Doctoral Dissertation

The Development of an Instrument to Measure Indonesian Teachers' Attitudes toward Inclusive Education

EDIYANTO

Graduate School for International Development and Cooperation
Hiroshima University

March 2020

The Development of an Instrument to Measure Indonesian Teachers' Attitudes toward Inclusive Education

D171740

EDIYANTO

A Dissertation Submitted to
the Graduate School for International Development and Cooperation
of Hiroshima University in Partial Fulfillment
of the Requirement for the Degree of
Doctor of Philosophy in Education

March 2020

We hereby recommend that the dissertation by Mr. EDIYANTO entitled "The Development of an Instrument to Measure Indonesian Teachers' Attitudes toward Inclusive Education" be accepted in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY IN EDUCATION.

Committee on Final Examination:

KAWAI Norimune, Professor
Chairperson

SHIMIZU Kinya, Professor

ISHIDA Yoko, Professor

NAKAYA Ayami, Associate Professor

YAMANE Noriko, Associate Professor
Graduate School of Integrated Arts and Science

Date: February 4, 2020

Approved:

BABA Takuya, Professor
Dean

Date: February 21. 2020

Graduate School for International Development and Cooperation
Hiroshima University

Abstract

In Indonesia, the Inclusive Education System has been run for the past 20 years. It has been emerged both in the research and policy sectors. The implementation of Inclusive Education means to provide space for students with special educational needs to study in the same class as typical students. On the other hand, a great effort is needed to realize the success of Inclusive Education.

To achieve successful Inclusive Education, the teacher's attitude towards Inclusive Education is very important. However, based on the literature review, there is no instrument in the Indonesian context that can measure teacher attitudes towards Inclusive Education. Therefore, the present study aims to develop an instrument to measure teachers' attitudes towards Inclusive Education.

This study used the Research and Development method, which contains ten developing steps. The initial step is to conduct a literature review, make plans, and develop instruments. Then, proceed with validating the instrument to experts, two times trial in the filed times, and three times revisions. A total of 499 teachers from Indonesia became the participants in the first trial. Then, in the second trial, about 1,206 Indonesian teachers who have been taken as the participants.

The Indonesian Teachers Attitudes toward Inclusive Education Instrument, which is developed in the current study, is called the ITAIE scale. The ITAIE scale was developed from seven previous studies and combined with new items that fit the situation of Inclusive Education in Indonesia (Forlin, Earle, Loreman, & Sharma, 2011; Gregory & Noto, 2012; Cullen, Gregory, & Noto, 2010; Stobier, Gettinger, & Goetz, 1998; Monsen, Ewing, & Boyle, 2015; Mahat 2008; Sharma & Desai 2002). The seven previous studies researched on the development of instruments to measure teachers' attitudes towards Inclusive Education. Meanwhile, five items developed in Indonesia are the result of the analysis of government regulations and interviews with teachers about Inclusive Education in Indonesia. As a result, 22 items are considered the final version named the ITAIE scale and can measure teacher attitudes towards Inclusive Education. The 22 items in ITAIE scale are grouped into six components; 1) Creating an accepting environment for all students (3

items); 2) Problem students with SEN in the inclusive classroom (4 items); 3) Professional responsibilities in Inclusive Education (4 items); 4) Professional knowledge about Inclusive Education (3 items); 5) Implication of Inclusive Education (3 items); and 6) Inclusive Education perspective in Indonesia (5 items).

The ITAIE scale is a valid and reliable instrument. In the validation process, with the lowest value of Principal Component Analysis is 0.541, and the value of reliability with Cronbach's Alpha is 0.821. Furthermore, the ITAIE scale has been used to measure the attitudes of 683 of Indonesian teachers toward Inclusive Education in East Java. As a result, 38.9% of teachers had a positive attitude, 45.3% had a moderate attitude, and 15.8% had a negative attitude towards Inclusive Education. It can be concluded that Indonesian teachers have a positive tendency towards Inclusive Education. Whereas in comparison of teacher demographic data, type of school, experience in training programs in Inclusive Education, and experience in interaction with SEN students have a significant difference. Teachers who teach in elementary schools have a more positive attitude towards Inclusive Education than teachers who teach in secondary schools. Furthermore, teachers who have experience in training programs in Inclusive Education and interact with SEN students have a more positive attitude towards Inclusive Education than teachers who do not have that experience. Whereas in the other demographic data analysis, specifically age, gender, school type, school level, educational level, teaching experience, and teaching experience in inclusive schools, there were no significant differences.

Acknowledgment

First and foremost, I would like to express my gratitude to Allah SWT, and the Salawat and Salam to the Prophet Muhammad SAW. I would like to express my highly appreciate Japan Student Services Organization, Hiroshima University, *Yahata* Memorial Ikuei, and LPDP that provide a scholarship for my doctoral study at Graduate School for International Development and Cooperation (IDEC), Hiroshima University in Japan.

Second, I would like to thank the members of my dissertation committee: not only for their time and extreme patience, but for their intellectual contributions to my development as a researcher. I would like to express my sincere gratitude to my research advisor, Professor Norimune Kawai, for his great efforts in providing useful guidance and critical comments from the beginning till the end of this research work. I sincerely thank Professor Kinya Shimizu and Professor Yoko Ishida for their valuable supports, comments, and advice on my study. I would like to thank all professors, academic staff, and colleagues of the education development program at IDEC, Hiroshima University, academic staff, and colleagues in Universitas Yudharta Pasuruan, my research roommates, and my Indonesian friends for their unconditional help and support throughout my study.

Third, I particularly grateful to the academic staff and teachers in Indonesia who participated in this study and made it possible for me to conduct my preliminary fieldwork. I also say many thanks to Mr. Sentot Kusairi, Mr. Karuniawan Puji Wicaksono, and Mr. Tuswadi, who gave me recommendation letters for pursuing this doctoral program. Without their participation and contribution, the conclusion of this study would not have been completed.

Lastly, I would like to express my profound gratitude to my parents, my wife, my sons, my brothers, my sisters, my whole family members, and all of my best friends for their love, encouragement, and supports.

Table of Contents

List of Tables

List of Figures

List of Abbreviations

ANOVA : Analysis of Variance

ATIES : Attitude toward Inclusive Education Scale

ATTAS-mm : Attitudes toward Teaching All Students (Modified)

CIE : The Concerns about Integrated Education

df : Degree of Freedom

ERIC : Education Resources Information Center

ITAIE Scale : Indonesian Teachers' Attitudes toward Inclusive Education Scale

KMO : Kaiser-Meyer Olkin

M : Mean

MATIES : Multidimensional Attitudes toward Inclusive Education Scale

MTAI : My Thinking about Inclusion

n : Partial number of participants

N : Total number of participants

NGO : Non-governmental organizations

ORMS : Opinions Relative to Mainstreaming Scale

PCA : Principal Component Analysis

SACIE-R : **Sentiments, Attitudes, and Concerns about the Inclusive Education Revised**

SD : Standard Deviation

SEN : Special Educational Needs

Sig. : Significance

SLB : *Sekolah Luar Biasa* (Special School)

SPSS : the Statistical Package for the Social Sciences

TAIS : Teachers' Attitudes toward Inclusion Scale

TATIS : The Teacher Attitudes toward Inclusion Scale

UNESCO : United Nations Educational, Scientific and Cultural Organization

List of Appendices

CHAPTER I
INTRODUCTION

A. BACKGROUND

Students with special educational needs (SEN) have been accepted into regular schools since 2002 in Indonesia (Firdaus, 2010), which means that the Government of Indonesia has started to focus on inclusive education (Ediyanto, Atika, Kawai, & Prabowo, 2017). In 2002, as a pilot project, three inclusive schools were formed in the province of West Sumatra. In addition, the Salamanca Statement and Framework for Action on Special Needs Education (UNESCO, 1994) states that every child has a fundamental right to education and that students deserve to have their unique characteristics, interests, abilities, and learning needs recognized. The Indonesian government also signed the Bandung Declaration during the 2004 National Workshop on Inclusive Education, which supports the development of inclusive education. As part of the Bandung Declaration (2004), the National Workshop on Inclusive Education declared that society should

> *"... 6. Continuously promote and socialize inclusive education through mass media, scientific forums, education, etc....."*

The governing regulation on inclusive education is provided in the Regulation of the National Education Minister of Indonesia Republic Number 70 Year 2009, which states that inclusive education should be provided for learners who have disabilities, exceptional intelligence, or gifts. The regulation is affirmed in Article 6, Paragraph (1):

> "*District/city governments ensure the implementation of inclusive education in accordance with the needs of learners.*"

Moreover, Article 3, Paragraph (1) states the following:

> "*Any learner who has a physical, emotional, mental, or social disability or has the potential for special intelligence and/or talents is entitled to follow education in an inclusive education unit according to his or her needs and abilities.*"

Furthermore, Paragraph (2) discusses learners who suffer from visual impairments, deafness, mental disorders, autism, emotional disabilities, or multiple handicaps.

B. RESEARCH PROBLEMS RELATED TO TEACHERS' ATTITUDES TOWARD INCLUSIVE EDUCATION IN INDONESIA

In 2002, Indonesia started to develop an inclusive education system (Firdaus, 2010). In 2002, three inclusive schools were formed in West Sumatra as part of a pilot project. However, Ishartiwi (2010) points out the following problems in implementing inclusive education in Indonesia: (1) it is difficult to adjust the relationship between the current standards of regular school services and the various learning needs of students with SEN and (2) schools have not been able to provide appropriate programs for students with SEN. In addition, Ediyanto, Atika, Kawai, and Prabowo (2017) point out that not all teachers know the appropriate methods for teaching students with SEN.

To implement inclusive education that meets all students' needs, including those of students with SEN, teachers need to adapt their practices and alter the teaching process and learning environments (Kinsella & Senior, 2008; Fidan, Cihan, & Özbey, 2014). Furthermore, teachers must have the appropriate skills and knowledge to successfully conduct inclusive teaching practices (Avramidis & Norwich, 2002). By successfully identifying teachers' attitudes toward inclusive education, methods can be developed to help teachers to conduct inclusive practices effectively (Forlin, Sharma, & Loreman, 2007; De Boer, Pijl, & Minnaert, 2011; Kurniawati, Minnaert, Mangunsong, & Ahmed, 2012). Previous studies show that positive attitudes can increase teachers' willingness to provide services to students with SEN (Beattie, Anderson, & Antonak, 1997; De Boer et al., 2011; Subban & Sharma, 2005). Meanwhile, negative attitudes lead to unsatisfactory services (Berry, 2010), thus inhibiting the success of inclusive education (Gibb, Tunbridge, Chua, & Frederickson, 2007).

De Boer et al. (2011) conducted a meta-analysis and revealed that most teachers showed neutral or negative attitudes toward inclusive education. Attitude measurements can be used by policymakers to design intervention programs to change teachers' attitudes towards students with SEN. Such measurements can also be used to evaluate the quality of professional training programs in the realms of counseling, rehabilitation, and special education (Towner, 1984; Yuker, 1988).

Very few studies have investigated Indonesian teachers' attitudes toward inclusive education, and the studies that do exist are flawed. For example, research conducted by Kurniawati et al. (2012) employed instrument "the nature of attitudes" by Eagly and Chaiken (1993) that were developed more than ten years ago. Meanwhile, a study by

Kristiana and Widayanti (2017) does not mention which instrument was used to measure teachers' attitudes toward inclusive education. In addition, they use instruments without checking whether they are appropriate in the Indonesian context. Therefore, more research needs to be conducted to determine Indonesian teachers' attitudes toward inclusive education. However, so far, no instrument has been developed to measure such attitudes in an Indonesian setting.

The development of teachers' professionalism pertaining to the concepts and principles of learning inclusive education has become a topic of interest to leaders (Angelides, 2008; Avramidis, Bayliss, & Burden, 2000; Center & Ward, 1987; Clough & Lindsay, 1991; Dickens-Smith, 1995). The impetus for the preparation and development of professionalism among teachers is based on the need to change their perceptions and shape their attitudes so that they can foster inclusive education. The efforts made by the Government of Indonesia to promote inclusive education have revolved around the professional development of teachers through training. The evaluation of inclusive education requires teachers' attitudes toward inclusive education to be measured. If training does not change the attitudes of teachers, other methods must be applied to change the practices of teachers.

Attitudes can be based on affective, cognitive, or behavioral information and can vary in terms of how enduring the beliefs are, how resistant the individual is to change their beliefs, and how predictive a person's attitudes are of their behavior (Alwin, 2001). Thus, attitudes are global evaluative assessments and psychological tendencies regarding a person, object, or problem. A literature review by Cullen and Noto (2007) describes teachers' attitudes towards inclusive education. The authors categorized these attitudes as follows: a) attitudes toward students with SEN in the setting of inclusive education, b) beliefs about teachers' responsibilities and professional roles, and c) beliefs about the efficacy of inclusive education.

Olson, Chalmers, and Hoover (1997) found that teachers' positive attitudes toward students with SEN are a reliable indicator of the success of inclusive education. Therefore, it is essential to investigate the attitudes of teachers toward inclusive education. However, such an investigation cannot be carried out without an appropriate measurement tool. Studies on instruments used to measure teachers' attitudes toward inclusive education indicate the need to assist teachers in forming positive attitudes. Specifically, a valid and reliable instrument is necessary to measure changes in attitudes. It is also essential to

develop an instrument that is succinct, easy to administrate, flexible, valid, and reliable (Mahat, 2008).

Table 1.1 summarizes the results of a review of instruments concerning the five criteria listed above. Any instrument that is developed to measure teachers' attitudes toward inclusive education must meet the following criteria (Antonak & Livneh, 2000; Cullen, Gregory, & Noto, 2010):

(a) The instrument must be sufficiently broad to encompass the three critical dimensions (affective, cognitive, and behavioral) of teachers' attitudes toward inclusive education, as described in the literature review.
(b) The instrument must be developed in the same country that it will be used in, as attitudes on any subject tend to vary significantly by culture.
(c) The instrument must have been developed within the last ten years to account for the significant shifts in education that have occurred during this time.
(d) The instrument must be valid and reliable.

In the current study, all of the available instruments for measuring teachers' attitudes toward inclusive education are reviewed. These instruments included SACIE-R by Forlin, Earle, Loreman, and Sharma (2011), ATTAS-mm by Gregory and Noto (2012), TATIS by Cullen et al. (2010), MTAI by Stoiber, Gettinger, and Goetz (1998), TAIS by Monsen, Ewing, and Boyle (2015), MATIES by Mahat (2008), and CIES by Sharma and Desai (2002).

Table 1.1 shows that no available instrument meets all of the required criteria to measure Indonesian teachers' attitudes toward Inclusive Education. Therefore, in the current study, a new instrument that meets all of the criteria will be developed. In developing this instrument, a specific methodology is needed to produce the desired measurement tools. In previous research, instrument development was carried out using the steps outlined in Table 1.2.

The steps taken to develop an instrument that can measure teachers' attitudes towards inclusive education are a) information gathering, b) planning, c) establishing the initial product, d) validating the process, e) carrying out an initial pilot study, and f) performing a second pilot study. The research and development methodology that best suits the development of the instrument was selected. Detailed information on the research and development methodology is described in Chapter III.

Table 1.1

Comparison of Instruments for Assessing Teachers' Attitudes toward Inclusive Education

Instrument by	Name	In Indonesia	In the last ten years	Cover affective, cognitive, and behavioral dimensions	Technically adequate?
Forlin et al. (2011)	SACIE-R	No	Yes	Yes	Yes
Gregory and Noto (2012)	ATTAS-mm	No	Yes	Yes	Yes
Cullen et al. (2010)	TATIS	No	Yes	Yes	Yes
Stoiber et al. (1998)	MTAI	No	No	No	Yes
Monsen et al. (2015)	TAIS	No	Yes	No	Yes
Mahat (2008)	MATIES	No	Yes	Yes	Yes
Sharma and Desai (2002)	CIES	No	No	No	Yes

C. RESEARCH OBJECTIVES

Several research objectives have been covered by the development of instruments to measure Indonesian teachers' attitudes toward inclusive education of students with SEN. Following the research reviewed above, the objectives of the current study are as follows:

1. To develop an instrument to measure Indonesian teachers' attitudes towards inclusive education in accordance with the standard Research & Development method.
2. To examine the content, construct, and criterion-referenced validity of the proposed instrument, which is used to measure Indonesian teachers' attitudes toward inclusive education.
3. To examine the reliability of the proposed instrument, which is used to measure Indonesian teachers' attitudes toward inclusive education.
4. To measure Indonesian teachers' attitudes toward inclusive education.

D. RESEARCH QUESTIONS

Based on the background of the current study, it is necessary to develop an instrument to measure Indonesian teachers' attitudes toward inclusive education. The following research questions guided the creation of the instrument developed in the current study:

1. What is the process of developing an instrument to measure the Indonesian teachers' attitudes toward inclusive education in the current study?

Table 1.2

Comparison of the Development of Instruments for Assessing Teachers' Attitudes toward Inclusive Education

Instrument developer(s)	Name	Information gathering	Planning	Establishing the initial product	Validation process by the expert	Pilot Study I	Pilot Study II
Forlin et al. (2011)	SACIE-R	Yes	Yes	Yes	No	Yes	Yes
Gregory and Noto (2012)	ATTAS-mm	Yes	Yes	Yes	No	Yes	Yes
Cullen et al. (2010)	TATIS	Yes	Yes	Yes	No	Yes	No
Stoiber et al. (1998)	MTAI	Yes	Yes	Yes	No	Yes	No
Monsen et al. (2015)	TAIS	Yes	Yes	Yes	No	Yes	No
Mahat (2008)	MATIES	Yes	Yes	Yes	No	Yes	No
Sharma and Desai (2002)	CIES	Yes	Yes	Yes	Yes	Yes	No

2. Does the developed instrument that measures the Indonesian teachers' attitudes toward inclusive education meet the requirements of content validity?
3. Related with construct validity, does the instrument developed to measure the Indonesian teachers' attitudes toward inclusive education emerge from a Principal Component Analysis?
4. Related with criterion-referenced validity, does the instrument developed to measure the Indonesian teachers' attitudes toward inclusive education emerge from Product-Moment Correlation analysis?
5. Related with reliability, is the internal consistency of the instrument acceptable according to Cronbach's alpha?

After the instrument was systematically evaluated the component structure, reliability, and convergent validity, it was used to measure Indonesian teachers' attitudes toward inclusive education. The following research question guided the investigation of teachers' attitudes:

6. What are Indonesian teachers' current attitudes toward inclusive education?

E. RESEARCH HYPOTHESES

The hypotheses of the current study are related to the validity and reliability of the proposed instrument, as well as Indonesian teachers' attitudes toward inclusive education. The research hypotheses are as follows:

1. The development of an instrument to measure Indonesian teachers' attitudes toward inclusive education is in accordance with the stages of the Research and Development Method by Borg and Gall (1989).
2. The development of an instrument to measure Indonesian teachers' attitudes toward inclusive education in the current study has fulfilled content validity. To examine content validity, the researcher should consult two to three experts (Creswell, 2005; Borg and Gall, 1989). The minimum score that must be met for each item on the assessment indicator is 0.7 (Sudjana, 2011).
3. The development of an instrument to measure Indonesian teachers' attitudes toward inclusive education in the current study has fulfilled the construct validity. In the Indonesian context, no instrument has yet been developed to measure the attitudes of Indonesian teachers in inclusive education. The instrument is valid because it is developed based on seven valid instruments. It also contains the questions based on the results of interviews to ask Indonesian teachers about their attitudes toward inclusive education. The validity of this instrument can be confirmed by the components of greater than 0.40 attained through a Principal Component Analysis (Kahn, 2006).
4. The development of an instrument to measure Indonesian teachers' attitudes toward inclusive education in the current study has fulfilled the criterion-referenced validity. Each component produced from Principal Component Analysis is tested for correlation by using Product-Moment Correlation. A correlation coefficient of a .60 or above will indicate a significant, positive relationship (Creswell, 2005).
5. The instrument developed was reliable as seen from the internal consistency of each item. The developed instrument is reliable based on a Cronbach's alpha value of greater than 0.70 (Field, 2013).
6. Indonesian teachers have positive attitudes toward inclusive education. Previous studies have revealed that primary school teachers have a positive attitude toward inclusion in Indonesia (Kurniawati et al., 2012; Maulia & Kurniawati, 2018) and other countries (Avramidis & Norwich, 2002; Leatherman & Niemeyer, 2005). Previous

studies have not used instruments that are appropriate to the Indonesian context, so it is necessary to measure the Indonesian teachers' attitudes toward inclusive education.

F. EXPECTED PRODUCT SPECIFICATIONS

The instrument developed in the current study is expected to have the following specifications.

1. This instrument can measure the attitudes of Indonesian teachers toward inclusive education.
2. This instrument is available in two languages (Indonesian and English).
3. This instrument asks for teachers' demographic data on the first page.
4. This instrument has a precise rating scale.
5. This instrument gives a technical report on the measurement of a precise attitude scale technique so that other researchers can easily use it.

G. SIGNIFICANCES OF THE CURRENT STUDY

The results of the current study are expected to be useful, as described in the following points.

