

6-2019

# Thai Secondary Teachers' Attitudes Toward Inclusion of Students with Learning Disabilities into General Education Classrooms

Pattaraporn Jamsai

Follow this and additional works at: <https://digscholarship.unco.edu/dissertations>

---

## Recommended Citation

Jamsai, Pattaraporn, "Thai Secondary Teachers' Attitudes Toward Inclusion of Students with Learning Disabilities into General Education Classrooms" (2019). *Dissertations*. 535.  
<https://digscholarship.unco.edu/dissertations/535>

This Text is brought to you for free and open access by the Student Research at Scholarship & Creative Works @ Digital UNC. It has been accepted for inclusion in Dissertations by an authorized administrator of Scholarship & Creative Works @ Digital UNC. For more information, please contact [Jane.Monson@unco.edu](mailto:Jane.Monson@unco.edu).

UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

THAI SECONDARY TEACHERS' ATTITUDES TOWARD INCLUSION  
OF STUDENTS WITH LEARNING DISABILITIES  
INTO GENERAL EDUCATION CLASSROOMS

A Dissertation Submitted in Partial Fulfillment  
Of the Requirements for the Degree of  
Doctor of Philosophy

Pattaraporn Jamsai

College of Education and Behavioral Sciences  
Department of School Psychology  
School Psychology

December 2018

This Dissertation by: Pattaraporn Jamsai

Entitled: *Thai Secondary Teachers' Attitudes toward Inclusion of Students with Learning Disabilities into General Education Classrooms*

has been approved as meeting the requirement for the Degree of Doctor of Philosophy in College of Education and Behavioral Sciences in Department of School Psychology

Accepted by the Doctoral Committee

---

Robyn S. Hess, Ph.D., Research Advisor

---

David M. Hulac, Ph.D., Committee Member

---

Lewis B Jackson, Ed.D., Committee Member

---

Eugene Sheehan, PhD., Faculty Representative

Date of Dissertation Defense \_\_\_\_\_

Accepted by the Graduate School

---

Linda L. Black, Ed.D.  
Associate Provost and Dean  
Graduate School and International Admissions

## ABSTRACT

Jamsai, Pattaraporn. *Thai Secondary Teachers' Attitudes toward Inclusion of Students with Learning Disabilities into General Education Classrooms*. Published Doctor of Philosophy dissertation, University of Northern Colorado, 2018.

The purpose of this study was to examine Thai secondary teachers' attitudes toward inclusion of students with learning disabilities in general education classrooms. The researcher collected quantitative data using the questionnaire, 28 Likert-type scale questions, adapted from the Opinions Relative to Integration of Students with Disabilities (ORI) (Antonak & Larrivee, 1995). The participants were comprised of 370 secondary teachers from all regions of Thailand and were all Thai. The study used descriptive statistics and multiple linear regression for data analysis. Demographics of participants indicated that the majority were female general education teachers and had a Bachelor's degree. Through multiple linear regression, the finding showed that Thai secondary teachers had a positive attitude toward inclusion of students with learning disabilities into general education classrooms. All three independent variables (hours of training, years of teaching experience, and hours of workload) were significant predictors of teachers' attitudes toward inclusive classrooms, though the hours of work loading was a greater predictor. In addition, the government and school administrators may need to provide time and financial support to teachers in order to take more special education training

## **ACKNOWLEDGEMENTS**

Beginning in 2011, when I left Thailand to study the School Psychology at University of Northern Colorado (UNC). This process would not have been possible if Kasetsart University (KU), Thailand, did not give me this opportunity by funding me a scholarship to pursue my doctoral degree. Thus, I would like to give a big thank to KU and Kasetsart University Laboratory School as well. In addition, I would like to thank special persons in my life, my mother (Supen Jamsai), a strong single mom who believed in giving love, prayers, and encouragement her daughter. My sister, Pattareeya Jamsai, who has always been on my side. Thank you, everyone in my family, who has helped me reach this point.

Words cannot describe how thankful I am for the support, advice, understanding, and patience given to me by my advisor, Dr. Robyn Hess, since the day we met. Thank you, Dr. Robyn Hess, for being so thorough with my paper and leaving all those notes in the margins. To my committee members, Dr. Lewis Jackson, Dr. Eugene Sheehan, and Dr. David Hulac, thank you. You have all persevered with me throughout this process and allowed me to achieve one of my most significant life goals. Finally yet importantly, I am very grateful to have studied at UNC. The UNC community and Department of School Psychology were always warm and supportive.

## TABLE OF CONTENTS

CHAPTER		PAGE
I.	INTRODUCTION.....	1
	Statement of the Problem	
	The Theory of Planned Behavior	
	Variables Related to Teachers' Attitudes	
	Purpose of the Study	
	Research Questions and Hypotheses	
	Definitions of Terms	
II.	LITERATURE REVIEW.....	20
	History and Practice of Inclusion	
	Inclusion in International Contexts	
	Factors Affecting the Success of Inclusion	
	Attitudes in the Context of Inclusion	
	Factors Affecting Teachers' Attitudes Toward Inclusion	
	The Measurement of Attitudes Toward Inclusive Classrooms	
	Special Education in Thailand	
III.	METHODOLOGY.....	49
	Setting and Participants	
	Sampling Procedures	
	Instrumentation	
	Pilot Study	
	Data Collection Procedures	
	Data Analysis Procedures	
IV.	RESULTS.....	63
	Descriptive Data	
	Reliability	
	Exploratory Factor Analysis (EFA)	
	Preliminary Analyses	
	Multiple Linear Regression	

CHAPTER	PAGE
V. DISCUSSION.....	78
Implications for Practice and Policy	
Limitations	
Recommendations for Future Research	
Conclusion	
REFERENCES.....	90
APPENDIX A.....	105
Permission to use the Opinions Relative to Integration of Students with Disabilities (ORI)	
APPENDIX B.....	110
Questionnaire	
APPENDIX C.....	122
Scoring Key	
APPENDIX D.....	124
Consent Form and IRB Approval Letter	
APPENDIX E.....	127
Factor Loadings and Communalities	

## LIST OF TABLES

### TABLE

1.	Numbers of Students with Disabilities Separated by Disability Type	48
2.	Mean of Demographic Variables in Each Region	64
3.	Correlation among the Six Factors on the ORI	71
4.	Correlation among the Three Factors on the ORI	72
5.	Multiple Regression Results Predicting Teachers' Attitudes toward Inclusive Classrooms	76

## **CHAPTER I**

### **INTRODUCTION**

The goal of most countries is to provide their children with access to education; for children with disabilities, this is not always the case. In Thailand, the most recent available statistics indicate that there are about 1,615,629 individuals with disabilities, but only an estimated 62% of these individuals went to and graduated school. Sadly, 37.97% (613,478) of school-age individuals with disabilities never go to school. Of those students with disabilities who do attend school most will drop out when they graduate from elementary school. Only 48.63% of individuals with disabilities continue on to higher education (Department of Empowerment of Persons with Disabilities, 2016). However, of the 404,602 students with disabilities who are registered with the Ministry of Education in 2016, only 83.33% of them study in general education schools (Pruekchaikul, Kuptametanon, & Walker, 2016). Despite global efforts to include all students in school regardless of disability, Thailand has not been able to meet this goal.

It is especially surprising to note that although Thailand hosted the World's Declaration on Education for All: Meeting Basic Learning Needs in 1990, there are still so many students with disabilities in this country who are not receiving an education or being included in general education schools. This conference, hosted by the United Nations Educational, Scientific, and Cultural Organization (UNESCO), featured activities such as workshops and seminars focused on initiatives and equity issues for all, including those with disabilities (Ali, Mustapha, & Jelas, 2006). In June 1994, UNESCO's World

Conference on Special Needs Education: Access and Quality proposed an inclusive education system to ensure inclusion of students with disabilities (UNESCO, 1994). Representatives of 92 governments and 25 international organizations were present at this conference with the goal of creating an inclusive educational system for students with disabilities in order to achieve “Education for All (EFA).” Thailand was one of many countries that adopted the EFA policy and established an inclusive education system as the target of the country’s educational policy (Narot, 2010).

Despite their earlier commitment, it was not until the National Education Act in 1999 that inclusive classrooms became a reality in Thailand. The development of inclusive education in Thailand seems to have occurred later than in many other participating countries. Some countries included inclusive education into their petitions for independence as they moved toward their own nation status from their colonial pasts. For example, in 1961, the Education Act of Ghana was the principal enactment concerning the privilege of education for all children (Agbenyega, 2007). Many countries in Asia created laws about equality for all, including individuals with disabilities, because they believed it was the right thing to do. For example, inclusive education arose in Malaysia in 1996, under the Education Act (Ali et al., 2006), and, in 1997, inclusive education evolved in Taiwan as the Special Education Act (Hsieh, Hsieh, Ostrosky, & McCollum, 2012). Despite Thailand’s early commitment to the idea of education for all, beginning with the 1990 conference, it was nearly 10 years until they enacted their own inclusive education laws.

Although numerous countries have moved toward the philosophy of inclusive education, they may have neglected to address how the philosophy of inclusion

transforms into effective classroom practice (Westwood, 2013). For example, Boer, Pijl, and Minnaert (2011) analyzed 26 studies that examined primary teachers' attitudes toward inclusive classrooms in countries such as India, China, and Portugal. The six studies that measured teachers' attitudes toward inclusion revealed that teachers did not feel competent or confident in teaching students with disabilities. These findings were consistent with those of Sadler (2005) who examined general education teachers' confidence in teaching students with speech/language impairments. The majority of teachers in this study indicated that they were "not very confident" in their ability to teach students with speech/language difficulties. Importantly, the failure to address the needs of teachers as related to effective classroom instruction and practice for all students may result in a lower likelihood of having successful inclusive classrooms.

Soodak, Podell, and Lehman (1998) found that teachers' reports of teaching efficacy were one of the strongest predictors of their attitudes toward inclusive classrooms. They expressed that teachers with a low sense of teaching efficacy exhibited anxiety and rejected the idea of including students with disabilities into general education classrooms. In their study of teachers' efficacy, Ahsan, Deppeler, and Sharma (2013) surveyed 1,623 Bangladesh pre-service teachers' attitudes and perceived teaching-  
efficacy for inclusion. They found that level of training and gender were significant predictors of pre-service teachers' attitudes toward inclusive education. The length of training, the level of training, gender, knowledge of the law on disability rights, confidence in teaching, and interaction with individuals with disabilities were significant predictors of perceived teaching-  
efficacy (Ahsan et al., 2013).

Additionally, there are significant obstacles to implementing inclusive classrooms, as reported in some Asian countries and South Africa. Examples of problems have included large class sizes, negative attitudes toward disabilities, the absence of support services, inflexible teaching methods, lack of parent involvement, and absence of clear national directives, and, perhaps most notably, the negative attitudes of teachers toward inclusive classrooms (Mitchell, 2008). Although studies specific to Thailand were not found, based on my own personal teaching experience in Thailand, inclusive programming in Thailand shares many of these various obstacles, such as large class sizes (30-50 students per classroom per one teacher), teachers' lack of knowledge about special education, inclusion, and disabilities, and absence of support services from school. In conclusion, Thailand still has many factors that may act as barriers to implementing effective inclusive classrooms.

### **Statement of the Problem**

Although Thailand has made great strides in their progress toward inclusive practices, many students with disabilities are not included in the general education classroom, or even in their local general education schools. Decisions to include students with disabilities are dependent on each student's abilities, on rigid policies, or both. For instance, students with autism are required to be segregated from general classes from kindergarten to the second grade to prepare them in both academic and non-academic skills. During this period, those students are fully excluded from the general education classroom and are taught in a small group, using teaching strategies that differ from those used in general education. Examples of this instruction include using shorter sentence structures, providing visual materials, incorporating modeling and shaping to teach skills,

and working to maintain eye contact (Onbun-uea, 2008). After second grade, the decision as to whether any of these students can be placed in a general education classroom is made on a case by case basis.

In Thailand, there are various ideas about which students will and will not be successfully included. For example, some students with disabilities (e.g., ADHD, emotional disabilities) can be fully included in the general education classroom, as long as their behaviors are appropriate. Some students with disabilities (e.g., autism and learning disabilities) are only included for some subjects, such as art, physical education, or music in the general education classroom. However, this partial inclusion creates a very uncomfortable situation for students as they are expected to leave the classroom after the lesson. In practice, one to four students with learning disabilities will have to walk in and out of the classroom at different points of the school day as they transition between their general education and special education classrooms, while the other thirty students in the class watch them. As a teacher, watching this daily humiliation inspired me to study about inclusive classrooms. Although teachers intend to help students with disabilities by this process (partial inclusion in a general education classroom), it may cause additional embarrassment and shame for students with disabilities, especially to secondary students (i.e., adolescents) who are in the process of forming close peer relationships and developing their identities. Rather than including students all day, this partial method may be more harmful than beneficial.

There continue to be many factors that affect whether schools adopt full inclusion as well as whether that programming is a success or failure. For example, school administrators' support, teachers' beliefs, and staff's support are all important factors

(Monsen, Ewing, & Kwoka, 2014). Nevertheless, the personnel who work most directly on inclusion are teachers. Teachers' attitudes can enhance or obstruct the implementation of inclusion, and numerous studies have described teachers' attitudes as a crucial factor in the implementation of inclusion (e.g., Bender, Vail, & Scott, 1995; Cagran & Schmidt, 2011; Leyser & Tappendorf, 2001). If teachers have positive attitudes toward inclusion, they will feel more confident in their abilities and be more likely to fulfill their obligations to accommodate students' needs in inclusive settings by adapting instructional materials and procedures (Campbell, Gilmore, & Cuskelly, 2003; Norwich, 1994). On the other hand, teachers with negative attitudes toward inclusion tended to have lower expectations for students with disabilities and negatively influenced students' feelings about their learning experiences. Teachers with negative attitudes may treat their students with disabilities in more negative ways, such as providing a substandard level of instruction or looking down on them (Dapudong, 2014; Wilczenski, 1994).

Since teachers' attitudes are crucial to effective implementation of inclusive education practices and the success of students with disabilities, it is essential to understand the kinds of factors that affect these attitudes. Little is known about Thai secondary teachers' attitudes toward inclusion of students with disabilities in general education classrooms. According to the most recent data, Thailand had 337,144 students with disabilities who studied in inclusive schools, and the majority of those students were diagnosed with learning disabilities (83.75%) (Pruekchaikul et al., 2016). Therefore, the purpose of this study was to assess Thai secondary teachers' attitudes toward inclusion of students with learning disabilities in general education classrooms. As Dapudong (2014) noted in his research with Thai elementary teachers, their attitudes toward inclusive

classrooms may be the best method to gain valuable insight into the practice and the dynamics of these settings (Dapudong, 2014).

### **The Theory of Planned Behavior**

Most countries have fostered social norms promoting inclusion, but they are still struggling to transform inclusion into successful classroom practice (Westwood, 2013). Teachers who work regularly with students in inclusive classrooms tend to agree with the idea of inclusion but are less eager to have students with disabilities in their classrooms (Mukhopadhyay, 2014). Thus, there is a distinction on teachers' attitudes between what they believe and what they do.

Fundamental to understanding why teachers have positive attitudes toward inclusive classrooms in principle but hold negative attitudes toward inclusive classroom in practice is the theory of planned behavior, which was proposed by Ajzen in 1985. The theory of planned behavior states that behavioral intention can be predicted by three factors: (a) attitudes toward a target behavior, (b) subjective norms, and (c) perceived behavioral control (Ajzen, 1991). The first factor represents an individual's attitudes toward the behavior which refers to the degree to which someone has a favorable or unfavorable evaluation of the issue or behavior. The second factor is the subjective norm which relates to the perceived social pressure to perform or not to perform the action. The last factor is perceived behavioral control which refers to an individual's perceived ability, or conversely, difficulty, in performing the behavior (Ajzen, 1991). In general, individuals have a stronger intention to perform the behavior when they have a more favorable attitude, it is something that is expected of them (i.e., subjective norm), and they perceived themselves to have been able to perform the behavior (i.e., behavioral

control). As applied to inclusion, this theory would predict that teachers who hold positive attitudes toward inclusion, perceive themselves as being expected to include children with disabilities, and who believe they have the necessary skills and abilities, would be most likely to have successful inclusive classrooms.

However, Ajzen (1991) also noted that the relation of attitudes, subjective norms, and perceived behavioral control to the prediction of behavior intention differs across behaviors and circumstances. Therefore, in some cases, it might appear that only one aspect of this model (e.g., attitude, subjective norm, or perceived behavioral control) affects the behavioral outcome. In other cases, two or all three factors influence an individual's behavioral intention. Again, as applied to inclusion, a teacher might have a positive attitude toward inclusion and also experience the expectation of including students with disabilities, but may also perceive herself to be underprepared, or unable to do so. If this last component is strong enough, it may result in an unwillingness to try inclusion or to have limited commitment to a successful outcome.

The theory of planned behavior provides a useful framework for addressing the relationship between teachers' attitudes and teachers' behavior and understanding how factors such as years of teaching experience, hours of special education training, and hours of teachers' workloads can predict teachers' attitudes toward inclusive classrooms. MacFarlane and Woolfson (2013) used the theory of planned behavior to examine the relationships between teachers' attitudes and teachers' behavior toward inclusion of students with social, emotional, and behavioral difficulties (SEBD) in general education classrooms. Using four different measures to assess teachers' attitudes, subjective norm, behavioral control, and behavioral intentions as related to inclusion, the researchers found

that teachers had a higher level of behavioral intention to engage in inclusive practices when they held more positive attitudes and had higher levels of perceived behavioral control. The subjective norm component of the model had little or no predictive power over behavioral intention (MacFarlane & Woolfson, 2013). This finding was consistent with earlier work by Armitage and Conner (2001) who concluded after reviewing 185 articles on the theory of planned behavior that the subjective norm component of this model is a weak predictor of behavioral intention.

Therefore, in this study, the researcher measured secondary teachers' attitudes and certain factors (e.g., years of teaching experience, hours of special education training, teachers' workloads) that were considered to be associated with perceived behavioral control. Because subjective norms do not appear to be as important to the model of planned behavior, they were not measured. By understanding teachers attitudes and aspects of their perceived behavioral control, additional policies may be implemented that would help reduce potential barriers to the effective implementation of inclusive education for Thai secondary students with learning disabilities.

### **Variables Related to Teachers' Attitudes**

Because attitude is so important to behavioral intention, there have been a number of studies on the variables associated with teacher attitudes toward inclusive education. Teachers' attitudes toward inclusive classrooms have been found to be influenced by many variables including, the amount of training in special education, the types of disabilities presented by students, their years of teaching experience, and their overall workload.

Most studies on teachers' attitudes toward inclusion have been conducted with general education teachers and show that for the most part, teachers from many different countries support the concept of inclusion (e.g., Ali et al., 2006; Dapudong, 2013; Dukmak, 2013), although this finding was not universal (e.g., Agbenyega, 2007; Rakap & Kaczmarek, 2010). Less is known about the attitudes of special education teachers toward inclusion, but some research has compared attitudes between special and general education teachers. One study conducted by Lifshitz, Glaubman, and Issawi (2004), found that special education teachers held more positive attitudes toward inclusive classrooms than general education teachers. This finding was not unexpected as with more training and experience in working with students with special education needs, teachers were more likely to feel confident and competent in meeting their students' needs.

### **Special Education Training**

The relationship between training in special education and positive attitudes toward inclusion has been demonstrated in research across different populations. In their study of Greek primary grade general education teachers' attitudes toward inclusion, Avramidis and Kalyva (2007) found that teachers who were trained in special education and inclusion held significantly more positive attitudes than teachers who had no training in these areas. These findings were similar to those of Rakap and Kaczmarek (2010) who concluded that Turkish teachers who did not have any special education training had less positive attitudes toward inclusion than those teachers who had received in-service training, had taken courses in college, or had special education certificates. Moreover, the period of training also had an impact on teachers' attitudes toward inclusion. Teachers

with long-term training had more positive attitudes toward inclusion than teachers with short-term training in special education and inclusion (Rakap & Kaczmarek, 2010).

Although additional training in special education may be associated with more positive attitudes, it is not clear that it is sufficient to help teachers view themselves as more skilled. For example, Lifshitz et al. (2004) found that as little as 28 hours of training had a positive influence on Israeli and Palestinian teachers' attitudes. They found that the scores of general education teachers on the attitude questionnaire increased significantly while the scores of special education teachers did not. Some of the activities that were effective in changing teachers' attitudes included instruction on intervention programs, the philosophy of inclusion, and an overview of the types of disabilities. In summary, it is important to study the amount and type of training that teachers have received in special education (whether they have a special certificate or several hours of in-services and workshops) as these opportunities relate to their attitudes. Furthermore, because high levels of collaborative teaming of teachers and joint problem-solving among general and special education teachers are essential for inclusive education to provide appropriate services for students, some knowledge of special education likely makes this process more effective (Lifshitz et al., 2004). Ali et al. (2006) found that collaboration between the general and special education teachers is crucial to the implementation of inclusive education.

