

*Coaching and Mentoring Teachers to Accommodate Students With Learning Disabilities
in Elementary Inclusive Classrooms*

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Abstract

Research objectives were to investigate 1) teachers' knowledge of coaching and mentoring methods and selecting appropriate teaching accommodation of both Thai language and mathematics in inclusive classrooms and 2) teachers' performance competence, after receiving training, to select and utilize appropriate accommodations and/or modifications for individualized student's lesson plan. The subjects were 10 Thai language and nine mathematics teachers from six selected schools. The research instruments included 1) a questionnaire, 2) two teacher's classroom teaching behavior observation forms, and 3) a focus group. The Data were collected and analyzed using frequency, percentage, and the interpretative analysis. The research findings showed that the knowledge of coaching and mentoring methods and selecting appropriate teaching accommodations of both groups of teachers were rated at moderate level (or 66.7% and 65%), respectively. After they had received learning disabilities intensive training on coaching and mentoring, all participating teachers reported being able to identify different learning characteristics of individual students and employed a variety of appropriate teaching accommodations/modifications, i.e., teaching tools; students' reading materials; assignments; adaptive exercises; and learning activities' kit to meet the needs of students with learning disabilities.

Keywords: Learning Disabilities, Coaching and Mentoring, Accommodations

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Introduction

Learning disability (LD) has been one of the major global education concerns for some time now because of the continually increasing number of students with LD who are integrated into regular classrooms. Diagnostic and Statistical Manual of Mental disorders (APA, 2013) estimates that the prevalence of all learning disorders to be about 5-15% worldwide. In the United States, among the students who received special education services under IDEA during school year 2020–21, the category of disabilities with the largest reported percentage of students was "specific learning disabilities" (National Center for Education Statistics, 2022). In Thailand, the prevalence of learning disabilities among K-12 students is somewhat unclear. In 2009, there was a survey on screening elementary students in 9,828 schools around the country using KUS-SI screening tool that was developed corroboratively by Thai educators, psychiatrists, and other experts. The results of the survey showed that students with potential LD, without diagnosis, was about 15.6% (Sirirutraykha, 2023). In fact, the number of students with LD in elementary classrooms has statistically been reported to be the highest of the nine classifications of disabilities under the two key legislations, i.e., Thailand's National Education Act (B.E. 1999) (or NEA 1999) and The Persons with Disabilities Education Act (B.E. 2551) (or PDEA (2008). Special Education Bureau, The ministry of Education has for many years been challenging schools to accommodate students with LD in their regular classrooms.

Specific learning disorder, which is clinically and legally recognized as learning disabilities (LD) in Thailand, is a biologically based neurodevelopmental disorder that affects a person's ability to take in, process, and/or communicate information (American Psychiatric Association, 2013). Students with learning disabilities encounter a variety of academic difficulties including basic skills in reading, writing, and mathematics. LD may co-occur with other disorders of attention; language; behavior; and other associated deficit disorders, including memory, cognitive, or/and metacognition deficit, perceptual differences, motor skills, and coordination problems (Smith, Polloway, Patton, & Dowdy, 2006); and executive functioning deficit (the ability to plan, organize, strategize, remember details, and manage time and space efficiently (Rosenzweig, Krawec, & Montague, 2011). In Thailand, most students who struggle with reading, writing, and calculation learn under the observation of a classroom teacher and receive a screening test by trained teachers. Students who are identified as potential students with LD are then referred to a physician for clinical diagnosis. (Tongsookdee, et al, 2018). In order to serve the needs of these students with LD properly and appropriately, a variety of changes of teachers' roles in classroom teaching are needed to affect students' learning.