1. The current study broadens the horizons of inclusive education studies and can be used as a reference for other studies, especially for inclusive education study conducted in an Indonesian setting.
2. The current study expands the study of inclusive education, which involves the development of an instrument for measuring teachers' attitudes toward inclusive education.
3. The current study provides a significant contribution to the study on inclusive education that can be used to measure teachers' attitudes toward inclusive education, and the results of teachers' attitudes can be used to implement teachers' training programs.
4. An understanding of the success of inclusive education is essential, as an increasing number of teachers report negative attitudes toward inclusive education.
5. The results of the current study can be used by studies to measure teachers' attitudes toward inclusive education.
6. The results of the current study can be used to devise teacher training methods and solve problems related to inclusive education in Indonesia precisely regarding the quality of teaching practices.

H. RESEARCH LIMITATION

While the current study focuses on the development of an instrument used to measure teachers' attitudes toward inclusive education in Indonesia, the participants are from only three provinces (East Java, Yogyakarta, and West Java).

I. OPERATIONAL DEFINITIONS

1. Attitude: In psychology, attitude is defined as a feeling or emotion toward a fact or state. A model developed by Fishbein and Ajzen (1980) describes an individual's attitude toward an object as a function of the individual's beliefs about the object, as well as the implicit evaluative responses associated with those beliefs. Attitudes, unlike personality, are expected to change as a function of experience.
2. Inclusive education: Following the Regulation of the Minister of National Education of the Republic of Indonesia Number 70 Year 2009, inclusive education is defined as an education system that provides opportunities for all students to be taught in an educational environment with other learners. This includes students who have disabilities and who have the potential for high intelligence and/or unique talents.
3. Teacher: Following the Law of the Republic of Indonesia Number 14 Year 2005, a teacher is a professional educator with the primary task of educating, teaching, guiding, directing, training, and evaluating students at the primary and secondary levels.
4. Students with SEN: Following the Regulation of the Minister of National Education of the Republic of Indonesia Number 70 Year 2009, students with SEN are students who have disabilities and the potential for exceptional intelligence and/or talent. Students with SEN have physical, emotional, mental, and/or social difficulties (e.g., learning disabilities, deafness and hearing difficulties, visual impairments, physical handicaps, speech disorders, mild/moderate emotional disturbances, intellectual disabilities, autism, traumatic brain injuries). These issues are often combined with poor access to education due to such students' geographic location and conditions.

J. ETHICAL CONSIDERATIONS

The privacy of participants in this study is protected by maintaining their confidentiality and anonymity. The current study was conducted after the participants signed permit letters from the institutions where they work. The participants voluntarily

joined the study, and each participant agreed to fill out the questionnaire without being compelled to do so. Participants' information was collected personally and used for research purposes. This research followed the Hiroshima University Ethical Guide for Academic Research (2016), which ensures that researchers do not perform dishonest or inappropriate acts (e.g., fabrication, falsification, plagiarism) when conducting scientific research.

CHAPTER II
LITERATURE REVIEW

A. THE CONCEPT OF INCLUSIVE EDUCATION

Inclusive education is part of an education system that places all students, including those with disabilities (regardless of the degree or severity of their disability), in regular, age-appropriate classrooms (Mahat, 2008). In line with Mahat (2008), in inclusive education, children who have limitations are united with other children without considering their limitations (Garnida, 2015). The aim of inclusive education is to provide access to all children, including children with special needs, to high-quality education and provide educational services that are appropriate based on their needs (Garnida, 2015). Inclusive education combines all children in a single learning climate that includes appropriate education services following the individual needs of all students without segregating children based on their ethnic background, social conditions, economic status, political views, family, language, geographic remoteness, gender, religion, or physical or mental conditions (Ni'matuzahroh & Nurhamida, 2016).

Inclusive education provides an ideal learning environment for all children (Garnida, 2015) regardless of their specific needs and has the following four characteristics:

a. It continually uncovers ways to respond to the diversity of children.
b. It offers opportunities for students to overcome learning obstacles.
c. It allows children to attend school, participate, and achieve meaningful learning outcomes.
d. It is intended for children who are classified as marginalized and who need special education services.

The primary objective of inclusive education is to educate children with SEN in regular classrooms alongside other children while they receive the supports that fit their needs without discrimination (Stubbs, 2002). Inclusive education also promotes the growth and development of children with SEN and maximizes their opportunities to be involved in

the same social environment as other children. Inclusive education also aims to prevent the conditions of developmental deviations from becoming more severe (Ni'matuzahroh & Nurhamida, 2016).

B. INCLUSIVE EDUCATION IN INDONESIA

The history of inclusive education in Indonesia began with the provision of special education for which students with SEN were placed in special schools that were separate from regular schools. Special education in Indonesia was designed by a program in 1980, "Pola Dasar Umum Penyelenggaraan Pendidikan Luar Biasa Dalam Rangka Kewajiban Belajar, BP3K, 1980" (Sutratinah, 1984). This program discussed the planning of special education for students with SEN (at that time, they were called "handicapped" students). Through the BP3K program in Indonesia, special schools accepted almost all students with SEN – such as visual impairments, deafness and hearing difficulties, intellectual disabilities, autism, and emotional disturbances. Students with visual impairments are classified as SLB A, those who are deaf or hard of hearing are SLB B, those with intellectual disabilities are SLB C, those with a physical impairment are SLB D, students with emotional and social behavior issues are SLB E (Sutratinah, 1984; Alfian, 2013), and gifted students are SLB F (Sutratinah, 1984).

Inclusive education is a practice that places students with special needs and typical students in the same class (Stubbs, 2002). Since 2003, inclusive schools in Yogyakarta City, Indonesia, have started to emerge (Purbani, 2013). In 2008, inclusive schools gained the support of the Government Regulations of Yogyakarta Number 47 Year 2008 on the "Implementation of inclusive education" Article 1 Chapter 1 (Yogyakarta Major Regulation, Number 47, 2008). This article states that inclusive education should include all children in one learning climate in which they are instructed with the appropriate education and services based on the potential, capacity, condition, and needs of individual learners without distinguishing or discriminating against them based on social, economic, political, ethnic, language, gender, religion, or belief factors or differences in their physical and mental condition.

Since 2009, the Government of Indonesia has focused on issues related to the acceptance of students with SEN in regular schools (Ediyanto, Atika, Kawai, & Prabowo, 2017). In addition, they refer to the Salamanca Statement and Framework for Action on Special Needs Education (UNESCO, 1994), which states that every child has the right to be educated and to have their differences recognized in terms of their interests, abilities,

and learning needs. Moreover, in 2004, the government devised the Bandung Declaration, which expresses a commitment to the development of inclusive education. The National Workshop on Inclusive Education provides seven points related to the genuine sincerity and responsibility in inclusive education that is to be followed by the government, NGOs, and academic lecturers in Indonesia. In the Bandung Declaration (2004), the participants of the National Workshop on inclusive education stated in points that

> *"1. Ensure that every child with disability and other children with special needs receive equal access in all aspects of life in education, health, social, well being, security, and other aspects so that they will become trustworthy succeeding generation.*
> *2. Ensure that every child with disability and other children with special needs grow as a dignified individual to receive good humane treatment, quality education which develops their potentials and meets demands of the society without discriminative treatment that would harm their life physically, psychologically, economically, sociologically, legally, politically as well as culturally.*
> *3. Implementing and developing inclusive education are supported by good synergic and productive cooperation among stakeholders, in particular, the government, educational institutions, related institutions, business world and industry, and parents as well as society…*
> *4. Create a supportive environment to meet the needs of children with disabilities and other children with special needs so that it makes it possible for them to develop their optimum unique potentials.*
> *5. Ensure the freedom of children with disabilities and other children with special needs to reactively and proactively interact with anyone, any place, and any environment by minimizing the barriers.*
> *6. Continuously promote and socialize inclusive education through mass media, scientific forums, education, etc.*
> *7. Design Plan of Action and allocate the needed funds to promote physical as well as nonphysical accessibility, quality education service, health, recreation, well being of all children with disabilities and other children with special needs."*

Since then, the Indonesian government has begun to promote inclusive education to provide the same education to all students. They have organized seminars and training in the field of inclusive education as well as in education ministry programs that provide materials on inclusive education and child protection (Ediyanto et al., 2017). In addition to introducing the Bandung Declaration, the Government of Indonesia has also expressed its commitment to the development of inclusive education. The "Regulation of the National

Education Minister of Indonesia Republic" Number 70 Year 2009 provides regulations for the inclusive education of students who have disabilities, special intelligence, and/or gifts. One such regulation is affirmed in Article 6, Paragraph (1) as follows:

> "*District/city governments ensure the implementation of inclusive education following the needs of learners.*"

Furthermore, Article 3, Paragraph (1) states the following:

> "*Any learner who has physical, emotional, mental, or social abilities or has the potential for special intelligence and/or talents is entitled to follow education in an inclusive education unit according to his or her needs and abilities.*"

Although Indonesia is a developing country, its people are aware of inclusive education. Indonesia's National Education System is regulated by Article 34, Paragraph (4) of Law Number 20 Year 2003. As part of the implementation of the compulsory education program, inclusive education is regulated as per the Government Regulation of the Republic of Indonesia Number 47 Year 2008. This regulation regarding compulsory education for Indonesian citizens is to be followed by the national government and local governments. This regulation shows the government's commitment to the education sector. The implementation of the compulsory basic education program is part of the education policy in Indonesia that strives to achieve education for all.

Paragraph (1) to Paragraph (4) in Article 9 of the Government Regulation of the Republic of Indonesia Number 47 Year 2008 on Compulsory Education explains that children aged seven to 15 years old are entitled to education. This article also explains that children whose parents/guardians are not able to finance their education are to be exempted from tuition fees. In Indonesia, children who are seven to 15 years of age must take part in formal education in elementary school (or an equivalent) for six years and junior high school (or an equivalent) for three years. Compulsory education strives to provide equal opportunities for every Indonesian citizen to obtain a high-quality education. As such, all Indonesian citizens must be provided with a level of education that allows them to develop their potential to live independently in their community or continue their education at a higher level.

According to Irwanto, Fransiska, Lusli, and Siradj (2010), the participation of students – including those with disabilities – in education is strengthened by the enactment of policies that promote inclusive education. Other rules that form the basis of inclusive education include 1) the 1945 Constitution of the Republic of Indonesia, 2) Law Number 4 of 1997 concerning disabled people, 3) Law Number 23 of 2002 concerning the protection

of children, 4) Government Regulation Number 19 of 2005 on national standard education, and 5) Regulation of Ministry National Education Number 34 of 2006, which identifies children who have potential. In Indonesia, there are as many as 338,328 (21.42%) 5- to 18-year-old children with SEN enrolled in special schools; as many as 15,144 children with SEN are enrolled in regular classes in one of Indonesia's 811 inclusive schools (Irwanto et al., 2010).

C. TEACHERS' ATTITUDES TOWARD INCLUSIVE EDUCATION

Teachers' attitudes toward inclusive education vary, especially for including SEN students in the same classroom with typical students. For example, some teachers in regular schools do not want students with SEN in their classrooms. They believe including students with SEN in their classroom may be harmful to teaching the rest of the class and be better including students with SEN in special schools that have higher quality and level of support than that provided within regular classrooms (Grieve, 2009). Other teachers are willing to include students with SEN within the regular classroom when appropriate support is available to them (Grieve, 2009).

With regard to the concepts and practices of inclusive education on attitudes possessed by teachers, there are a number of factors that influence, such as believed about their professional roles and responsibilities, perceived availability and quality of resources and support, teachers' perceptions of their own competence in facilitating an inclusive learning environment, and the behavior of students with SEN (Villa, Thousand, Meyers, & Nevin, 1996; Forlin, Keen, & Barrett, 2008; Monsen et al., 2014). For example, teachers expressed concerns about their students' difficulties, such as short attention spans, limited communication skills, and/or inappropriate social skills when implementing inclusive education in their classrooms (Forlin et al., 2008).

In addition, teachers were concerned about their professional knowledge about inclusive education to support children with SEN within their classrooms. Inclusive education is not assimilation (Slee, 2018). In inclusive classrooms, teachers should exhibit professional competence (Zulfija, Indira, & Elmira, 2013). Some teachers feeling insufficiently trained and expressing difficulty in monitoring other students when they focus on students with SEN, and a reduced ability to teach the whole class as effectively (Forlin et al., 2008). It is not intended to normalize students or to create sameness within a classroom but rather to celebrate diversity among all students (Parekh & Underwood, 2015). Teachers in inclusive schools must be organized and responsive to all students in

the classroom (Artiles, Kozleski & Waitoller, 2011). The teacher must learn and practice student-centered pedagogy (McDonnel, 1998; as cited in Mitchell, 2010) and teach not only the material in the curriculum but also social skills (Hannah, 2013). Other barriers include students' low academic attainment, inflexible staff attitudes towards adapting different teaching approaches, and parents' anxieties that their children will not have their needs met (Gibb, Tunbridge, Chua, & Frederickson, 2007). Those barriers towards inclusion can be related to less inclusive learning environments, where teachers with less positive attitudes toward inclusion, and students who report less satisfaction and cohesiveness within the classroom (Monsen et al., 2014).

The successful implementation of inclusive education can be determined based on the attitudes of teachers (De Boer et al., 2011; Kurniawati et al., 2012). Previous research shows that positive attitudes toward inclusive education can increase teachers' willingness to teach students with SEN (Beattie et al., 1997; De Boer et al., 2011; Subban & Sharma, 2005). Contrarily, teachers' negative attitudes toward inclusive education reflect adverse reactions to students with SEN (Berry, 2010).

One indicator of the successful implementation of inclusive education can be seen in teachers' attitudes (De Boer et al., 2011; Kurniawati et al., 2012). A willingness to serve students with SEN is associated with their attitudes toward inclusive education (Beattie et al., 1997; De Boer et al., 2011; Subban & Sharma, 2005; Berry, 2010). Teachers' positive attitudes increase their willingness to serve students with SEN (Beattie et al., 1997; De Boer et al., 2011; Subban & Sharma, 2005), and teachers' negative attitudes reflect negative responses to students with SEN (Berry, 2010). Other than the attitudes of teachers, the understanding of pre-service teachers about inclusive education is among the strongest predictors of the success of the inclusion reforms (Avramidis & Norwich, 2002; Forlin, 2010).

Knowledge of the attitudes of persons without disabilities toward persons with disabilities helps researchers understand the nature of interactions between the two groups. Furthermore, understanding the underlying dimensions of negative attitudes could lead to changes and new procedures and might promote an appropriate assessment of the effects of these interventions (Antonak & Livneh, 2000).

D. TEACHERS' ATTITUDES TOWARD INCLUSIVE EDUCATION IN INDONESIA

According to Crano and Prislin (2006), attitude is the collection of evaluative judgments that integrate cognitive and affective reactions. Eagly and Chaiken (1993) define attitude as a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor. Similarly, Barden and Petty (2003) explain that an attitude is a global and relatively enduring evaluation (e.g., good or bad) of a person, object, or issue. Attitudes can be based on affective, cognitive, or behavioral information and can vary in strength (e.g., how enduring, how resistant to change, and how predictive of behavior they are) (Ajzen, 1985). Thus, attitudes are global evaluative assessments (such as good or bad) and psychological tendencies that can be based on affective, cognitive, or behavioral information for a person, object, or problem.

Attitudes serve various functions (Bizer, Barden & Petty, 2003), and the same attitude can serve different purposes for different individuals (Malinen, 2013). The functions of attitudes are knowledge, utilitarian, value-expressive, and ego-defensive. The knowledge function, which indicates attitudes that help people understand the people and world around them, accommodates people's need for the world to be consistent and relatively stable (Katz, 1960). Knowing another's attitude helps people to explain events, make sense of the world around them, and predict what is likely to happen. It also gives them a sense of control (Katz, 1960; Malinen, 2013). The utilitarian function, which involves attitudes that are concerned with benefits and drawbacks, helps individuals to obtain rewards or avoid punishments (Bizer et al., 2003; Malinen, 2013; Watt, Maio, Haddock, & Johnson, 2011). Other people might reward someone with approval and social acceptance (Katz, 1960). For example, if a person has a positive attitude toward someone, then that person will do kind things for him. Conversely, if a person has a negative attitude toward someone, that person is likely to exhibit bad behavior and have negative thoughts toward him. The value-expressive function, which represents attitudes that are centered in a person's morals, helps individuals to gain awareness of the world through the expression of their personal values, core beliefs, and self-concept (Katz, 1960; Malinen, 2013). Attitudes can communicate who people are and make them feel good because they have asserted their identity (Katz, 1960). Finally, ego-defensive function, which has to do with attitudes that preserve a sense of worth, helps people to protect their self-esteem or justify actions that make them feel guilty (Katz, 1960; Ajzen, 2012; Mahzarin & Heiphetz, 2010).

Attitudes can describe actions that protect people from acknowledging fundamental trust in themselves and from the harsh realities of the external world (Watt et al., 2008).

Attitudes are measured in two ways – explicitly and implicitly (Bizer et al., 2003). Explicit measurement can be performed by directly asking people to explain their attitudes. In contrast, implicit measurements are indirect. Explicit measures of attitudes use Likert scales and semantic differentials. When a Likert scale is used, participants are presented with a series of evaluative statements and response options that take the form of statements of degree, such as 'strongly agree,' 'agree,' 'neither agree nor disagree,' 'disagree,' and 'strongly disagree.' When the semantic differential technique is used, participants are presented with the name of the attitudinal object and evaluative adjectives that might describe that object. More recently, attitudes have been measured implicitly through methods such as the implicit association test (AIT), Fazio's priming procedure (Fazio, 1990), and measurements of neural activity (Bizer et al., 2003; Bohner & Dickel, 2011).

Some studies have distinguished three types of attitudes that can occur alone or in combination with each other: affective, behavioral, and cognitive (Bizer et al., 2003; Eagly & Chaiken, 1993). The affective basis of an attitude is made up of feelings, moods, and emotions that have become associated with the attitudinal object through past or current experiences. The cognitive basis consists of particular attributes ascribed to the object. The behavioral basis includes two kinds of information: past behaviors and intentions to commit future behaviors (Bizer et al., 2003).

Studies on teachers' attitudes toward inclusive education have been conducted by Kurniawati et al. (2012) and De Boer et al. (2011). Their findings show that teachers are in favor of inclusion, and their attitudes seem to be related to their teaching experiences and training in special education. The results also suggest that Indonesian teachers generally hold positive attitudes toward inclusion (Kurniawati et al., 2012). In contrast, a recent international review reported that most teachers hold neutral or negative attitudes toward inclusive education (De Boer et al., 2011). Regarding demographic characteristics, teachers who have experience teaching students with SEN or who have worked with students with SEN in some other capacity were favorable toward inclusion. This result was confirmed by several other studies (Avramidis et al., 2000; Jerlinder, Danermark, & Gill, 2010). In addition, training in special education has been found to influence the formation of positive attitudes toward inclusion (Leyser, Kapperman, & Keller, 1994; Lifshitz, Glaubman, & Issawi, 2004).

Similarly, the research of Kurniawati et al. (2012), Sutisna and Retnayu (2016), Muzdalifah and Billah (2017), Fitrianasari (2015), Elisa and Wrastari (2013), and Huroiyati and Paramitha (2015) suggests that teachers generally have a positive attitude toward inclusive education. On the other hand, Elisa and Wrastari (2013) have stated that some teachers have positive attitudes toward inclusive education, while others have negative attitudes. Overall, previous research indicates that teachers tend to have a positive attitude toward inclusive education.

E. THE INSTRUMENTS OF TEACHERS' ATTITUDES TOWARD INCLUSIVE EDUCATION

1. Sentiments, Attitudes, and Concerns about the Inclusive Education Revised Scale (SACIE-R) (Forlin et al., 2011)

The sentiments, attitudes, and concerns about inclusive education revised (SACIE-R) scale was developed by Forlin et al. (2011) to identify the perceptions of pre-service teachers during their preparation to teach in inclusive classrooms. The SACIE-R scale consists of 15 questions that are divided into three components – sentiments, attitudes, and concerns – each of which contains five questions. Responses to items are based on a four-point Likert scale, with possible answers ranging from 'strongly disagree' to 'strongly agree.' A 'strongly disagree' response indicates a negative attitude toward inclusive education, while a 'strongly agree' response indicates a positive attitude toward inclusive education.

The review of the SACIE-R scale followed a four-stage process comprised of the following: 1) the development of the 19-SACIE scale and the first validation attempt, 2) the involvement of a revision of the scale based on the results of the previous iteration and a reduction from 19 items to 15 items, 3) the addition of eight new items to strengthen the aspect of attitudes, and 4) the improvement of the reliability of this component and a final reduction and validation of the resultant 15-item SACIE scale.

Stage one is the initial review of the SACIE scale. In this stage, the sample consisted of 297 pre-service teachers from four institutions in four countries (Canada, Hong Kong, Australia, and Singapore). These represented pre-service teachers preparing to work in early childhood (n = 75, 25.25%), primary (n = 102, 34.34%), or secondary (n = 113, 38.05%) schools. The majority of participants (90%) were women, and most (84%) were in the youngest age bracket (≤ 25 years).

The construct validity was confirmed through an initial principal component analysis (PCA). This procedure revealed three components that accounted for over 61% of the total variance. The results indicated that three eigenvalues from the real data had higher values than those obtained from a random sample using a parallel analysis. Thus, three components were retained. Construct validity for stage one was assessed using Cronbach's alpha correlation procedure. The initial review stage reveals an overall Cronbach's alpha reliability coefficient (α) of 0.83 for the reduced 15-item scale completed by 297 participants.