The third component of Ajzen's model of planned behavior (1991) is that of behavioral control. It is likely that factors such as additional training positively affect both teacher attitudes as well as their perceived ability to successfully carry out inclusive instruction in their classrooms. In addition to the amount of training in special education,

past research in teachers' attitudes toward inclusion has indicated that years of teaching experience and teacher workload are important factors to their perceived ability to implement inclusive practices.

### **Years of Teaching Experience**

One component that seems contrary to the model is years of teaching experience. Rather than having more positive attitudes, teachers with more years of experience tend to have more negative attitudes toward inclusion (e.g., Boer et al., 2011). In their reviewed of 26 studies related to teaching experience and attitudes toward inclusion, Boer et al. (2011) found that teachers with a greater number of years of teaching experience held significantly more negative attitudes toward the inclusion of students with disabilities than those with fewer years of teaching experience. This finding corresponds to a study by Hwang and Evans (2011) who also found that the more years of teaching experience, the more negative their attitudes and openness toward inclusion. These authors hypothesized that teachers who had been in the field for a longer period of time (more years since their initial teacher preparation program) may not have had as much exposure to curriculum and practices designed to enhance outcomes for students with disabilities and this may have been the reason they held more negative attitudes toward inclusive education. So, although they may have viewed themselves as more efficacious teachers overall, in the special instance of including students with disabilities in their classrooms, they may not have perceived themselves as able to be successful. Additionally, Coutsocostas and Alborz (2010) suggested that less experienced teachers had more exposure to current thinking as related to disabilities and were influenced by

the more contemporary ideas and therefore, were better prepared to teach students with disabilities.

However, if teaching experiences included years of teaching students with disabilities, those teachers tended to have more positive attitudes. For example, Avramidis and Kalyva (2007) found that Greek primary teachers who had been actively involved in teaching students with disabilities held significantly more positive attitudes than teachers who had little or no experience with inclusion. In summary, there is some inconsistency in the findings of how years of teaching experience relate to teachers' attitudes toward inclusion. It seems that simply being a teacher for a number of years, without specific experience teaching students with disabilities may not contribute to positive attitudes. However, if those years of experience included greater exposure to working with students with disabilities in their classrooms, then their attitudes seemed to be more positive. Without more specifics on the types of experiences of teachers, there continues to be some inconsistency in our understanding of the relationship between teaching experience and attitudes toward inclusive education practices.

### **Teachers' Workloads**

Another factor that might affect teachers' attitudes is their general workload. Many teachers struggle with heavy workloads and a large number of responsibilities beyond teaching such as offering a homeroom class, taking care of the students' needs, providing thorough specific feedback on student work, and recording student progress (Newhook, 2012). Teachers' responsibilities can be conceptualized as falling into six areas: (a) teaching-related activities, (b) student outcomes, (c) classroom atmosphere, (d) interactions with students, (e) communication with others involved, and (f) school

policies and external regulations (Lauerman, 2014). In addition to teaching, teachers' workloads include many important non-teaching tasks.

Although the first priority for teachers is their teaching, many have reported their workloads to be excessive due to non-teaching tasks (Butt & Lance, 2005). Examples of non-teaching tasks were photocopying, collecting money, paperwork, and typing letters. Specifically, secondary teachers in the United Kingdom spent 43% of their workload time on teaching, 22% on supporting learning, 12% on other student contact, 10% on other activities, 7% on school/staff management, and 6% on general administration. Therefore, teachers spent a majority of their time (57%) on non-teaching tasks (Butt & Lance, 2005).

If counting workload as the number of hours, British secondary teachers worked on average 49.1 hours a week, while secondary teachers in New Zealand worked 47 hours a week. However, a number of hours depended on the teachers' position and responsibilities. Those teachers who held higher positions tended to work more hours than other teachers. For example, in the United Kingdom, head teachers worked (56.8 hours a week) as compared to their deputy heads (53.4 hours a week). In New Zealand, senior managers worked 59 hours a week, but middle managers worked 52 hours a week (Butt & Lance, 2005; Ingvarson, Kleinhenz, Beavis, Barwick, & Carthy, 2005).

Newhook (2012) conducted in-depth interviews with 24 teachers and six representatives of other groups in education. He found that teachers' workloads affected both the teachers and their families. Teachers reported feeling tired, stressed, overwhelmed, and lacking time for themselves. The findings of this study were consistent with those of Barmby (2006), who interviewed 246 teachers in London. He revealed that

workload was the most frequently stated reason for teachers considering leaving the profession. Although workload was considered to be a factor in stress on teachers, Amalu (2014) concluded that stress from workload had no significant influence on lesson presentation, evaluation of students, classroom management, or professional qualities. In contrast, the study by Ingvarson et al. (2005) of secondary teachers in New Zealand suggested that teachers' workloads impacted the quality of their teaching with 75% reporting their workload was heavy and 71% indicating their workload was affecting the quality of their teaching.

Many studies have reviewed the impact of workloads on various aspects of teaching, but there has been little research undertaken on teachers' workloads and inclusive classrooms. Malak (2013) interviewed 20 Bangladesh pre-service teachers and found that high workload was one of the perceived barriers to reform in inclusive education. Participants stated that general education teachers might not have time for students with disabilities and would be overloaded by having students with disabilities in their classrooms. At some schools in Bangladesh, the ratio of students to teacher is as high as 90:1. Thus, in Bangladesh, workloads may pose a barrier to implementing effective inclusive classrooms because the inclusion of students with disabilities in general education classrooms is perceived as increasing responsibilities that are already very high (Malak, 2013).

Since students with disabilities might be perceived as requiring more time or support in the classroom, it is possible that teachers who perceive their workloads as excessive may be even less likely to hold positive attitudes toward inclusion of students with disabilities. However, a thorough literature review did not reveal any research about

how workload relates to attitudes of teachers toward inclusive classrooms. Therefore, one of the goals of this study was to better understand how teachers' workloads predicted their attitudes toward inclusive classrooms.

### **Types of Disabilities**

The types of disabilities experienced by students may also affect teachers' attitudes toward implementing inclusive practices. Coutsocostas and Alborz (2010) indicated that both the type and severity of disabilities impacted teachers' attitudes toward the inclusive classrooms. This finding was replicated by Cagran and Schmidt (2011) who demonstrated that the types of disabilities that students had was related to teachers' attitudes toward inclusion. Interestingly, these attitudes seemed to vary across teachers from different countries (and cultures). For instance, teachers in the United Arab Emirates (UAE), Palestine, Turkey, and Slovene were more accepting of students with physical disabilities for inclusive classrooms than students with other types of disabilities. On the other hand, teachers in Saudi Arabia held more negative attitudes toward including students with physical impairments, as compared to other disability areas, into general education classrooms. In fact, teachers in Saudi Arabia were most favorable toward including students with learning disabilities in their classrooms. Even though similar in culture to Saudi Arabia, teachers in the UAE held negative attitudes toward including students with learning disabilities in general education classrooms (Cagran & Schmidt, 2011; Dukmak, 2013; Rakap & Kaczmarek, 2010). It appears that teachers in different countries may hold different views and rationales as related to which students with disabilities are most easily included into the general education classroom, although

the methodology and instruments used across these various studies differed and may have contributed to the inconsistent findings.

There were equally diverse attitudes among teachers from different countries in terms of the types of disabilities they least supported for inclusion into general education classrooms. For example, Palestinian teachers held negative attitudes toward the inclusion of students with blindness and intellectual disabilities (Lifshitz et al., 2004). Teachers in Turkey rated themselves as less open to working with students with autism (Rakap & Kaczmarek, 2010), while teachers in Slovenia did not prefer to teach students with behavioral and emotional disabilities (Cagran & Schmidt, 2011). In this study, the focus was on students with learning disabilities as they represent the majority group of students with disabilities in Thailand.

### **Purpose of the Study**

The goal of this study was to explore Thai secondary education teachers' attitudes toward including students with learning disabilities in general education classrooms. Thus, the researcher surveyed secondary teachers working in inclusive schools (defined as those that had more than 30 students with learning disabilities who were included at some level into general education classrooms). Because attitudes guide behaviors, having a better understanding of how teachers perceive inclusion, might provide clues as to how inclusion could be more successfully practiced in secondary schools in Thailand. For example, if teachers with more special education training held more positive views toward inclusion, this finding might lend support to increasing the coverage of special education topics in teacher training programs. An understanding of how to support teachers at different points in their careers may also be helpful in moving toward more

inclusive practices. This study was designed to provide information on secondary teachers' attitudes toward inclusive classrooms, and the variables that impact these attitudes. These results may provide useful information for administrators in the Thai education system regarding preparing general and special education teachers for inclusion practice. Finally, these findings may be helpful for students who have special education needs because it may ultimately help open more general education classrooms to them across the school day rather than for only a few classes.

### **Research Questions and Hypotheses**

The research questions addressed in this study focus on Thai secondary teachers' attitudes toward inclusion of students with learning disabilities in general education classrooms. The specific research questions for this study were:

- Q1 Do the number of hours of special education training predicts teachers' attitudes toward inclusion of students with learning disabilities in general education classrooms?
  - H1 The number of hours of special education training are a predictor of teachers' attitudes toward inclusion of students with learning disabilities in general education classrooms.
  
- Q2 Do the years of teaching experience predict teachers' attitudes toward inclusion of students with learning disabilities in general education classrooms?
  - H2 The years of teaching experience are a predictor of teachers' attitudes toward inclusion of students with learning disabilities in general education classrooms.
  
- Q3 Does the hours of teachers' workload (per week) predict teachers' attitudes toward inclusion of students with learning disabilities in general education classrooms?
  - H3 The hours of teachers' workload (per week) are a predictor of teachers' attitudes toward inclusion of students with learning disabilities in general education classrooms.

## **Definitions of Terms**

### **Inclusion**

In this study, inclusion means students with and without learning disabilities studying together in general education classrooms for the entire day, with a general education teacher having primary responsibility.

### **Learning Disabilities**

As this study conducted in Thailand, the term learning disabilities was based on the National Education Act of 1999 of Thailand and was defined as brain dysfunctions that cause difficulties in learning or academic skills.

### **Teachers Workload**

In this study, teachers workload was defined as the number of hours that teachers worked per week, which includes both teaching and non-teaching duties.

## **CHAPTER II**

### **LITERATURE REVIEW**

In order to understand the concepts presented in this study, it is helpful to have a greater perspective on the history, meaning, and practice of inclusion. Although general support for inclusion is part of educational policy in numerous countries, the degree of implementation varies greatly and thus an international context is provided. Finally, since this study was conducted in Thailand, research studies specific to the practice of inclusion and teacher attitudes in that country were reviewed.

#### **History and Practice of Inclusion**

The concept of inclusion emerged in the 1980s as part of the debate about the efficacy and morality of a dual system of education. However, the term was rarely used in education until the early 1990s (Raymond, 2012). The fundamental reason for inclusive education is out of respect for differences in students' cultures, genders, and abilities, but, inclusive education in the United States and other countries tends to focus on students with disabilities (Artiles & Kozleski, 2007). One of the catalysts for the concept of inclusion was a document by Madeline Will, Secretary of Education, advocating that students with disabilities be given the opportunity to participate in their neighborhood schools and the general education classroom to the greatest extent possible. Will claimed that "programs must be allowed to establish a partnership with regular education to cooperatively assess the educational needs of students with learning problems and to cooperatively develop effective educational strategies for meeting those

needs” (Will, 1986, p. 415). Although this basic concept has been widely accepted, the definition and practice of “inclusion” has various meanings and is often confused with the least restrictive environment (LRE), mainstreaming, and integration. Furthermore, numerous scholars and practitioners use the terms integration, mainstreaming, and inclusion interchangeably (Hornby, 2015).

In many ways, these different terms reflect advancements in our conceptualization of what it means to include students with disabilities in general education. For example, when students with disabilities were mainly educated in separate schools, integration, the oldest term, meant placing students with disabilities in a mainstream school (Hick, Kershner, & Farrell, 2009). However, integration only referred to a physical placement of a student but not necessarily a concomitant change in the educational approach by the school (Winzer, 2000). Students with disabilities continued to be educated in separate classrooms although they might attend their neighborhood schools. Therefore, the next step represented a push for mainstreaming, which referred to moving students from separate schools or classes to general education classes for part or all of the school day (Hick et al., 2009). These types of decisions were supported by the legislative mandate of the least restrictive environment or LRE, which requires that:

To the maximum extent appropriate, children with disabilities, including children in public or private institutions or other care facilities, are educated with children who are not disabled, and special classes, separate schooling, or other removal of children with disabilities from the regular educational environment occurs only when the nature or severity of the disability of a child is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily. (Federal Register, 1999, p. 12457)

The term “inclusion” was next to emerge and as noted, the meaning and interpretation of the term vary greatly among both practitioners and scholars. For

example, Kochhar, West, and Taymans (2000) described an inclusive classroom as having three components: (a) all students study together with services incorporated so every student can be successful; (b) all students have their unique needs met; and (c) all students understand and accept individual differences. Moreover, King (2003) described that “Inclusive education means that all students within a school regardless of their strengths, weaknesses, or disabilities in any areas become part of the school community” (p.478). The descriptions of inclusion provided by Kochhar et al. (2000) and King (2003) focus on both the educational and social aspect of students’ lives. In contrast, Wolfe and Hall (2003) provided a definition of inclusion that was specific to education. They described inclusion as students with disabilities being served in the general education classroom, and under the instruction of the general education teacher. Regardless of these differences, it was clear that inclusion meant students with disabilities not only belonged in their neighborhood schools, but also in the general education classroom.

The terms *full* and *partial* inclusion have emerged to reflect this tension in the field as to whether it is possible and efficacious to include all students, despite their abilities, in the general education classroom on a full-time basis. Bateman and Bateman (2002) stated that students may be required to study outside the general education classroom when all available methods have been tried and failed to meet students’ needs. Currently, there is a continuum of placement options and a great deal of disagreement as to which of these options truly represents inclusion. As inclusion does not always mean full inclusion in the general education classroom, there are different placement options within a continuum of services for students with disabilities. These options range from full inclusion, part-time inclusion, and attending a special class within a neighborhood

school. Warnock claimed that some level of educating students in a separate setting (e.g., classroom) can still be considered inclusion in the sense that it is making it possible for students with disabilities to engage in learning the same curriculum as other students without disabilities (cited in Norwich, 2008).

Another debate in the field is the degree to which inclusion reflects surface changes or deep institutional reforms to address the needs of all students. For example, it was suggested that students with disabilities needed to demonstrate their readiness for an integrated setting, as opposed to the setting proving its willingness to accept the students (Winzer, 2000). During his inaugural professorial lecture delivered at the University of London, Barton countered this idea and argued that inclusion represented a general changing of the way that educative procedures were organized and conducted in school, while integration was concerned with assimilating students with disabilities into the existing school system without changing that system (cited in Westwood, 2013). In other words, schools would be expected to change their practices in order to effectively educate students with disabilities. More recently, Raymond (2012) suggested that inclusion refers to some level of actual integration of the two systems, ranging from collaboration and partial integration to an entirely unified system.

Despite inconsistent definitions, the meanings of inclusion seem to converge at providing equal access to education for students with disabilities and an equal right to be educated in the general education setting. Moreover, the concept that makes “inclusion” different from the other terms (e.g. integration, mainstreaming) is a commitment by schools and communities to welcome students with disabilities as full members of the group (Hick et al., 2009). Students with disabilities are to be valued and have important

roles to play in their classrooms and social groups. Simply locating students with disabilities in the same setting with students without disabilities does not necessarily provide them with equal access to education. Rudd (2002) stated that inclusion is not to be called inclusion when there are no supports and services given to students with disabilities to help them cope in the general education classroom. Inclusion requires not only students with disabilities being physically present in general education classrooms but also that changes in values, attitudes, policies, and practices be made to ensure that they can be active participants in their classes (Monsen et al., 2014). According to Friend and Bursuck (2012), inclusive practices must address the physical, social, and instructional dimensions by (a) placing students in the same classroom; (b) building nurturing relationships between students with disabilities and their peers; and (c) assuring that students with disabilities have the same curriculum as their peers with supports provided.

### **Inclusion in International Contexts**

The inclusion of students with disabilities in general education settings is a complex topic, and there are controversy and confusion regarding the best decision making and outcomes for inclusionary practices in general education classrooms. This problem does not only occur in the United States but in other countries as well. It is generally perceived that the strategy of “full inclusion” is hard to accomplish in practice because there will be some students with disabilities who are not successful when included full-time in general education classrooms. Westwood (2013) indicated that full inclusion may not be the best option for some students with disabilities since full inclusion may actually make students’ learning environment more restrictive. For

example, students with disabilities who are unable to keep up with the assignments, who are passive participants in the class, or who experience a decrease in their self-esteem may not be successful in full inclusion classrooms. Therefore, other placement options such as resource rooms, special classes, and special schools are still needed.

Although full inclusion is difficult to put into practice, the educational systems of some countries are closer to meeting this goal than other countries (Anastasiou, Kauffman, & Nuovo, 2015). For example, Anastasiou et al. (2015) described Italy as the country that was nearest to meeting full inclusion because Italian law and practice defines the term full inclusion to mean total inclusion without any exception. Although Italy emphasizes full inclusion, other countries in Europe and North America focus on the maximum inclusion that is appropriate for students. For example, in Great Britain, the government supports an adaptable continuum of services as opposed to forcing all students with disabilities into the general education schools (Westwood, 2013). On the other hand, the Centre for the Study of Inclusive Education in the UK still advocates for “one school for all children,” and would like to see every special school abolished (Westwood, 2013, p. 2).

“One school for all children” may be easier to implement in a country like South Korea, where students with and without disabilities study in general education schools. Unfortunately, students with disabilities are still separated from those students without disabilities, and Korean Special Education Law defines the use of special education classes for students with disabilities as inclusive practice. As a result of this law, Kim (2014) found that the number of special classes tended to increase within the general education schools. The majority of the students with developmental disabilities, such as

emotional disturbance, learning disabilities, and autism studied in special classrooms in general education schools. The practice of separate classes is still prevalent even though the Korean Special Education Law was revised in 2007 to stress the importance of fully inclusive education.

Not only do countries differ in their definitions, but even when their laws seem to advocate for inclusion, the day-to-day practice may look quite different. For example, although Anastasiou et al. (2015) described Italy as the country that was the nearest to meeting full inclusion, they also found that the everyday reality in Italian classrooms was that students with disabilities had been excluded and isolated from general education classrooms. Indeed, even in the United States where the LRE is mandated by law, half of the students with severe disabilities were being taught in a specialized setting for most of the school day (Artiles & Kozleski, 2007).

In the province of Alberta, Canada, the government tried an alternative approach to implementing full inclusive education. In 1990, the Alberta government discontinued the continuum of services and only provided two service options: full-time inclusion or the full-time special classroom. Two years after the implementation of this policy 60% of students with disabilities were placed in their general education classrooms on a full-time basis (Jahnukainen, 2011).

In summary, countries have different perspectives on placing students with disabilities in general education classrooms. Each country has policies that guide practices and some of those policies emphasize full inclusion, whereas others place less emphasis on this practice. However, there is no right or wrong answer to implementing inclusive education. Therefore, finding the best educational placement for students with

disabilities is one of the most challenging decisions, representing different, and sometimes conflicting discourses.

### **Factors Affecting the Success of Inclusion**

There are numerous factors that influence the success or failure of implementing inclusion. For example, the degree to which school administrators and staff support this practice, teachers' beliefs and attitudes toward inclusion, and sufficient funding are major factors that affect the realization of inclusive practices (Monsen et al., 2014). Based on a review of the literature, there appear to be three types of factors that are related to the success of inclusion. The first type of factor is the way in which schools and classrooms are structured, organized, and managed. For example, adding the objective of inclusion in the school goals, permitting the use of special education resources and equipment in classrooms, and inviting speakers in for in-service days to discuss inclusive education all promote the success of inclusion (Kochhar et al., 2000). In the UK, the Department for Education and Skills stated that how well schools managed their resources determined the degree to which they achieved inclusive education (Monsen et al., 2014).

A second factor that impacts the effectiveness of inclusion involves the knowledge and abilities of teachers to overcome the barriers to inclusion. When teachers are not knowledgeable about the continuum of placements, differentiated teaching strategies, and types of inclusion programs, it makes the success of inclusion unlikely (Kochhar et al., 2000). More recently, Vaz et al. (2015) reaffirmed that teachers' education and training was one of the primary factors required for effective inclusion. Additionally, they found that teachers who reported having training in teaching students with disabilities upheld positive attitudes toward inclusion (Vaz et al., 2015). Although

the reason for this more positive attitude cannot be attributed directly to this increased training, it does suggest an important relationship between knowledge and attitudes.