In the past 20 years, there have been numerous results of research studies indicating that students with LD need a variety of help to succeed in their academic studies, especially, help from regular classroom and special education teachers. The academic success of these students requires that each of them be helped to attain individual's achievement through specific, directed, individualized, and intensive remedial instructions using various accommodations, including changes in presentation of the lesson, instructional strategies, student response format and procedures, time/scheduling, environment, equipment, and/or assignment structure – paper/pencil work and modification strategies, e.g., instructional level, content/curriculum, performance criteria, and/or assignment structure – paper/pencil work (Hawpe, 2013; Gonzalez-Ledo, 2012; Elbaum, 2007; Mummaw, 2010; Anderson, Yilmaz, and Washburn-Moses, 2004; Terrill, Scruggs, and Mastropieri, 2004; Pyle, 2016) by **experienced teachers** (Storm, 2003; PEAK Parent Center, 2006). It is, therefore, important

to note that in order to better serve the needs of students with LD to become more successful in their learning and future lives, classroom teachers play a significant role to that success.

In general, most Thai elementary school teachers spend approximately 8-9 hours a day in schools, with at least 12 hours spend teaching and at least 8 hours spend performing other school responsibilities each week (Office of the Teacher Civil Service and Educational Personnel Commission, 2021). Therefore, it is very important that these teachers receive proper training on how to identify and accommodate students with LD in their respective classrooms. Majority of teachers who have students with LD in their classrooms do not have a special education degree, but they might have received specific training on screening or writing individualized educational plans from any of the Provincial Special Education Centers or other agencies. At the same time, they do expect to frequently get academic support from education supervisors under Provincial Primary Educational Service Area, who most of the time, might not be readily available due to their very heavy load of supervisory responsibilities covering schools spread across a large area. Consequently, many teachers miss the opportunity of receiving supervision during classroom teaching, and whenever they receive classroom supervision, the duration is only for a very short time, and the discussion and/or feedback provided is most frequently focused on matters not related to effective teaching strategies and methods that would help students with learning disabilities or any other disabilities become successful in their academic studies and other daily life matters (Tongsookdee, et al, 2018; Tongsookdee & Vittayakorn, 2016; Sainark, Tongsookdee, Vittayakorn, & Leosiripong, 2022).

In their previous research study, which was supported by a grant from the National Research Council of Thailand, entitled Teaching Accommodations and Modifications for Students with Learning Disabilities in Elementary Inclusive Classrooms, Tongsookdee & Vittayakorn (2016) found that all participants (n=32) had not earned a special education degree and as such, they lacked the knowledge and skills to accommodate and support students with LD. Furthermore, the participants in that study did specifically request for more training on developing effective teaching strategies and methods to help them to appropriately accommodate students with LD in their Thai language and mathematics classrooms, respectively. In addition, the request of coaching and mentoring from experts on the fields was the top training choice of the teachers participating in that study.

According to MacLennan (2017), Jones (2014), & Parsloe (2009), coaching is a teaching process that enables learning and development to occur and thus performance to improve. It can consist of peer-to-peer discussions that provide the person being coached with objective feedback on their strengths and weaknesses in areas chosen by them. A coach requires knowledge and understanding of process as well as the variety of styles, skills, and techniques that are appropriate to the context in which the coaching takes place. On the other hand, according to Jones (2014), mentoring is a supportive, long-term relationships between an experienced mentor and their less experiences mentee. The idea is that more senior mentor passes on knowledge and guidance as the mentee finds their feet in new role. More importantly, coaching and mentoring is very efficient and effective research-based process (Kirk-Martinez, 2011; Davis, 2011; Roper, 2014; Lee, 2000; Matheson, 1997) and, therefore, it is suitable to use as process to help teachers to be more confident to teach students with LD through accommodations and modifications.

Research Objectives

The objectives of this research study were to examine 1) teachers' knowledge of coaching and mentoring methods and selecting appropriate teaching accommodations of both Thai language and mathematics in inclusive classrooms and 2) teachers' performance ability, after receiving training, to select and utilize appropriate accommodations and/or modifications for individualized lesson plan for students with learning disabilities.

Research Methodology

The researchers contacted selected seven school directors, teachers, and parents who volunteered to be part of the research study. Within these schools, 51 students selected for the study were identified using the official screening test, but they were still on the long waiting list to be diagnosed by psychologists/doctors at their local hospitals. Three additional screening tests were also used to further identify their disability status before being included in the study. They included the Test of Nonverbal Intelligence, third edition (TONI-3); the DTVP-2; and the Dynamic Occupational Therapy Cognitive Assessment for Children (DOTCA-ch). There were 10 students with potential LD in reading and writing and 10 students with potential LD in mathematics. Students with potential LD (n=20) in reading, writing, and mathematics were matched with the appropriate classroom teachers (n=20).