Stage two involves the testing of the refined 15-item SACIE scale. The sample used in this stage was different from that used in the first stage. A population of 227 pre-service teachers was used to confirm the items and construct the refined 15-item SACIE scale. The population comprised pre-service teachers from three institutions in three countries (Hong Kong, Australia, and Singapore). The participants represented pre-service teachers preparing to work in either primary (n = 115, 50.66%) or secondary (n = 112, 49.34%) schools. Again, the vast majority of participants (91%) were women, and most participants (83%) were in the youngest age bracket ($\leq$ 25 years).

As in stage one, construct validity was confirmed through the PCA using the Promax rotation. The analysis produced a component pattern matrix to determine the best item membership of the components, as well as a component structure matrix on which the relative importance of the 15 items on each component construct can be evaluated. This procedure revealed three components that exhibited eigenvalues greater than 1: sentiments (4.91), attitudes (4.60), and concerns (1.98). The reliabilities for stage two were assessed using Cronbach's alpha correlation procedure. The Cronbach's alpha (α) for the components of sentiments and concerns are 0.83 and 0.85, respectively, considering the combined contribution of all three components and were acceptable (α = 0.85). Furthermore, the component of attitudes was inadequately represented.

Stage three involves the revision and further testing of the SACIE scale. In this stage, the items were drawn from the original The Attitude toward Inclusive Education Scale (ATIES) scale, which measured participants' attitudes toward inclusion. The ATIES scale has 23 items. The results were administered to a new population of 186 pre-service teachers from Canada and Hong Kong to evaluate whether these groups could provide equal weight to all three components of the nomological network, thus strengthening the third component. Notably, the resulting three-component structure that produced the most

Table 2.1
The Items of Sentiment, Attitudes, and Concerns about Inclusive Education Scale-Revised (SACIE-R) (Forlin et al., 2011)

No	Items	Factors
1	I am concerned that students with disabilities will not be accepted by the rest of the class.	Concerns
2	I dread the thought that I could eventually end up with a disability.	Sentiments
3	Students who have difficulty expressing their thoughts verbally should be in regular classes.	Attitudes
4	I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom.	Concerns
5	I tend to make contacts with people with disabilities brief, and I finish them as quickly as possible.	Sentiments
6	Students who are inattentive should be in regular classes.	Attitudes
7	I am concerned that my workload will increase if I have students with disabilities in my class.	Concerns
8	Students who require communicative technologies (e.g., Braille/sign language) should be in regular classes.	Attitudes
9	I would feel terrible if I had a disability.	Sentiments
10	I am concerned that I will be more stressed if I have students with disabilities in my class.	Concerns
11	I am afraid to look directly at a person with a disability.	Sentiments
12	Students who frequently fail exams should be in regular classes.	Attitudes
13	I find it difficult to overcome my initial shock when meeting people with severe physical disabilities.	Sentiments
14	I am concerned that I do not have the knowledge and skills required to teach students with disabilities.	Concerns
15	Students who need an individualized academic program should be in regular classes.	Attitudes

consistent reliabilities consisted of 15 items and exhibited equal representation among the three scale components related to inclusive education, which were identified as sentiments, attitudes, and concerns. The relative proportions of variance explained by the three components were 23.4%, 19.4%, and 15.5%, respectively.

Stage four includes the final validation. The final confirmation of the validity of the new 15-item three-component structure of the SACIE scale was achieved using data collected from 542 pre-service teachers from nine institutions located in four countries (Canada, Hong Kong, India, and the United States). As with the other stages, the participants were principally training to become either primary (35%) or secondary (46.8%) teachers, and most were relatively young (85.7%) and female (87.3%). The nomological network comprising the sentiments, attitudes, and concerns of pre-service teachers was confirmed through a PCA of a correlation matrix followed by an orthogonal rotation. Internal reliability (as measured by Cronbach's alpha) was acceptable for the combined SACIE scale (α = .74), as well as for the individual subscales of sentiments (α = .75), attitudes (α = .67), and concerns (α = .65). The total proportion of variance explained by the scale was 47.31%. Researchers using this instrument should note that

approximately half of the variation in responses were caused by an unknown or inherent variability.

In conclusion, there appears to be adequate evidence to suggest that this refined SACIE-R scale is a useful tool. The SACIE-R combined construct includes components to evaluate teachers' sentiments about engaging with people with disabilities (Component 1, *sentiments*), acceptance of learners with different support needs (Component 2, *attitudes*), and their concerns about inclusive education (Component 3, *concerns*). The SACIE-R scale possesses sufficient strength to justify its use in identifying changes in pre-service teachers' dispositions toward inclusion, sentiments about engaging with people with disabilities, attitudes toward accepting learners with different needs in regular classrooms, and concerns about implementing inclusive practices. The complete version of the SACIE-R is found in Table 2.1.

2. Attitudes toward Teaching All Students (ATTAS-mm) (Gregory & Noto, 2012)

The instrument of Attitudes toward Teaching All Students was developed based on two instruments that had been developed previously: SACIE (Loreman & Earle, 2007) and Teacher Attitudes Toward Inclusion Scale (TATIS) (Cullen et al., 2010). This instrument was developed because the previously developed instruments were not loaded onto the three factors as described in the literature review and result in a reverse bias score. ATTAS-mm is an entirely positively scored revision of TATIS-p (Gregory & Noto, 2015).

The methodology used in developing this instrument began by testing small groups (n = 40). The questions presented in this instrument came from three component categories: cognitive, affective, and behavioral. Furthermore, the analyzed instruments were retested using data from 48 respondents. The results were based on an initial component analysis, through which 26 items were reduced to 12. The selection of these items was based on the value of the initial correlations, which were 7.0 or higher. These 12 selected items were analyzed again using PCA. The result was a nine-item instrument with items representing three components of attitudes (cognitive, affective, and behavioral). The complete nine-item version of the ATTAS-mm is found in Table 2.2.

Table 2.2
The Nine items of Attitudes toward Teaching All Students (ATTAS-mm) (Gregory & Noto, 2012)

No	Items	Factors
1	All students with mild to moderate disabilities should be educated in regular classrooms with nonhandicapped peers to the fullest extent possible.	Affective: Developing personal and professional relationships
2	Students with mild to moderate disabilities can be trusted with responsibilities in the classroom.	
3	I would like people to think that I can create a welcoming classroom environment for students with mild to moderate disabilities.	
4	Most of all, separate classrooms that exclusively serve students with mild to moderate disabilities should be eliminated.	Behavioral: Creating an accepting environment for all students to learn
5	Students with mild to moderate disabilities can be more effectively educated in regular classrooms as opposed to special education classrooms.	
6	Students with mild to moderate disabilities should be taught in regular classes with nondisabled students because they will not require too much of the teacher's time.	
7	I would like to be mentored by a teacher who models effective differentiated instruction.	Cognitive: Believing all students can succeed in general education Classrooms
8	I want to emulate teachers who know how to design appropriate academic interventions.	
9	I believe including students with mild/moderate disabilities in regular classrooms is effective because they can learn the social skills necessary for success.	

3. The Teacher Attitudes toward Inclusion Scale (TATIS) (Cullen, Gregory & Noto, 2010)

The TATIS is an instrument that can measure teachers' attitudes toward inclusion. This instrument covers all three divisions of the inclusion of children with disabilities (i.e., teachers' perceptions of students with mild to moderate disabilities (POS), beliefs about the efficacy of inclusion (BEI), and perceptions of professional roles and functions (PRF)). These three dimensions, according to Gregory and Noto (2012), have similarities with the three domains of attitude (i.e., cognitive, affective, and behavioral). Cognitive domains are the same as the perceptions of teachers to students with mild to moderate disabilities dimensions, affective domains are the same as beliefs about the efficacy of inclusion dimensions, and behavioral domains are similar to perceptions of professional roles and functions.

The technical report of TATIS (Cullen & Noto, 2010) explained that this instrument was developed from eight instruments that had been developed previously. The eight instruments include CRI (Antonak & Larrivee, 1995), IDPs (Gething, 1991), SACIE (Loreman et al., 2007), BAIES (Marfo, Harris, & Dedrick, 2002), ISPS (McLeskey, Waldron & So, 2001), CIES (Sharma & Desai, 2002), TIAQ (Sideridis & Chandler, 1995),

Table 2.3
The 14 items of the Teacher Attitudes Toward Inclusion Scale (TATIS))(Cullen, Gregory & Noto, 2010)

No	Items	Factors
1	All students with mild to moderate disabilities should be educated in regular classrooms with non-handicapped with non-handicapped peers to the fullest extent possible.	Attitudes toward students with disabilities in an inclusive setting (POS)
2	It is seldom necessary to remove students with mild to moderate disabilities from regular classrooms to meet their educational needs.	
3	Most of all, separate classrooms that exclusively serve students with mild to moderate disabilities should be eliminated.	
4	Most of all, regular classrooms can be modified to meet the needs of students with mild to moderate disabilities.	
5	Students with mild to moderate disabilities can be more effectively educated in regular classrooms as opposed to special education classrooms.	
6	Inclusion is a more efficient model for educating students with mild to moderate disabilities because it reduces transition time (i.e., the time required to move from one setting to another).	
7	Students with mild to moderate disabilities should not be taught in regular classes with non-disabled students because they will require too much of the teacher's time.	Beliefs about the efficacy of inclusion (BEI)
8	I have doubts about the effectiveness of including students with mild/moderate disabilities in regular classrooms because they often lack the academic skills necessary for success.	
9	I have doubts about the effectiveness of including students with mild/moderate disabilities in regular classrooms because they often lack the social skills necessary for success.	
10	I find that general education teachers often do not succeed with students with mild to moderate disabilities, even when they try their best.	
11	I would welcome the opportunity to team-teach as a model for meeting the needs of students with mild/moderate disabilities in regular classrooms.	Beliefs about professional roles and responsibilities (PRF)
12	All students benefit from team teaching; that is, the pairing of a general and a special education teacher in the same classroom.	
13	The responsibility for educating students with mild/moderate disabilities in regular classrooms should be shared between general and special education teachers.	
14	I would welcome the opportunity to participate in a consultant teacher model (i.e., regular collaborative meetings between special and general education teachers to share ideas, methods, and materials) as a means of addressing the needs of students with mild/moderate disabilities in regular classrooms	

and ATIE (Wilczenski, 1992). Based on the results of the comparison, the eight instruments did not fulfill all the requirements for measuring teachers' attitudes toward inclusion. According to Cullen and Noto (2010), when measuring teachers' attitudes toward inclusion, it is ideal to use a sample of in-service and pre-service teachers working in the same country in which the testing instruments were designed. Furthermore, the testing instrument should be less than eight years old, cover all three critical dimensions of inclusion, and include reports regarding its validity and reliability.

In the TATIS (Cullen & Noto, 2010) test phase, the researchers took a sample of 252 participants and collected their demographic data. The demographic data mentioned in the technical properties of TATIS include gender (64% female and 36% male), educational status (77% held bachelor's degrees, 14% held master's degrees, and 9% held degrees beyond the master's level), teaching background (82% had 0-3 years of experience, 18%

had 4 or more years of experience), etc. After obtaining the sets of data and analyzed descriptively, the TATIS were processed and analyzed using PCA to confirm the construct validity and Cronbach's alpha correlation procedure to confirm its reliability. As for the results, 14 items that qualify have a variance of 58% (of three components), the component matrix ranges from 0.584 to 0.88 with a mean of 0.72, and the alpha reliability for POS components (0.803), component IDX (0.863), and PRF (0.680) totals 0.821.

For the 14 items developed for the TATIS, four questions are reverse-scored and use a seven-point Likert Scale from 1 ('agree very strongly') to 7 ('disagree very strongly') in addition to the technical report that measures teachers' attitudes toward inclusion. High scores on these questions indicate a teacher's willingness to support inclusion. The complete the 14-item version of the TATIS is found in Table 2.3.

4. My Thinking about Inclusion (MTAI) Scale (Stoiber, Gettinger, & Goetz, 1998)

The My Thinking about Inclusion (MTAI) scale developed by Stoiber, Gettinger, and Goetz (1998) aims to understand the thinking and, more specifically, the domain of beliefs of parents and educators. The MTAI has three perspectives: the core perspective, expected outcomes, and classroom practices. The MTAI has 28 items – 12 in the expected outcomes category, 11 in the core perspective category, and five in the classroom practices category.

A total of 415 parents and 128 early childhood educators participated in the study. The MTAI scale has 28 items that are scored using a 5-point scale (1 = strongly agree, 2 = agree, 3 = undecided / neutral, 4 = disagree, 5 = strongly reject). This instrument was not assessed for its validity; it was only assessed via a reliability analysis using Cronbach's alpha. The internal consistency values of the categories are as follows: core perspective (0.80), expected outcomes (0.85), classroom beliefs (0.91), and total beliefs (0.91). The complete the 28-item version of the MTAI is found in Table 2.4.

5. Teachers' Attitudes toward Inclusion Scale (TAIS) (Monsen, Ewing, & Boyle, 2015)

The Teachers' Attitudes toward Inclusion Scale (TAIS) was developed by Monsen, Ewing, and Boyle (2015) to measure teachers' attitudes toward inclusive education. This instrument is a revised version of the Opinions Relative to Mainstreaming Scale (ORMS), which was developed by Larrivee and Cook (1979). The ORMS needed to be revised because the terms 'integration' and 'mainstream' are no longer suitable. Due to changes in

Table 2.4
The 28 items of My Thinking about Inclusion (MTAI) Scale (Stoiber, Gettinger, Goetz, 1998)

No	Items	Factors
1	Students with SEN have the right to be educated in the same classroom as typically developing students.	Core Perspective
2	Inclusion is NOT a desirable practice for educating most typically developing students. (R)	
3	It is difficult to maintain order in a classroom that contains a mix of children with exceptional educational needs and children with average abilities.	
4	Children with exceptional education needs should be given every opportunity to function in an integrated classroom.	
5	Inclusion can be beneficial for parents of children with exceptional education needs	
6	Parents of children with exceptional needs prefer to have their child placed in an inclusive classroom setting	
7	Most special education teachers lack an appropriate knowledge base to educate typically developing students effectively. (R)	
8	The individual needs of children with disabilities CANNOT be addressed adequately by a regular education teacher. (R)	
9	We must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large-scale basis. (R)	
10	The best way to begin educating children in inclusive settings is just to do it.	
11	Most children with exceptional needs are well behaved in integrated education classrooms.	
12	It is feasible to teach children with average abilities and exceptional needs in the same classroom.	
13	Inclusion is socially advantageous for children with SEN.	Expected Outcomes
14	Children with SEN will probably develop academic skills more rapidly in a special, separate classroom than in an integrated classroom. (R)	
15	Children with exceptional needs are likely to be isolated by typically developing students in inclusive classrooms. (It)	
16	The presence of children with exceptional education needs promotes acceptance of individual differences on the part of typically developing students.	
17	Inclusion promotes social independence among children with SEN.	
18	Inclusion promotes self-esteem among children with SEN.	
19	Children with exceptional needs are likely to exhibit more challenging behaviors in an integrated classroom setting. OR)	
20	Children with SEN in inclusive classrooms develop a better self-concept than in a self-contained classroom.	
21	The challenge of a regular education classroom promotes academic growth among children with exceptional educational needs.	
22	Isolation in a special class does NOT have a negative effect on the social and emotional development of students prior to middle school. OR)	
23	Typically developing students in inclusive classrooms are more likely to exhibit challenging behaviors learned from children with SEN. (It)	
24	Children with exceptional needs monopolize teachers' time. (R)	Classroom Practice
25	The behaviors of students with SEN require significantly more teacher-directed attention than those of typically developing children. OR)	
26	Parents of children with exceptional education needs require *more* supportive services from teachers than parents of typically developing children. (R)	
27	Parents of children with exceptional needs present no greater challenge for a classroom teacher than do parents of a regular education student.	
28	A good approach to managing inclusive classrooms is to have a special education teacher be responsible for instructing children with SEN. OR)	

Noted: R = Reserve scoring

Rated on a 5-point scale where one = Strongly Accept and Strongly Reject

Table 2.5
The 20 items of Teachers' Attitude toward Inclusion Scale (TAIS) (Monsen, Ewing, & Boyle, 2015)

No	Item	Factors
1	It is difficult to maintain order in a normal classroom that contains a SEN child.	Problems of inclusion of SEN in mainstream classes
2	SEN children are likely to create confusion in the regular classroom.	
3	Inclusion is likely to have a negative effect on the emotional development of the SEN child.	
4	The SEN child probably develops academic skills more rapidly in a special classroom than in a regular classroom.	
5	The behavior of SEN students sets a bad example for the other students.	
6	It is likely that a SEN child will exhibit behavior problems in a normal classroom setting.	
7	The extra attention SEN students require is to the detriment of the other students.	
8	Isolation in a special class has a negative effect on the social and emotional development of a SEN child.	Social benefits for all of the inclusion of SEN pupils in mainstream classes
9	SEN students should be given every opportunity to function in the regular classroom setting where possible.	
10	The inclusion of SEN students can be beneficial for non-SEN students.	
11	Including the SEN child in the regular classroom promotes his or her social independence.	
12	Most SEN children are well behaved in the classroom.	
13	The inclusion of SEN children necessitates extensive retraining of regular classroom teachers.	Implications of inclusion for teaching practice
14	The inclusion of SEN children requires a significant change in regular classroom procedures	
15	Diagnostic-prescriptive teaching is better done by special education teachers than by normal classroom teachers.	
16	Increased freedom in the classroom creates too much confusion.	
17	SEN children need to be told exactly what to do and how to do it.	Implications for teachers addressing the needs of children with SEN
18	A SEN child's classroom behavior generally requires more patience from the teacher that does the behavior of a non-SEN child.	
19	Most SEN children do not make an adequate attempt to complete their assignments.	
20	The needs of SEN students can best be served through special, separate classes.	

policy, the term 'inclusion' is preferred to 'integration' or 'mainstreaming.'

The TAIS includes 30 items that were accompanied by demographic data (sex, teaching experience, qualifications of teachers, and level of contact with children and young people) and was distributed to 95 teachers. This instrument measures responses on an eight-point scale, with responses ranging from 'strongly agree' to 'strongly disagree.' The 12 items on the TAIS have a positive response, and 18 items have a negative response. A high score indicates that a teacher has a positive attitude toward inclusive education.

PCA was used to test the validity of the instrument and to identify the structure and dimensionality of the items. The structure and dimensionality of the TAIS are 1) problems of inclusion in mainstream classes, 2) social benefits gained from the inclusion of all students with SEN into mainstream classes, 3) implications of inclusion for teaching

practice, and 4) implications for teachers addressing the needs of children with SEN. The values of the rotated component matrix calculations ranged from 0.431 to 0.852.

The author used Cronbach's alpha coefficients to assess the model's reliability. Cronbach's coefficients of .86 were achieved for the seven items of Component 1; coefficients of .80 were obtained for the five items of Component 2; and a value of .76 was attained for the four items of Component 3, as well as for the four items of Component 4. Overall, the results indicate the TAIS is valid and reliable to measure teachers' attitudes toward inclusion. The complete version of the TATS is found in Table 2.5.

6. Multidimensional Attitudes toward Inclusive Education Scale (MATIES) (Mahat, 2008)

The Multidimensional Attitudes toward Inclusive Education Scale (MATIES) was developed by combining the measurement frameworks described by Wilson (2003; 2005) and De Vellis (2003). This instrument includes three dimensions of attitudes, namely affective, cognitive, and behavioral.

In the development of this instrument, a random sample of 111 primary and secondary school teachers in Victoria, Australia, was employed. All items in these instruments used the same six response categories, which ranged from 'strongly agree' to 'strongly disagree.' Demographic data (gender, age, and teaching experience) were also collected.

In the first stage, all 36 items, encompassing eight components, met Kaiser's eigenvalue criterion of greater than 1 (70.6% of the variance in the data). At the revision stage, 28 items were then selected for a confirmatory factor analysis. Of these 28 items, 18 matched the selected criteria that correspond to the three dimensions of teachers' attitudes.

7. Concerns about the Integrated Education (CIE) Scale (Sharma & Desai, 2002)

The Concerns about Integrated Education (CIE) scale was developed to measure educators' concerns about integrated education in India. This instrument is simple, easy to administer, reliable, and valid. The steps taken to develop this scale were identifying concerns, determining the format for measurement, developing the scale (drafting form), reviewing the scale (which was done by an expert panel), carrying out a pilot study, and making final revisions to the scale.

Table 2.6
The 18 items of Multidimensional Attitudes toward Inclusive Education Scale (MATIES) (Mahat, 2008)

No	Items	Factors
1	I believe that an inclusive school is one that permits the academic progression of all students regardless of their ability.	Cognitive
2	I believe that students with a disability should be taught in special education schools	
3	I believe that inclusion facilitates socially appropriate behavior amongst all students.	
4	I believe that any student can learn in the regular curriculum of the school if the curriculum is adapted to meet their individual needs.	
5	I believe that students with a disability should be segregated because it is too expensive to modify the physical environment of the school.	
6	I believe that students with a disability should be in special education schools so that they do not experience rejection in regular schools.	
7	I get frustrated when I have difficulty communicating with students with a disability.	Affective
8	I get upset when students with a disability cannot keep up with the day-to-day curriculum in my classroom.	
9	I get irritated when I am unable to understand students with a disability.	
10	I am uncomfortable including students with a disability in a regular classroom with other students without a disability.	
11	I am disconcerted that students with a disability are included in the regular classroom, regardless of the severity of the disability.	
12	I get frustrated when I have to adapt the curriculum to meet the individual needs of all students.	
13	I am willing to encourage students with a disability to participate in all social activities in the regular classroom.	Behavioral
14	I am willing to adapt the curriculum to meet the individual needs of all students regardless of their ability.	
15	I am willing to physically include students with a severe disability in the regular classroom with the necessary support.	
16	I am willing to modify the physical environment to include students with a disability in the regular classroom.	
17	I am willing to adapt my communication techniques to ensure that all students with an emotional and behavioral disorder can be successfully included in the regular classroom.	
18	I am willing to adopt the assessment of individual students for Inclusive Education to take place.	