Lastly, teachers' attitudes, beliefs, and aspirations are factors that relate to the implementation and success of inclusion (Kochhar et al., 2000). In fact, teachers' attitudes are one of the key components in promoting or hindering the effectiveness of inclusion, as teachers are the people who are the ones who directly implement day-to-day inclusive practices (Kaikkonen, 2010). Additionally, research has demonstrated that teachers' attitudes are a crucial factor in the implementation of inclusion (e.g., Bender et al., 1995; Monsen et al., 2014). In their research, Bender et al. (1995) surveyed 127 general education teachers who taught Grades 1-8 using questionnaires concerning instructional strategies, mainstreaming attitudes, and teaching efficacy. They found that teachers with less positive attitudes toward mainstreaming tended to report using fewer strategies than did the teachers with more positive attitudes toward mainstreaming. More recently, Campbell et al. (2003) found that if the teachers held positive attitudes toward inclusion, they were more confident in their abilities and committed to accommodating students' needs in inclusive settings by adapting instructional materials and procedures.

Not only do attitudes affect strategy use, but they can also profoundly affect students' accomplishments. Ahmad and Rehman (2014) compared two groups of students taught in a friendly disciplined way and in a traditional way. They found that students taught in a friendly disciplined manner had greater achievements than when students were taught by teachers holding more traditional attitudes. Monsen et al. (2014) surveyed 95 teachers and 2,514 students using questionnaires. Teachers completed questionnaires on attitudes toward inclusion, classroom learning environment, and sources of support

and stress, and students completed a questionnaire on classroom learning environment. The results indicated that teachers with more positive attitudes toward inclusion had classroom environments marked by greater levels of satisfaction and cohesiveness, and lower levels of friction, competitiveness, and difficulty than teachers who held less positive attitudes toward inclusion. On the other hand, teachers with negative attitudes toward inclusion tended to have lower expectations for students with disabilities and negatively influenced students' feelings about their learning experiences. These findings suggest that teachers with negative attitudes toward inclusion may treat their students in more negative ways. For instance, when teachers are uncertain of their students' abilities to learn, teachers may provide a substandard level of instruction. Moreover, if teachers believe that students with disabilities do not have the ability to learn in a standard manner, they frequently have a bias toward these students and may look down on them (Dapudong, 2014). Therefore, teachers' attitudes can enhance or obstruct the implementation of inclusion.

### **Attitudes in the Context of Inclusion**

As teachers' attitudes are key to the success of inclusion, it is important to understand the construct of attitude so as to better appreciate the different ways that this factor might affect teachers' implementation of inclusion. There are several definitions of attitude which exist, and descriptions have varied significantly across time. The idea of attitude developed within the field of social psychology and it has always included an evaluative aspect (Albarracin, Johnson, Zanna, & Kumkale, 2005). Evaluation is characterized by the attribution of some level of judgment about its value along a positive

or negative dimension, such as goodness or badness, liking or disliking, approval or disapproval, valuable or worthless (Eagly & Chaiken, 1993).

Early conceptualizations of attitude were developed by Katz and Stotland (1959) who hypothesized that attitudes included cognitive, affective, and behavioral components. The cognitive part consisted of the individual's beliefs, thoughts, ideas, or knowledge while feelings, emotions, or moods made up the affective component. The behavioral component reflected individuals' actions on their attitudes (Boer et al., 2011). Katz and Stotland (1959) concluded that the affective component was central to attitude because the affective component was closely related to the evaluation of the object. Although the component of cognition was necessary to the evaluation of the object, the affective component seemed to differentiate between attitudinal evaluation and intellectual appraisal. Katz and Stotland (1959) stated that a belief was not an attitude unless there was an attribution of good or bad qualities accompanying the specific belief, which required the affective component. As a result, when attitudes are measured, the degree of affectivity is also measured. However, attitudes were thought to have a reciprocal impact on affect, beliefs, and behaviors.

Triandis (1971) also agreed that there were three components but proposed that each should be conceptualized and measured independently. He found inconsistency among the cognitive, affective, or behavioral components of attitudes and provided the example that when individuals act in ways that are conflicting with their attitudes, they tended to change their attitudes to make them consistent with their behavior (Triandis, 1971). Conversely, Albarracín et al. (2005) stated that attitudes reflected the association between belief, affect, and behavior rather than simply being three separate parts.

Eagly and Chaiken (1993) also adopted the three component model of attitude and described it as “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor” (p. 1). The meaning of “tendency” in this definition implies that attitude is an internal state that can last for an extended period or can be temporary but is always changeable. Because attitudes are believed to be changeable, teacher attitudes are an important area of focus in studies of inclusion. The belief is that if teachers were able to develop a more positive attitude toward inclusion, they would more readily implement effective inclusive practices in their own classrooms. From an inclusion perspective, teachers’ attitudes toward inclusive classrooms are a reflection of their beliefs and feelings which in turn, guide their behaviors or practices.

### **Factors Affecting Teachers’ Attitudes Toward Inclusion**

Teachers’ attitudes are one of the factors that influence the success of inclusion, although many other factors impact teachers’ attitudes as well. For example, political trends and cultural values may also play a role. In their multinational comparative study examining teachers’ attitudes toward inclusion, Sharma, Forlin, Loreman, and Earle (2006) surveyed 1,060 teachers from four countries: Australia, Canada, Hong Kong, and Singapore. They found that teachers held positive attitudes toward inclusion, but there were cultural variations. Teachers from Eastern institutions (i.e., Hong Kong, Singapore) had less positive attitudes toward inclusive education than their Western or Western-style counterparts.

Along with Western-style institutions being more open to inclusive education, Bowman also found a relationship between the legislative system and inclusive attitudes (cited in Avramidis & Norwich, 2002). Bowman stated that teachers in countries where

there were laws requiring integration had more positive attitudes toward integration, while teachers in countries that offered segregated education held less favorable views of integration. Additionally, Avramidis and Norwich (2002) hypothesized that in some countries (Ghana, the Philippines, Israel, and Taiwan) teachers had less positive attitudes toward inclusive education because none of these countries had a history of offering inclusive education to children with disabilities. These studies seem to indicate that different political, cultural, and educational contexts may impact the implementation of inclusive education (Hsieh et al., 2012) as well as the overall support for or resistance to this practice.

### **Supportive Attitudes Toward Inclusive Classroom**

Although teachers in many countries (e.g., Botswana, Malaysia, and UAE) agree with the concept of inclusion, they are much less willing to have students with special needs in their classrooms (Mukhopadhyay, 2014). For example, a sample of teachers in Botswana indicated an absence of critical knowledge, skills, and abilities in inclusive education (Mukhopadhyay, 2014). Malaysian teachers believed that inclusive education could improve students' social interactions and minimize negative stereotypes of students with disabilities. They also noted the need for clear guidelines on the implementation of inclusive education. Teachers supported the idea that if their level of competency was increased, inclusive education programming could be implemented successfully (Ali et al., 2006; Dukmak, 2013). A consistent theme across these studies appeared to be that although teachers support the idea of inclusion, they believed they lacked the knowledge and skills required to teach students with disabilities in general education classrooms.

A similar result was found in Thailand where Dapudong (2013) surveyed 310 general primary teachers using an adapted form of the Opinions Relative to the Integration of Students with Disabilities (ORI) survey to assess their knowledge and attitudes toward including students with learning disabilities in general education classrooms. The participants revealed positive attitudes, including beliefs, feelings, and actions, toward the inclusive education of students with learning disabilities. Similar to the participants in the studies mentioned above, primary teachers in Thailand reported needing more training, preparation, and advancement programs to enhance their knowledge and attitudes. The study showed that two-thirds of the participants did not have experience teaching students with disabilities in a general education classroom, more than half of them had not attended any training in special education, and the participants exhibited only moderate knowledge on the symptoms of Learning Disabilities (LD).

These findings seem to support the conclusion of Shevlin, Winter, and Flynn (2013) that the process of putting inclusive education into practice results in a complex mix of positive teacher beliefs, fears, and perceived inadequacies. Teachers' negative attitudes toward the practice of inclusive education may result in resistance toward this type of reform.

### **Resistant Attitudes Toward Inclusive Classrooms**

Teachers in many countries have a positive attitude toward inclusive education in theory but may hold a negative attitude toward inclusive education in practice. In fact, teachers in many countries hold negative attitudes toward inclusive education in both theory and practice. For example, Boer et al., (2011) analyzed 26 studies that examined

primary teachers' attitudes toward inclusive classrooms in countries such as Serbia, USA, Portugal, New Zealand, India, China, and the United Kingdom. Using a three component model of attitude, the researchers found that the majority of the studies showed that teachers held neutral or negative attitudes toward inclusion in terms of their beliefs and knowledge. The six studies that included a measure of the affectivity component revealed that teachers did not feel competent or confident in teaching students with disabilities.

When teachers object to inclusive practices, they often do so because of worries about how it will affect children who do not have special needs. For instance, Agbenyega (2007) found that teachers in Ghana did not believe students with disabilities belonged in a general education classroom and preferred that students with disabilities study in special schools. They believed that it would negatively influence the academic performance of students without disabilities if students with disabilities were included in the general education classrooms.

Some teachers also question the benefit of inclusive practices. Teachers in Ghana expressed concern that inclusive classrooms had only shown social benefits for students with disabilities, but believed the educational aspect was too difficult for students with disabilities and that these students were not able to follow the lessons. Unfortunately, Coutsocostas and Alborz (2010) also found limited support for inclusive practices among Greek teachers. They examined 138 Greek secondary teachers' perceptions of inclusive education and found that 17.5% of participants perceived that there were no advantages for students either with or without learning disabilities, and only 17.8% of participants perceived that there were benefits of inclusive education for all students.

Whether teachers held positive or negative attitudes, part of the concern was about their ability to educate students with special needs successfully. Most teachers in Ghana found it difficult to work within inclusive classrooms, and they viewed themselves as unable to effectively teach students with disabilities in general education classrooms (Agbenyega, 2007). Palestinian teachers also noted their lack of training in inclusive practices (Abu-Heran, Abukhayran, Domingo, & Perez-Garcia, 2014). In fact, teachers in Palestine expressed that they were aware of the reality and troubles in confronting the challenge of inclusive education, but noted that students without disabilities did not welcome students with disabilities in their schools. Moreover, the curriculum did not promote the integration process, and the school environment was not directed toward achieving integrated programming (Abu-Heran et al., 2014).

These varying attitudes toward inclusive classrooms across different countries seem to confirm, the idea of Hsieh et al. (2012) that different political, cultural, and educational contexts “may” impact the implementation of inclusion. One factor alone does not control teachers’ attitudes toward inclusive classrooms; it likely a mix of broad systemic factors (e.g. law, culture, and history) as well as more local variables such as the available supports and structures within each school. Yet another potential explanation for the diverse attitudes held by teachers may be partly accounted for by the use of different attitude measures.

### **The Measurement of Attitudes Toward Inclusive Classrooms**

There are a number of different instruments that have been used to measure teachers’ attitudes toward inclusive education. Boer et al., (2011) reviewed 26 studies that were published between 1998 and 2008, and focused on attitudes of general primary

teachers toward aspects of inclusion. They found that none of the instruments used measured the three components of attitudes (i.e., beliefs, affect, behaviors). The instruments tended to measure only one, or sometimes two components (Boer et al., 2011).

In order to address this gap, Boer, Timmerman, Pijl, and Minnaert (2012) attempted to develop a measure of teacher attitudes toward inclusive education, which was based on the three-component theory. Unfortunately, they concluded that they were unable to create items that measured the three attitude components with specificity. Boer et al. (2012) concluded that the three-component model was a theoretical model without an empirical basis.

Part of the difficulty in measuring the different aspects of attitudes was explained by Maio, Esses, and Bell (2012). When individuals have conflicting opinions about something, such as individuals who have both negative and positive feelings toward an object, this is called “intra-component ambivalence” (Maio et al., 2012, p. 71). As a result, individuals’ attitudes may be inconsistent with either their overall evaluation of the object or other components of their attitude. In sum, attitude inconsistency exists and interferes with our ability to measure attitudes. Therefore, some instruments that claim to measure teachers’ attitudes toward inclusive classrooms are based on dimensions of inclusion, rather than components of attitude. For example, the Impact of Inclusion Questionnaire (IIQ) measures teachers’ opinions about the effect of inclusion on the teacher, the target student, the classroom environment, and on students without disabilities (Cagran & Schmidt, 2011).

One popular measure that has been used to study teacher attitudes toward inclusion is the Opinions Relative to Mainstreaming Scale (ORM) developed by Larrivee and Cook in 1979. This instrument was revised in 1995 by Antonak and Larrivee, and then renamed the Opinions Relative to Integration of Students with Disabilities (ORI). The ORI is a rating scale that was designed to measure attitudes toward the integration of students with disabilities into general education classrooms. It is composed of four components; (a) benefits of integration, (b) integrated classroom management, (c) perceived ability to teach a student with disabilities, and (d) special versus integrated general education. The ORI is reported to have good psychometric properties (Antonak & Larrivee, 1995) and has been used internationally to study teacher attitudes. For example, Rakap and Kaczmarek (2010) used a translated version of the ORI to study teachers' attitudes toward inclusion in Turkey. When they conducted the factor analyses, they found only one-factor representing teacher attitudes instead of four factors found in the English version of the ORI. In 2013, Dapudong translated the ORI into Thai in order to measure primary teachers' attitudes toward inclusion of students with learning disabilities. He also substantially revised the instrument to measure the variables of interest in his study. The resulting instrument adapted from the ORI was composed of three parts; (a) demographics of the participants; (b) the level of knowledge in terms of legislation and symptoms of learning disabilities; and (c) the participants' attitudes toward inclusion. Unfortunately, Dapudong (2013) did not confirm the factor components in his study.

Most recently, Vaz et al. (2015) examined factors associated with teachers' attitudes toward inclusion with 74 primary teachers in Australia using the ORI. They

found that the ORI had high internal consistency, split-half reliability, and moderate concurrent validity. The ORI appears to be an important research tool for measuring teacher attitudes. However, its use with teachers in international samples may not yield the same psychometric properties as when it is used with a population of the United States. Nevertheless, there is some support for its use with a Thai sample.

### **Special Education in Thailand**

From a traditional Thai perspective, individuals with disabilities are often considered as useless, worthless, and as having no future. Thus, children with disabilities have historically been kept at home and refused an education. Despite the Primary Education Act in 1921 which stated that children of seven years of age needed to attend school until age 14, those with disabilities were allowed to stay at home because of their impairments (Hill & Sukbunpant, 2013; Sangnapaboworn, 2007). In 1939, Genevieve Caulfield, an American teacher who was blind, provided initial leadership in Thai special education. Caulfield was the first teacher who taught students with visual impairment in Thailand, developed Thai Braille characters, and she and her friends set up the Bangkok school for students with visual impairment (Hill & Sukbunpant, 2013). Her pioneering efforts demonstrated that students with disabilities positively benefited from educational opportunities.

In the early 1950s, the Ministry of Education started to become concerned about the lack of education provided to children with disabilities. The Ministry of Education identified the necessity of providing special education for slow learners, students with sensory or physical impairments, and those with chronic illness. For example, a school for the hearing impaired was established in 1954. In 1956, St. Gabriel's school permitted

students with visual impairments to participate in general education classrooms, becoming the first inclusive education classrooms in Thailand. One year later, the Ministry of Education started a pilot project to integrate students who were viewed as slow learners into seven Bangkok Metropolitan public schools (Kosuwan, Viriyangkura, & Swerdlik, 2014). Nevertheless, special education in Thailand began with separate schools for each disability (Narot, 2010), and for the most part, it has continued to reflect the segregation of students with disabilities.

In 1995, the Thai government proposed “Education for All,” which was intended to ensure that no child was kept from going to school as a result of physical, mental, social, or economic status. Subsequently, the National Education Act of Thailand in 1999 mandated that children with disabilities should have the chance to be included in general education programs in all schools (Carter, 2006). Although the National Education Act of 1999 was not considered an official special education law, it was the most prominent legislation that led to the implementation of special education in Thailand (Kosuwan et al., 2014).

The National Education Act of 1999 classified nine categories of disability that were considered eligible for special education services including (a) impairment of vision; (b) impairment of hearing; (c) impairment of intellect ability; (d) impairment of physical ability; (e) impairment of learning ability; (f) impairment of speaking and language ability; (g) impairment of behavioral, emotional, or social ability; (h) autism; and (i) multiple disabilities. These are fairly similar to the disability categories used in the United States and other countries. Furthermore, this Act outlined the right of these students to access basic education and special education:

Persons with physical, mental, intellectual, emotional, social, communication, and learning deficiencies; those with physical disabilities; or immobility; or those unable to support themselves; or those destitute or disadvantaged; shall have the rights and opportunities to receive basic education specially provided (Office of the National Education Commission, 1999, p. 9).

Although the specifics of how this education would be delivered was not detailed, “ministries, bureaus, departments, state enterprises, and other state agencies shall be authorized to provide specialized education in accord with their needs and expertise” (Office of the National Education Commission, 1999, p. 11).

This Act indicated that students with disabilities were allowed to attend general public schools and guaranteed that students with disabilities be given the chance to receive twelve years of compulsory education. After this Act, the education policy in Thailand appeared to move toward a more inclusive practice for individuals with disabilities (Carter, 2006). In the same year that the Act was passed, the Ministry of Education designated 1999 as the year of education for individuals with disabilities and set down several plans to expand educational opportunities for people with disabilities. For example, schools were encouraged to incorporate services for students with disabilities, and the practice of including students with disabilities into the general education classroom was promoted. Both of these efforts led to the improvement of special education in Thailand (Carter, 2006; Dapudong, 2013).

Nearly ten years passed before Thailand implemented its first official special education law, the Education Provision for People with Disabilities Act of 2008. This Act addressed the need for the education of individuals with disabilities from birth, or when first diagnosed, throughout their lives, and was designed to support their rights, services, and other resources as related to inclusive education. In fact, it was now illegal for

schools to deny entry to children with disabilities. Moreover, the Individual Educational Plan (IEP) was introduced in this Act for the first time. Educational institutions now had a responsibility to provide an update to the student's IEP at least once a year (Hill & Sukbunpant, 2013).

Thailand's special education laws have continued to develop and expand, as well as to incorporate broader coverage for students with disabilities. The Office of the Basic Education Commission (OBEC) announced that 2016 would be the year of collaboration for arranging education for students with special needs. This announcement outlined three operational guidelines: (a) early intervention: children with disabilities could access education services from early childhood or after their disabilities were diagnosed; (b) inclusive education: children with disabilities were to be served with quality education without discrimination; and (c) the transition from school to work: children with disabilities would be taught to become self-reliant (Pruekchaikul et al., 2016).

The practice of educating children with disabilities has come a long way in Thailand. In the last 60 years, the country has moved from refusing education to individuals with disabilities to providing for a broad range of services across the educational spectrum, from early childhood to transition into employment. However, certain challenges remain and one of the most common tensions remains the degree to which individuals are included in the general education setting.

### **Inclusion in Thailand**

Changes in global education helped to influence Thai education policy, especially the passage of the "Education for All" declaration. Additionally, the Jomtien World Conference of 1990 and the Salamanca Statement in 1994 were perceived to significantly

affect the development and establishment of the Thai inclusive education policy (Hill & Sukbunpant, 2013). The Ministry of Education began the project of establishing model schools for inclusion as a method for implementing policy into practice. In 2004, Thailand had 390 model inclusive schools all around the country and the number increased to 2,000 in the following year (Hill & Sukbunpant, 2013). Currently, there are 23,763 public inclusive schools and 644 private inclusive schools in Thailand (Kosuwan et al., 2014; Pruekchaikul et al., 2016).

The Ministry of Education has outlined six approaches to inclusive education. The first approach is the provision of a full-time inclusive classroom, also known as full-inclusion. This method allows students with and without disabilities to participate together in the same class for the entire school day. However, this approach is adopted under the condition that students with disabilities can be responsible for their studies, have abilities at levels near to those of their peers, and have no disruptive behaviors. Thus, most students with disabilities in full-inclusion classrooms have a high level of functioning.

The second and third approach both feature inclusive classroom settings with special education teachers coming into this setting to provide supports and services. Special education teachers have duties which include identifying areas of need, providing individualized education plans (IEP), and advising students with disabilities. Similar to this approach is the model known as inclusive classroom settings with mobile special education teachers. Students with disabilities study in the same setting as students without disabilities and receive special education from mobile special education teachers. Unlike special education teacher who is housed in one school or district, mobile special

education teachers work in several schools. This approach is frequently used in suburban areas that lack special education teachers.