After that, the researchers developed a three-day training curriculum on teaching students with LD, coaching, and mentoring to help teachers succeed in their teaching practice. Twenty teachers received a three-day training on teaching students with LD, writing teaching plans using accommodation and modification strategies, and received coaching and mentoring services. After training, the participating teachers were given a post-test on teaching students with LD and asked to edit existing teaching plans with appropriate accommodation and/or modification strategies for targeted individual students with LD. The teaching plans were evaluated by experts using coaching and mentoring processes. Seven Thai and seven mathematics teachers' teaching behavior was observed twice using the coaching and mentoring processes (three teachers and three students were excluded from the study because they had already relocated to other schools before the completion the study).

The research instruments included 1) an open-ended questionnaire for knowledge and skills, including coaching and mentoring, screening, teaching methods/techniques, and accommodations and modifications, 2) evaluation forms for teaching Thai language and mathematics plans, 3) both Thai language and mathematics teacher's classroom teaching behavior observation form and video recorder, and 4) focus group. The data were analyzed using frequency, percentage, mean, standard deviation, and the interpretative analysis.

Results of the Study

The research findings showed that the knowledge of coaching and mentoring methods and selecting appropriate teaching accommodations and modifications of both groups of Thai teachers and mathematics teachers were rated at moderate level (or 66.67% and 65 %), respectively as illustrated in Table 1.

Table 1. Teachers' Knowledge of Coaching and Mentoring Methods and Selecting Appropriate Teaching Accommodations and Modifications (n=20)

Knowledge	Frequency/Percentage			Means	S.D.	Ability
	1*	2*	3*			
1. Accommodations & Modifications in Teaching and Learning	7 (35%)	6 (30%)	7 (35%)	1.95 (65%)	0.858	Moderate
2. Coaching and Mentoring	5 (25%)	11 (55.5%)	4 (20%)	2 (66.7%)	0.686	Moderate
Total	12 (30%)	17 (17%)	11 (27.5%)	1.98 (66%)	0.768	Moderate

3* = directed, covered, corrected answer with clear examples;

2* = Somewhat directed, covered, corrected answer with some clear examples;

1* = unclear answer

After they had received learning disabilities intensive training on coaching and mentoring methods and selecting appropriate teaching accommodations and modifications for students with learning disabilities, all participating teachers reported being able to identify different learning characteristics of targeted individual students with learning disabilities. Both these Thai language and mathematics teachers were also able to employ a variety of appropriate teaching accommodation and modification strategies, i.e., teaching tools, students' reading materials; assignments; adaptive exercises; and learning activities' kit to meet the needs of every individual student with learning disabilities in their respective classrooms. The data depicted on Table 2 and Table 3 were from two classroom observations conducted by two researchers on each occasion, while Table 4 depicts transcribed information from the video recorder.

Table 2. Teaching Behavior of Thai Language Teachers (n=7)

Thai Teachers' Teaching Behavior	N / %	N / %
	Showed	Not showed
1. Reviewed the main points before starting the new lesson	6 (85.7%)	1 (85.7%)
2. Explained new concepts slowly and clearly	5 (71.4%)	2 (28.6%)
3. When students seemed to be confused, teachers repeated their explanation with short and more precise sentences	4 (57.2%)	3 (42.8%)
4. Waited longer for the students' answers	7 (100%)	-
5. Used various accommodations including pictures, objects, movements, flexible reading materials, exercises, quizzes, and positive reinforcement to enhance students' understanding	4 (57.2%)	3 (42.8%)
6. Reminded students to pay attention when emphasizing important main points	5 (71.4%)	2 (28.6%)
7. Asked more questions to prompt students to develop their own strategies for learning	4 (57.2%)	3 (42.8%)
8. Asked students to rehearse what the teachers assigned them to do	5 (71.4%)	2 (28.6%)
9. Organized the buddy system in the classrooms	5 (71.4%)	2 (28.6%)
10. Provided gentle nonverbal prompting to regain students' attention	7 (100%)	-
11. Verbally reminded students when moving from one activity to another	5 (71.4%)	2 (28.6%)
12. Listed the main points for each lesson, and quizzed or questioned students at the end of the session	4 (57.2%)	3 (42.8%)