During the literature review (i.e., the identifying concerns step), 36 items were developed. Then, at the next stage (i.e., determining the format for measurement), a four-point Likert-type classification with responses from ‘extremely concerned’ (4) to ‘not concerned at all’ (1) was decided on. Based on expert reviews, 21 of the original 36 items were used in the pilot study. After that, two groups of subjects (specifically, primary school principals and teachers) (n = 794) were included as the sample in this study. After being analyzed using a principal component analysis with varimax rotation, the 21 items of the CIE scale, which comprised four components, were deemed relevant and had a variance of 55.2 percent. The four components referred to on this scale are concern about resources, concern about acceptance, concern about academic standards, and concern about

Table 2.7

The 21items of Concern about Integrated Education (CIE) scale (Sharma & Desai, 2002)

No	Items	Factors
1	I will not have enough time to plan educational programs for students' disabilities	Acceptance
2	It will be difficult to maintain discipline in class	
3	I do not have the knowledge and skills required to teach students with disabilities	
4	Students with disabilities will not be accepted by non-disabled students	
5	Parents of children without disabilities may not like the idea of placing their children in the same classroom where there are students with disabilities	
6	My Schools will not have enough funds for implementing integration successfully	Resources
7	There will be inadequate paraprofessional staff available to support integrated students (e.g., speech therapist, physiotherapist, occupational therapist, etc.).	
8	My schools will have difficulty accommodating students with various types of disabilities because of inappropriate infrastructure, e.g., architectural barriers.	
9	There will be inadequate resources or special teachers available to support integration.	
10	My school will not have adequate special education instructional materials and teaching aids, e.g., Braille.	
11	There will be inadequate administrative support to implement the integration program.	
12	I will not receive enough incentives (e.g., additional remuneration or allowance) to integrate students with disabilities.	Workload
13	My workload will increase.	
14	Other staff members of the school will be stressed.	
15	I will have to do additional paperwork	
16	The overall academic standards of the school will suffer.	Academic Standards
17	My performance as a classroom teacher or school principal will decline.	
18	The academic achievement of students without disabilities will be affected.	
19	It will be difficult to give equal attention to all students in an integrated classroom.	
20	I will not be able to cope with disabling students who do not have adequate self-care skills, e.g., students who are not toilet trained.	
21	The integration of a student with a disability in my class or school will lead to a higher degree of anxiety and stress in me.	

workload, the alpha coefficients of which were 0.82, 0.72, 0.84, and 0.74, respectively. The coefficient alpha for the total scale was 0.91. All 21 items of the CIE scale can be viewed in Table 2.7.

CHAPTER III
METHODOLOGY

A. RESEARCH AND DEVELOPMENT MODEL

The current study is conducted based on the research and development method (Borg & Gall, 1989). According to Borg and Gall, research and development is a suitable methodology used in the field of education. Based on this method, the development model of teachers' attitudes toward inclusive education for students with SEN instrument generally has ten steps (Table 3.1).

Table 3.1

Steps in the Research and Development Model Proposed by Borg and Gall (1989)

Steps	Description
1	Gathering information, namely conducting literature studies, making class observations, and designing research frameworks.
2	Devising a plan, formulating the goals to be achieved by developing a product, estimating the ability of researchers, and compiling work procedures.
3	Establishing the initial product form, namely designing the initial draft of the product.
4	Conducting preliminary field tests, the purpose of which is to develop a description of the feasibility of the product. This trial is limited to experts related to development research.
5	Revising the initial product based on the results of the validation test conducted by experts.
6	Carrying out the main field test (i.e., conducting product feasibility tests on teachers for whom the operational products are produced.
7	Revising operational products.
8	Testing the product; quantitative data about the performance of the subject in the trial process was collected.
9	Revising the final product.
10	Publishing the final product.

The Research and Development model developed by Borg and Gall (1989) established the development model for measuring teachers' attitudes toward inclusive education of students with SEN (Figure 3.1).

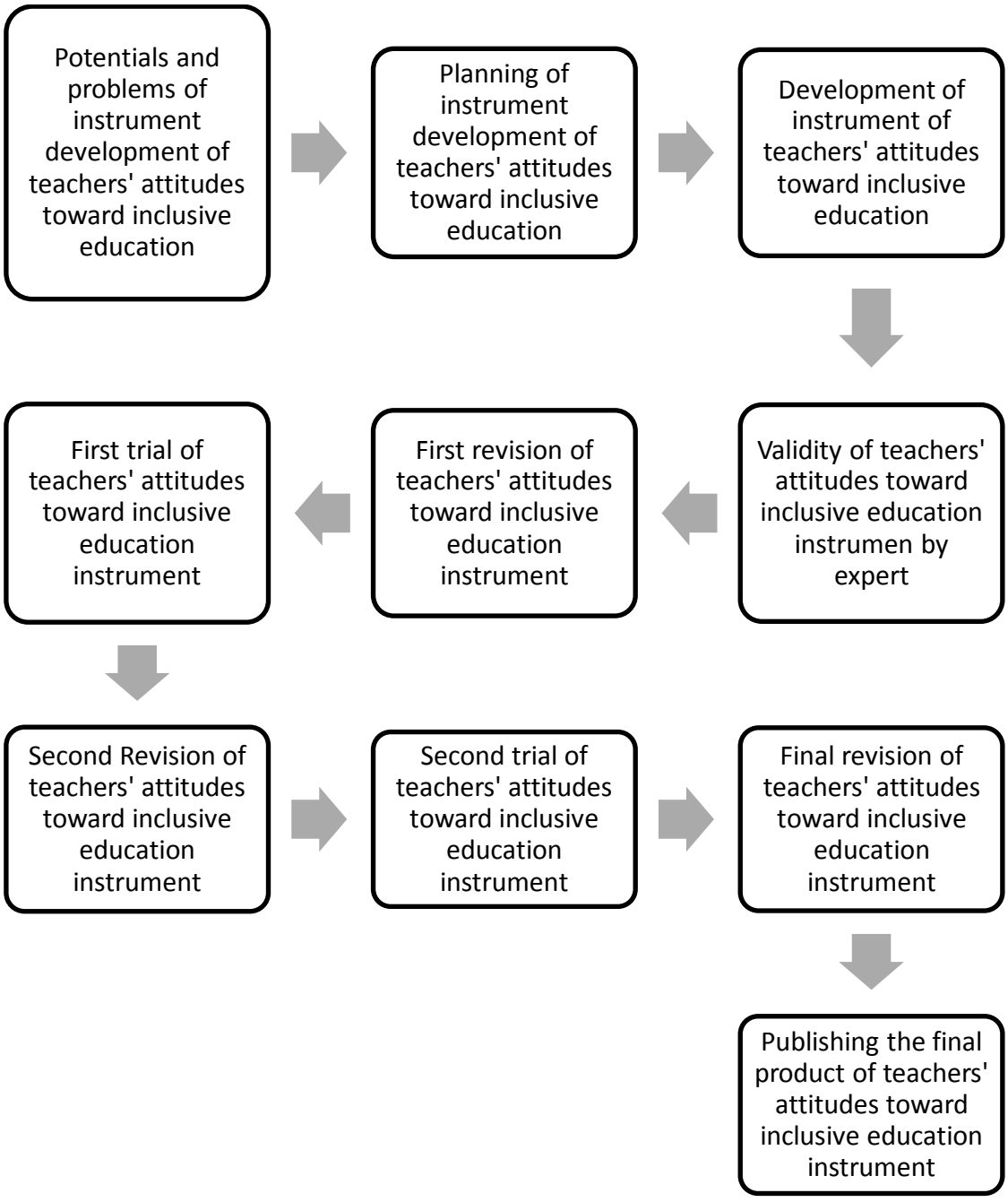


Figure 3.1. Steps of Research and Development Methods of the Development of an Instrument to Measure Teachers' Attitudes toward Inclusive Education (revised from Borg and Gall, 1989)

B. THE RESEARCH PROCEDURE AND DEVELOPMENT

1. Potential and Problems Related to Development of Instrument to Measure Teachers' Attitude toward Inclusive Education

The research context in Indonesia requires the development of a new instrument for measuring teachers' attitudes toward inclusive education. According to Cullen et al. (2010), a new instrument is needed when such an instrument has not been developed in previous studies. Several instruments used to measure teachers' attitudes toward inclusive education have been developed – for example, the SACIE-R (Forlin et al., 2011) and the TATIS (Cullen et al., 2010). When a previous study has developed an instrument in regions other than the region of interest, the result is a cross-cultural context. However, if a study is valid in one context, which does not mean that it is valid in other contexts (Harkness, Edwards, Hansen, Miller, & Villar, 2010).

At the step of potential and problems, it has been explained that the current study is fundamental for the development of an instrument to measure teachers' attitudes toward inclusive education. The research problem is explained in Chapter I.

2. Planning Related to the Development of Instrument's to Measure Teachers' Attitude toward Inclusive Education

In the planning step, the current study refers to previous research by Antonak and Livneh (2000) and Cullen et al. (2010). The study by Antonak and Livneh (2000) provides a variety of first-hand information regarding the measurement of teachers' attitudes toward students with SEN. The study by Cullen et al. (2010) also included the development of useful instruments.

The instrument developed in the current study was created after a review of research articles in online databases. The purpose of the planning step is to provide an overview of available research on the development of teachers' attitudes toward inclusive education. Two different databases were used for the literature search: Google Scholar (https://scholar.google.com) and the Education Resources Information Center (ERIC) (http://www.eric.ed.gov).

a. Selection of Articles

The article-selection process started with a search for peer-reviewed research journals on the Google Scholar and ERIC databases. The key phrase used in the search was "development of an instrument for measuring teachers' attitudes toward inclusive

education." In other searches, the term "inclusive education" was replaced by the phrases "student with disabilities," "students with SEN," "inclusion," and other words that have meanings similar to inclusive education. Seven articles were deemed appropriate, as they contained the desired keywords and were published in peer-reviewed journals.

b. Analyzing the Instruments

The instruments were analyzed so that the most suitable instruments for the current study are selected. During the selection of the articles, the researcher selected articles that contain the methods, results, and questionnaire items suitable for the current study. For additional consideration, articles also needed to contain purpose statements, research questions, hypotheses, and discussions. The articles that did not include information about the development of teachers' attitudes toward inclusive education were excluded.

From the results of the literature review, seven instruments were identified as suitable for the current study. In light of these considerations, the author reviewed all of the available instruments for evaluating teachers' attitudes toward inclusive education. These instruments included the SACIE-R (Forlin et al., 2011), ATTAs-mm (Gregory & Noto, 2012), TATIS (Cullen et al., 2010), MTAI (Stoiber, Gettinger, & Goetz, 1998), TAIS (Monsen et al., 2015), MATIES (Mahat, 2008), and CIES (Sharma & Desai, 2002). Descriptions of these seven instruments were provided in Chapter II, and explanations for the selection of these seven instruments are given in Chapter IV.

3. The Development of the Instrument to Measure Teachers' Attitude toward Inclusive Education

The current study started by finding the reason to develop the instrument to measure teachers' attitudes toward inclusive education in Indonesia. As previously explained, measuring the attitudes of teachers toward inclusive education is an indicator of the success of inclusive education (Forlin, Sharma, & Loreman, 2007; De Boer, Pijl, & Minnaert, 2011; Kurniawati, Minnaert, Mangunsong, & Ahmed, 2012), and there is no tool to measure teachers' attitudes toward inclusive education in an Indonesian context. The goal of this step was to develop an English version of the proposed instrument. An English version of the proposed instrument was translated into Indonesian in the first trial stage. A complete explanation of the process of developing this instrument can be found in Chapter IV.

a. Development of the New Instrument

In the product development stage, first, all questions from the seven instruments were listed and coded. Coding was done alphabetically and numerically. An alphabetical rule is coding for each instrument and sequential numeration for each item. The results of the coding process are available in Chapter IV. After the coding process, any items with the same content were merged into one. Then, the terms of items were ordered – for example, "a student with a disability," "special educational needs student," and "abnormal student" became "students with SEN." In addition, items with a negative connotation were marked with the letter "R."

b. Development of a Likert Scale

The Likert scale has been used in instruments to measure teachers' attitudes toward inclusive education, such as the SACIE-R (Forlin et al., 2011), ATTAs-mm (Gregory & Noto, 2012), TATIS (Cullen et al., 2010), MTAI (Stoiber et al., 1998), TAIS (Monsen et al., 2015), MATIES (Mahat, 2008), and CIES (Sharma & Desai, 2002). However, Likert scales in different studies use different ranges. For example, the instruments developed by Sharma and Desai (2002) and Forlin et al. (2011) use a four-point Likert scale. Meanwhile, the instruments designed by Mahat (2008) used six response categories, whereas the instruments developed by Stoiber et al. (1998) and Gregory and Noto (2012) use a five-point scale, and the instrument designed by Cullen et al. (2010) uses a seven-point scale.

In the current study, Likert scales with four, five, six, and seven points were considered because the best way to create a Likert scale has not changed much over time. Initially, the researcher decided to use a five- or seven-point scale because these contain a middle value. Weijters, Cabooter, and Schillewaert (2010) stated that odd-numbered scales reduce the number of false responses given on reversed items. Besides, odd-numbered scales seem to increase the validity and reliability of an instrument (Alwin, 2007; Lietz, 2010).

For the current study, the researcher eventually decided to use a five-point Likert scale. Five response categories have been used in other instruments that measure teachers' attitudes toward inclusive education studies (e.g., Stoiber et al., 1998; Gregory and Noto, 2012). The five points are given labels from "strongly disagree" to "strongly agree."

c. Development of Demographic Characteristics

At this stage, the demographic characteristics section was developed based on previous instruments. The demographic characteristics in the current study come from the seven previous instruments, as does the development of demographic characteristics. The types of demographic characteristics used in this instrument are 1) gender, 2) age, 3) province, 4) type of school, 5) level of school, 6) level of education, 7) teaching experience, 8) teaching experience in inclusive education, 9) training programs in inclusive education, and 10) experience with SEN students in the classroom.

4. Validation of the Instrument and First Revision

The validation of the instrument by experts is recommended to confirm content validity definitions of the construct, invalidate the definitions of the construct, and see the relationship of items with the desired construct (Abell, Springer, & Kamata, 2009). To examine content validity, the researcher should consult two to three experts (Creswell, 2005; Borg and Gall, 1989). The minimum score that must be met for each item on the assessment indicator is 0.7 (Sudjana, 2011). At this stage, a validation tool is developed that has been used by experts in the field of inclusive education. This activity included two professors and three experts with master's degrees in the field of inclusive education. According to Carmines and Zeller (1991) and Fink (1995), an appropriate validation tool must include criteria that are clear and balanced, include appropriate responses, and be applicable to praxis and related to the problem being studied while avoiding negative wording, wordiness, overlapping responses, jargon, and technical language. The validation tools used in this study are available in Appendix C.

Experts are asked to evaluate items, measure the feasibility of the construct, or match each item to the construct to determine whether the expert group the items in the same way as the author. After the instrument was validated by experts, the next step was an expert assessment. Experts were given a deadline of one month after agreeing to do the assessment. Data generated from expert validation is provided in the form of assessments that are analyzed through percentage techniques. The formulas used for this purpose follow Sudjana (2011, p. 109)

a. Data Analysis Techniques for Each Criterion

$$p = \frac{x}{x_i} \times 100\%$$

note: p: percentage

x : participant's answer score is one item

x_i : ideal score for one item

b. Data Analysis Techniques for Overall Scores

$$p = \frac{\sum x}{\sum x_i} \times 100\%$$

note: p: percentage

$\sum x$: the number of participants' answers to one item

$\sum x_i$: an ideal number of items for one item

The decision for revision is used qualification level with the following criteria.

$80\% \leq p \leq 100\%$, decent and does not need revision

$60\% \leq p < 80\%$, quite decent and does not need revision

$50\% \leq p < 60\%$, quite decent and need revision

$p < 50\%$, not feasible and must undergo a total revision

An instrument can be categorized as feasible and ready for the first trial step if the final score obtained is greater than 60% and if the instrument is revised according to the suggestions and comments made by the validators. If the final score obtained is below 50%, the instrument must be revised according to the suggestions and comments made by the experts.

5. The First Trial and Second Revision

After the first revision of the instrument was completed, the next step was to perform the first trial. A first trial/pilot study is an essential procedure for any piece of research: "Methodologically, the work on the pilot cases can provide information about relevant field questions and about the logistics of the field inquiry" (Yin, 2017).

First, the English version of the instrument needed to be translated into Indonesian. After the translated instrument was completed, a trial was conducted on 552 teachers from East Java, West Java, and Yogyakarta. Then, the statistical analysis (construct validity, criterion-referenced validity, and internal consistency) of the Indonesian version of teachers' attitudes toward inclusive education instrument was performed using the

Statistical Package for the Social Sciences (SPSS) 23.0 (IBM, 2015). The instrument in the current study was developed by collecting items in large numbers (more than 100 items) from previous studies. In addition, in the data collection, the number of participants was also large (more than 500 teachers). So that large items and quite a lot of participants produce large datasets as well. For this reason, the statistical analysis aims to test the construct validity, criterion-referenced validity, and reliability of the Indonesian version of the instrument and to check its validity using Principal Component Analysis (PCA). PCA is a method or technique to reduce the dimensions of the larger dataset, increasing interpretability but, at the same time, minimizing information loss (Jolliffe & Cadima, 2016; Lever, Krzywinski, & Altman, 2017). PCA's approach to data reduction is to create one or more index variables from a larger set of measured variables (Jolliffe & Cadima, 2016; Lever, Krzywinski, & Altman, 2017). Then to see the correlation generated from each component, correlations analysis was used to see the underlying construct (Clark & Watson, 1995). The test used in the bivariate correlation analysis was the Pearson product-moment correlation. The validity test of the Pearson product-moment correlation uses the principle of correlating or connecting between each component. Product-moment correlation is the most stable technique with the smallest standard error and can be calculated for any two variables, no matter how they have been measured (Borg & Gall, 1989). A correlation coefficient of a .60 or above will indicate a significant, positive relationship (Creswell, 2005). After the first trial was finished, the instrument was revised for the second time.

For keeping the instrument originality and in line with the conditions of inclusive education in Indonesia, the new items are developed. The new items were created using two methods. The first was based on the analysis of regulations and the inclusive education curriculum that applies to Indonesia. The second was based on the results of interviews with teachers who work in inclusive schools. In each school, teachers who had taught students with SEN were selected to be interviewed. The questions were related to inclusive education implementation in schools and the challenges related to teaching students with SEN. Interviews were conducted with 23 teachers from five inclusive schools in Indonesia. The next step was to conduct the second trial.

6. The Second Trial, the Final Revision, and the Final Version of Instrument of Indonesian Teachers' Attitudes toward Inclusive Education

a. Participants

The participants in the second trial were selected purposefully. An adequate sample size was needed so that the desired statistical methods could be applied to the data. The sample size needed to meet the requirements for calculations using a principal component analysis. According to Field (2013), a sample of 300 cases is sufficient to conduct a principal component analysis. Therefore, it was decided that this study would include a minimum sample size of 300 participants. The second trial was conducted on 1,633 teachers from the three provinces of East Java, West Java, and Yogyakarta.

b. Data Analyses

Data analyses were performed using SPSS 23.0 (IBM, 2015) to evaluate teachers' attitudes toward inclusive education. Descriptive statistics, such as frequency analysis means and standard deviations, were calculated for the total score as well as for each component's score.

1) Preliminary Analysis

Before performing an in-depth analysis, namely, a scale analysis, preliminary analyses were carried out. According to Field (2013), Kaiser-Meyer-Olkin measures and Bartlett's test are preliminary analyses that can be used to check the eligibility of items for PCA procedures.

2) Scale Analysis

At this stage also performed the statistical analysis (construct validity, criterion-referenced validity, and internal consistency) of the Indonesian version of teachers' attitudes toward inclusive education instrument was performed using the Statistical Package for the Social Sciences (SPSS) 23.0 (IBM, 2015) as in the first trial. In the final step, the PCA model was used to obtain component scores. These steps were carried out to examine the internal structure of the instrument, which was previously discussed in the current study as one aspect of the validity of the measurement.

The first step was to determine the number of components. Kaiser's criterion was used to determine the number of components. This criterion assumes that all components

with eigenvalues above 1.00 are substantial. In addition, descriptive methods were used for the actual extraction component.

In the current study, sampling was not done randomly. Hence, inferential methods for component extraction were not considered. Based on a critique pertaining to PCA (Field, 2013), PCA was utilized for component extraction. Next, a rotation method was performed using the varimax method. If this number exceeded 50% of the residuals, the fit was explicitly indicated as non-sufficient (Field, 2013). Meanwhile, Cronbach's alpha was used to assess the internal consistency of each component. A Cronbach's alpha value of above .70 indicated sufficient internal consistency. Although values below .70 were not necessarily considered non-sufficient, they required further explanation and explicit discussion.