When special education teachers are not available, teaching assistants often fill the role of providing support services to students. Through this fourth approach, assistant teachers deliver services to help students with disabilities gain better skills in academic and non-academic content. Typically, assistant teachers serve students in resource rooms. The fifth approach to inclusive education is for students to spend some of their school day in a special classroom. With this approach, students with disabilities go to special education classes for most of the day and attend general education classrooms for a few class periods. The last approach is the least inclusive as students with disabilities participate in a special classroom for the entire day. With this approach, students with disabilities go to special education classes for the whole school day. This approach mainly occurs when students with disabilities are low functioning and not ready to study with their peers (Narot, 2010; Onbun-uea, 2008).

As noted earlier, placing students with disabilities in appropriate education settings has been a controversial and often confusing issue. There are no guidelines as to how these decisions should be made regarding which students should be provided a particular type of inclusive setting. Although the U.S. Individuals with Disabilities Education Act (IDEA) is also somewhat unclear, there is an explicit statement that students should be served in the least restrictive environment possible. This statement contains two requirements: firstly, students with disabilities must be taught with students without disabilities in the general education settings to the maximum extent appropriate. Secondly, students with disabilities cannot be removed from the general education

settings unless education in those setting cannot be accomplished satisfactorily (Yell & Katsiyannis, 2004). On the other hand, there is no such statement in Thai law, and the final placement decisions are typically made by school administrators and are dependent upon on the inclusive options that a particular school can offer (Kosuwan et al., 2014).

### **Preparing Teachers for Inclusion in Thailand**

With the many special education reforms under way in Thailand, the emphasis has now focused on providing appropriate training to teachers so that they can provide inclusive education. The concept and practice of having students with disabilities educated in the general education classroom are a new to the Thai education system. Unfortunately, the legislative change occurred rapidly and without a focus on educating and preparing teachers how to effectively teach students with disabilities in the general education classroom (Dapudong, 2013). Because most of the inclusive models described above are facilitated by special education teachers, it is critical to consider the availability of these specially trained individuals to assist with inclusive decision-making. For example, there are 156 universities in Thailand, but only 14 of these have a special education program: nine universities offer a bachelor's degree, six universities offer a master's degree, and two universities offer a doctoral degree (Kosuwan et al., 2014).

In the year following the Act, it became clear that there were no teachers to carry out these inclusive programs because there were no training programs for general and special education teachers. In response, the government developed a program to provide training to teachers who were interested in special education. Teachers who already hold a teaching certificate can obtain a special education certificate by completing 200 hours of training and passing an examination. With this special education certificate, teachers

can earn a higher salary when teaching children with special needs in a special education classroom or including students with special needs in their general education classroom. Unfortunately, this approach has not been as effective as anticipated (Jetchamnonnuch, Visessuvarnabhumi, Apichatabutra, & Tinmala, 2011; Hill & Sukbunpant, 2013). Teachers only receive \$80 more each month (if they teach students with disabilities) which may not be enough compensation for the greater responsibility of teaching students with disabilities. Moreover, 200 hours of training is not likely to be sufficient to effectively prepare teachers to take on this role. For example, special education teachers in the United States attend four years of college, with two years of coursework focusing on special education programming in order to earn their degree with a major in special education. In comparison, the amount of training in special education as outlined by the Thai Ministry of Education does not seem like enough time to provide teachers with adequate knowledge and skills.

Although the Ministry of Education of Thailand has established several plans to improve special education, the country still lacks a sufficient number of teachers who are trained in special education. Numerous teachers feel unprepared to teach students with disabilities. The additional special education training is inadequate and remains inaccessible to all teachers (Carter, 2006). Further, there are problems in the management of inclusive education classrooms, such as an absence of curriculum adjustment or individualized learning and instructional approaches, a gap in teachers' knowledge of special education, and a lack of experience supervising and monitoring instruction (Thawiang, 2006). Well trained special education teachers could help address those gaps

by providing consultation, modeling differentiated instruction, and helping teachers to be more confident in their abilities to include students with special needs.

The ineffectiveness of special education teachers in Thailand also appeared in a report from the Office of the National Education Commission (ONEC), ten years after the implementation of the National Education Act of 1999. The report claimed that teachers who taught in inclusive classrooms did not have the adequate background knowledge to teach all students effectively (ONEC, 2009). Thailand lacks a sufficient number of trained teachers to provide special education instruction, most of the teachers who work in special education are temporary staff who do not have background knowledge in special education, and have never trained in special education (Narot, 2010). In conclusion, this lack of knowledge and experience is especially critical considering the number of students with special education needs who attend Thai schools.

### **Students with Disabilities in Thailand**

In Thailand, there were 1.6 million individuals with disabilities who registered as individuals with disabilities and only 404,602 persons with disabilities who registered with the Ministry of Education in 2016. Out of these registered persons, 337,144 students with disabilities attended 23,763 public schools (Pruekchaikul et al., 2016). As is represented in Table 1, the majority of students with disabilities who study in inclusive classrooms are diagnosed with learning disabilities (282,343 students) and overall students with learning disabilities make up the majority of students served in special education. The National Education Act of 1999 defined learning disabilities as brain dysfunctions that cause difficulties in learning or academic skills. The second and third

biggest groups are those students who have intellectual disabilities, and multiple disabilities which is defined as having more than one disability (Kosuwan et al., 2014).

One of the growing areas of disability in Thai society is that of Autism. In the Thai population, for every 10,000 children, 9.9 of them have been identified with autism with a ratio of four males to one female. In Thailand, children with autism are identified as having a deficiency in physical development, communication skills, and social interaction. However, this Act established autism as brain dysfunction which results in multiple disabilities in language and social advancement, social interaction, and limited behaviors or interests. Autism has an onset before the child is 30 months old (Kosuwan et al., 2014). Although there were approximately 200,000 children with autism in Thailand, only 0.5% of these children received any intervention (Hill & Sukbunpant, 2013). Currently, 5,176 of students diagnosed with Autism are served in inclusive schools (Special Education Bureau, 2016).

Table 1

*Numbers of Students with Disabilities Separated by Disability Type*

Types of Disabilities	Numbers
Impairment of vision	2,260
Impairment of hearing	1,383
Impairment of intellect ability	22,488
Impairment of physical ability	7,937
Impairment of learning ability	282,343
Impairment of speaking and language ability	2,606
Impairment of behavioral or emotional or social ability	5,006
Autism	5,176
Multiple disabilities	7,945
Total	337,144

(Special Education Bureau, 2016)

## **CHAPTER III**

### **METHODOLOGY**

Using survey research, the researcher explored the attitudes of public secondary school teachers in Thailand as related to inclusion of students with learning disabilities. Survey research designs can be cross-sectional or longitudinal; cross-sectional research collects data at one point in time, while a longitudinal design collects data over a period of time (Creswell, 2014). This study represented a cross-sectional method in that data were collected across the period of a few months.

This chapter focuses on the methodology used in this study including the participants, instrumentation, research design, and data analysis.

#### **Setting and Participants**

This research study took place in Thailand. All public schools in Thailand are under the Office of the Basic Education Commission (OBEC) through 225 educational service areas. The focus of this study was specific to teachers in secondary schools (Grades 7-12) of which there are 42 educational service areas. Because the research question of interest was on attitudes toward inclusive practice, the first criterion for selecting schools was that they be considered inclusive schools. The Bureau of Special Education Administration (2016) reported that there are 1,492 secondary inclusive schools in Thailand. The second criterion for selecting schools was that the schools must have more than 30 students who were identified with learning disabilities to make it more

likely that teachers in the schools would be familiar with teaching students with learning disabilities. Using these criteria, the researcher found 216 secondary schools that had at least 30 students with learning disabilities who had been identified for special education services. The last criterion for selecting schools was that there were at least some teachers in the schools who had attended the state mandated 200 hours of special education training, since training is one of the variables that the researcher wanted to measure. With this additional criterion, there were 164 possible schools that met all three criteria.

### **Sampling Procedures**

Thailand is commonly recognized as having four regions: north, north-east, central, and south. The researcher divided the potential population of schools (i.e., 164) into strata, according to location and criteria (described above). Thus, the researcher applied a stratified sampling process to obtain the desired sample. Additionally, this method helped to protect the identity of participants who were located in a more rural part of Thailand. At the time of the study, according to the Bureau of Special Education Administration (2016), 37 schools were located in the north, 104 schools were in the north-east, 17 schools were in the central region, and only six schools were in the south.

Since the number in each region was not equal, the researcher computed the relative percentage of schools in each region and then selected a corresponding representative ratio. For example, schools in the north represented 22.56% of the total sample that met criteria which corresponded to about six schools. This method was used to create a representative ratio to select schools from each region. Using this method, six schools were selected from the north region, 17 schools from the northeast, three schools from the central region, and one school from the south region, for a total of 27 schools.

These numbers were further divided in half to create a more manageable sample size. Therefore, the researcher collected data from teachers in three schools in the north, eight schools in the north-east, two schools in the central region, and one school in the south, for a total of 14 schools. In summary, the stratified sampling created a representative sample of the larger population of secondary teachers in Thailand, potentially enhancing the ability to generalize the findings.

The researcher selected the school(s) within each region to be included in this study by using a convenience sample method. That is, the researcher first targeted schools where she knew school staff in order to facilitate participation. The researcher contacted the known professional, usually a teacher, and asked about when the school started, when teacher meetings occurred, and whether it was possible to meet with the school principal. Through this method, the researcher approached 14 target schools and received permission from each of the schools' principals. In most instances, the researcher met with the school principal face to face, but some preferred to discuss study via telephone. The researcher described the study and asked permission to carry out the study in his or her school. Once permissions were obtained, the researcher went to the schools to distribute the survey to the entire teaching staff of participating schools by introducing the study and survey during a general teacher meeting. This method helped the researcher contact large numbers of participants in a relatively short period of time and at minimal cost.

Based on G\*Power 3.1 analysis for a linear multiple regression, a minimum sample size for a medium effect size with power = .95 and  $\alpha = .05$  was 119 participants (Faul, Erdfelder, Buchner, & Lang, 2009). All participants in this study reported having

experience teaching at least one or more students with learning disabilities. If any teacher responded that he or she had not had the opportunity to teach a student with learning disabilities, that individual's survey data was excluded from the data analysis. Moreover, Antonak and Larrivee (1995) suggested that if participants did not respond to any item on the ORI, a value of zero should be assigned to that item. Furthermore, if participants omitted responses to four or more questions, the ORI was not considered to be valid. These guidelines were used for this study.

Therefore, data were collected from a larger sample of participants in order to ensure that at least 119 useable surveys were available. No incentives were offered for completing the survey. From these 14 schools, 488 participants completed the questionnaire. There were 118 questionnaires that were excluded because of missing data (omitted more than three questions in the teachers' attitudes section, omitted important questions in demographic section or because the individuals reported not having experience in teaching students with learning disabilities). Thus, the researcher conducted the statistical analysis with the final sample of 370 participants.

### **Instrumentation**

The Opinions Relative to Integration of Students with Disabilities (ORI) was developed by Antonak and Larrivee in 1995. The purpose of the ORI was to measure teachers' attitudes toward the integration of students with disabilities into general classrooms and is comprised of four components: (a) Benefits of Integration, (b) Integrated Classroom Management, (c) Perceived Ability to Teach Students with Disabilities, and (d) Special Versus Integrated General Education. Antonak and Larrivee (1995) asked 433 teachers to complete the ORI, 16% of whom were special education

teachers and 84% were general education teachers. Based on this sample, Antonak and Larrivee (1995) reported that the ORI had a Spearman-Brown corrected split-half reliability estimate of 0.87, and the value of Cronbach's coefficient alpha homogeneity coefficient was 0.83. Since this time, the ORI has been used in several studies, including international research (including Thailand), to study teachers' attitudes toward inclusive classrooms (e.g., Dapudong, 2013; Rakap & Kaczmarek, 2010).

Specifically, Dapudong (2013) translated the ORI into the Thai language and administered it to 310 Thai primary general education teachers. In his study, Dapudong (2013) modified the ORI for his study by changing the term "general disabilities" to "learning disabilities." For example, the first ORI item states that "most students with disabilities will make an adequate attempt to complete their assignments" (Antonak & Larrivee, p.1, 1995). The modified version by Dapudong (2013) edited this item to read, "Most students with learning disabilities make adequate attempts to complete their assignments" (p. 2). Additionally, Dapudong (2013) added three more items on the ORI for his study. The original ORI had 25 items, but the ORI (Thai language version) has 28 items. In his study, Dapudong (2013) reported that the ORI (Thai language version) had a Cronbach's alpha of 0.71, and the validity was reported as favorable. For this study, the change in language to "learning disabilities" was maintained.

In addition to changing some of the content of the original ORI, Dapudong (2013) also made changes to the rating scale by using a 5-point Likert scale rather than the original 6-point Likert scale (forced choice), meaning that participants were offered a neutral mid-point choice in the Dapudong version of the ORI. Unfortunately, Dapudong did not provide the rationale for changing the rating scale, but the presence or absence of

a midpoint on a scale may produce distortions in the results (Garland, 1991). Therefore, in this study, the researcher kept a 6-point Likert scale as presented on the original ORI. By doing so, the researcher wanted to “force” participants to make a definite choice, rather than allowing participants to choose a neutral position.

Another minor change made by Dapudong was one item that was originally a reverse scored item (#14) was changed to a positively worded item. The rationale for this change was not provided. Therefore, the researcher kept this item as a negatively worded item, as in the original ORI, and made the appropriate conversion when scoring participant questionnaires as described below.

For the current study, minor changes were made to the Thai language version of the ORI. In the ORI (Thai language version), the first part is described “participant information” but was switched to become the second part of this research instrument. It also was expanded from seven items to ten items to ask about participants’ gender, age, educational level, types of teachers (general vs. special), years of teaching experience, training, workload, experience in teaching students with learning disabilities, students with learning disabilities in teachers’ current class, and teachers’ perceived competence. The questions that the researcher added to make it ten items rather than seven items were: “How many hours is your average workload (per week)?” “In your current class, do you have any students with learning disabilities?” and “How competent do you believe you are in teaching students with learning disabilities?” For the last question, How competent do you believe you are in teaching students with learning disabilities?, participants answered by selecting from a continuum of “Not at all competent,” “Somewhat,” “A little,” and “Very competent.”

Although the second part of the ORI (Thai language version) measured Thai teachers' knowledge on special education legislation and symptoms of learning disabilities, the current study was not designed to measure knowledge, and this section was omitted. Therefore, part 3 of the ORI (Thai language version) became Part 1 in this study. This section includes 28 items related to teachers' attitudes toward students with learning disabilities and their inclusion in general education settings. Some minor wording changes were made to use more inclusive and contemporary terminology, such as "inclusion" for "integration," "general education teachers" for "regular classroom teachers," and "general education classrooms" for "regular classrooms." To help avoid a positive response bias, 14 items were positively worded (1, 3, 5, 7, 10, 13, 15, 16, 17, 19, 21, 22, 25, and 28), and 14 items were negatively worded (2, 4, 6, 8, 9, 11, 12, 14, 18, 20, 23, 24, 26, and 27). The negatively worded items were reverse scored prior to calculation of the scale value. For example, the item "The behavior of students with learning disabilities will set a bad example for students without disabilities" has a negative value and is reverse coded for data analyses (Antonak & Larrivee, 1995).

Participants were asked to indicate their endorsement of each statement by selecting from a continuum of "disagree very much" to "agree very much" responses. A 6-point Likert type scale was applied, with -3 as disagree very much, -2 as disagree pretty much, -1 as disagree a little, +1 as agree a little, +2 as agree pretty much, and +3 as agree very much. To score the ORI, the researcher positively scored the 14 items that were worded negatively by reversing the sign of the response (i.e., from + to -, or from - to +). Using the method described by Antonak and Larrivee (1995) as well as Dapudong (2013), the researcher summed the 28 item responses and added a constant of 84 to the

total to eliminate negative scores. Thus, the final overall scores range from 0 to 168, with a higher score indicating a more positive attitude toward including students with learning disabilities in general education classrooms (Antonak & Larrivee, 1995; Dapudong, 2013).

In summary, the final research instrument used for this study was divided into two parts: (a) teachers' attitudes toward inclusion of students with learning disabilities in general education classrooms and (b) participant information (see Appendix B for the actual instrument). As the teachers' attitudes items are more important and interesting, the researcher placed the teachers' attitudes items before participant information items. In addition, Teclaw, Price, and Osatuke (2012) found that placing demographic questions (at the beginning or at the end of a questionnaire) does not affect the item response rate or the average of item mean scores.

The aim of translating an instrument into other languages is to achieve equivalence. There are a few different strategies to improve equivalence, such as one-way translation, translation by committee, or back translation (Hilton & Skrutkowski, 2002). One-way translation is the most frequently utilized method because of its straightforwardness, ease, and cost. The one-way procedure of translation occurs when a bilingual individual translates the original version into another language. In this way, the total comparability of a translated version depends on the translator's skill and knowledge. Dapudong (2013), who is not a native Thai speaker, translated the ORI from English to Thai using a one-way procedure which may have impacted the reliability and validity of the ORI (Thai language version). Although Dapudong (2013) stated that the ORI (Thai language version) was validated by three experts from the Philippines and

Thailand (validation by committee), validity and reliability may still be poor (Hilton & Skrutkowski, 2002). Therefore, the researcher used a back translation method once all of the changes described above were made (e.g. incorporating more contemporary terms). The researcher also reviewed the ORI (Thai language version) and made other wording and sentence changes based on her knowledge of the Thai and English language as well as her special education and school psychology background. Then, the researcher had a second translator, who is bilingual and a professional interpreter, translate the ORI (Thai language version) back to English. The researcher and the second translator consulted to identify discrepancies and made adjustments to correct any inconsistencies. If the original ORI and the back-translated version are identical, the ORI (Thai language version) is likely equivalent in meaning (Hilton & Skrutkowski, 2002). Although this back-translation approach is time-consuming, it helped to enhance the equivalence of the ORI (Thai language version) to the original instrument.

Since a number of years have passed since the original ORI was developed and ideas and laws about special education and inclusive environments have expanded, the researcher wanted to establish content validity to ensure that the sample of items adequately reflected contemporary ideas about inclusion (Salkind, 2014). The researcher asked three professors in psychology and special education who are bilingual (Thai and English) to review the test items measuring attitudes toward inclusion of students with learning disabilities in general education classrooms. The suggestions of these experts were incorporated and translated/back translated using the method described to develop the final research instrument. The experts' suggestions and back translating process made some change on the research instrument; for example, the original ORI used "classroom

procedures” and “freedom,” when back translated used “instruction” and “independence” respectively. However, the experts and translators stated that both words had a similar meaning in the Thai language.

### **Pilot Study**

To determine the reliability of the “new” research instrument, the researcher used a pilot study with a population of 30 Thai general and special education teachers. According to Cresswell (2014), pilot testing is essential for establishing the content validity and clarifying questions. Internal consistency reliability is used to ensure that all the items in the research instrument measure the same construct. Cronbach’s alpha coefficient ( $\alpha$ ) is an exceptional measure to determine internal consistency (Salkind, 2014). For research purposes, Cronbach’s alpha coefficients between 0.70 and 0.80 are viewed as acceptable, while in the clinical setting the minimum value that is acceptable of Cronbach’s alpha is 0.90 (Bland & Altman, 1997; Tavakol & Dennick, 2011). As this study was not a clinical application, the researcher utilized a cut off of 0.70 to determine acceptable reliability. Additionally, participants in the pilot study were asked whether there were any items that were unclear or that could be worded differently. These suggestions were incorporated into the final revision of the instrument.

Pilot study data were collected from March to April 2017 with a sample of secondary teachers (n=30) from Bangkok who was known to the researcher. This means the researcher chose the participants in this pilot study by using a convenience sample. Ten teachers from three different schools agreed to participate in this pilot study. The aim of the pilot study was to check the wording of the questionnaire, participant comprehension of the instructions, and the reliability of the instrument. Johanson and

Brooks (2010) suggested that 30 participants from the population of interest are a reasonable minimum number of participants to enroll in a pilot study. Teachers from Bangkok were selected for this pilot sample because of the many secondary schools located in the city and because the researcher was not going to use this city as a data collection site for the main study. No pilot data were included in the main study.

The participants indicated that the questionnaire was clear and they were able to follow the logic of the questions. Only one word in the questionnaire was found to have incorrect spelling, and this was corrected. The participants had no suggestions for changing or rewording any questions.

Cronbach's alpha was used to measure the internal consistency of this instrument resulting in a reliability estimate of 0.89. During the pilot phase, it was discovered that one item (#14) was negatively correlated with the other items. In the original ORI, this item had been reverse scored; but as noted, Dapudong (2013) had worded it positively in his translation. Even though that positive wording was used in the pilot, the item still performed as a reverse scored item. Thus, the item was reworded to correspond with the original ORI (that is, returning it to a reverse scored item). Therefore, the reliability was considered to be acceptable, and the decision was made to proceed with the modified Thai ORI instrument.