As is shown on Table 2, more than 70% of Thai language teachers were able to exhibit 8 out of the 12 appropriate teaching behaviors that encompass accommodation strategies for students with learning disabilities. Among the eight strategies, they include: waiting longer for the students' answers (100%), providing gentle nonverbal prompting to regain students' attention (100%), reviewing the main points before starting the new lesson (85.7%), explaining new concepts slowly and clearly (71.4%), reminding students to pay attention when emphasizing important main points (71.4%), asking more questions to prompt students to develop their own strategies for learning (71.4%), organizing the buddy system in the classrooms (71.4%), and verbally reminding students when moving from one activity to another (71.4%). However, only 57.2% of them used various accommodations.

Table 3. Teaching Behavior of Mathematics Teachers (n=7)

Mathematics Teachers' Teaching Behavior	N / %	N / %
	Showed	Not showed
1. Reviewed the main points before starting the new lesson	4 (57.2%)	3 (42.8%)
2. Explained new concepts slowly and clearly	7 (100%)	-
3. When students seemed to be confused, teachers repeated their explanation with short and more precise sentences	7 (100%)	-
4. Waited longer for the students' answers	7 (100%)	-
5. Used various accommodations including pictures, objects, movements, flexible reading materials, exercises, quizzes, and positive reinforcement to enhance students' understanding	6 (85.7%)	1 (14.3%)
6. Reminded students to pay attention when emphasizing important main points	1 (14.3%)	6 (85.7%)
7. Asked more questions to prompt students to develop their own strategies for learning	7 (100%)	-
8. Asked students to rehearse what the teachers assigned them to do	7 (100%)	-
9. Organized the buddy system in the classrooms	3 (42.8%)	4 (57.2%)
10. Provided gentle nonverbal prompting to regain students' attention	5 (71.4%)	2 (28.6%)
11. Verbally reminded students when moving from one activity to another	6 (85.7%)	1 (14.3%)
12. Listed the main points for each lesson, and quizzed or questioned students at the end of the session	5 (71.4%)	2 (28.6%)

The data on Table 3 shows that 100% of the mathematics teachers were able to exhibit 5 out of the 12 appropriate teaching behaviors that encompass accommodation strategies for students with learning disabilities. Of these five strategies, they include: 1) explaining new concepts slowly and clearly, 2) repeating their explanation with short and more precise sentences whenever students seemed to be confused, 3) waiting longer for the students' answers, 4) asking more questions to prompt students to develop their own strategies for learning, and 5) asking students to rehearse what the teachers assigned them to do. In addition, more than 70% of mathematics teachers were able to exhibit 4 out of the 12 aforementioned appropriate teaching behaviors that incorporate accommodation strategies to help student with learning disabilities, including 1) using various accommodations including

pictures, objects, movements, flexible reading materials, exercises, quizzes, and positive reinforcement to enhance students' understanding (85.7%), 2) verbally reminding students when moving from one activity to another (85.7%), 3) providing gentle nonverbal prompting to regain students' attention (71.4%), and 4) listing the main points for each lesson, as well as quizzing or asking students questions at the end of the session (71.4%). However, only 14.3% of the participating teachers did remind students to pay attention when emphasizing important main points.