7. Indonesian Teachers' Attitudes toward Inclusive Education

This section describes the investigation of Indonesian teachers' attitudes toward inclusive education. A survey was conducted by distributing the instrument to teachers. As mentioned above, the instrument was adapted from previous studies and was pilot-tested to ensure its validity and reliability. Moreover, descriptive and inferential analyses were applied to analyze the survey data. Means and standard deviations were obtained to understand frequencies. Furthermore, analyses of variance (ANOVAs) were conducted to discover the influence of components of the teachers' demographic information (i.e., gender, age, province, type of school, level of school, level of education, teaching experience, teaching experience in inclusive education, training programs in inclusive education, and experience with students with SEN in the classroom). For the demographic information that has more than two means, such as age (<31 years, 31-40 years, 41-50 years, >50 years) and level of school (elementary school, junior high school, and senior high school), Tukey's post hoc analyses were applied (Field, 2013). Further analyses uncovered the parts of the data for which statistically significant differences could be found.

a. Participants

Purposive sampling was used to select participants in the current study. Borg and Gall (1989) explain that purposive sampling allows the researcher to select cases that will provide rich information related to the purpose of the study. This method was selected so that the current study could provide meaningful data about teachers' attitudes toward

inclusive education. A total of 812 teachers, including elementary and high school teachers in East Java, Indonesia, were the participants of this study.

b. Hypothesis Analysis

Attitude dimensions were tested with regard to their associations with conceptually related constructs. An ANOVA was used to determine a statistical approach that could include multiple continuous dependent variables and a categorical independent variable. This way, the procedure could be used to estimate group differences without assuming that the values are in a specific order. Such a procedure could also estimate the effects of all dependent variables separately and together. Hence, ANOVAs were calculated, with the teachers' attitudes specified as dependent variables and their demographic characteristics as independent variables. For categorical variables with more than two values, post hoc procedures were utilized to obtain information about which sub-groups differ significantly from each other. 95% confidence intervals were calculated and interpreted to prevent the overemphasis of significance testing, as recommended by Field (2013).

This hypothesis analysis answered the question of which Indonesian teachers show positive attitudes toward inclusive education. Previous studies revealed that Indonesian primary school teachers tend to have a positive attitude toward inclusion (Kurniawati et al., 2012; Maulia & Kurniawati, 2018). Positive attitudes were also found among teachers in other countries (Avramidis & Norwich, 2002; Leatherman & Niemeyer, 2005).

C. TIMELINE OF THE CURRENT STUDY

The timeline of research describes the implementation of research from beginning to end. Table 3.2 describes the timeline of the instrument development of teachers' attitudes toward inclusive education study.

Table 3.2

Timeline of the Development of Instrument to Measure Indonesian Teachers' Attitudes toward Inclusive Education

No	Activity of Research	1st Years		2nd Years		3rd Years											
		1st S	2nd S	1st S	2nd S	1	2	3	4	5	6	7	8	9	10	11	12
1	Gathering information about instrument development of teachers' attitudes toward Inclusive Education	■	■														
2	Making a plan for instrument development of teachers' attitudes toward Inclusive Education		■	■													
3	Validating of the instrument by experts and first revision				■												
4	1st trial and 2nd revision					■	■	■	■								
5	2nd trial and final revision									■	■	■	■	■			
6	Publishing the final product														■		

Note: 1st S = First Semester

2nd S = Second Semester

CHAPTER IV
RESULTS

A. INTRODUCTION

As explained in Chapter III, the current study used a research and development methodology (Borg & Gall, 1989) with the following steps: a) planning, b) product development, c) product validity, d) first revision, e) first trial, f) second revision, g) second trial, h) final revision, and i) final product. The present chapter explains the steps of product development, product validity, the first revision, the first trial, the second revision, the second trial, the final revision, and the final product.

B. DEVELOPMENT OF THE INSTRUMENT TO MEASURE TEACHERS' ATTITUDE TOWARD INCLUSIVE EDUCATION

1. Developing the English Version of the Instrument to Measure Teachers' Attitude toward Inclusive Education

Selecting appropriate research articles is vital to a literature review. Articles that contain suitable methods, results, and questionnaire items were taken into consideration in this research. Articles were excluded if they did not mention the development of teachers' attitudes toward inclusive education as a primary focus.

The present stage of this research explains the sources used as reference material for developing the scale proposed in this work. Based on the literature review, seven instruments that are suitable for the current study were discovered. These seven instruments were considered when developing the proposed instrument for measuring teachers' attitudes toward inclusive education. The instruments included are the SACIE-R (Forlin et al., 2011), ATTAs-mm (Gregory & Noto, 2012), TATIS (Cullen et al., 2010), MTAI (Stoiber et al., 1998), TAIS (Monsen et al., 2015), MATIES (Mahat, 2008), and CIES (Sharma & Desai, 2002). All items were coded alphabetically for the overall instruments and numerically for each item. The results of the coding process for each instrument and the items are provided in Table 4.1.

Table 4.1
Coding System of the Various Instruments Previously Published

No	Instrument	Number of Items	Code
1	SACIE-R	15	S
2	ATTAS-mm	9	A
3	TATIS	14	T
4	MTAI	28	B
5	TAIS	20	I
6	MATIES	18	M
7	CIE	21	C
Total items		125	

A total of 125 items are included in the seven scales previously used to assess teachers' attitudes toward inclusive education (all items and codes are shown in Appendix A). The questions are selected by combining those closest meaning from 125 items. For example, In the ATTAS-mm instrument, the following item is:

> "Students with mild to moderate disabilities can be more effectively educated in regular classrooms as opposed to special education classrooms."

Meanwhile, the following item appears in the TATIS:

> "Students with mild to moderate disabilities can be more effectively educated in regular classrooms as opposed to special education classrooms."

Furthermore, the TAIS contains the following item:

> "The SEN Child probably develops academic skills more rapidly in a special classroom than in a regular classroom."

Items similar to those in the above examples were combined into one item in the scale developed for the current study.

The last step in the English instrument development process was the equation of terms: for example, the terms "a student with a disability" and an "abnormal student" were merged into "students with SEN." In addition, negative, or reverse, items were marked with the letter "R." At the end of the development process, the original 125 items had been reduced to 45, which were included in the initial version of the instrument.

Then in the second revision stage, items were developed to suit the conditions of inclusive education in Indonesia. The purpose of this step is to keep the instrument originality and in line with the conditions of inclusive education in Indonesia. The new items were created using two methods. The first was based on the analysis of regulations and the inclusive education curriculum that applies to Indonesia. The second was based on the results of interviews with teachers who work in inclusive schools. In each school,

teachers who had taught students with SEN were selected to be interviewed. The questions were related to inclusive education implementation in schools and the challenges related to teaching students with SEN. Detailed descriptions of these 45 items are given below.

a. *Item Number 1. All students should be educated in the same classroom regardless of their SEN.*

Item number 1 was adapted from the item with the code A1. At first, the item with the A1 code read:

> "All students with mild to moderate disabilities should be educated in regular classrooms with non-handicapped with non-handicapped peers to the fullest extent possible."

This was later changed to:

> "All students should be educated in the same classroom regardless of their SEN."

Other items that have a similar meaning and, thus, were combined with item number 1 are A1, A4, T1, T3, B1, B12, M2, M6, M11, and C5. Meanwhile, the items with codes S3, S6, S8, S12, and S15 mention types of students with SEN, and so these items were also included in item number 1.

b. *Item Number 2. Students with SEN can be trusted with responsibilities in the classroom.*

The item with codes A2 and I9 were used in item number 2. In item number 2, the term "student with mild to moderate disabilities" was replaced with "student with SEN."

c. *Item Number 3. Regular classrooms can create a welcoming classroom environment for students with SEN with other students without SEN.*

Item number 3 is adapted from the item with code A3. The item with code A3 reads:

"I would like people to think that I can create a welcoming classroom environment for students with mild to moderate disabilities."

This was changed to:

"Regular classrooms can create a welcoming classroom environment for students with SEN with other students without SEN."

The item with code M10 was combined with item number 3.

d. Item Number 4. Students with SEN cannot be effectively educated in regular classrooms.

Item number 4 is adapted from the items with codes A5 and T5. Item number 4 is identical to the item with code A5 and is labeled "R." The "R" label means the scores of responses to this item will be reversed during data tabulation. All items labeled "R" are treated in the same way.

e. Item Number 5. It is seldom necessary to remove students with SEN from regular classrooms in order to meet their educational needs.

Item number 5 is adopted from the item with code T2. In item number 5, the term "student with mild to moderate disabilities" is replaced with "student with SEN."

f. Item Number 6. It is difficult to maintain discipline in a regular classroom that contains students with SEN.

Item number 6 is adopted from the items with codes B3 and I1. This item is labeled "R." The term "order" in the original items was changed to "discipline," and "normal classroom" was changed to "regular classroom."

g. Item Number 7. Students with SEN are likely to create confusion in the regular classroom.

Item number 7 is adapted from the item with code I2 and is labeled "R." Initially, the item with the A1 code read:

"SEN children are likely to create confusion in the regular classroom."

There is a slight editorial change to the word "SEN children" to "Students with SEN."

h. Item Number 8. Inclusive education is likely to have a negative effect on the emotional development of the students with SEN.

Item number 8 is adapted from the item with code I3. The items with codes B22 and I8 are very similar to those with code I3. The term used in item I3 is "emotional development," while items B22 and I8 use "emotional and social development." However, in the current instrument, emotional and social development were considered separately, which is why item number 8 includes the term "emotional development." (The term "social development" is used in item number 19.)

The term "inclusion" in the item with code I3 was changed to "inclusive education." Meanwhile, the term "special class" used in items with codes B22 and I8 was changed to "inclusive education." In addition, item number 8 is labeled "R."

i. Item Number 9. The behavior of the students with SEN sets a bad example for the other students.

Item number 9 is adapted from the item with code I5. Item number 9 was not changed significantly from the original item (I5). The term "SEN students" in item I3 was changed to "students with SEN." Items on other instruments that have almost the same meaning and were therefore combined with item number 9 are the items with codes B11, B19, B23, I6, I12, and I18. Item number 9 is labeled "R."

j. Item Number 10. It will be difficult to give appropriate attention to all students in an inclusive classroom.

Item number 10 is adapted from the items with codes B25 and I7 and is labeled "R." Initially, item A25 read:

"The behaviors of students with SEN require significantly more teacher-directed attention than those of typically developing children."

Item I7 originally read:

"The extra attention SEN students require is to the detriment of the other students."

This was changed to:

"It will be difficult to give appropriate attention to all students in an inclusive classroom."

k. Item Number 11. Inclusion of Students with SEN necessitates extensive retraining of regular classroom teachers.

Item number 11 was adapted from the item with code I7 and is labeled "R." The term "SEN children" in item I7 was changed to "students with SEN."

l. Item Number 12. The inclusion of the students with SEN requires a significant change in regular classroom procedures.

Item number 12 was adapted from the item with code I14 and was labeled "R." The term "SEN children" in item I7 was changed to "students with SEN."

m. Item Number 13. Most of the students with SEN do not make an adequate attempt to complete their assignments.

Item number 13 was adapted from the item with code I19 and was labeled "R." The term "SEN children" in item I19 was changed to "students with SEN."

n. *Item Number 14. The needs of students with SEN can best be served through special, separate classes.*

Item number 14 was adapted from the item with code I20 and was labeled "R." The term "SEN students" in item I20 was changed to "students with SEN."

o. *Item Number 15. I get frustrated when I have difficulty communicating with students with SEN.*

Item number 15 was adapted from the item with code M7 and was labeled "R." The term "student with a disability" in item M7 was changed to "students with SEN."

p. *Item number 16. I get upset when students with SEN cannot keep up with lessons in my classroom.*

Item number 16 was adapted from the item with code M8 and was labeled "R." The original item read:

> "I get upset when students with a disability cannot keep up with the day-to-day curriculum in my classroom."

This was changed to:

> "I get upset when students with SEN cannot keep up with lessons in my classroom."

q. *Item number 17. I get irritated when I am unable to understand students with SEN.*

Item number 17 is adapted from the item with code M9. The original item was not changed.

r. *Item number 18. I get frustrated when I have to adapt the lesson to meet the individual's needs of all students.*

Item number 18 was adapted from the item with code M12 and was labeled "R." The term "curriculum" in the item with code M12 was changed to "lesson." The item with code M14 was also integrated into item number 18.

s. *Item number 19. Including students with SEN in regular classrooms is effective because they can learn the social skills necessary for success.*

Item number 19 was adapted from the items with codes A9, T9, B13, B17, I8, I11, M3, and M13. Item 19 is a revised version of the item with code A9. The statement given in item A9 is:

> "I believe including students with mild/moderate disabilities in regular classrooms is effective because they can learn the social skills necessary for success."

This was changed to:

> "Including students with SEN in regular classrooms is effective because they can learn the social skills necessary for success."

The term "I believe" was removed, and the phrase "students with mild/moderate disabilities" was changed to "students with SEN."

t. *Item number 20. I find that general education teachers often do not succeed with students with SEN, even when they try their best.*

Item number 20 was adapted from the item with code T10 and was labeled "R." The original item was not changed.

u. *Item number 21. The responsibility for educating students with SEN in regular classrooms should be shared between general and special education teachers.*

Item number 21 was adapted from the items with codes T13 and B28 and was labeled "R." Item number 21 was based on item T13, with the term "students with mild/moderate disabilities" in item T13 changed to "students with SEN."

v. *Item number 22. Students with SEN should be segregated from inclusive classrooms because it is too expensive to modify the physical environment of regular schools.*

Item number 22 was adapted from the item with code M5 and was labeled "R." The item with code M5 read as follows:

> "I believe that students with a disability should be segregated because it is too expensive to modify the physical environment of the school."

This was changed to:

> "Students with SEN should be segregated from inclusive classrooms because it is too expensive to modify the physical environment of regular schools."

The phrase "I believe" was deleted, and "students with a disability" was altered to "students with SEN."

w. *Item number 23. inclusive education is not a desirable practice for educating most typically developing students.*

Item number 23 was adapted from the item with code B2 and was labeled "R." The term "inclusion" in the item with code B2 was changed to "inclusive education."

x. *Item number 24. Most special education teachers lack an appropriate knowledge base to educate typically developing students effectively.*

Item number 24 was adapted from the item with code B7 and was labeled "R." The original item was not changed.

y. *Item number 25. The individual's needs of students with SEN cannot be addressed adequately by a regular education teacher.*

Item number 25 was adapted from the item with code B8 and was labeled "R." The term "students with disabilities" in the item with code B8 was changed to "students with SEN."

z. *Item number 26. I must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large-scale basis.*

Item number 26 was adapted from the item with code B9 and was labeled "R." The word "We" in the item with code B9 is replaced by the word "I."

aa. *Item number 27. Students with SEN will probably develop academic skills more rapidly in a special, separate classroom than in an inclusive classroom.*

Item number 27 was adapted from the item with code B14 and was labeled "R." The phrase "children with SEN" in the item with code B14 was replaced by "students with SEN." Other items that have close meaning to item number 27 are the items with codes B21 and M1.

bb. *Item number 28. Students with SEN are likely to be isolated by typically developing students in inclusive classrooms.*

Item number 28 was adapted from the item with code B15 and was labeled "R." The term "children with exceptional needs" in the item with code B15 was replaced by the term "students with SEN."

cc. Item number 29. The presence of students with SEN promotes acceptance of individual differences on the part of typically developing students.

Item number 29 was adapted from the item with code B16, which read

> "The presence of children with exceptional education needs promotes acceptance of individual differences on the part of typically developing students."

This was changed to:

> "The presence of students with SEN promotes acceptance of individual differences on the part of typically developing students."

dd. Item number 30. Inclusion promotes self-esteem among students with SEN.

Item number 30 was adapted from the item with code B18. The term "children with SEN" in the item with code B18 was replaced by the term "students with SEN."

ee. Item number 31. Students with SEN in inclusive classrooms develop a better self-concept than in a self-contained classroom.

Item number 31 was adapted from the item with code B20. The term "children with SEN" in the item with code B20 was replaced by the term "students with SEN."

ff. Item number 32. Students with SEN monopolize teachers' time.

Item number 32 was adapted from the items with codes B24, A6, and T7. Item number 32 was labeled "R." Item number 32 is a slightly revised version of the item with code B24. Specifically, the term "children with exceptional needs" in the item with code B24 was replaced by the term "students with SEN."

gg. Item number 33. My workload will be increased if I have students with SEN in my class.

Item number 33 was adapted from the items with codes S7, C13, and C15. Item number 32 was labeled "R." The item with code S7 stated:

> "I am concerned that my workload will increase if I have students with disabilities in my class."

The item with code C13 stated:

> "My workload will increase."

The item with code C15 stated:

"I will have to do additional paperwork."

Based on the three items mentioned above, item number 33 stated:

"My workload will increase if I have students with SEN in my class."

The term "I am concerned that" included in the item with code S7 was deleted, and the term "students with disabilities" was changed to "students with SEN."

hh. Item number 34. I will be more stressed if I have students with SEN in my class.

Item number 34 was adapted from the items with codes S10 and C21. Item number 34 was labeled "R." The item with code S10 stated:

"I am concerned that I will be more stressed if I have students with disabilities in my class."

The item with code C21 stated:

"The integration of a student with a disability in my class or school will lead to a higher degree of anxiety and stress in me."

Based on the two items mentioned above, item number 34 stated:

"I will be more stressed if I have students with SEN in my class."

The term "I am concerned that" in the item with code S7 was deleted, and the term "students with disabilities" was changed to "students with SEN."

ii. Item number 35. I do not have any knowledge and skills required to teach students with SEN.

Item number 35 was adapted from the items with codes S14 and C3. Item number 35 was labeled "R." Item number 35 is an edited version of the item with code S14. The term "students with disabilities" in the item with code S14 was replaced by the term "students with SEN," and the phrase "I am concerned" was deleted.

jj. Item number 36. There will be inadequate resources/staff available to support inclusive education.

Item number 36 was adapted from the item with code C7 and was labeled "R." The item with code C7 stated:

"There will be inadequate paraprofessional staff available to support integrated students (e.g., speech therapist, physiotherapist, occupational therapist, etc.)."

This was changed to:

"There will be inadequate resources/staff available to support inclusive education."

kk. Item number 37. It will be difficult to maintain discipline in an inclusive classroom.

Item number 37 was adapted from the item with code C2 and was labeled "R." The term "class" in the item with code S14 was replaced by the term "inclusive classroom."

ll. Item number 38. Students with SEN will not be accepted by non-disabled students and the rest of the class.

Item number 38 was adapted from the items with codes C4 and S1. Item number 38 was labeled "R." The item with code S1 stated:

"I am concerned that students with disabilities will not be accepted by the rest of the class."

The item with code C4 stated:

"Students with disabilities will not be accepted by non-disabled students."

Based on the two items mentioned above, the combined sentence for item number 34 is as follows:

"Students with SEN will not be accepted by non-disabled students and the rest of the class."

The term "I am concerned that" in the item with code S1 was deleted, and the term "students with disabilities" was changed to "students with SEN."

mm. Item number 39. My schools will not have enough funds for implementing inclusion successfully.

Item number 39 was adapted from the item with code C6 and was labeled "R." The term "integration" in the item with code C6 was replaced by the term "inclusion."

nn. Item number 40. I will not receive enough incentives (e.g., additional remuneration or allowance) to integrate students with SEN.

Item number 40 was adapted from the item with code C12 and was labeled "R." The term "students with disabilities" in the item with code C12 was replaced by the term "students with SEN."

oo. *Item number 41. My schools will have difficulty in accommodating students with various types of SEN because of inappropriate infrastructure, e.g., architectural barriers.*

Item number 41 was adapted from the item with code C8 and was labeled "R." The term "types of disabilities" in the item with code C8 was replaced by the term "types of SEN."

pp. *Item number 42. There will be inadequate resources or special teachers available to support inclusion.*

Item number 42 was adapted from the item with code C9 and was labeled "R." No changes were made to the item with code C9.

qq. *Item number 43. My school will not have adequate special education instructional materials and teaching aids, e.g., Braille.*

Item number 43 was adapted from the item with code C10 and was labeled "R." No changes were made to the item with code C10.

rr. *Item number 44. My performance as a classroom teacher will decline.*

Item number 44 was adapted from the item with code C17 and was labeled "R." The item with code C17 stated:

"My performance as a classroom teacher or school principal will decline,"

This was changed to:

"My performance as a classroom teacher will decline."

The term "school principal" was deleted.

ss. *Item number 45. There will be inadequate administrative support to implement the inclusive education program.*

Item number 45 was adapted from the item with code C11 and was labeled "R." The item with code C11 stated:

"There will be inadequate administrative support to implement the integration program."

This was changed to:

"There will be inadequate administrative support to implement the inclusion program."

The term "integration" was changed to "inclusive education."