### **Data Collection Procedures**

Prior to beginning, approval to conduct this study from the University of Northern Colorado Institutional Review Board was obtained. There is not a similar IRB consent process in Thailand. Using the sampling procedure described above, the principal of each identified school was approached for permission to survey teachers.

The researcher asked for the principals' permission to collect data at their respective schools. They were willing to participate, the researcher asked to visit the school during one of the teachers' conferences (a time when all or most teachers were gathered together). With the principals' permission, the researcher visited the schools according to the date and time of the teachers' conferences. After these meetings, the researcher briefly described the study and informed the teachers of the research procedures and their rights, both orally and in writing, and invited them to participate in the study. All teachers in attendance at the meeting were invited to participate. These data were collected across a two-month span, May to June 2017; all data were collected by the researcher using a paper-and-pencil survey method.

After explaining the study to the teachers, the questionnaire was handed out to the teachers. The researcher asked the teachers to read the cover letter. The cover letter described the purpose of the study, the questionnaire length, the confidentiality protection, and the participants' risks and benefits. The cover letter also identified that by completing the questionnaire, the participants were giving their consent for participation. If the teachers did not want to participate, they could keep the questionnaire or return it to the researcher. Teachers who agreed to take part in the study then completed the questionnaire while the researcher waited for them to fill it out, which took approximately 10-15 minutes to complete. Once teachers completed the questionnaire, they were asked to place their questionnaires in a box by the door before leaving the conference room. Once all teachers had left the room, the completed questionnaires were

collected by the researcher. No identifying information appeared on these questionnaires. However, the surveys were printed on different colored paper in order to identify the regions (north, north-east, central, or south) from which data were collected. This procedure was completed at each of the identified schools until all data were collected.

The completed questionnaires were maintained in a locked file cabinet in the home office of the researcher. The raw data from the completed questionnaire were transferred from paper to a Microsoft Excel spreadsheet, and responses to each question were assigned with numerical values for the data analysis. Additionally, the Excel spreadsheet was stored on a password-protected computer, and only the researcher had direct access to the information. Both the completed survey and transferred data will be retained for three years and then shredded in accordance with UNC IRB policies.

### **Data Analysis Procedures**

The Statistical Package for the Social Sciences (SPSS) version 24 was used for data analysis. Both descriptive and inferential analyses were conducted and presented in narrative and table format as suitable. Descriptive statistics were used to analyze the demographic characteristics of teachers who participated in the study and to report the results for frequency, the range of scores, and means for all variables.

A Cronbach's alpha was used to determine the internal consistency of the survey with these samples to determine the reliability of the research instrument. The mean scores and standard deviations of teachers in each region were compared to determine the appropriateness of combining these different samples to answer the broader research questions.

Antonak and Larrivee (1995) stated that the ORI was composed of four factors: (a) Benefits of Integration, (b) Integrated Classroom Management, (c) Perceived Ability to Teach Students with Disabilities, and (d) Special Versus Integrated General Education. On the other hand, Dapudong (2013) stated that the ORI (Thai version) was categorized into three components; (a) beliefs, (b) feelings, and (c) actions. However, these factors appeared to be more conceptual than statistical. Because of changes and updates, the researcher utilized an Exploratory Factor Analysis (EFA) in this study to determine the factor structure of the research instrument. It is expected that with the small sample, and based on previous research, only one factor would emerge.

Prior to running the data analysed to answer the research questions, the researcher conducted various analyses to ensure that all assumptions were met (i.e., normality, linear relationship, and multicollinearity). Once these assumptions were checked, the researcher applied a linear multiple regression statistical model to identify predictive patterns among variables (e.g., hours of training, years of teaching, and workload). It was expected that these variables would be important to understanding teachers' attitudes toward inclusion of students with learning disabilities in their general education classrooms. An alpha of  $<0.05$  was used as the level of significance in all analyses.

## **CHAPTER IV**

### **RESULTS**

Participants included in the final data analysis were 370 Thai secondary teachers. All information was transferred from questionnaires to SPSS for analysis. Multiple linear regression was used to discover whether the selected independent variables (i.e., hours of training, years of teaching experience, and hours of workload) would predict the dependent variable (teachers' attitudes toward inclusion). This chapter presents a summary of the demographics of the sample, data analysis procedures, and results of the data analysis.

#### **Descriptive Data**

A total of 370 participants were categorized as follows: 92 North teachers (24.9%), 72 Central teachers (19.5%), 167 North-East teachers (45.1%), and 39 South teachers (10.5%). Participants were from every region of Thailand and were all Thai by nationality and ethnicity. A total of 121 (32.7%) participants were male, and 249 (67.3%) were female. The majority of teachers had earned a Bachelor's degree ( $n = 241$  or 65.1%), with the rest having earned a Master's degree ( $n = 128$ ; 34.6%) and only one participant with a Doctorate. Most teachers ( $n = 359$  or 97%) had majors not related to special education, such as Math, Science, Music, and Social Studies; and only 11 (3%) teachers reported majoring in a subject similar to special education, such as guidance and counseling, developmental psychology, or mental health. Only 5 (1.4%) of the

participants reported themselves as special education teachers. Table 2 summarizes participants' training, experience, and workload, divided by regions.

Table 2

*Mean of Demographic Variables in Each Region*

Region	Hours of training		Years of experience		Hours of workload	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
North	12.84	34.50	17.27	11.09	26.11	6.14
Central	11.49	28.48	18.56	14.51	25.83	7.07
North-East	7.18	46.89	9.57	7.87	25.72	9.38
South	12.95	21.18	16.08	13.30	25.23	3.79
Total	10.03	38.63	13.92	11.53	25.79	7.75

Across the four regions, teachers reported a very similar number for the mean hours of workloads. This number was surprisingly low considering that the Ministry of Education determines that Thai teachers work the hours of 8:30 am to 4:30 pm during the school week from Monday to Friday (Ministry of Education, 2004). Therefore, teachers must be in schools at least eight hours a day or 40 hours per week. However, the mean number of hours reported by the participants was 25.79 hours a week. It is suspected that teachers may have only reported the hours that they spent with their students rather than reporting the additional time that they use for conducting classroom research, writing lesson plans, and doing multiple administrative tasks. Therefore, post-data collection, the

researcher interviewed four teachers about how they answered the workload question. All teachers confirmed that they only provided the number of hours in the classroom directly working with students. Future studies will want to provide a more detailed question to ensure an accurate account of teacher workload.

In contrast, the mean of hours of special education training was quite different across regions. For example, in the North-East, the number of special education training hours appeared to be lower than any other region (by 4.5 to 5 hours). The North, Central, and South regions were fairly similar in the mean number of hours of training (i.e., 12.84, 11.89, and 12.95). Generally, the population in the North-East region of Thailand has the highest level of poverty and is the least developed. However, the North-East region also had the highest number of small schools (some with fewer than 120 students). As the North-East region has so many schools, the Ministry of Education opens many teacher positions in this region each year. Unfortunately, many teachers may work in the North-East region for only one to two years before moving to another region (Hays, 2013; Jitsuchon & Richter, 2007; Office of the Basic Education Commission, 2017). It is difficult to determine why so many teachers move from this region, but this trend may be reflected in the relatively lower number of mean years of teaching experience and possibly, the fewer hours of special education training. Nevertheless, these results support those of Thawiang (2006) who studied the management of inclusive schools specific to the North-East region of Thailand. Thawiang (2006) stated that schools in the North-East region of Thailand were not ready to provide inclusive education to students with special needs. The problems encountered included gaps in teachers' knowledge in special

education, lack of teacher experience monitoring instruction, and limited skill in making curriculum adjustments.

It is important to note that the number of participants in each region was not equal across regions; and thus, the number of participants on which the mean was based is not equivalent. As the number of participants in the North-East region was higher than other regions, it is possible that this greater number of participants accounted for more stable means of experience and training that were different from any other region. However, although this subgroup difference is important to note, the region was not the variable of interest in this study. However, the researcher was aware and careful when analyzing these data as there were differences across regions.

### **Description of Attitudinal Scores**

All surveys were scored consistently with instructions for the original Opinions Relative to Integration of Students with Disabilities (ORI), including all items that needed to be reverse scored as appropriate. Once the researcher addressed the reversed score items, a constant was added to eliminate negative scores. Then, the 28 items were totaled and used to represent an index of the teachers' attitudes toward inclusion of students with learning disabilities into general education classrooms. A higher score implied a positive attitude, while a lower score indicated a negative attitude, with possible scores ranging from 0 – 168. Results showed a range of scores from 40 to 140 with the average score of 88.49 and the standard deviation of 16.75. On the item level, the average item rating was 0.16 (6-points rating scale; -3 to 3). If the researcher used the score of 84 as a cut-point (scores lower than 84 indicated negative attitudes), the results indicated that 63.6% of the participants held slightly more positive attitudes toward

inclusive classrooms. Although the majority of participants held positive attitudes toward including students with learning disabilities into general education classrooms, there appeared to be a lot of variation in their responses. The results correspond to Dapudong (2013) who found that Thai teachers generally held a positive attitude toward inclusion of children with learning disabilities in general education classrooms.

### **Reliability**

Cronbach's alpha of the research instrument in the pilot study was 0.89. A Cronbach alpha reliability analysis was conducted to measure the internal consistency with the entire sample ( $n = 370$ ) and yielded a Cronbach's alpha of 0.81. Cronbach's alpha coefficients between 0.70 and 0.80 are viewed as acceptable for research purposes, and the researcher utilized a cut-off of 0.70 to determine acceptable reliability. Therefore, the reliability of this instrument with the current sample was considered to be acceptable. Although this high value for Cronbach's alpha indicates good internal consistency for this scale, it was also a bit lower than expected and might suggest that the scale was not unidimensional with this sample. Therefore, the researcher conducted a factor analysis to determine the dimensionality of the scale.

### **Exploratory Factor Analysis (EFA)**

The original Opinions Relative to Integration of Students with Disabilities (ORI) was designed to measure teachers' attitudes toward the integration of students with disabilities into general classrooms. Antonak and Larrivee (1995) based their factor structure on the responses of 433 teachers and found four components that were labeled: (a) benefits of integration, (b) integrated classroom management, (c) perceived ability to teach a student with disabilities, and (d) special versus integrated general education.

Instead of using of factor scores as subscale scores, Antonak and Larrivee (1955) use one overall score. The translated instrument used by Dapudong (2013) did not include a confirmation of these factor components. Therefore, the researcher wanted to determine whether the factor structure proposed by Antonak and Larrivee (1995) was similar for participants in this study.

Twenty-eight items were examined and found to be appropriate to run a factor analysis. Firstly, the Kaiser-Meyer-Olkin (KMO) index was assessed to measure sampling adequacy. With these data, the value was 0.85 which was considered satisfactory, as it was above the commonly recommended value of 0.60. Secondly, Bartlett's test of sphericity was significant ( $\chi^2 = 3478.11$ ,  $df = 378$ ,  $p < 0.01$ ). Thirdly, the communalities were all above 0.30 which confirms that each item shared some common variance with other items (Dugard, Todman, & Staines, 2010). Finally, Costello and Osborne (2005) suggested that larger numbers of participants tended to produce solutions that were more accurate. However, there is no rule regarding sample size for factor analysis. In this study, the subject to item ratio was around 13:1, which was equal to or larger than the ratio used by the majority of the studies that they reviewed.

### **Six and Three Factor Solutions to the Opinions Relative to Integration of Students with Disabilities (ORI)**

The number of factors were calculated based on a principal components exploratory factor analysis with a Varimax rotation. There are different methods for determining factors. For example, if the researcher retained all factors with Eigenvalues greater than 1.0, there would be six factors. The initial Eigenvalues indicated that the first six factors explained 20.63%, 13.05%, 9.88%, 4.77%, 4.10%, and 3.89% of the variance,

respectively. In contrast, there would be three factors if the researcher used a scree plot analysis to determine the number of factors. The first three factors explained 19.85%, 13.25%, and 9.98% of the variance, respectively.

The researcher could retain all six factors with Eigenvalues greater than 1.0 because these values provided good evidence for the factors; all item loadings were above 0.30 with only a few items cross-loading, and no factors had fewer than three items (Costello & Osborne, 2005). These analyses indicated that there were six distinct factors for the 28 items underlying Thai secondary teachers' responses to the ORI Thai version (see Appendix E for factor loadings and communalities). Factor 1, labeled "Academic, behavior, and social interaction of students in inclusive classrooms," was composed of seven items accounting for 20.63% of the variance. Factor 2, labeled "Inclusive classroom management," was composed of six items accounting for 13.05% of the variance. The items in this factor (8, 10, 19, 21, 25, and 28) were related to teachers' abilities to manage their classrooms when students with learning disabilities were included. Factor 3, labeled "Benefits of inclusive classrooms," was composed of five items accounting for 9.88% of the variance. The items comprising this factor (1, 3, 5, 7, and 17) were related to the benefits of inclusive classrooms to students with and without learning disabilities.

Factor 4, labeled "Special education," was composed of four items accounting for 4.77% of the variance. The items in this factor are 20, 23, 24, and 27. Factor 5, labeled "Expectations of teachers in inclusive classroom," was composed of three items accounting for 4.10% of the variance. The items (15, 16, and 22) refer to the perceived ease or difficulty for teachers working in inclusive classrooms. Last, factor 6 was labeled

as “Disadvantages of inclusive classrooms.” This factor was composed of three items accounting for 3.89% of the variance. The items (2, 4, and 9) showed the disadvantages of the inclusive classrooms.

The findings suggested there may be six factors that account for the variation in the ORI: Thai version item responses. There were two factors that were similar to the original ORI, including: (a) Factor 2 “Inclusive classroom management” and “Integrated classroom management” on the original ORI; and (b) Factor 3 “Benefits of inclusive classrooms” and “Benefits of Integration” on the original ORI. In addition, Factor 4 (special education) on this instrument was very similar to the “Special versus integrated general education” factor on the original ORI because both of these factors addressed issues related to special education. Interestingly, factors related to student interactions, instructional variables (e.g., time and patience), and potential disadvantages emerged as separate factors for the Thai secondary teachers.

In contrast, if the researcher considered the data using a scree plot analysis, three factors were retained. Factor one, labeled “Students in inclusive classrooms versus students in general education classrooms,” was composed of eleven items accounting for 19.85% of the variance. The items in this factor are 4, 6, 9, 11, 12, 14, 18, 20, 23, 24, and 27. Factor two, labeled “Inclusive classrooms management,” was composed of eight items accounting for 13.25% of the variance. The items in this factor are 2, 3, 8, 10, 19, 21, 25, and 28. Last, factor three, labeled “Benefits and expectations about inclusive classrooms,” was composed of nine items accounting for 9.98% of the variance. The items in this factor are 1, 5, 7, 13, 15, 16, 17, 22, and 26. The finding suggests there all three factors similar to the original ORI, which are “Special versus integrated general

education,” “Integrated classroom management,” and “Benefits of integration” in the original ORI. The items in “Perceived ability to teach a student with disabilities” factor (original ORI) did not seem to emerge as its own factor for the ORI: Thai version.

### Correlations Between Factors

The researcher conducted correlations between both the three factor and six factor solutions to determine how the factors were related to the overall construct of teacher attitudes toward inclusion. The researcher calculated a correlation between six factors (based on the Eigenvalues criteria) and found that there were factors that were not significantly correlated with each other. When this occurs, it suggests that it is not appropriate to interpret an overall score.

Table 3

#### *Correlation among the Six Factors on the ORI*

Factors	1	2	3	4	5	6
1	-					
2	0.29**	-				
3	0.33**	0.43**	-			
4	0.54**	-0.04	0.19**	-		
5	0.04	0.22**	0.41**	0.08	-	
6	0.36**	-0.04	-0.03	0.37**	0.00	-

In contrast, when the researcher calculated a correlation using three factors (based on the screen plot analysis), all factors were significantly correlated with each other (as seen in Table 4) suggesting that this solution yielded three subcomponents that were significantly correlated suggesting a unidimensional construct.

Table 4

*Correlation among the Three Factors on the ORI*

Factors	1	2	3
1	-		
2	0.26**	-	
3	0.26**	0.43**	-

The correlations between factors range from 0.26 to 0.43. Although a multi-factor structure emerged, it was considered preliminary at this point. On the basis of these results, it was concluded that it would be appropriate to treat the ORI as a unidimensional scale. The factor analysis in this study was completed to consider whether the ORI: Thai version was similar to the original version. As noted, three variables appeared to be fairly similar, suggesting that there were some unique aspects to how Thai secondary teachers perceived inclusion practices as compared to the original sample. The aim of the study was not to develop a new instrument for measuring teachers' attitudes toward inclusive classrooms, only to determine whether the instrument was adequate for use with this new population. The researcher did not compute the homogeneity and reliability of the factors, therefore, use of the ORI: Thai version subscale scores could not be defended. However,

with additional analyses, future research may include subscale scores for differential prediction of attitudes.

In sum, the instrument proved to have acceptable reliability with this population, but had a slightly different factor structure yielding both three and six factor solutions. The three factor solution appeared to be the most cohesive with all factors being significantly related to one another, in contrast to the six factor solution. In addition, items loading on each three factor appeared to be grouped in a manner that made conceptual sense (e.g., items that highlighted the disadvantages of inclusion were grouped on item 1) in that they represented teachers' attitudes toward inclusive classrooms. The three factors may be considered as components of general construct of including students with learning disabilities into general education classrooms. Therefore, as consistent with the overarching research question regarding attitudes toward inclusive practices, only the total score was used for teachers' attitudes toward inclusive classrooms.

### **Preliminary Analyses**

Before conducting the data analysis for the three hypotheses, the researcher ensured that the variables of interest met appropriate statistical assumptions. For example, data were examined for missing items, normality, and linearity to assure the effectiveness and appropriateness of using linear regression. There were no missing data. Additional analyses to rule out outliers, multicollinearity, independent errors, and other threats were conducted and described below.

**Outlier.** Data are not considered to have significant outliers when the minimum value of the standardized residual is equal to or below -3.29, or the maximum value of the

standardized residual is equal to or above 3.29 (Field, 2009). There were outliers in these data as the standardized residual was between -2.94 and 4.04. Consequently, the researcher removed the two participants who were significant outliers. The researcher repeated this analysis with 368 participants, and the resulting analysis indicated that the data contained no outliers (Std. Residual Min = -3.01, Std. Residual Max = 3.24).

**Multicollinearity.** The presence of multicollinearity was examined by reviewing the Tolerance and Variance Inflation Factor (VIF) in the Collinearity Diagnostic table produced by SPSS. The Tolerance is the percentage of the variance in a given predictor that cannot be explained by other predictors. The VIF is the amount of inflation attributed to the standard error of the regression coefficient. The researcher needs to be concerned over multicollinearity when the Tolerance value is less than 0.2, or the VIF value is greater than 5 (Field, 2009). The researcher found that multicollinearity was not a concern (Experience, Tolerance = 0.97, VIF = 1.03; Training, Tolerance = 0.97, VIF = 1.03; Work load, Tolerance = 0.99, VIF = 1.01). Another way to identify the multicollinearity is to look at the condition index. When the condition index of the final model exceeds 30, a multicollinearity problem arises. The higher the condition index is, the greater the multicollinearity problem (Charry, Coussement, Demoulin, & Heuvinck, 2016). In this study, the condition index of the final model was 8.16, which indicates there were no multicollinearity problems.

**Independence of errors.** Durbin-Watson statistics were computed to assess the independence of errors. The suggested resulting values should range between 0 and 4 (Field, 2009). In this study, the data met the assumption of independent errors with a Durbin-Watson Value of 1.63.

### **Random normally distributed errors, homoscedasticity, and linearity.**

Examination of the histograms of the standardized residuals suggested that the distributions appeared normal. The normal P-P plot of standardized residuals showed points that were not completely on the line but followed the 45-degree line. In addition, the skewness and kurtosis value was in the range of  $\pm 1.00$  and considered to be in the range of the normal curve (Meyers, Gamst, & Guarino, 2013). The skewness (0.41) and kurtosis (0.96) value for the majority of the 28 items on the questionnaires were within a tolerable range for accepting a normal distribution. Finally, the scatter plot of standardized residuals indicated that the data met the assumption of homogeneity of variance and linearity (Charry et al., 2016).

The results of these analysis, and resulting corrections (i.e., removing the data from two participant cases) indicated that all assumptions were met and within acceptable limits. Thus, the researcher determined it was appropriate to conduct the planned analysis procedures with the remaining 368 respondents.