Table 4. Usage of Accommodation Strategies
by Both Thai Language and Mathematics Teachers (n=18)

Accommodations	Teachers (n)*	%
1. One-on-one teaching with explicit instruction and easy to follow	12	67
2. Buddy system	13	72
3. Adjust exercises (make them shorter or less in numbers, less words, colors)	8	44
4. Various teaching media and materials (word cards with or without pictures, pop-up, video, games, short stories)	12	67
5. More time on task	0	0
6. Clear speech and repetition	10	56
7. Group work and collaboration	9	50
8. Activity participation	14	78
9. Positive verbal reinforcement	9	50
10. Non-verbal prompt (e.g., snacks, free time, stickers)	6	33
(n)* answer all that apply		

Table 4 depicts the percentage of both Thai language and mathematics teachers who were able to utilize a variety of effective accommodation strategies in their respective classrooms to help students with learning disabilities. The top three most commonly applied accommodation strategies by more than 65 percent of the teachers in both classrooms were as follows: 1) activity participation (78%), 2) Buddy system (72%), and various teaching media and materials (word cards with or without pictures, pop-up, video, games, short stories) (67%). However, the transcribed information from the video recording did not show evidence of teachers in both Thai language and mathematics classrooms utilizing modification strategies in their teaching practice to meet the needs of students with learning disabilities.

Conclusion and Discussion

As the results of this research study show, coaching, mentoring, and teacher development training program on accommodations of students with LD in both Thai language and mathematics classrooms was rather a success in spite of the fact that none of the participants were able to apply modification strategies in their classroom teaching. Withstanding this short coming of teachers' inability to apply appropriate modification strategies in their respective classroom teaching, it is hugely significant to report that all of the 20 teachers participating in the three-day training program were in attendance from the start to the end. Also, they all tried to apply what they had learned from the training regarding teaching students with LD utilizing appropriate accommodation, with the exception of modification

strategies, in their classroom teaching routines and wrote teaching plans that reflected these accommodations and modifications strategies in order to help students become successful in their academic studies and everyday life.

Furthermore, after the completion of the training, the professional knowledge and skills of the participating teachers improved significantly. For example, both Thai language and mathematics teachers were able to demonstrate an understanding of the teaching and learning theories, teaching techniques and methods, teaching modification strategies, and teaching accommodation strategies at a moderate level. These teachers were also able to apply some of the general accommodation strategies in the teaching and learning procedures as part of their classroom teaching and management routines. For example, they made sure that they waited longer for the students with learning disabilities to respond to their questions, provided gentle nonverbal prompting to regain students' attention, reviewed the main points before starting the new lesson, explained new concepts slowly and clearly, reminded students to pay attention when emphasizing important main points, asked more questions to prompt students with learning disabilities to develop their own strategies for learning, organized the buddy system in the classrooms, verbally reminded students when moving from one activity to another.

Obviously, many of the teaching behaviors that the participating teachers learned at the three-day training were not a novelty to them, but the additional information that they learned about how to identify the vital characteristics of students with LD was critically significant because it helped them realize that by applying simple accommodation strategies such as waiting longer for answers, reminding and explaining clearly and slowly, various prompt, or reinforcement can be powerful teaching tools to facilitate learning success of students with learning disabilities. However, to effectively apply them to targeted students with learning disabilities, teachers would need to have a better understanding of special education principles, practices, and courage for a successful integration into their classroom teaching practice. For example, accommodation of extra time for any tasks, quizzes, or tests given to students with LD. Actually, most teachers relate this act of utilizing appropriate accommodation strategies in classroom teaching to fairness being extended to all students. Therefore, coaching and mentoring on accommodations and special education is extremely critical and helpful to ensure that this act of fairness is extended to all inclusive classrooms.

Moreover, a follow-up discussions during focus group with participating teachers revealed that none of the modifications of the learning content materials, the student assessment/measurement, nor the evaluation strategies called for and agreed upon at the training sessions had yet to be implemented at the time this research was being written. One of the reasons was that these teachers were not confident enough to undertake such responsibilities on their own without the support of experts. When the participating teachers in this study were asked to suggest some viable solutions to some of the pressing problems that they were currently experiencing while teaching students with learning and other disabilities in their respective inclusive classrooms, an overwhelming majority of over 90 percent requested the following: 1) to have permanent special education teachers available in schools for relevant consultation matters about accommodation and modification strategies for students with learning disability in their respective inclusive classrooms, 2) to receive continuous staff development and/or coaching and mentoring services that specifically focus on teaching techniques and methods, as well as teaching materials and medias, and 3) to be relieved of some of the school responsibilities in order to devote more quality time to serve the needs of students with LD and their family.

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