2. The Instrument of Indonesian Teachers' Attitudes toward Inclusive Education (English Version)

The instrument developed in the current study was divided into three sections: demographic characteristics, directions of the instrument, and items.

a. Demographic Characteristics

The demographic characteristics section in the instrument is based on previous studies, such as the SACIE-R (Forlin et al., 2011), ATTAs-mm (Gregory & Noto, 2012), TATIS (Cullen et al., 2010), MTAI (Stoiber et al., 1998), TAIS (Monsen et al., 2015), MATIES (Mahat, 2008), and CIES (Sharma & Desai, 2002). The demographic characteristics employed in the instrument developed in the current study are 1) gender, 2) age, 3) province, 4) type of school, 5) school level, 6) level of education, 7) teaching experience, 8) teaching experience in inclusive schools, 9) training programs in inclusive education, and 10) interaction with SEN students. The format of the demographic characteristics section can be found in Appendix B.

1) Gender

Gender is a common demographic characteristic used in instruments, such as the SACIE-R (Forlin et al., 2011), ATTAs-mm (Gregory & Noto, 2012), TATIS (Cullen et al., 2010), MTAI (Stoiber et al., 1998), TAIS (Monsen et al., 2015), MATIES (Mahat, 2008), and CIES (Sharma & Desai, 2002).

2) Age

At the time of the data tabulation, age was categorized into four groups: 1) 21-30 years, 2) 31-40 years, 3) for ages 40-50 years, and 4) over 50 years. Categorizing starts at the age of 21 years because, on average, those who become teachers are at least 21 years old. Meanwhile, the retirement age of teachers is 60 years old (Article 40 paragraph (4) of Law Number 4 of 2005 concerning Teachers and Lecturers).

3) Province/School Location

The province/school location is where the participants work. This location can be used as a reference distribution of sample data. The three provinces included in the current study were East Java, Yogyakarta, and West Java.

4) Type of School

In general, Indonesia has two types of schools: regular schools and special schools. The type of school depends on whether a school accepts students with SEN. In Indonesia, not all schools accept students with SEN. Only public schools designated by the government accept students with SEN and become inclusive schools.

5) School Level

School level refers to the level of school at which the participants work. In Indonesia, there are three school levels: elementary school, junior high school, and senior high school.

6) Level of Education

Level of education refers to the highest education degree of the participants. Level of education is divided into three categories: bachelor's, master's, and doctoral degrees.

7) Teaching Experience

In this section, the participants described their teaching experiences. When tabulating data, teaching experience is categorized into four categories: 1) 1-10 years, 2) 11-20 years, 3) 21-30 years, and 4) more than 30 years.

8) Teaching Experience in Inclusive Schools

In this section, the participants stated the amount of teaching experience they have in inclusive schools. Teaching experience in inclusive schools was categorized into four categories: 1) 1-5 years, 2) 6-10 years, 3) 11-15 years, and 4) for more than 15 years.

9) Training Program in Inclusive Education

In this section, some teachers expressed having experience in inclusive education training programs, while others did not.

10) Interaction with Students with SEN

In this section, some teachers reported having experienced interactions with students with SEN, while others did not.

b. The Format of the Instrument

The instrument contains instructions on the first page. The instructions provide general information about the instrument, contains the objectives of the research, and asks participants to respond honestly.

In addition to the directions, a definition of inclusive education and directions for filling out the instrument are also given. The definition of inclusive education section aims to provide respondents with an understanding of inclusive education in accordance with applicable regulations in Indonesia. This definition was taken from the regulations stipulated by the Regulation of the Minister of National Education of the Republic of Indonesia Number 70 Year 2009. The directions for filling out the instrument explained to participants how they should fill out the questionnaire. As explained in Chapter III, the items of the questionnaire are given in the form of five-point Likert scales, with choices ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The format of the English version of the instrument is provided in Appendix B.

Another consideration in developing instruments in the current study is the adaptation to the Indonesian context. The method used is to analyze the curriculum, regulations, and interviews with teachers in Indonesia. The results from analyzing the curriculum, regulations, and interviews with teachers in Indonesia are 12 new items that were added based on the conditions of inclusive education specific to Indonesia.

C. VALIDATION BY EXPERTS

The purpose of this phase was to confirm definitions of the construct, invalidate the definitions of the construct, and see the relationship of items with the desired construct (Abell, Springer, & Kamata, 2009). To examine content validity, the researcher should consult two to three experts (Creswell, 2005; Borg and Gall, 1989). The minimum score that must be met for each item on the assessment indicator is 0.7 (Sudjana, 2011). Validation by experts make up the fourth and fifth steps of the research and development method developed by Borg and Gall (1989) (See Chapter III, Figure 3.1).

1. Preparation of Validation by Experts

a. Preparation of Validation Sheet

Using the validation sheet, the experts assessed the instrument in two ways (i.e., by giving an appropriate assessment of the instrument and by leaving comments in the column provided on the sheet). A validation sheet must include criteria that are appropriate in terms of clarity, wordiness, negative wording, overlapping responses, balance, use of jargon, appropriateness of listed responses, use of technical language, application to praxis, and relationship to the problem (Carmines & Zeller, 1991; Fink, 1995). Furthermore, the instrument must be revised by paying attention to experts' suggestions and comments.

Each item includes a "suggestions and comments" column for the experts to fill out. In addition, instructions for filling in the validation sheets are given at the beginning of the instrument. The validation sheet can be found in Appendix C.

b. Selecting Experts

The use of experts in developing the instrument is based on scientists' trust in the knowledge of experts. In the "public trust in expert knowledge," symposium, Camporesi, Vaccarella, and Davis (2017) state that scientists must trust the competence and knowledge possessed by experts. The most important aspect of the validation process by experts is the suitability of the field of research with the expertise. In the current study, a validation sheet was developed to be used by experts to assess the instrument. Two professors and three experts with master's degrees in the field of inclusive education were selected for this step of the research.

2. The Validation Process

The validation process was carried out within two months. Experts who were selected in the previous process were contacted and asked to assess the instrument. Experts who expressed their willingness to provide an assessment were sent a letter containing the instrument of the teachers' attitudes toward inclusive education and a validation sheet. After receiving these items, the experts were given one month to make their assessments and return them.

3. Results of Validation by Experts

a. Results of validating each item

The results of the validating each item were based on 20 validation indicator items. The lowest scores for the indicator "The statement is specific" were found in items 12 and 44 (85%, decent quality). The other results can be found in Table 4.2.

1) Validation Indicator 1: The statement is specific

The results of validation by experts for the indicator "The statement is specific" are found in Figure 4.1. Based on Figure 4.1, the lowest percentage in validation indicator 1 for items number 12 and 44 is 85%. The score 85% indicates that each item is of decent quality for the validation indicator 1.

Table 4.2
The Results of Validation Indicators for Each Item on the Validation Sheet

No	Validation Indicator	Lowest Percentage	Item Number(s)	Decision
1	The statement is specific.	85	12,44	Decent quality
2	The statement is direct.	90	22,23,24,26	Decent quality
3	Participants will be able to understand what is being asked.	75	14	Quite decent quality
4	There is no double-barreled statement (two statements in one).	85	2	Decent quality
5	The statement is concise.	80	22,23	Decent quality
6	There are no unnecessary words.	75	10,11,23,24	Quite decent quality
7	The statement is asked using the affirmative (e.g., Instead of asking, "Which methods are not used?", the researcher asks, "Which methods are used?").	70	35	Quite decent quality
8	The response includes only one option.	85	2,3,7,27	Decent quality
9	The sentence is unambiguous.	75	23	Quite decent quality
10	The statement is unbiased and does not lead the participants to a response.	65	10	Quite decent quality
11	The statement is asked using a neutral tone.	80	21	Decent quality
12	The terms used in the statement are understandable by the target population.	75	3,5,10,11	Quite decent quality
13	The words in the question do not contain clichés or hyperboles.	85	4	Decent quality
14	The sentence is communicative.	90	5,15,28,44	Decent quality
15	The language used in the statement is correct according to the language.	70	5	Quite decent quality
16	The sentences do not contain words that can offend readers.	85	24	Decent quality
17	The responses apply to all situations or offer a way for those to respond with unique situations.	85	2	Decent quality
18	The use of technical language is appropriate.	75	5	Quite decent quality
19	The use of technical language is clear.	75	4,14	Quite decent quality
20	The statement is related to the daily practices or expertise of the participants.	90	6,7,24,31,44	Decent quality

2) Validation Indicator 2: The statement is direct

The results of validation by experts for the indicator "The statement is direct" are found in Figure 4.2. Based on Figure 4.2, the lowest percentage in validation indicator 2 for items number 22, 23, 24, and 26 is 90%. The score 90% indicates that each item is of decent quality for the validation indicator 2.

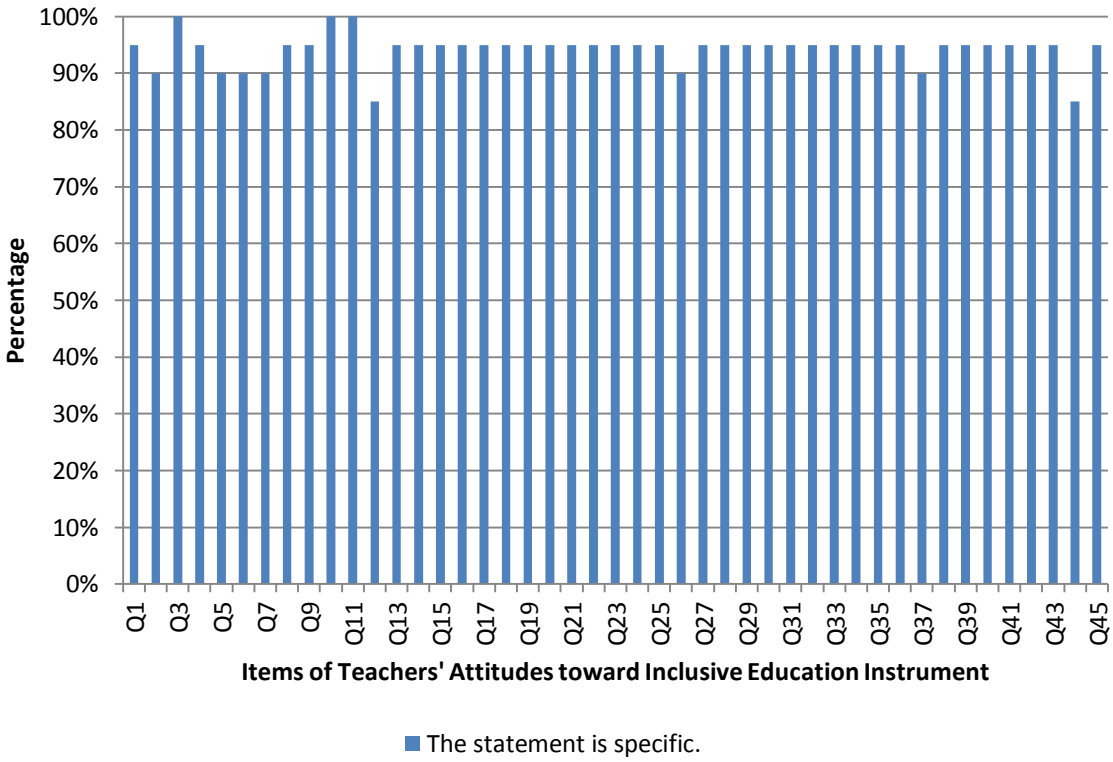


Figure 4.1. Results of Validation by Experts for Validation Indicator 1

3) Validation Indicator 3: Participants will be able to understand what is being asked.

The results of validation by experts for the indicator "Participants will be able to understand what is being asked" are found in Figure 4.3. Based on Figure 4.3, the lowest percentage in validation indicator 3 for item 14 is 75%. The score 75% indicates that each item is quite decent quality for the validation indicator 3.

4) Validation Indicator 4: There is no double-barreled statement (two statements in one).

The results of validation by experts for the indicator "There is no double-barreled statement (two statements in one)" are found in Figure 4.4. Based on Figure 4.4, the lowest percentage in validation indicator 4 for item number 2 is 85%. The score 85% indicates that each item is of decent quality for the validation indicator 4.

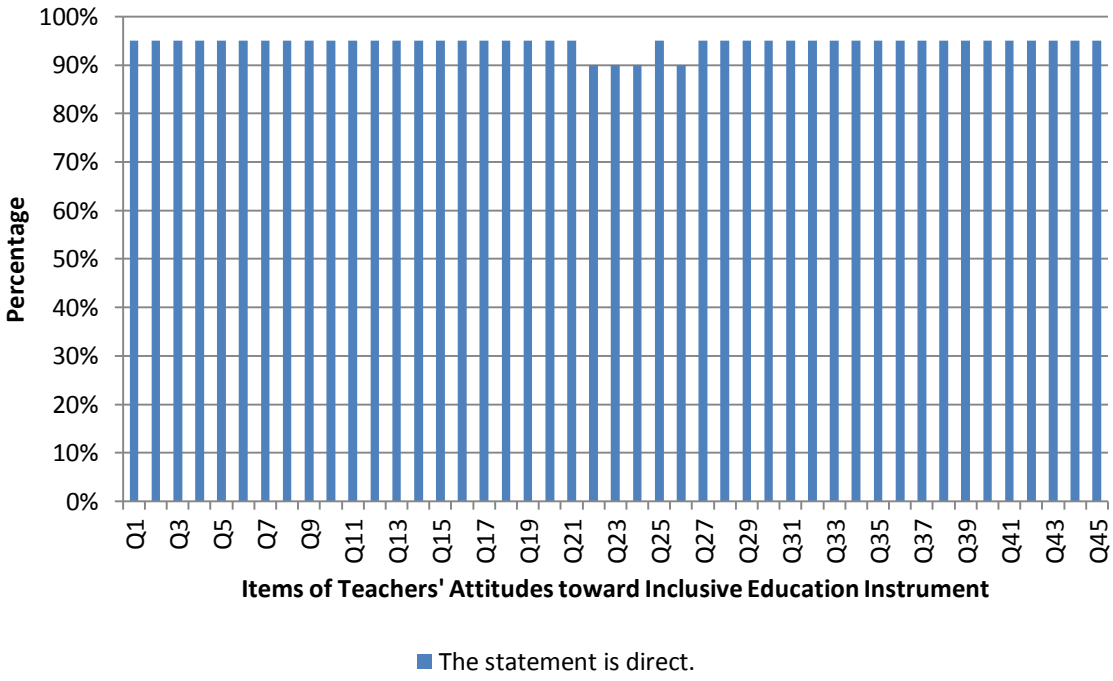


Figure 4.2. Results of Validation by Experts for Validation Indicator 2

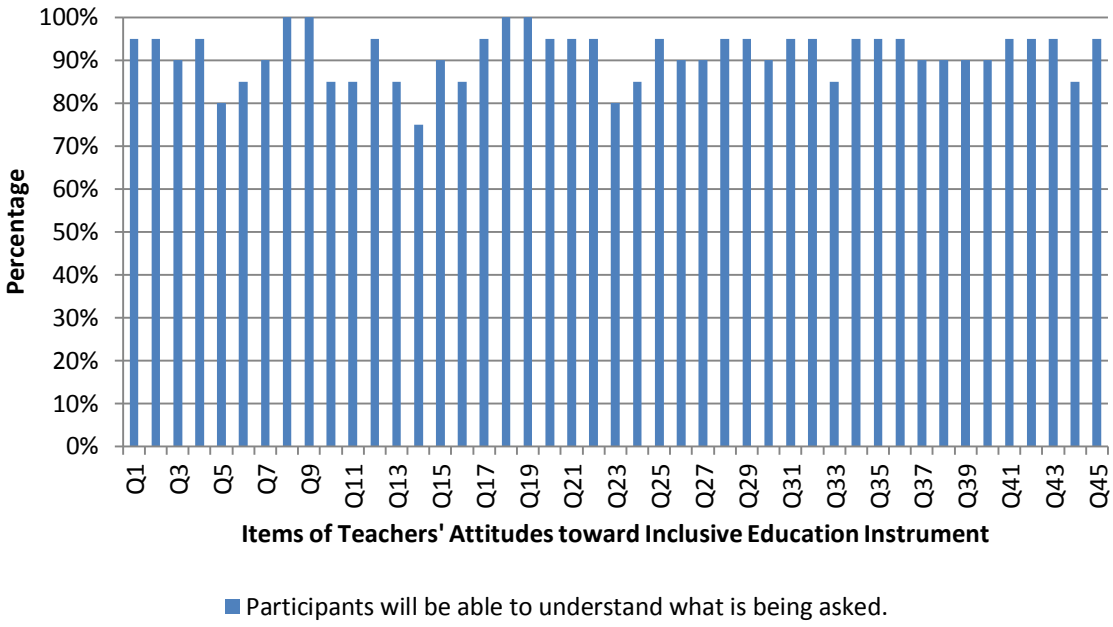


Figure 4.3. Results of Validation by Experts for Validation Indicator 3

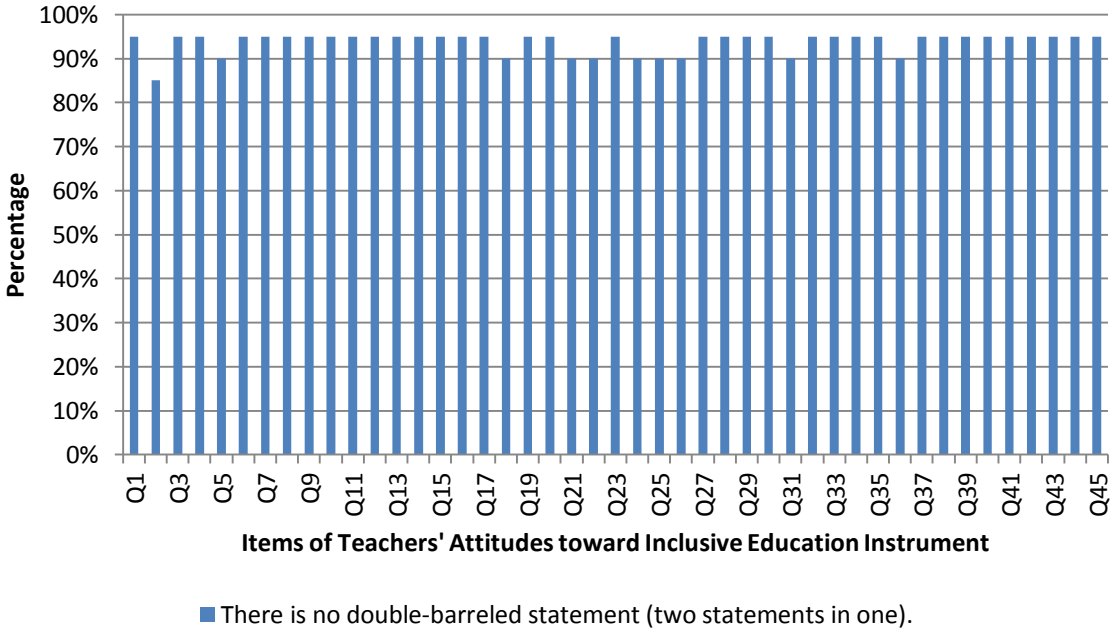


Figure 4.4. Results of Validation by Experts for Validation Indicator 4

5) Validation Indicator 5: The statement is concise

The results of validation by experts for the indicator "The statement is concise" are found in Figure 4.5. Based on Figure 4.5, the lowest percentage in validation indicator 5 for items number 22 and 23 is 80%. The score 80% indicates that each item is of decent quality for the validation indicator 5.

6) Validation Indicator 6: No unnecessary words

The results of validation by experts for the indicator "No unnecessary words" are found in Figure 4.6. Based on Figure 4.6, the lowest percentage in validation indicator 6 for items number 10, 11, 23, and 24 is 75%. The score 75% indicates that each item is quite decent quality for the validation indicator 6.

7) Validation Indicator 7: The statement is asked using the affirmative

The results of validation by experts for the indicator "The statement is asked using the affirmative" are found in Figure 4.7. Based on Figure 4.7, the lowest percentage in validation indicator 7 for item number 35 is 70%. The score 70% indicates that each item is quite decent quality for the validation indicator 7.