### **Multiple Linear Regression**

A multiple linear regression was conducted to predict teachers' attitudes toward inclusion of students with learning disabilities based on hours of training, years of teaching experience, and hours of workload (see Table 5). Using the enter method, the regression model indicated that hours of training, years of teaching experience, and hours of workload were significant predictors of teachers' attitudes toward inclusive classrooms ( $F(3, 364) = 12.14, p < 0.01$ ). All three independent variables contributed significantly to the model, though the hours of workload was the greatest contributor. The effect size of  $R^2$  was 0.09, meaning that 9% of the total variance in teachers' attitudes was accounted

for by the independent variables (hours of training, years of teaching experience, and hours of workload). Participants' predicted attitudes were equal to  $83.69 + 0.12(\text{training}) - 0.20(\text{experience}) + 0.25(\text{workload})$ . In summary, hours of training ( $\beta = 0.12, p < 0.01$ ), years of teaching experience ( $\beta = -0.20, p < 0.01$ ), and hours of workload ( $\beta = 0.25, p = 0.02$ ) were significant predictors of teachers' attitudes toward inclusion.

Table 5

*Multiple Regression Results Predicting Teachers' Attitudes toward Inclusive Classrooms*

Measure	$\beta$	$p$
Constant	83.20	0.00
Hours of training	0.12	0.00
Years of experience	-0.20	0.01
Hours of workload	0.25	0.02

**Summary of hypotheses testing.** For hypothesis 1, hours of special education training ( $\beta = 0.12, p < 0.01$ ), the  $\beta$ -value indicated that as hours of training increased by one unit, teachers' attitudes increased by 0.12 units. This interpretation was true only if the years of teaching experience and workload were held constant. In addition, the hours of special education training was significant in predicting teachers' attitudes toward inclusion of students with learning disabilities in general education classrooms. Higher hours of training in special education were related to more positive attitudes toward inclusive classrooms. For hypothesis 2, years of teaching experience ( $\beta = -0.20, p < 0.01$ ), the  $\beta$ -value indicated that as years of teaching experience decreased by one unit

score (e.g., teachers with less experience), teachers' attitudes increased by 0.20 units. This interpretation was true only if the hours of training and workload were held constant. Teachers who had more positive attitudes toward inclusive classrooms had fewer years of teaching experience.

Finally hypothesis 3, hours of teachers' workload ( $\beta = 0.25, p = 0.02$ ), the  $\beta$ -value indicated that as hours of teachers' workload increased by one unit score, teachers' attitudes increased by 0.25 units. This interpretation was true only if the hours of training and years of teaching experience were held constant. Teachers' workload was significant in predicting teachers' attitudes toward inclusion of students with learning disabilities in general education classrooms. In an unexpected finding, teachers who reported more hours of workload presented more positive attitudes toward inclusive classrooms. In addition, data indicated that hours of teachers' workload was the best predictor of teachers' attitudes toward inclusive classrooms

## **CHAPTER V**

### **DISCUSSION**

Education in Thailand strives to be more inclusive, and understanding teachers' attitudes is important to supporting the implementation of inclusive education practice. Thus, it is essential to understand the kinds of factors that affect these attitudes. The overarching purpose of this study was to better understand the attitudes of Thai secondary teachers toward the inclusion of students with learning disabilities and to explore those factors that seemed to correspond with more favorable attitudes. Data were collected from 370 Thai secondary teachers in all regions of Thailand using a modified and translated version of the Opinions Relative to Integration of Students with Disabilities (ORI) to examine their attitudes toward inclusive classrooms. This chapter summarizes the findings of this study and offers strategies for policy, practice, and teacher preparation as to how the information can be utilized relative to Thai secondary teachers' attitudes toward inclusive classrooms.

Based on previous research, it was expected that teachers with more special education training would hold more favorable attitudes toward the inclusion of students with learning disabilities. The findings did support this expectation as the number of hours of special education training positively predicted teachers' attitudes toward the inclusion of students with learning disabilities in general education classrooms. The skills

and knowledge that teachers had acquired during their training might contribute to their positive attitudes. The findings of this study were consistent with previous research demonstrating that training in special education and inclusion is positively related to teachers' attitudes toward inclusive classrooms (Avramidis & Kalyva, 2007; Rakap & Kaczmarek, 2010). Sadly, the majority of participants (60.3%) in this study did not have any specific training in special education. The mean hours of this type of training was only 10 hours as compared to the 200 hours established by the Thai government for teachers who are interested in teaching special education. In fact, there were only three participants who had completed 200 hours of training and one participant who completed 600 hours of training in special education, suggesting that the mean of 10 might be a high estimate. Additionally, these results seemed to suggest that few teachers were pursuing the training hosted by the Thai government, especially those teachers in rural areas who may not have adequate access to these classes.

Teachers in the North-East, who represented the largest percentage of the sample (45%), reported the least amount of training (a mean of about seven hours as compared to the group mean of ten). This area of Thailand is more rural and may suggest that there is limited access to ongoing professional development in this part of the country. If the researcher excluded the mean of hours of training in the North-East region, the overall mean of hours of training was 12.42. The difference between this mean and the mean number of hours of training in the North-East region (5.24) becomes especially apparent. Regardless, the low number of training hours in special education was well below the suggested 28 hours of training required to positively influence teachers' attitudes (Lifshitz et al., 2004). Overall, these results confirm the findings of Carter (2006) who

stated that Thailand has a serious shortage of teachers who are specialized in special education. The majority of secondary teachers in this study had not pursued advanced training in special education and given the discrepancy between regions, the training may be inaccessible to many general education teachers. In this study, only five (1.4%) teachers reported that they were special education teachers.

Another factor that was believed to affect teachers' attitudes toward inclusion was their years of teaching experience. Although the literature was somewhat mixed on this issue, it was believed that teachers with fewer years of teaching experience would have more positive attitudes toward inclusion. After the National Educational Act of Thailand in 1999, every teacher education program began to provide special education or inclusive classrooms courses. Thus, teachers who were educated more recently (i.e., those with less experience) would have had these courses and, as a result, experienced more positive attitudes toward inclusion. For example, Kimble (2017) reported that participants who had taken four or more special education courses were more likely to agree (82%) with the statement that students with mild to moderate disabilities should be educated to the fullest extent possible with students without disabilities as compared to participants who had three or fewer special education courses while in college. Therefore, the differences between those with more or less experience may simply reflect the likelihood of having had more special education training.

Specific to Thai populations, the findings of this study were opposite to those of Dapudong (2014) who studied Thai primary teachers' attitudes and knowledge toward inclusive classrooms. In his study, Dapudong (2014) found that teachers who had 6-10 years of teaching experience had more favorable attitudes than those teachers with less

than six years of teaching experience. Dapudong (2014) hypothesized that teachers with fewer years of teaching experience may be more resistant to inclusive practices because they had not had the chance to benefit from proper training. It is not clear why the opposite was found in this study; it is possible that the expectations of teaching in a secondary setting has different demands for teachers. For example, in primary settings, teachers may be the first to identify that students are having learning challenges and experience of a period of confusion and struggle as they try to meet the needs of students with unidentified learning disabilities. By the time students have reached the secondary level, their learning disabilities have likely been identified and teachers have established learning plans for these students.

Internationally, other studies have found a trend toward more negative views of inclusion among teachers with more experience. The findings of this study were consistent with those of Coutsocostas and Alborz (2010), Boer et al. (2011), Hwang and Evans (2011), and Dukmak (2013) all reported that teachers with more years of teaching experience held more negative attitudes toward inclusive classrooms. Teachers with less teaching experience may have more exposure to current thinking as related to disabilities and may have been better prepared to teach students with disabilities. Unfortunately, this survey format did not allow the researcher to understand why teachers held certain attitudes toward inclusion of students with learning disabilities. As noted, all participants in this study reported having experience teaching students with learning disabilities, but not the extent of that experience. More information about years of teaching experience in inclusive settings may have provided more insight into the relationship between experience and attitudes.

An unexpected finding was that teachers' workload positively predicted attitudes toward inclusive classrooms. The results of this study indicated that if teachers reported having more workload hours, they held more positive attitudes toward inclusive classrooms. These findings differ from those of Malak (2013) who found that teachers perceived high workload as one of the barriers to reform in inclusive classrooms. Although there was no way to establish this connection, it was suspected that teachers who reported a higher workload, may have worked more with students with disabilities and it was this connection, rather than the hours of workload, that accounted for the more positive attitudes. If this is the case, it would align with the findings from Hoffman (2006) and Kimble (2017), who both found that the more time teachers worked with students with disabilities, the more positive their attitudes were toward inclusive classrooms. Nevertheless, the findings between teachers' attitudes toward inclusion and their workload is interesting and may warrant further study to tease out the underlying mechanisms that could clarify this relationship.

This study revealed that Thai secondary teachers generally held positive attitudes toward including students with learning disabilities into general education classrooms. However, the average score of the participants on the ORI (88.49) was only slightly greater than the mid-point score (84.00) suggesting a mild positive trend toward inclusive classrooms. This finding was similar to that of Dapudong (2013) who reported that Thai primary teachers held positive attitudes toward inclusive classrooms. Unfortunately, there was no way to make a direct comparison between the results because the version of the ORI used in this study was quite different from the one used in the Dapudong (2013) study.

The theory of planned behavior states that attitudes, subjective norms, and perceived behavioral control combine to drive individual's intent to act (Ajzen, 1991). With regards to this study, self-reported survey data was utilized to define teachers' attitudes and factors that would likely to associate with perceived behavioral control. This study attempted to measure two of these components (attitudes and behavioral control). Training and workload were considered to be a proxy for behavioral control. Unfortunately, these variables accounted for a very small amount of variance (9%) in teachers' attitudes, which means that a much larger 91% proportion remains unexplained. Furthermore, positive attitudes toward inclusion, on their own, do not necessarily predict teachers' intentions or skill in including students with learning disabilities in their classrooms. Thus, this study provided limited information about the actual behavior of teachers. More information is needed to better understand the many variables that might have affected and predicted teachers' attitudes and behaviors such as stress level, family history of having a child with disabilities, and teaching efficacy, with an emphasis on those that can be addressed through training or policy.

### **Implications for Practice and Policy**

Teachers' attitudes toward inclusion are affected by the amount of specialized training they have received as related to working with students with learning disabilities. Although the Thai Ministry of Education has tried to address these training needs through various training opportunities, it has not been effective in building a larger teaching workforce that has specialized knowledge of special education. Very few teachers in this sample had reached the minimum number of 200 hours to qualify them as special education teachers. This limited training was especially notable in the North-East region

of Thailand where the teachers' hours of training were lowest. It is difficult to know what combination of information and incentives are necessary to encourage more teachers to pursue this training, but helping teachers to understand the importance of expanding and deepening their knowledge about special education and inclusive classrooms might be helpful. In addition, the government and school administrators may need to provide time and financial support in order to motivate teachers to take advantage of this training.

In recognition of the ongoing professional development needs of teachers, in April 2017, the Thai Ministry of Education created a teachers' training project called "Teachers' Coupons" in which teachers were asked to attend training during the school break and provided with 10,000 baht (around 300 USD) for doing so. Unfortunately, of the 1,460 courses that were offered, only 26 (1.78%) of them related to special education. Furthermore, those 26 courses were divided across the different regions of Thailand with, 15 courses occurred in the Central region, five in the North-East region, three in the North region, and three in the South. Despite the large area and great number of schools in the North-East region, there were only five courses available related to special education. Only four courses out of all 26 courses were related to inclusive education and included: (a) Teaching techniques in inclusive classrooms: co-teaching; (b) Classroom management in inclusive classrooms; (c) Inclusive schools management; and (d) Development of instructional media for inclusive classrooms (Teachers and Basic Education Personnel Development Bureau, 2017).

On average, Thai teachers participate in 50 hours of training per year and 92.6% of Thai teachers attended training programs three times a year (Organization for Economic Cooperation and Development / The United Nations Educational, Scientific

and Cultural Organization, 2016). However, the most common professional development courses that teachers take are English language, Southeast Asia language and culture, and 21<sup>st</sup> century skills, but not those related to working with students with learning disabilities. Based on the study findings, it may be important to require that teachers take a special education course periodically, or be given additional “coupons” to do so. Additionally, alternative forms of course delivery such as online platforms and distance learning might be helpful to allow teachers in rural and/or remote areas to attend classes virtually.

Along with professional development, school administrators might support more experienced teachers in working with students with special needs by providing mentoring, coaching, and consultation from guidance teachers and school psychologists. These types of supports may help teachers to become more confident and willing to include students with learning disabilities in their classrooms. As noted, it is likely that more recent graduates have had greater exposure to special education within their college curriculum. As noted, the National Educational Act of Thailand in 1999 directed every teacher education program to provide a course on special education or inclusive classrooms. However, teacher candidates may benefit from gaining more direct experience by taking at least one practicum in an inclusive classroom, examining case studies, or conducting research on students with special needs. This type of experience may help future teachers to feel more familiar, confident, and competent to work in inclusive classrooms.

### **Limitations**

This study includes the following limitations, which may have affected the generalizability of the results. The first limitation was that the method of data collection relied on self-reported data. Hoskin (2012) stated self-report measures have potential problems, such as participants responding in a biased or dishonest manner, lacking introspective ability, and lacking an understanding of the questions. In this study, it is possible that the participants might not have wanted to answer sincerely in the event they might be seen as incompetent or as not meeting requirements to teach in an inclusive classroom, even though anonymity was provided. Also, self-rating might not reflect actual practice. Although teachers might view the concept of inclusion as positive, when faced with having a student with a disability in their classroom, their actions may not align with their broader attitudes, either because of a lack of knowledge or experience. Thus, a deeper understanding of the relationship between attitudes and practice could be obtained through additional data collection methods, such as classroom observations and teacher interviews. Similarly, collecting data over a period of multiple days in various school settings may also represent a limitation of this study. This process may have affected the participants' answers because of differences in environment and circumstances.

Another limitation to note is that it was not possible to determine how different attitudes had formed. The three selected factors (training, experience, and workload) accounted for a very small proportion of the variance. Any number of other aspects of the teachers' experiences may have contributed to their attitudes such as having or knowing

someone with a child with disabilities. Future research may be directed toward developing a better understanding between attitudes and how these attitudes were shaped.

### **Recommendations for Future Research**

Further research is needed to better understand factors that affect teacher attitudes and that may be amenable to change. For example, when teachers were asked how competent they felt to teach students with learning disabilities, the majority indicated that they were “somewhat” competent (40.5%) and “a little” competent (40%) in their ability to teach students with learning disabilities. Only a few teachers reported themselves as “very competent” (7.8%) to teach students with learning disabilities. Moreover, the researcher conducted a linear regression to predict teachers’ attitudes toward including students with learning disabilities into general education classrooms based on teachers’ competence. The results showed that teachers’ competent ( $\beta = 7.83, p < 0.01$ ) was significant predictor of teachers’ attitudes toward inclusive classrooms. Therefore, teachers’ perception of self-efficacy may be an important variable to include in future research. As expected, there was a positive relationship between the amount of hours of training and teachers’ ratings of competence. In order to better understand the relative strength and direction of these factors, a more complex analysis using a structural equation model may be the next step in advancing our knowledge of teacher attitudes toward inclusion.

Alternatively, there was a limited understanding as to why teachers responded in these specific ways. Therefore, future research might include more qualitative methods such as open-ended questions or a mixed methodology in order to provide further detail on the factors that impact teachers’ attitudes toward inclusive classrooms. For example,

in addition to using a survey, future research might include a sample of interviews and classroom observations to better understand how teachers' attitudes correspond with their classroom practices.

As the research instrument had a different factor structure than the original instrument, future studies conducting a confirmatory factor analysis on the ORI are needed to make more conclusive claims. In addition, a translation was used and the results could be due to differences in language or culture, should be taken into consideration.

This study focused on teachers' attitudes because teachers are the ones who work most directly in inclusive classrooms. However, there are significant people who play a major role in students' lives and who may play a role in how inclusive education is enacted. Thus, future research should investigate the attitudes of other populations, such as administrators, students, and parents. Finally, it is not clear whether attitudes toward inclusion are changing over time. Although more experienced teachers held more negative attitudes toward inclusion than less experienced teachers, it is not possible to determine whether it was differences in exposure, training, or societal changes. Future research might continue to monitor changes in attitudes, training, and other aspects of practice every five to ten years to capture trends that align with changes in educational policy or teacher training.

### **Conclusion**

As the number of students with special needs increases and the policy of the Ministry of Education in Thailand moves forward toward more inclusive education, it appears evident that teachers will be expected to establish successful and effective

inclusive classrooms (Special Education Bureau, 2016). In addition, numerous researchers agree that to empower teachers to use inclusive education, they must first have positive attitudes toward inclusion. Thus, the current study was conducted to better understand the variables that are meaningful to teachers' attitudes toward inclusion. The results demonstrated that Thai secondary teachers generally held positive attitudes toward inclusive classrooms, and that the hours of training, years of teaching experience, and hours of workload were significant predictors of these attitudes. However, the results also highlighted the need for more professional development in the area of special education as very few teachers identified themselves as special education teachers or had more than a few hours of instruction in this area. This study provides initial guidance in policy changes that may help the Thai Education ministry and school practitioners to improve inclusive practices in Thai secondary classrooms.

## REFERENCES

- Abu-Heran, N., Abukhayran, A., Domingo, J., & Perez-Garcia, M. (2014). Perceptions and expectations of Palestinian teachers towards inclusive education in Bethlehem district. *Electronic Journal of Research in Educational Psychology, 12*(2), 461-482.
- Agbenyega, J. (2007). Examining teachers' concerns and attitudes to inclusive education in Ghana. *International Journal of Wholeschooling, 3*(1), 41-56.
- Ahmad, R. N., & Rehman, S. U. (2014). Impact of teachers' attitudes on the achievement of students. *Journal of Educational Research, 17*(1), 14-24.
- Ahsan, M. T., Deppeler, J. M., & Sharma, U. (2013). Predicting pre-service teachers' preparedness for inclusive education: Bangladeshi pre-service teachers' attitudes and perceived teaching-efficacy for inclusive education. *Cambridge Journal of Education, 43*(4), 517-535. doi: 10.1080/0305764x.2013.834036
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211. doi: 10.1016/0749-5978(91)90020-T
- Albarracin, D., Johnson, B. T., Zanna, M. P., & Kumkale, G. T. (2005). Attitudes: introduction and scope. In D. Albarracin, B. T. Johnson, & M. P. Zanna, *The Handbook of Attitudes* (pp. 3-20). New Jersey: Lawrence Erlbaum Associates, Publisher

- Ali, M. M., Mustapha, R., & Jelas, Z. M. (2006). An empirical study on teachers' perceptions towards inclusive education in Malaysia. *International Journal of Special Education*, 21(3), 36-44.
- Amalu, M. (2014). Impact of workload induced stress on the professional effectiveness of secondary school teachers in cross river state. *Global Journal of Educational Research*, 13(1), 15-22. doi: 10.4314/gjer.v13i1.3
- Anastasiou, D., Kauffman, J. M., & Nuovo, S. D. (2015). Inclusive education in Italy: description and reflections on full inclusion. *European Journal of Special Needs Education*, 30(4), 429-443. doi: 10.1080/08856257.2015.1060075
- Antonak, R. F., & Larrivee, B. (1995). Psychometric Analysis and Revision of the Opinions Relative to Mainstreaming Scale. *Exceptional Children*, 62(2), 139-149. doi: 10.1177/001440299506200204
- Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: a meta-analytic review. *The British Journal of Social Psychology*, 40(4), 471-499. doi: 10.1348/014466601164939
- Artiles, A. J., & Kozleski, E. B. (2007). Beyond convictions: interrogating culture, history, and power in inclusive education. *Language Arts*, 84(4), 357-364.
- Avramidis, E., & Kalyva, E. (2007). The influence of teaching experience and professional development on Greek teachers' attitudes towards inclusion. *European Journal of Special Needs Education*, 22(4), 367-389. doi: 10.1080/08856250701649989

- Avramidis, E., & Norwich, B. (2002). Teachers' attitudes towards integration/inclusion: a review of the literature. *European Journal of Special Needs Education, 17*(2), 129-147. doi: 10.1080/08856250210129056
- Barmby, P. (2006). Improving teacher recruitment and retention: the importance of workload and pupil behaviour. *Educational Research, 48*(3), 247-265. doi: 10.1080/00131880600732314
- Bateman, D., & Bateman, F. C. (2002). What does a principal need to know about inclusion? ERIC digest. *ERIC Clearinghouse on Disabilities and Gifted Education*.
- Bender, W. N., Vail, C. O., & Scott, K. (1995). Teachers' attitudes toward increased mainstreaming: Implementing effective instruction for students with learning disabilities. *Journal of Learning Disabilities, 28*(2), 87-94. doi: 10.1177/0022219495028 00203
- Bland, J. M., & Altman, D. G. (1997). Statistics notes: Cronbach's alpha. *British Medical Journal, 572*.
- Boer, A. d., Pijl, S. J., & Minnaert, A. (2011). Regalur primary school teachers' attitudes towards inclusive education: a review of the literature. *International Journal of Inclusive Education, 15*(3), 331-353. doi: 10.1080/13603110903030089
- Boer, A. d., Timmerman, M., Pijl, S. J., & Minnaert, A. (2012). The psychometric evaluation of a questionnaire to measure attitudes towards inclusive education. *European Journal of Psychology of Education, 27*(4), 573-589. doi: 10.1007/s10212-011-0096-z

- Bureau of Special Education Administration. (2016). *Information management system*. Retrieved from [http://202.29.172.121/specialbasic/report\\_menter\\_area.php?p=12utr&&report=2re](http://202.29.172.121/specialbasic/report_menter_area.php?p=12utr&&report=2re)
- Butt, G., & Lance, A. (2005). Secondary teacher workload and job satisfaction: do successful strategies for change exist. *Educational Management Administration & Leadership*, 33(4), 401-422. doi: 10.1177/1741143205056304
- Cagran, B., Schmidt, M. (2011). Attitudes of Slovene teachers towards the inclusion of pupils with different types of special needs in primary school. *Education Studies*, 37(2), 171-195. doi: 10.1080/03055698.2010.506319
- Campbell, J., Gilmore, L., & Cuskelly, M. (2003). Changing student teachers' attitudes towards disability and inclusion. *Journal of Intellectual and Developmental Disability*, 28(4), 369-379. doi: 10.1080/13668250310001616407
- Carter, S. L. (2006). The development of special education services in Thailand. *International Journal of Special Education*, 21(2), 32-37.
- Charry, K., Coussement, K., Demoulin, N., & Heuvinck, N. (2016). *Marketing Research with IBM SPSS Statistics: A Practical Guide*. New York: Taylor and Francis.
- Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation*, 10(7), 1-9.
- Coutsocostas, G.-G., & Alborz, A. (2010). Greek mainstream secondary school teachers' perceptions of inclusive education and of having pupils with complex learning

- disabilities in the classroom/school. *European Journal of Special Needs Education*, 25(2), 149-164. doi: 10.1080/08856251003658686
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. California: SAGE Publication, Inc.
- Dapudong, R. C. (2013). Knowledge and attitude towards inclusive education of children with learning disabilities: The case of Thai primary school teachers. *Academic Research International*, 4(4), 496-512.
- Dapudong, R. C. (2014). Teachers' knowledge and attitude towards inclusive education: Basic for an enhanced professional development program. *International Journal of Learning and Development*, 4(4), 1-24. doi: 10.5296/ijld.v4i4.6116
- Department of Empowerment of Persons with Disabilities. (2016, September 30). *The report of the situation of people with disabilities in Thailand*. Retrieved from [http://dep.go.th/sites/default/files/files/news/Report\\_PWDS\\_SEP2559.pdf](http://dep.go.th/sites/default/files/files/news/Report_PWDS_SEP2559.pdf)
- Dugard, P., Todman, J., & Staines, H. (2010). *Approaching multivariate analysis: A practical introduction*. New York: Psychology Press.
- Dukmak, S. J. (2013). Regular classroom teachers' attitude towards including students with disabilities in the regular classroom in the United Arab Emirates. *The Journal of Human Resource and Adult Learning*, 9(1), 26-39.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Orlando: Harcourt Brace Jovanovich.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analysis using G\*power 3.1: tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149-1160.

- Federal Register, 64 § 300.550 (March 12, 1999). Retrieved from  
<http://www.2.ed.gov/legislation/FedRegister/finrule/1999-1/031299b.pdf>
- Field, A. (2009). *Discovering statistics using SPSS*. California: SAGE.
- Friend, M., & Bursuck, W. D. (2012). The foundation for educating students with special needs. In A. C. Davis (Ed.), *Including students with special needs* (pp. 2-29). Upper Saddle River, NJ: Pearson Education.
- Garland, R. (1991). The Mid-Point on a Rating Scale: Is it Desirable? *Marketing Bulletin*, 2, 66-70.
- Hays, J. (2013). *Land, geography, climate and regions of Thailand*. Retrieved from Facts and Details: [http://factsanddetails.com/southeast-asia/Thailand/sub5\\_8h/entry-3323.html](http://factsanddetails.com/southeast-asia/Thailand/sub5_8h/entry-3323.html)
- Hick, P., Kershner, R., & Farrell, P. T. (2009). *Psychology for inclusive education: New directions in theory and practice*. New York: Routledge.
- Hill, D. A., & Sukbunpant, S. (2013). The comparison of special education between Thailand and the United States: Inclusion and support for children with autism spectrum disorder. *International Journal of Special Education*, 28, 120-134.
- Hilton, A., & Skrutkowski, M. (2002). Translating instruments into other languages: Development and testing processes. *Cancer Nursing*, 25(1), 1-7. doi: 10.1097/00002820-200202000-00001
- Hoffman, K.J. (2006). *Inclusion: Secondary teacher attitudes toward inclusion of special needs students into regular classrooms* (Doctoral dissertation). Retrieved from <https://search.proquest.com/docview/305332889?pq-origsite=summon>

- Hornby, G. (2015). Inclusive special education: Development of a new theory for the education of children with special educational needs and disabilities. *British Journal of Special Education*, 42(3), 234-256. doi: 10.1111/1467-8578.12101
- Hoskin, R. (2012). *The dangers of self-report*. Retrieved from Science for all brainwaves: <http://www.sciencebrainwaves.com/the-dangers-of-self-report/>
- Hsieh, W.-Y., Hsieh, C.-M., Ostrosky, M., & McCollum, J. (2012). Taiwanese first-grade teachers' perceptions of inclusive education. *International Journal of Inclusive Education*, 16(1), 71-88. doi: 10.1080/13603111003592283
- Hwang, Y.-S., & Evans, D. (2011). Attitudes towards inclusion: Gaps between belief and practice. *International Journal of Special Education*, 126-146.
- Ingvarson, L., Kleinhenz, E., Beavis, A., Barwick, H., & Carthy, I. (2005). *Secondary teacher workload study: report*. Retrieved from Australian Council for Educational Research: <http://research.acer.edu.au/workforce/2/>
- Jahnukainen, M. (2011). Different strategies, different outcomes? The history and trends of the inclusive and special education in Alberta (Canada) and in Finland. *Scandinavian Journal of Educational Research*, 55(5), 489-502. doi: 10.1080/00313831.2010.537689
- Jetchamnongnuch, W., Visessuvarnabhumi, P., Apichatabutra, C., & Tinmala, D. (2011). *Professional standards for special education teachers*. Bangkok: The Teachers Council of Thailand.
- Jitsuchon, S., & Richter, K. (2007). Thailand's poverty maps from construction to application. In T. Bedi, A. Coudouel, & K. Simler, *More than a pretty picture:*

*Using poverty maps to design better policies and interventions* (pp. 241-260).

World Bank Publications.

Johanson, G. A., & Brooks, G. P. (2010). Initial scale development: Sample size for pilot studies. *Educational and Psychological Measurement*, 70(3), 394-400. doi:

10.1177/0013164409355692

Kaikkonen, L. (2010). Promoting teacher development for diversity. In R. Rose, *Confronting obstacles to inclusion: International responses to developing inclusive education* (pp. 171-183). New York: Routledge.

Kantavong, P., Nethanomsak, T., & Luang-ungkool, N. (2012). Inclusive education in Thailand after 1999 national education act: A review of a pre-service teacher education system. *Procedia - Social and Behavioral Sciences*, 69, 1043-1051. doi:

10.1016/j.sbspro.2012. 12.031

Katz, D., & Stotland, E. (1959). A preliminary statement to a theory of attitude structure and change. In S. Koch, *Psychology: A study of a science* (pp. 423-475). New York: McGraw-Hill.

Kim, Y.-W. (2014). Inclusive education in South Korea. *International Journal of Inclusive Education*, 18(10), 979-990. doi: 10.1080/13603116.2012.693402

Kimble, W.J. (2017). *Middle school administrator and teacher attitudes towards students with mild to moderate disabilities in the inclusive classroom* (Doctoral

dissertation). Retrieved from <https://search.proquest.com/docview/1920187842?>

pq-origsite=summon

- King, I. C. (2003). Examining middle school inclusion classroom through the lens of learner-centered principles. *Theory into Practice*, 42(2), 151-158. doi: 10.1207/s15430421tip4202\_9
- Kochhar, C. A., West, L. L., & Taymans, J. M. (2000). What is inclusion? In A. C. Davis (Ed.), *Successful inclusion: Practical strategies for a shared responsibility* (pp. 5-9). Upper Saddle River, NJ: Prentice-Hall.
- Kosuwan, K., Viriyangkura, Y., & Swerdlik, M. E. (2014). Special education today in Thailand. *Advances in Special Education*, 28, 689-721. doi: 10.1108/S0270-401320140000028027
- Lauerma, F. (2014). Teacher responsibility from the teacher's perspective. *International Journal of Educational Research*, 65, 75-89. doi: 10.1016/j.ijer.2013.09.005
- Leyser, Y., & Tappendorf, K. (2001). Are attitudes and practices regarding mainstreaming changing? A case of teachers in two rural school districts. *Education*, 121, 751-761.
- Lifshitz, H., Glaubman, R., & Issawi, R. (2004). Attitude towards inclusion: The case of Israeli and Palestinian regular and special education teachers. *European Journal of Special Needs Education*, 19(2), 171-190. doi: 10.1080/08856250410001678478
- MacFarlane, K., & Woolfson, L. M. (2013). Teacher attitudes and behavior toward the inclusion of children with social, emotional and behavioral difficulties in mainstream schools: An application of the theory of planned behavior. *Teaching and Teacher Education*, 29, 46-52. doi: 10.1016/j.tate.2012.08.006

- Maio, G. R., Esses, V. M., & Bell, D. W. (2012). Examining conflict between components of attitudes: Ambivalence and inconsistency are distinct constructs. *Canadian Journal of Behavioral Science/Revue Canadienne Des Sciences Du Comportement*, 44(2), 71-83. doi: 10.1037/a0027768
- Malak, S. (2013). Inclusive education reform in Bangladesh: Pre-service teachers' responses to include students with special educational needs in regular classrooms. *International Journal of Instruction*, 6(1), 195-214.
- Meyers, L. S., Gamst, G. C., & Guarino, A. J. (2013). *Performing data analysis using IBM SPSS*. New Jersey: John Wiley & Sons.
- Ministry of Education. (2004). *Regulations on working hours and public holidays of educational institutions*.
- Mitchell, D. (2008). *What really works in special and inclusive education: Using evidence-based teaching strategies*. New York: Routledge.
- Monsen, J. J., Ewing, D. L., & Kwoka, M. (2014). Teachers' attitudes towards inclusion, perceived adequacy of support and classroom learning environment. *Learning Environments Research*, 17(1), 113-126. doi: 10.1007/s10984-013-9144-8
- Mukhopadhyay, S. (2014). Botswana primary schools teachers' perception of inclusion of learners with special educational needs. *Journal of Research in Special Educational Needs*, 14(1), 33-42. doi: 10.1111/j.1471-3802.2012.01269.x
- Narot, P. K. (2010). Movement in special education in Thailand. *International Journal of Education*, 33(1), 3-11.

- Newhook, J. T. (2012). Task-diaries: A valuable qualitative tool for occupational health research on teacher workloads . *International Journal of Qualitative Methods*, 11(5), 666-683. doi: 10.1177/160940691201100509
- Norwich, B. (1994). The relationship between attitudes to the integration of children with special educational needs and wider socio-political views: A US-English comparison. *European Journal of Special Needs Education*, 9, 91-106.
- Norwich, B. (2008). What future for special schools and inclusion? Conceptual and professional perspectives. *British Journal of Special Education*, 35(3), 136-143. doi: 10.1111/j.1467-8578.2008.00387
- Office of the Basic Education Commission. (2017). *Information group*. Retrieved from <http://www.bopp-obec.info/home/>
- Office of the National Education Commission. (1999). *National education act of B.E. 2542 (1999)*. Bangkok: Office of the National Education Commission.
- Onbun-uea, A. (2008). *Educating young children with autism in inclusive classrooms in Thailand* (Doctoral dissertation). Retrieved from <http://search.proquest.com/docview/304548720?pq-origsite=summon>
- Organization for Economic Cooperation and Development / the United Nations Educational, Scientific and Cultural Organization. (2016). *Education in Thailand: An OECD-UNESCO perspective*, Reviews of National Policies for Education, OECD Publishing, Paris. Retrieved from <http://dx.doi.org/10.1787/9789264259119-en>
- Pruekchaikul, K., Kuptametanon, S., & Walker, K. (2016, April 19). *OBEC improves the quality of life and educational opportunities for the disabled in 2016*. Retrieved

from Ministry of Education Thailand: [http://www.en.moe.go.th/index.php?option=com\\_content&view=article&id=3283:obec-improves-the-quality-of-life-and-educational-opportunities-for-the-disabled-in-2016&catid=1:news&Itemid=42](http://www.en.moe.go.th/index.php?option=com_content&view=article&id=3283:obec-improves-the-quality-of-life-and-educational-opportunities-for-the-disabled-in-2016&catid=1:news&Itemid=42)

- Rakap, S., & Kaczmarek, L. (2010). Teachers' attitudes towards inclusion in Turkey. *European Journal of Special Needs Education, 25*(1), 59-75. doi: 10.1080/08856250903450848
- Raymond, E. B. (2012). *Learners with mild disabilities*. New Jersey: Pearson Education.
- Rudd, F. (2002). *Grasping the promise of inclusion*. CA: Palm Springs.
- Sadler, J. (2005). Knowledge, attitudes and beliefs of the mainstream teachers of children with a preschool diagnosis of speech/language impairment. *Child Language Teaching and Therapy, 21*(2), 147-163. doi: 10.1191/0265659005ct286oa
- Salkind, N. J. (2014). *Statistics for people who (think they) hate statistics*. California: SAGE.
- Sangnapaboworn, W. (2007). *The development of primary education in Thailand and its present challenges: From quantity to quality through effective management*. Retrieved from [http://ide.go.jp/English/Publish/Download/Report/2005/pdf/2005\\_04\\_15\\_07.pdf](http://ide.go.jp/English/Publish/Download/Report/2005/pdf/2005_04_15_07.pdf)
- Sharma, U., Forlin, C., Loreman, T., & Earle, C. (2006). Pre-service teachers' attitudes, concerns, and sentiments about inclusive education: An international comparison of novice pre-service teachers. *International Journal of Special Education, 21*(2), 80-94.

- Shevlin, M., Winter, E., & Flynn, P. (2013). Developing inclusive practice: Teacher perceptions of opportunities and constraints in the Republic of Ireland. *International Journal of Inclusive Education, 17*(10), 1119-1133. doi: 10.1080/13603116.2012. 742143
- Soodak, L. C., Podell, D. M., & Lehman, L. R. (1998). Teacher, student, and school attributes as predictors of teachers' responses to inclusion. *The Journal of Special Education, 31*(4), 480-497. doi: 10.1177/002246699803100405
- Special Education Bureau. (2016). *Students Rrport separate by school, grade, gender, and type of disabilities*. Bangkok: Office of the Basic Education Commission.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education, 2*, 53-55. doi: 10.5116/ijme.4dfb.8dfd
- Teachers and Basic Education Personnel Development Bureau. (2017). *Training registration*. Retrieved from <http://www.hrd.obec.go.th/index1.html>
- Teclaw, R., Price, M. C., & Osatuke, K. (2012). Demographic question placement: Effect on item response rates and means of a veterans health administration survey. *Journal of Business and Psychology, 27*(3), 281-290. doi: 10.1007/s10869-011-9249-y
- Thawiang, D. (2006). *A development of an inclusive learning management: A case study of Nongkungpitayakom school under the jurisdiction of Khon Kaen educational service area 5* (Unpublished master's thesis). Loei Rajabhat University, Thailand.
- Triandis, H. C. (1971). *Attitude and attitude change*. New York: John Wiley & Sons.

- United Nations Educational Scientific and Cultural Organization. (1994). *The Salamanca statement and framework for action: On special needs education*. United Nations Educational Scientific and Cultural Organization.
- United Nations Educational Scientific and Cultural Organization. (2016). *Education for all movement*. Retrieved from United Nations Educational Scientific and Cultural Organization: <http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/>
- Vaz, S., Wilson, N., Falkmer, M., Sim, A., Scott, M., Cordier, R., & Falkmer, T. (2015). Factors associated with primary school teachers' attitudes towards the inclusion of students with disabilities. *Plos One*, *10*(8), e0137002. doi: 10.1371/journal.pone.0137002
- Westwood, P. (2013). *Inclusive and adaptive teaching: Meeting the challenge of diversity in the classroom*. New York: Routledge.
- Wilczenski, F. L. (1994). Changes in attitudes toward mainstreaming among undergraduate education students. *Educational Research Quarterly*, *17*(1), 5-17.
- Will, M. C. (1986). Educating children with learning problems: A shared responsibility. *Exceptional Children*, *52*(5), 411-415.
- Winzer, M. A. (2000). The inclusion movement: Review and reflections on reform in special education. In M. A. Winzer, & K. Mazurek, *Special education in the 21st century: Issues of inclusion and reform* (pp. 5-16). Washington: Gallaudet University Press.
- Wolfe, P. S., & Hall, T. E. (2003). Making inclusion a reality for students with severe disabilities. *Teaching Exceptional Children*, *35*(4), 56-60.

Yell, M. L., & Katsiyannis, A. (2004). Placing students with disabilities in inclusive settings: Legal guidelines and preferred practices. *Preventing School Failure: Alternative Education for Children and Youth*, 49(1), 28-35. doi: 10.3200/PSFL.49.1.28-35

**APPENDIX A**

**PERMISSION TO USE THE OPINIONS RELATIVE TO  
INTEGRATION OF STUDENTS  
WITH DISABILITIES (ORI)**

Dear Dr. Barbara Larrivee,

I am a doctoral student from the University of Northern Colorado writing my dissertation tentatively titled “Thai Middle School Teachers’ attitudes toward inclusive classroom”. I would like to get the Opinion Relative to Integration of Students with Disabilities (ORI), and your permission in order to use this survey instrument in my research study. I will use this survey instrument only for my research study, and I will include the copyright statement on all copies of the instrument. If you would allow me to use this survey instrument, please email me the ORI and the statement of permission to [jams3043@bears.unco.edu](mailto:jams3043@bears.unco.edu).

Best Regards,

Pattaraporn Jamsai

Jamsai,

You have my permission to use the *Opinions Relative to the Integration of Students with Disabilities (ORI)*.

Attached please find pdf copies of the ORI and scoring instructions, along with citations on the ORI, and an official permission form.

There is no charge to use the survey. I am requiring that you send the results of the research in order to pool data to conduct further research on the ORI.

You can e-mail me your completed permission form. Your typed name will suffice as a signature.

Good luck with your research,

Dr. Barbara Larrivee

Professor Emerita

California State University

San Bernardino, CA 92407

Dear Dapudong, Richel

I am a doctoral student from the University of Northern Colorado writing my dissertation tentatively titled “Thai Middle School Teachers’ attitudes toward inclusive classroom”.

I would like to get the Opinion Relative to Integration of Students with Disabilities (ORI) in the Thai language, and get your permission in order to use this survey instrument in my research study. I will use this survey instrument only for my research study, and I will include the copyright statement on all copies of the instrument. If you are allowed me to use this survey instrument, please email me the ORI to [jams3043@bears.unco.edu](mailto:jams3043@bears.unco.edu).

Sincerely,

Pattaraporn Jamsai

Hello Pattarapon,

That has been a few years ago and I will need to look for the files. I will send it to you as soon as I found it. Yes, no problem you may adapt it to fit your study.

I also have another publication related to the previous one which you may find useful as well which links below.

[http://www.macrothink.org/journal/index.php/ijld/search/authors/view?firstName=Richel  
&middleName=Constantinopla&lastName=Dapudong&affiliation=Ifugao%20State%20  
University&country=TH](http://www.macrothink.org/journal/index.php/ijld/search/authors/view?firstName=Richel&middleName=Constantinopla&lastName=Dapudong&affiliation=Ifugao%20State%20University&country=TH)

Regards

Richel

Richel Dapudong

**Primary Special Educational Needs (SEN) Teacher**

**APPENDIX B**

**QUESTIONNAIRE**

### Teachers' Attitudes Toward Inclusion

#### Part 1: Teachers' Attitudes Toward Inclusion of Students with Learning Disabilities in General Education Classrooms

**Direction:** In the following pages, you will find statements of ideas and attitudes about the inclusion of students with learning disabilities in general education classrooms. We would like to know your personal opinion. There are no right or wrong answers. Please mark the number to the right of each statement that best describes your agreement or disagreement with the statement.