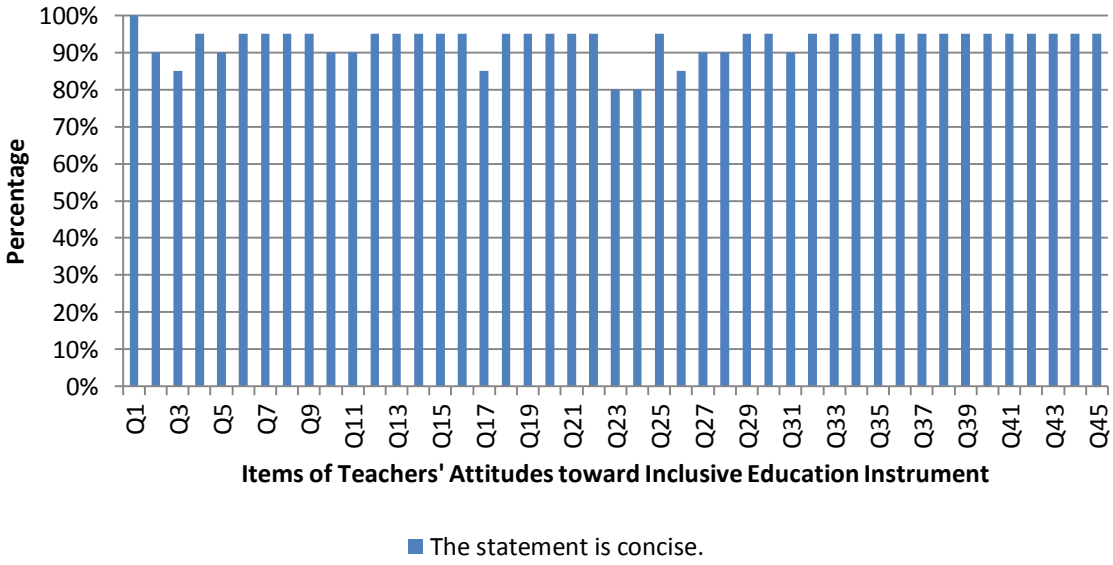


Figure 4.5. Results of Validation by Experts for Validation Indicator 5

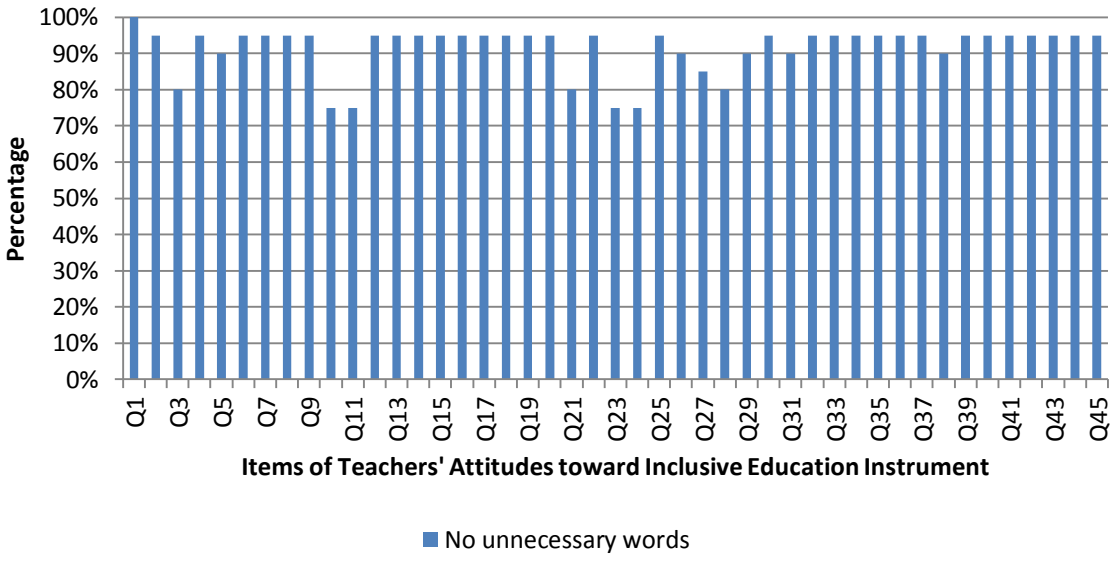


Figure 4.6. Results of Validation by Experts for Validation Indicator 6

8) Validation Indicator 8: The response includes only one option

The results of validation by experts for the indicator "The response includes only one option" are found in Figure 4.8. Based on Figure 4.8, the lowest percentage in validation indicator 8 for items number 2, 3, 7, and 27 is 85%. The score 85% indicates that each item is of decent quality for the validation indicator 8.

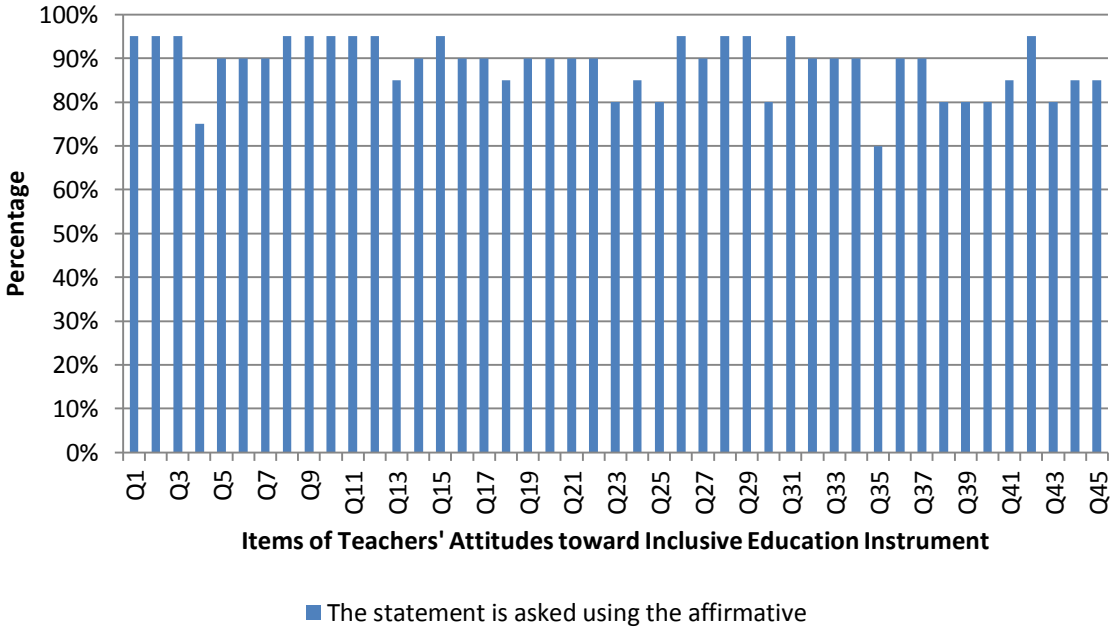


Figure 4.7. Results of Validation by Experts for Validation Indicator 7

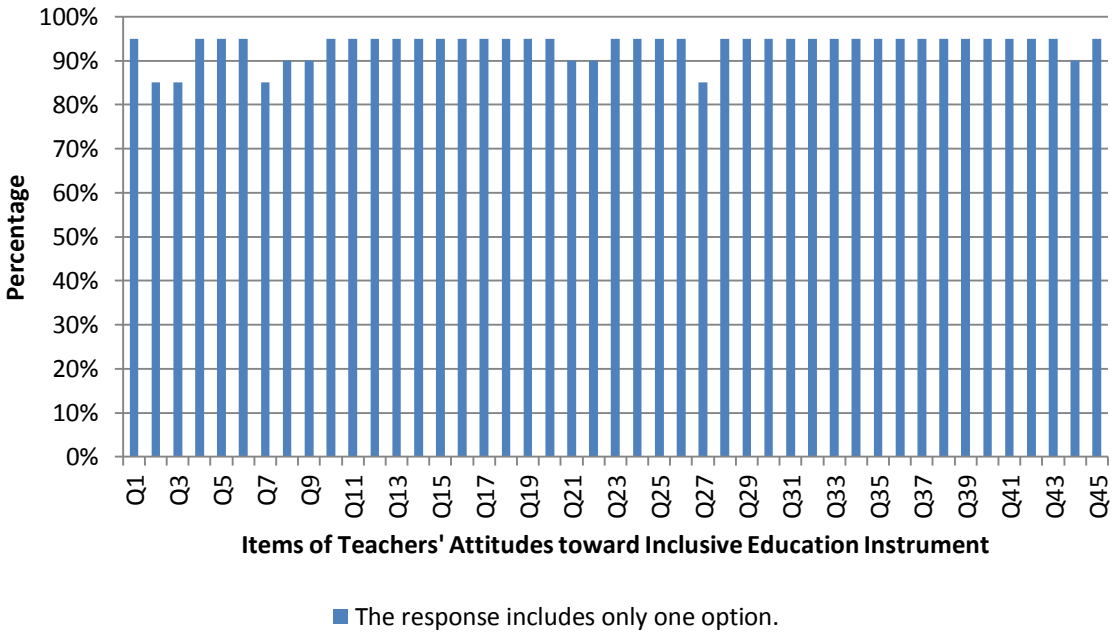


Figure 4.8. Results of Validation by Experts for Validation Indicator 8

9) Validation Indicator 9: Unambiguous sentence

The results of validation by experts for the indicator "Unambiguous sentence" are found in Figure 4.9. Based on Figure 4.19, the lowest percentage in validation indicator 9 for item number 23 is 75%. The score 75% indicates that each item is quite decent quality for the validation indicator 9.

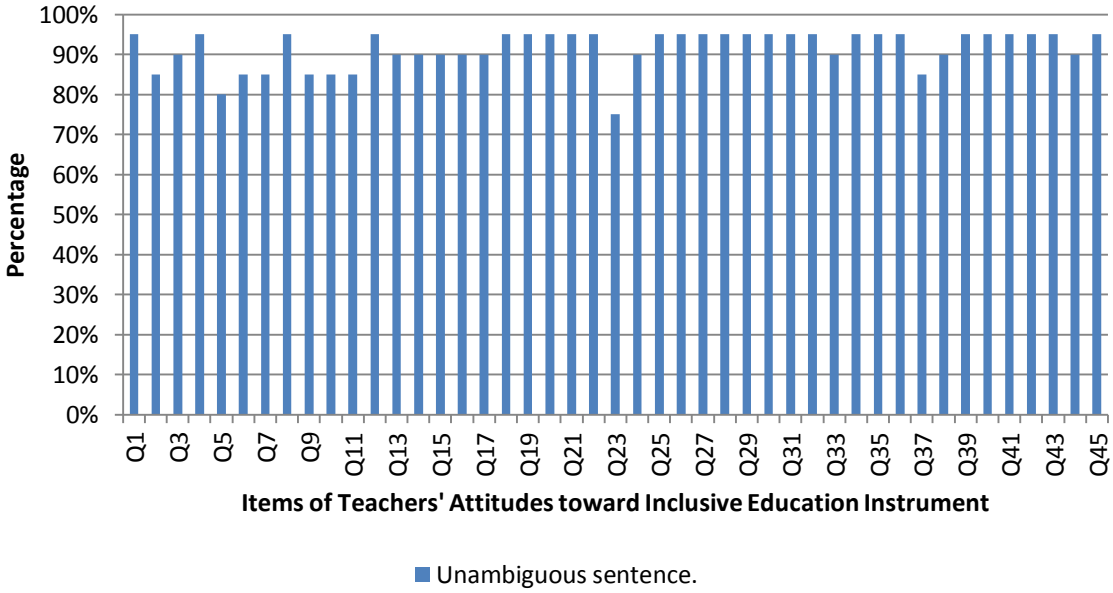


Figure 4.9. Results of Validation by Experts for Validation Indicator 9

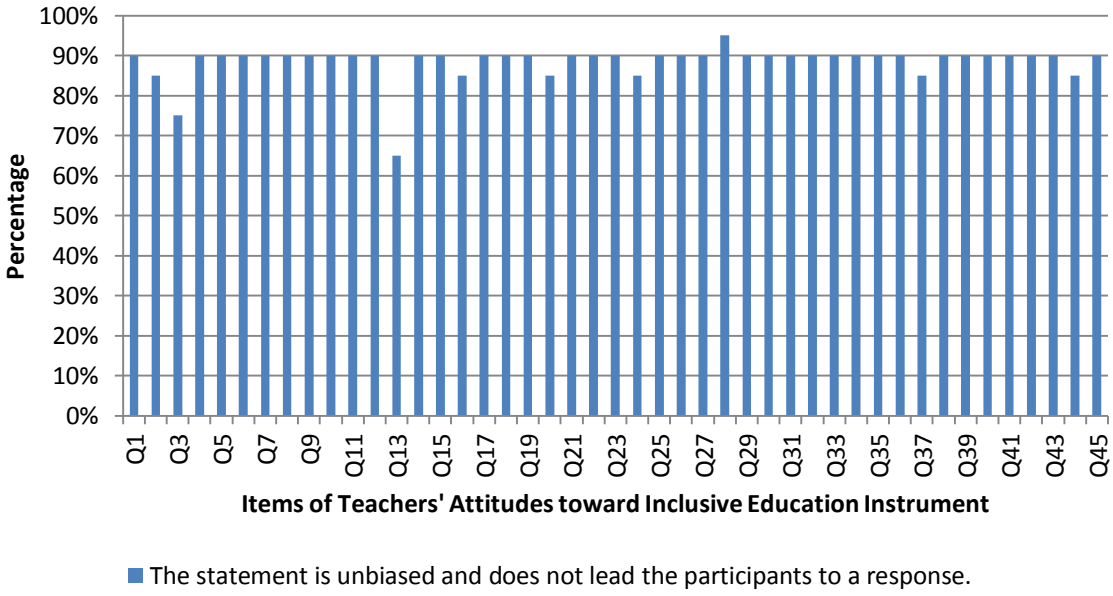


Figure 4.10. Results of Validation by Experts for Validation Indicator 10

10) Validation Indicator 10: The statement is unbiased and does not lead the participants to a response

The results of validation by experts for the indicator "The statement is unbiased and does not lead the participants to a response" are found in Figure 4.10. Based on Figure 4.10, the lowest percentage in validation indicator 10 for item number 13 is 65%. The score 65% indicates that each item is quite decent quality for the validation indicator 10.

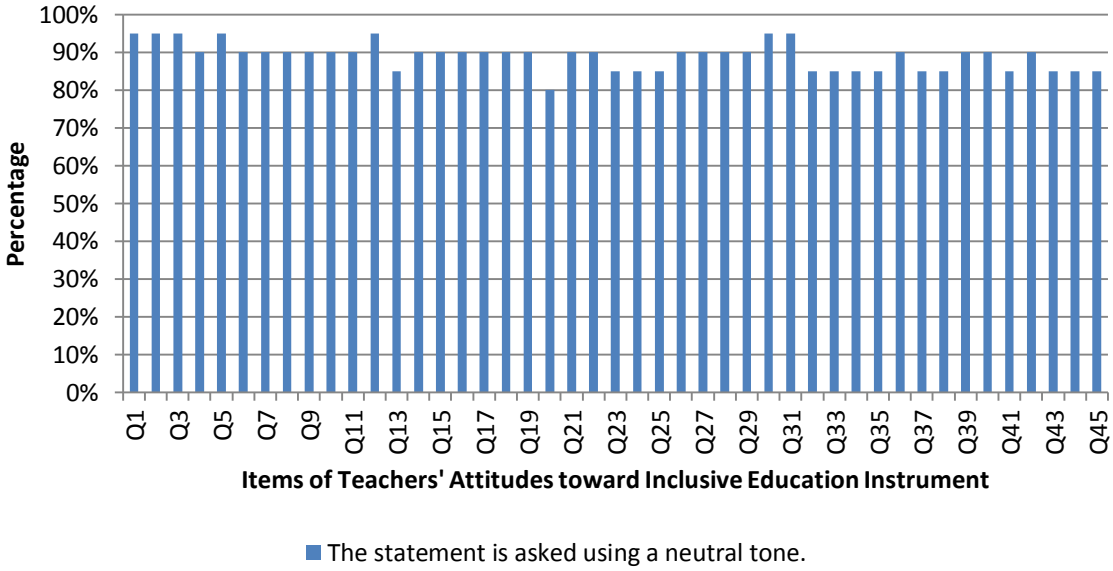


Figure 4.11. Results of Validation by Experts for Validation Indicator 11

11) Validation Indicator 11: The statement is asked using a neutral tone

The results of validation by experts for the indicator "The statement is asked using a neutral tone" are found in Figure 4.11. Based on Figure 4.11, the lowest percentage in validation indicator 11 for item number 21 is 80%. The score 80% indicates that each item is of decent quality for the validation indicator 11.

12) Validation Indicator 12: The terms used in the statement is understandable by the target population

The results of validation by experts for the indicator "The terms used in the statement are understandable by the target population" are found in Figure 4.12. Based on Figure 4.12, the lowest percentage in validation indicator 12 for items number 3, 5, 10, and 11 is 75%. The score 75% indicates that each item is quite decent quality for the validation indicator 12.

13) Validation Indicator 13: The words in the question do not contain clichés or hyperboles

The results of validation by experts for the indicator "The words in the question do not contain clichés or hyperboles" are found in Figure 4.13. Based on Figure 4.13, the lowest percentage in validation indicator 13 for item number 4 is 85%. The score 85% indicates that each item is of decent quality for the validation indicator 13.

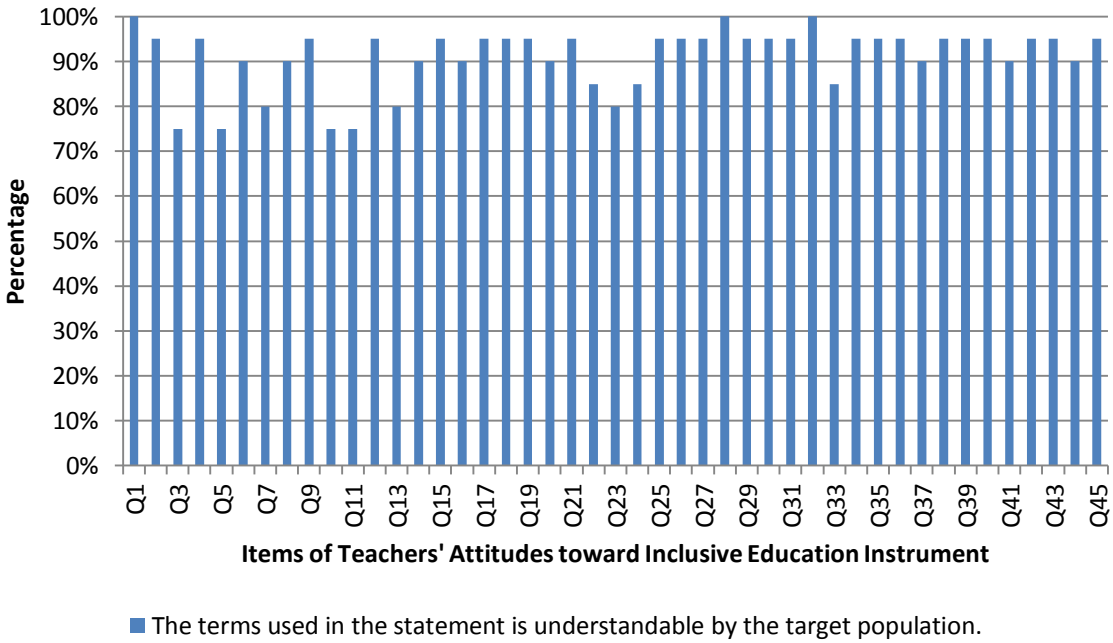


Figure 4.12. Results of Validation by Experts for Validation Indicator 12

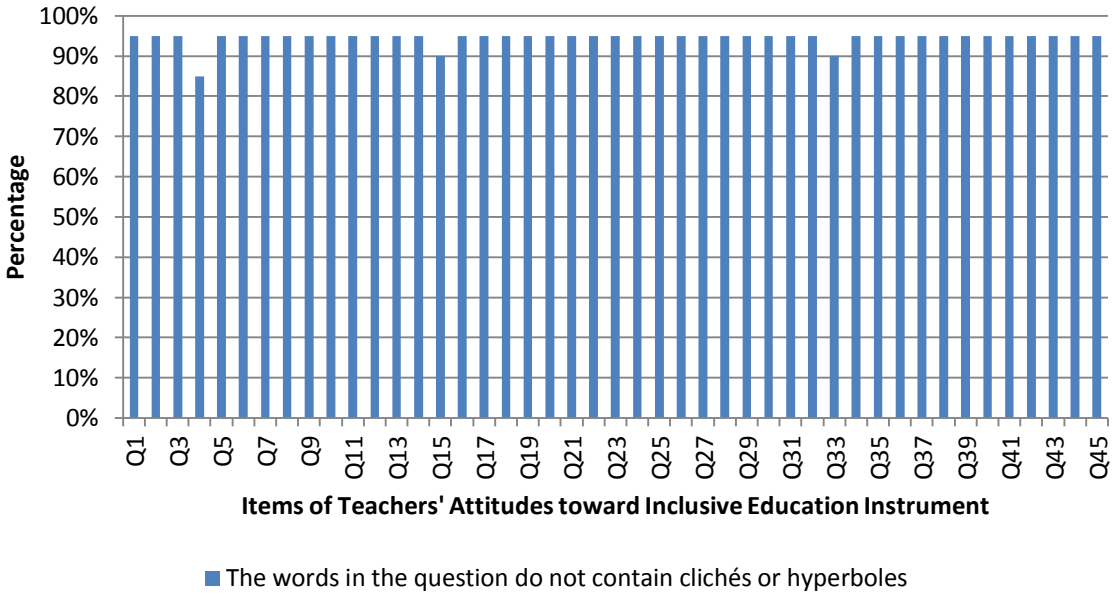


Figure 4.13. Results of Validation by Experts for Validation Indicator 13

14) Validation Indicator 14: Communicative sentence

The results of validation by experts for the indicator "Communicative sentence" are found in Figure 4.14. Based on Figure 4.14, the lowest percentage in validation indicator 14 for items number 5, 15, 28, and 44 is 90%. The score 90% indicates that each item is of decent quality for the validation indicator 14.