Statement	Disagree Very Much (-3)	Disagree Pretty Much (-2)	Disagree a Little (-1)	Agree a Little (+1)	Agree Pretty Much (+2)	Agree Very Much (+3)
1. Most students with learning disabilities make adequate attempts to complete their assignments.						
2. Inclusion of students with learning disabilities necessitates extensive retraining of general education teachers.						
3. Inclusion offers mixed group interaction that fosters understanding and acceptance of differences among students.						
4. Students with learning disabilities may exhibit behavior problems in general education classrooms.						
5. Students with learning disabilities can best be served in general education classrooms.						
6. The extra attention students with learning disabilities requires is detrimental to other students.						

*(Turn to the next page)*

Statement	Disagree Very Much (-3)	Disagree Pretty Much (-2)	Disagree a Little (-1)	Agree a Little (+1)	Agree Pretty Much (+2)	Agree Very Much (+3)
7. The challenge of being in a general education classroom promotes the academic growth of students with learning disabilities.						
8. Inclusion of students with learning disabilities requires significant change in general education classroom procedures.						
9. Increased freedom in the general education classroom creates too much confusion for students with learning disabilities.						
10. General education teachers must have the abilities necessary to work with students with learning disabilities.						
11. The presence of students with learning disabilities will not promote acceptance of differences on the part of students without disabilities.						
12. The behavior of students with learning disabilities will set a bad example for students without disabilities						
13. The student with learning disabilities develops academic skills more rapidly in general education classrooms than in special education classrooms.						

*(Turn to the next page)*

Statement	Disagree Very Much (-3)	Disagree Pretty Much (-2)	Disagree a Little (-1)	Agree a Little (+1)	Agree Pretty Much (+2)	Agree Very Much (+3)
14. Inclusion of students with learning disabilities will not promotes his or her social independence.						
15. There is less difficulty to maintain order in a general education classroom that has students with learning disabilities than in one that does not have students with learning disabilities.						
16. Students with learning disabilities will not monopolize the general education teacher's time.						
17. The inclusion of students with learning disabilities can be beneficial for students without disabilities.						
18. Students with learning disabilities create confusion in general education classrooms.						
19. General education teachers must have sufficient training to teach students with learning disabilities.						
20. Inclusion will likely have a negative effect on the emotional development of the students with learning disabilities						
21. Students with learning disabilities are given every opportunity to function in general education classrooms when possible.						

*(Turn to the next page)*

Statement	Disagree Very Much (-3)	Disagree Pretty Much (-2)	Disagree a Little (-1)	Agree a Little (+1)	Agree Pretty Much (+2)	Agree Very Much (+3)
22. The classroom behavior of students with learning disabilities generally does not require more patience from the teachers.						
23. Teaching students with learning disabilities is better done by special education teachers rather than by general education teachers.						
24. Isolation in a special education classroom has a beneficial effect on the social and emotional development of the students with learning disabilities.						
25. The students with learning disabilities will not be socially isolated in the general education classroom.						
26. Assignments should not be modified for students with learning disabilities.						
27. Modification of coursework for students with learning disabilities would be difficult to justify to other students.						
28. Students with learning disabilities should be welcome in general education classes.						

*(Turn to the next page)*

**Part 2: Participant Information**

1. How many years of teaching experience? \_\_\_\_\_ years

2. Did you attend any training programs in special education?

Yes; approximately how many hours? \_\_\_\_\_ hours

No

3. When you consider all the activities you do per week, what would you estimate as your average teaching workload (per week)? \_\_\_\_\_ hours, and non-teaching workload (per week)? \_\_\_\_\_ hours

4. In your current class, do you have any students with learning disabilities?

Yes

No

5. Do you have experience in teaching students with learning disabilities?

Yes

No

6. How competent do you believe you are in teaching students with learning disabilities?

Not at all competent

A little

Somewhat

Very competent

7. Gender:

Male

Female

*(Turn to the next page)*

8. Age:                     Under 30                     30 – 40
- 41 – 50                     Over 50
9. Educational Level:    Bachelor's                     Master's                     Doctoral
- degree                    degree                    degree

Major (specify)\_\_\_\_\_

10. Types of teacher:    General Education Teacher
- Special Education Teacher
- Other (specify)\_\_\_\_\_

*Thank you*

แบบสอบถามทัศนคติของครูต่อการเรียนร่วม

ส่วนที่ 1: ทัศนคติของครูต่อการเรียนร่วมของนักเรียนที่มีความบกพร่องทางการเรียนรู้ในชั้นเรียนปกติ

คำชี้แจง: โปรดแสดงความคิดเห็นเกี่ยวกับการเรียนร่วมของนักเรียนที่มีความบกพร่องทางการเรียนรู้ในชั้นเรียนปกติ

โดยทำเครื่องหมายกากบาท (x) ลงในช่องสี่เหลี่ยมที่ตรงกับความคิดเห็นของท่านมากที่สุด ซึ่งความคิดเห็นของท่านจะไม่มีผลถูกหรือผิด

ข้อความ	ไม่เห็นด้วย อย่างยิ่ง (-3)	ไม่เห็นด้วย มาก (-2)	ไม่เห็นด้วย (-1)	เห็นด้วย (+1)	เห็นด้วย มาก (+2)	เห็นด้วย อย่างยิ่ง (+3)
1.นักเรียนที่มีความบกพร่องทางการเรียนรู้ส่วนใหญ่มีความพยายามเพียงพที่จะทำงานที่ได้รับมอบหมายให้ครบถ้วนสมบูรณ์						
2.การรวมนักเรียนที่มีความบกพร่องทางการเรียนรู้ไว้ในชั้นเรียนปกติทำให้มีความจำเป็นที่จะต้องให้ครูในชั้นเรียนปกติเข้ารับการฝึกอบรมใหม่อีกครั้ง						
3.การรวมนักเรียนที่มีความบกพร่องทางการเรียนรู้ไว้ในชั้นเรียนปกติทำให้เกิดปฏิสัมพันธ์ภายในกลุ่มที่มีความหลากหลาย ซึ่งจะส่งเสริมความเข้าใจและการยอมรับความแตกต่างในหมู่นักเรียน						
4.นักเรียนที่มีความบกพร่องทางการเรียนรู้อาจแสดงพฤติกรรมที่เป็นปัญหาในชั้นเรียนปกติ						
5.นักเรียนที่มีความบกพร่องทางการเรียนรู้จะได้รับประโยชน์มากที่สุดที่สุดในชั้นเรียนปกติ						
6.ความต้องการการเอาใจใส่เป็นพิเศษของนักเรียนที่มีความบกพร่องทางการเรียนรู้เป็นผลเสียต่อนักเรียนคนอื่น ๆ						
7. ความท้าทายจากการเรียนในชั้นเรียนปกติ ช่วยส่งเสริมความก้าวหน้าทางวิชาการของนักเรียนที่มีความบกพร่องทางการเรียนรู้						
8.การรวมนักเรียนที่มีความบกพร่องทางการเรียนรู้ไว้ในชั้นเรียนปกติ ทำให้จำเป็นต้องมีการเปลี่ยนแปลงที่สำคัญในกระบวนการสอนในชั้นเรียนปกติ						
9.อิสระที่เพิ่มมากขึ้นในชั้นเรียนปกติสร้างความสับสนให้กับนักเรียนที่มีความบกพร่องทางการเรียนรู้						

ข้อคำถาม	ไม่เห็นด้วย อย่างยิ่ง (-3)	ไม่เห็นด้วย มาก (-2)	ไม่เห็นด้วย (-1)	เห็นด้วย (+1)	เห็นด้วย มาก (+2)	เห็นด้วย อย่างยิ่ง (+3)
10.ครูในชั้นเรียนปกติจำเป็นต้องมีความสามารถในการสอนนักเรียนที่มีความบกพร่องทางการเรียนรู้						
11.การมีนักเรียนที่มีความบกพร่องทางการเรียนรู้อยู่ในชั้นเรียนปกติไม่ช่วยส่งเสริมให้นักเรียนทั่วไปยอมรับความแตกต่างในหมู่ นักเรียน						
12.พฤติกรรมของนักเรียนที่มีความบกพร่องทางการเรียนรู้จะเป็น ตัวอย่างที่ไม่ดีสำหรับนักเรียนทั่วไป						
13.นักเรียนที่มีความบกพร่องทางการเรียนรู้จะมีพัฒนาการทาง ทักษะวิชาการในชั้นเรียนปกติได้เร็วกว่าในชั้นเรียนพิเศษ						
14.การรวมนักเรียนที่มีความบกพร่องทางการเรียนรู้ไว้ในชั้นเรียน ปกติไม่ช่วยส่งเสริมการไม่พึ่งพาอาศัยผู้อื่นทางสังคมของนักเรียน เหล่านั้น						
15.การรักษาความเป็นระเบียบเรียบร้อยในชั้นเรียนปกติที่มีนักเรียน ที่มีความบกพร่องทางการเรียนรู้ มีความยากลำบากน้อยกว่าในชั้นเรียนที่ไม่มีนักเรียนที่มีความ บกพร่องทางการเรียนรู้						
16.นักเรียนที่มีความบกพร่องทางการเรียนรู้จะไม่แย่งเวลาของ ครูในชั้นเรียนปกติไปเสียคนเดียว						
17.การรวมนักเรียนที่มีความบกพร่องทางการเรียนรู้ไว้ในชั้นเรียน ปกติสามารถเป็นประโยชน์ต่อนักเรียนทั่วไป						
18.นักเรียนที่มีความบกพร่องทางการเรียนรู้สร้างความสับสนวุ่น วายในชั้นเรียนปกติ						
19.ครูในชั้นเรียนปกติต้องได้รับการฝึกอบรมมากพอที่จะสอน นักเรียนที่มีความบกพร่องทางการเรียนรู้						
20.การรวมนักเรียนที่มีความบกพร่องทางการเรียนรู้ไว้ในชั้นเรียน ปกติอาจทำให้เกิดผลเสียต่อพัฒนาการทางอารมณ์ของนักเรียน ที่มีความบกพร่องทางการเรียนรู้						

(กรุณาเปิดหน้าถัดไป)

ข้อความ	ไม่เห็นด้วย อย่างยิ่ง (-3)	ไม่เห็นด้วย มาก (-2)	ไม่เห็น ด้วย (-1)	เห็นด้วย (+1)	เห็นด้วย มาก (+2)	เห็นด้วย อย่างยิ่ง (+3)
21.นักเรียนที่มีความบกพร่องทางการเรียนรู้ควรได้รับโอกาสที่จะทำหน้าที่ของตนเองในชั้นเรียนปกติเมื่อเป็นไปได้						
22.โดยทั่วไปแล้วพฤติกรรมในชั้นเรียนของนักเรียนที่มีความบกพร่องทางการเรียนรู้ไม่ได้ทำให้ครูต้องใช้ความอดทนเพิ่มมากขึ้น						
23.การสอนนักเรียนที่มีความบกพร่องทางการเรียนรู้ควรจะทำโดยครูด้านการศึกษาพิเศษมากกว่าครูในชั้นเรียนปกติ						
24.การแยกนักเรียนที่มีความบกพร่องทางการเรียนรู้ไว้ในชั้นเรียนพิเศษมีผลต่อพัฒนาการทางสังคมและอารมณ์ของนักเรียนที่มีความบกพร่องทางการเรียนรู้						
25.นักเรียนที่มีความบกพร่องทางการเรียนรู้จะไม่ถูกแบ่งแยกทางสังคมในชั้นเรียนปกติ						
26.การมอบหมายงานในชั้นเรียนปกติไม่ควรจะได้รับการปรับเปลี่ยนสำหรับนักเรียนที่มีความบกพร่องทางการเรียนรู้						
27.การปรับเปลี่ยนบทเรียนสำหรับนักเรียนที่มีความบกพร่องทางการเรียนรู้เป็นเรื่องที่อธิบายให้นักเรียนคนอื่นเข้าใจได้ยาก						
28.นักเรียนที่มีความบกพร่องทางการเรียนรู้ควรได้รับการต้อนรับในชั้นเรียนปกติ						

(กรุณาเปิดหน้าถัดไป)

## ส่วนที่ 2: ข้อมูลของผู้ตอบแบบสอบถาม

1. ท่านมีประสบการณ์การสอน เป็นเวลา ..... ปี
  
2. ท่านเคยเข้ารับการอบรมที่เกี่ยวข้องกับการศึกษาพิเศษหรือไม่?
  - เคย จำนวนชั่วโมงที่เข้ารับการอบรม ..... ชั่วโมง
  - ไม่เคย
  
3. ท่านมีภาระงานสอนโดยเฉลี่ยที่ชั่วโมงต่อสัปดาห์ ..... ชั่วโมง  
 และภาระงานที่ไม่เกี่ยวข้องกับการสอนโดยเฉลี่ยที่ชั่วโมงต่อสัปดาห์ ..... ชั่วโมง
  
4. ปัจจุบันในชั้นเรียนของท่าน มีนักเรียนที่มีความบกพร่องทางการเรียนรู้หรือไม่?
  - มี  ไม่มี
  
5. ท่านมีประสบการณ์ในการสอนนักเรียนที่มีความบกพร่องทางการเรียนรู้หรือไม่?
  - มี  ไม่มี
  
6. ท่านเชื่อมั่นในความสามารถของตนเองการสอนนักเรียนที่มีความบกพร่องทางการเรียนรู้เพียงใด?
  - ไม่มีเชื่อมั่นเลย  เชื่อมั่นเล็กน้อย
  - ค่อนข้างเชื่อมั่น  เชื่อมั่นมาก
  
7. เพศ:  ชาย  หญิง

8. อายุ:  น้อยกว่า 30 ปี  30 – 40 ปี  
 41 – 50 ปี  มากกว่า 50 ปี
9. ระดับการศึกษา:  ปริญญาตรี  ปริญญาโท  ปริญญาเอก

วิชาเอก (โปรดระบุ) .....

10. ประเภทของครู:

ครูทั่วไป

ครูการศึกษาพิเศษ

(รับผิดชอบการสอนในชั้นเรียนปกติเป็นหลัก)

(รับผิดชอบการสอนนักเรียนพิเศษเป็นหลัก)

อื่นๆ (โปรดระบุ) .....

**APPENDIX C**

**SCORING KEY**

### Modified the ORI (Thai version) Scoring

Scoring Key			
Item	+ / -	Item	+ / -
1	+	15	+
2	-	16	+
3	+	17	+
4	-	18	-
5	+	19	+
6	-	20	-
7	+	21	+
8	-	22	+
9	-	23	-
10	+	24	-
11	-	25	+
12	-	26	-
13	+	27	-
14	-	28	+

To score:

1. Positively score the 14 items that are worded negatively by reversing the sign of the response (i.e., from + to -, from - to +).
2. Sum the 28 item responses.
3. Add a constant of 84 to the total to eliminate negative scores.
4. Scores range from 0 to 168 with a higher score representing a more favorable attitude toward inclusion of students with learning disabilities into general education classrooms.
5. If protocols with omitted responses to any item, a value of zero will be assigned to that item.
6. Protocols will not be scored, if participants omitted responses to four or more questions.

**APPENDIX D**

**CONSENT FORM AND IRB APPROVAL LETTER**

UNIVERSITY of  
NORTHERN COLORADO



CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH  
UNIVERSITY OF NORTHERN COLORADO

**Project Title:** Thai Secondary Teachers' Attitudes toward Inclusion of Students with Learning Disabilities in General Education Classrooms

**Researcher:** Pattaraporn Jamsai: School Psychology,

Email: [jams3043@bears.unco.edu](mailto:jams3043@bears.unco.edu)

**Research Advisor:** Robyn Hess, Ph.D.: Professor of School Psychology,

Email: [robyn.hess@unco.edu](mailto:robyn.hess@unco.edu)

I am a doctoral student at College of Education and Behavioral Sciences, University of Northern Colorado. I am conducting research to examine the Thai secondary teachers' attitudes toward inclusion of students with learning disabilities in general education classrooms.

As a participant of this study, **you will be asked to complete a survey questionnaire** which consists of two parts. One part contains 28 statements on self-reported attitudes toward inclusive classrooms, and the other part contains ten questions on your demographic information relevant to the study. **The questionnaire will take approximately 10-15 minutes to complete.**

In completing the questionnaire, you will not be asked to provide your name; your answers will remain anonymous. Data from the responses will be transferred to a computer program for analyzing. The data in paper form will be kept in a locked file cabinet while the transferred data will be stored on a password-protected computer. Only the researchers will have direct access to the data.

There are no risks for participating in the survey. The benefit to you is that you will take part as an educator in contributing to educational research.

Participation is voluntary. You may withdraw from participation at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Having read the above and having had an opportunity to ask questions, please complete the questionnaire if you would like to participate in this research. By completing the questionnaire, you will give the researcher consent for your participation. You may keep this form for future reference. If you have any concerns about your selection as a research participant, please contact the Office of Sponsored Programs, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-2161.



*Institutional Review Board*

DATE: February 20, 2017

TO: Pattaraporn Jamsai  
FROM: University of Northern Colorado (UNCO) IRB

PROJECT TITLE: [1017900-2] Thai secondary teachers' attitudes toward inclusion of students with learning disabilities into general education classrooms  
SUBMISSION TYPE: Amendment/Modification

ACTION: APPROVAL/VERIFICATION OF EXEMPT STATUS  
DECISION DATE: February 20, 2017  
EXPIRATION DATE: February 20, 2021

Thank you for your submission of Amendment/Modification materials for this project. The University of Northern Colorado (UNCO) IRB approves this project and verifies its status as EXEMPT according to federal IRB regulations.

We will retain a copy of this correspondence within our records for a duration of 4 years.

If you have any questions, please contact Sherry May at 970-351-1910 or [Sherry.May@unco.edu](mailto:Sherry.May@unco.edu). Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Northern Colorado (UNCO) IRB's records.

**APPENDIX E**

**FACTOR LOADINGS AND COMMUNALITIES**

*Factor Loadings and Communalities*

Items	Factor Loadings			Communalities
	1	2	3	
11. The presence of students with learning disabilities will not promote acceptance of differences on the part of students without disabilities.	0.73			0.59
20. Inclusion will likely have a negative effect on the emotional development of the students with learning disabilities	0.72			0.55
18. Students with learning disabilities create confusion in general education classrooms.	0.70			0.50
6. The extra attention students with learning disabilities requires is detrimental to other students.	0.67			0.45
14. Inclusion of students with learning disabilities will not promote his or her social independence.	0.64			0.51
12. The behavior of students with learning disabilities will set a bad example for students without disabilities	0.64			0.47
9. Increased freedom in the general education classroom creates too much confusion for students with learning disabilities.	0.61			0.37
23. Teaching students with learning disabilities is better done by special education teachers rather than by general education teachers.	0.51			0.43
27. Modification of coursework for students with learning disabilities would be difficult to justify to other students.	0.48			0.27

Items	Factor Loadings			Communalities
	1	2	3	
4. Students with learning disabilities may exhibit behavior problems in general education classrooms.	0.46			0.32
24. Isolation in a special education classroom has a beneficial effect on the social and emotional development of the students with learning disabilities.	0.43			0.27
21. Students with learning disabilities are given every opportunity to function in general education classrooms when possible.		0.75		0.57
10. General education teachers must have the abilities necessary to work with students with learning disabilities.		0.67		0.45
28. Students with learning disabilities should be welcome in general education classes.		0.66		0.49
19. General education teachers must have sufficient training to teach students with learning disabilities.		0.64		0.47
2. Inclusion of students with learning disabilities necessitates extensive retraining of general education teachers.		-0.59		0.37
8. Inclusion of students with learning disabilities requires significant change in general education classroom procedures.		-0.56		0.41
3. Inclusion offers mixed group interaction that fosters understanding and acceptance of differences among students.		0.56		0.51
25. The students with learning disabilities will not be socially isolated in the general education classroom.		0.41		0.28

Items	Factor Loadings			Communities
	1	2	3	
16. Students with learning disabilities will not monopolize the general education teacher's time.			0.68	0.49
17. The inclusion of students with learning disabilities can be beneficial for students without disabilities.			0.66	0.55
22. The classroom behavior of students with learning disabilities generally does not require more patience from the teachers.			0.62	0.39
7. The challenge of being in a general education classroom promotes the academic growth of students with learning disabilities.			0.60	0.49
13. The student with learning disabilities develops academic skills more rapidly in general education classrooms than in special education classrooms.			0.58	0.36
5. Students with learning disabilities can best be served in general education classrooms.			0.57	0.37
15. There is less difficulty to maintain order in a general education classroom that has students with learning disabilities than in one that does not have students with learning disabilities.			0.52	0.38
1. Most students with learning disabilities make adequate attempts to complete their assignments.			0.45	0.32
26. Assignments should not be modified for students with learning disabilities.			-0.40	0.42