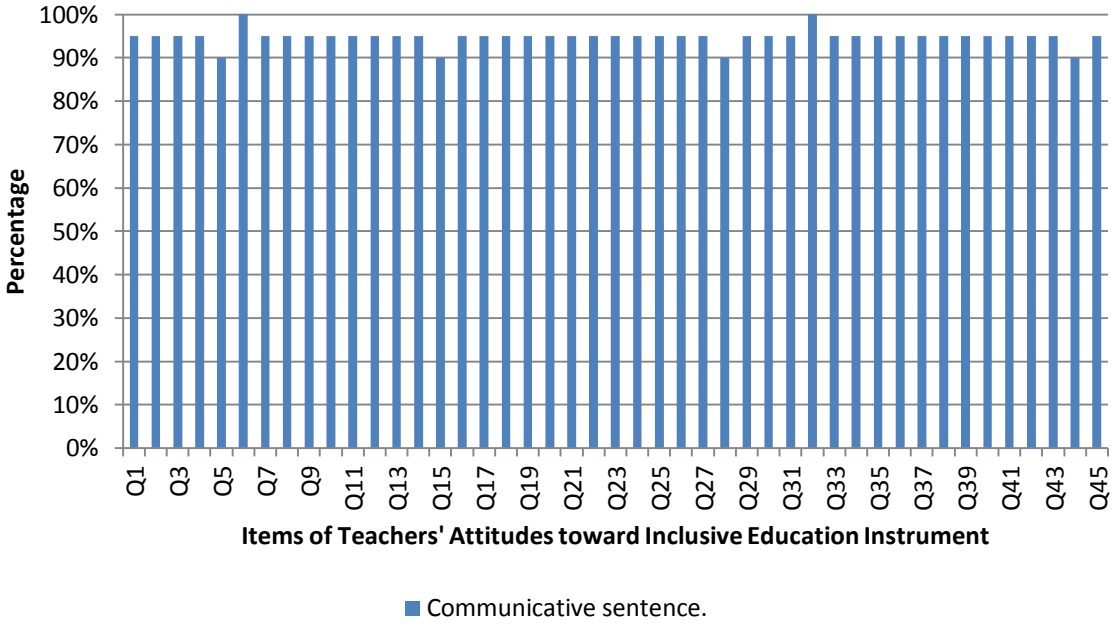


Figure 4.14. Results of Validation by Experts for Validation Indicator 14

15) *Validation Indicator 15: The language used in the statement is good and correct according to the language*

The results of validation by experts for the indicator "The language used in the statement is good and correct according to the language" are found in Figure 4.15. Based on Figure 4.15, the lowest percentage in validation indicator 15 for item number 5 is 70%. The score 70% indicates that each item is quite decent quality for the validation indicator 15.

16) *Validation Indicator 16: Formulation of sentences does not contain words that can offend readers*

The results of validation by experts for the indicator "Formulation of sentences does not contain words that can offend readers" are found in Figure 4.16. Based on Figure 4.16, the lowest percentage in validation indicator 16 for item number 24 is 85%. The score 85% indicates that each item is of decent quality for the validation indicator 16.

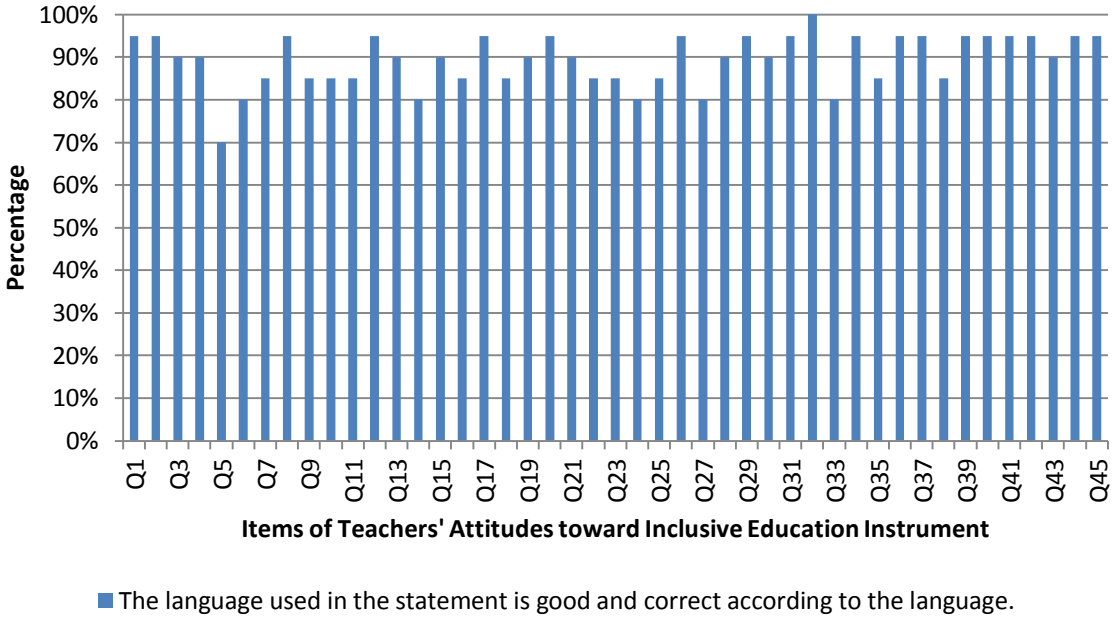


Figure 4.15. Results of Validation by Experts for Validation Indicator 15

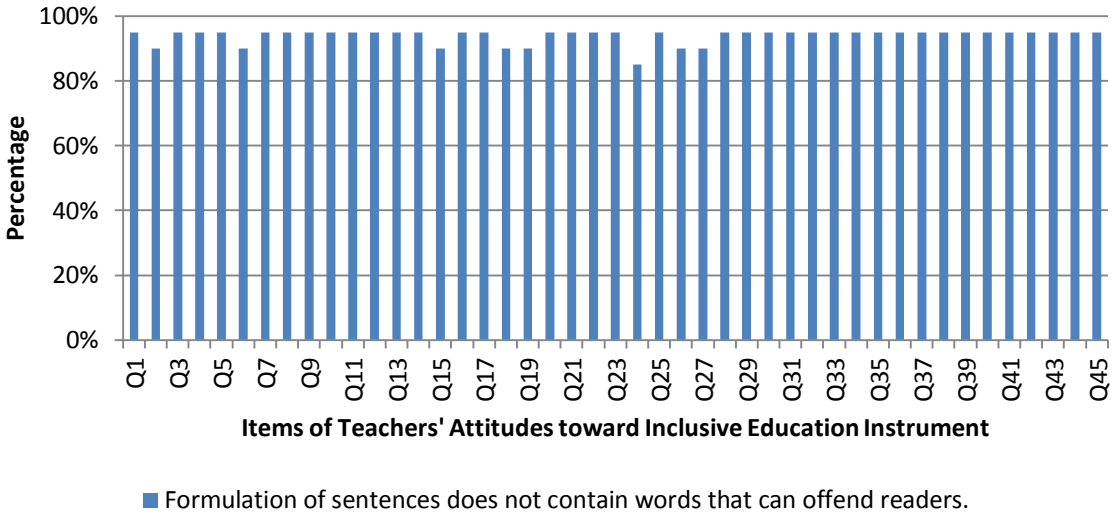


Figure 4.16. Results of Validation by Experts for Validation Indicator 16

17) Validation Indicator 17: The responses apply to all situations or offer a way for those to respond with unique situations

The results of validation by experts for the indicator "The responses apply to all situations or offer a way for those to respond with unique situations" are found in Figure 4.17. Based on Figure 4.17, the lowest percentage in validation indicator 17 for item number 2 is 85%. The score 85% indicates that each item is of decent quality for the validation indicator 17.

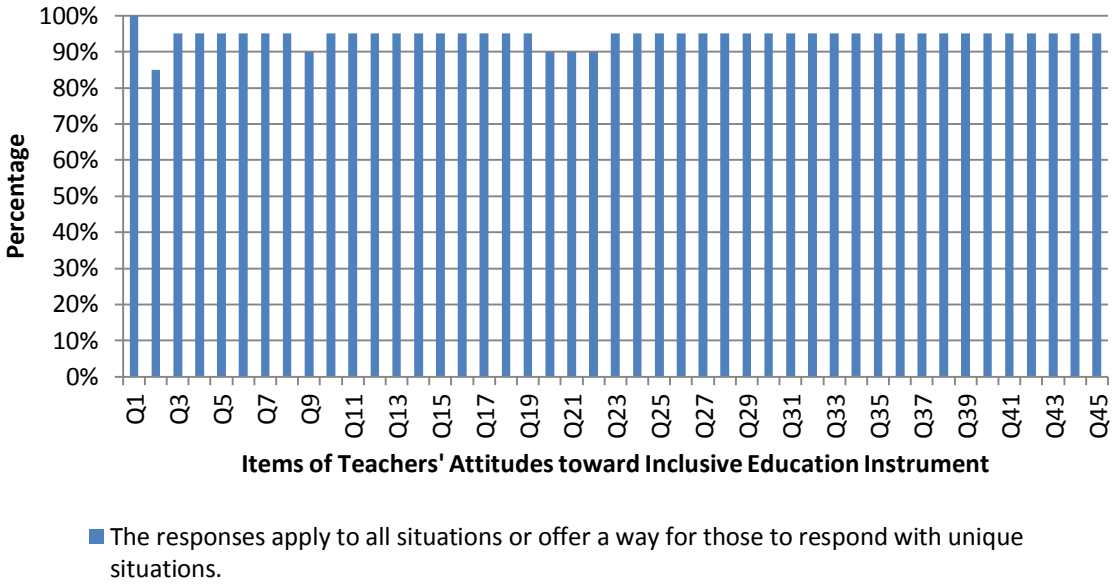


Figure 4.17. Results of Validation by Experts for Validation Indicator 17

18) Validation Indicator 18: The use of technical language is appropriate

The results of validation by experts for the indicator "The use of technical language is appropriate" are found in Figure 4.18. Based on Figure 4.18, the lowest percentage in validation indicator 18 for item number 5 is 75%. The score 75% indicates that each item holds quite decent quality for the validation indicator 18.

19) Validation Indicator 19: The use of technical language is clear

The results of validation by experts for the indicator "The use of technical language is clear" are found in Figure 4.19. Based on Figure 4.19, the lowest percentage in validation indicator 19 for items number 5 and 14 is 75%. The score 75% indicates that each item is quite decent quality for the validation indicator 19.

20) Validation Indicator 20: The statement is related to the daily practices or expertise of the participants

The results of validation by experts for the indicator "The statement is related to the daily practices or expertise of the participants" are found in Figure 4.20. Based on Figure 4.20, the lowest percentage in validation indicator 20 for items number 6, 7, 24, 31, and 44 is 90%. The score 90% indicates that each item is of decent quality for the validation indicator 20.

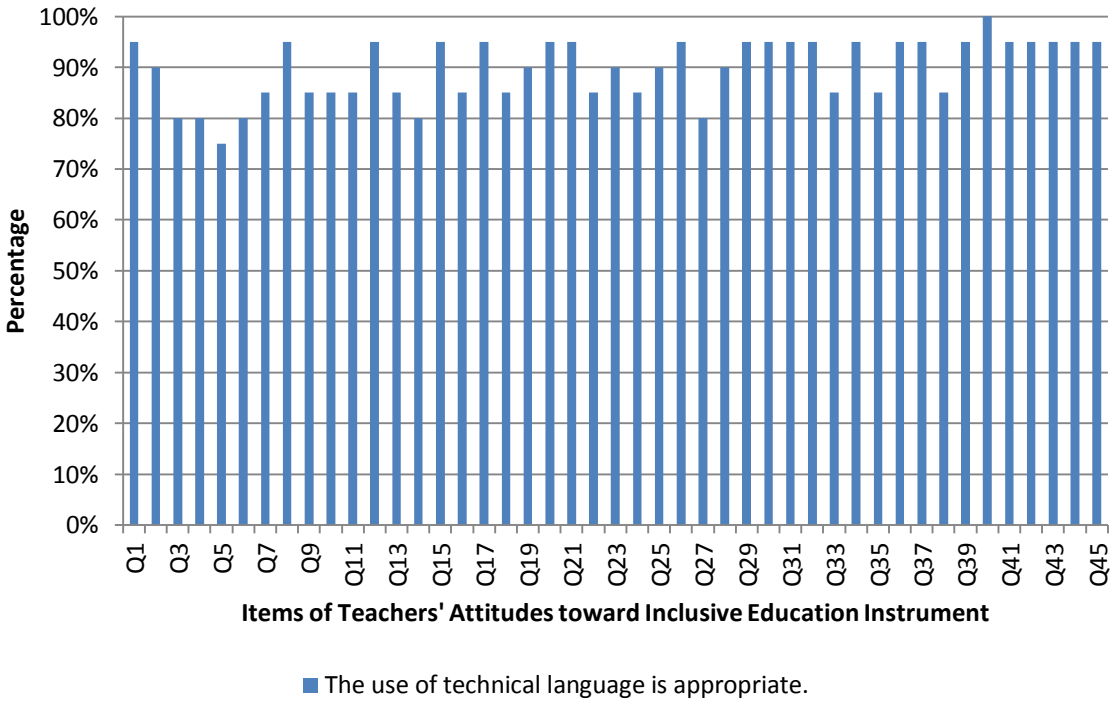


Figure 4.18. Results of Validation by Experts for Validation Indicator 18

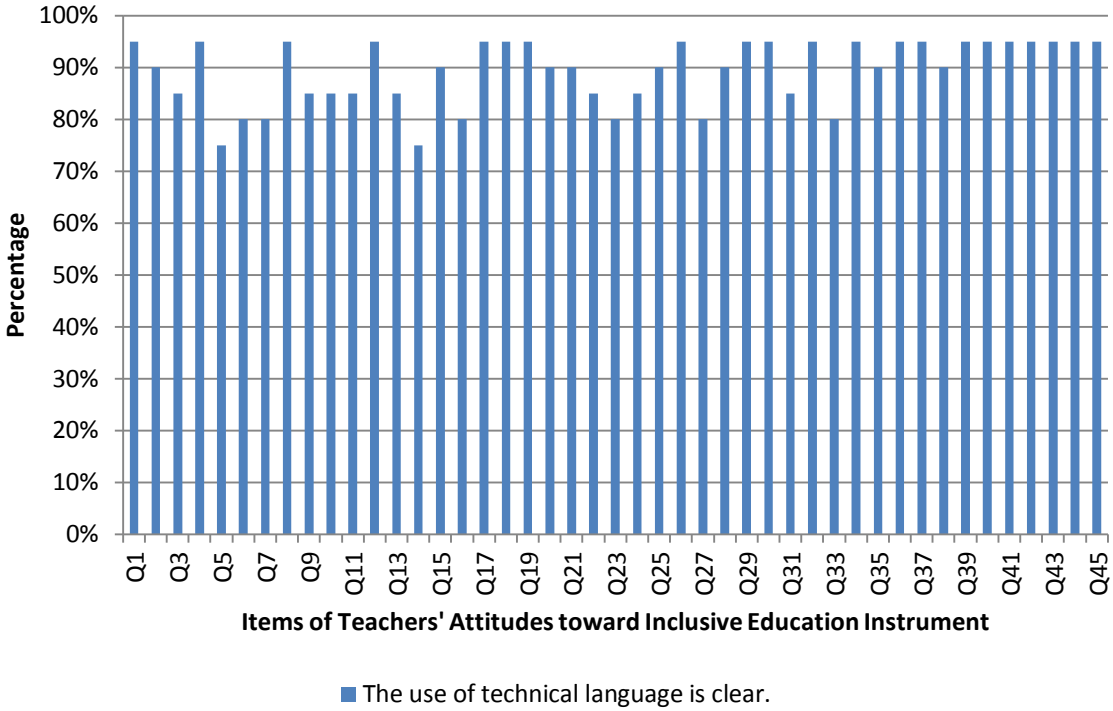


Figure 4.19. Results of Validation by Experts for Validation Indicator 19

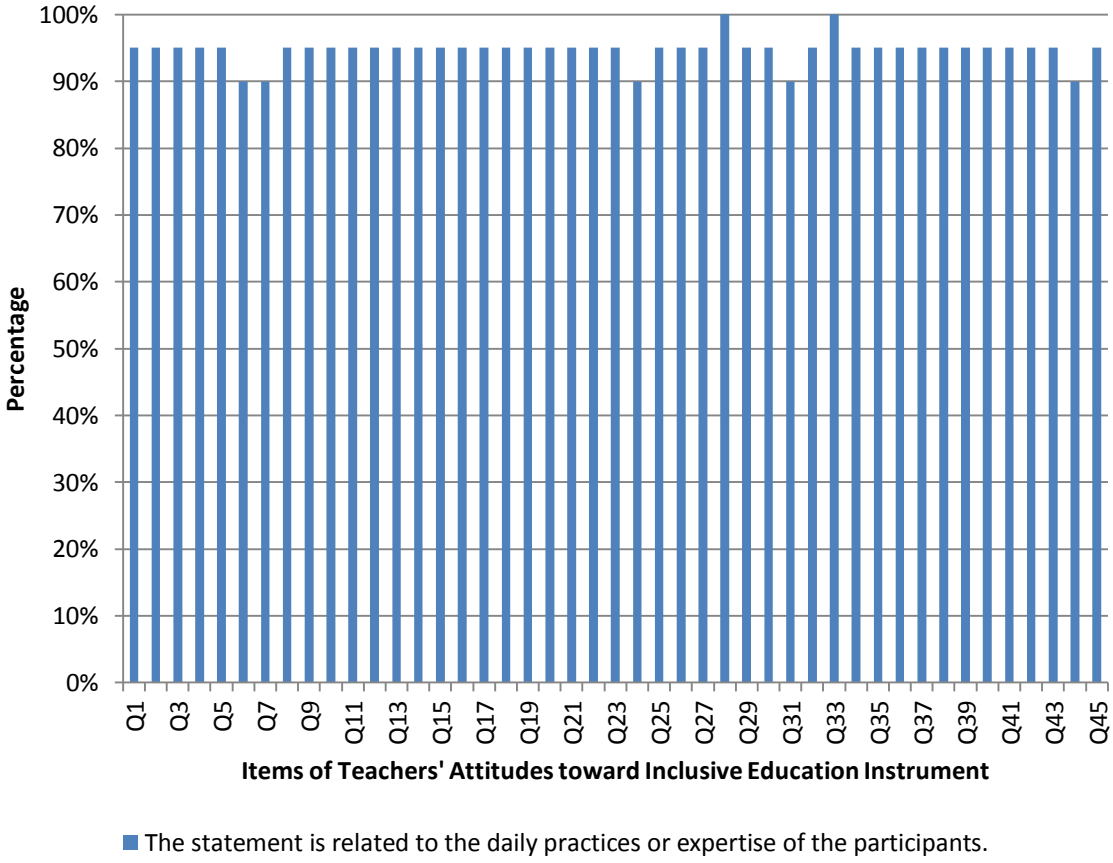


Figure 4.20. Results of Validation by Experts for Validation Indicator 20

b. The results of instrument validation

The results of the calculation of overall item scores are shown in Table 4.3. Based on Table 4.3, the lowest percentage attained was 70% (for validation indicators 7 and 12). The score of 70% indicates that the instrument has decent quality and does not need revision (Sudjana, 2011).

Overall, the instrument used in the current study met the requirements of the validation process by experts. Even though each item on the instrument is feasible and does not require revision, the experts' comments and suggestions still need to be considered. The experts' comments and suggestions are explained in the first revision section. Each item is given suggestions and comments column from experts. In addition, at the beginning of the instrument, the instructions for filling in validation sheets are given. The validation sheet is found in Appendix C.

Table 4.3
The Results of Instrument Validation

No	Instrument Validation Indicators	Total Score	%
1	The choices listed allow participants to respond appropriately.	19	95.0
2	All acronyms are defined.	15	75.0
3	The statements are sufficient to resolve the problem in the study.	17	85.0
4	The statements are sufficient to answer the research questions.	15	75.0
5	The statements are sufficient to fulfill the purpose of the study.	17	85.0
6	The instrument view does not overlap.	15	75.0
7	The content on the page is not too dense.	14	70.0
8	The font size used is appropriate.	18	90.0
9	The font size used is easy to read.	18	90.0
10	The font type used is consistent.	18	90.0
11	The participant can easily learn the instrument's instructions.	17	85.0
12	Participants will be able to answer the instrument easily.	14	70.0
13	The navigation system is consistent throughout the instrument.	17	85.0
14	No statements are repeated.	16	80.0
15	The number of questions in this instrument is sufficient to measure attitudes toward inclusive education.	15	75.0
16	The directions on the first page make it easy for teachers to fill out the instrument.	17	85.0
17	The definition of inclusive education on the first page of the instrument provides a clear picture of inclusive education.	15	75.0
18	The directions on the first page make it easy for teachers to fill out the instrument.	18	90.0

Notes: The results were validated by five experts. The maximum score is 20, and the minimum score is 5.

4. First Revision of the Instrument

The validation process by the experts is carried out within two months. Experts who have been selected in the previous process are contacted for their willingness to provide an assessment of the instrument that has been developed. In the expert who has expressed willingness to provide an assessment, it is sent in the form of a letter containing two things, namely the instrument of the teachers' attitudes toward Inclusive Education and instrument of validation sheet. After receiving, the experts are given one month to make an assessment. Then the expert sends the results in the validation of the instrument.

a. Item Number 3. Regular classrooms can create a welcoming classroom environment for students with SEN with other students without SEN.

Based on the comment from one expert, the term "regular classrooms" was changed to "regular classroom settings." Furthermore, "students with SEN with other students without SEN" was changed to "all students, including students with SEN." As such, item number 3 was revised to read, "Regular classroom settings can create a welcoming classroom environment for all students, including students with SEN."

b. *Item Number 5. It is seldom necessary to remove students with SEN from regular classrooms in order to meet their educational needs.*

According to a comment, the term "seldom" juxtaposed with "necessary" is not quite right. Thus, the word "seldom" is not very suitable in this sentence, nor is the term "remove" because it might conjure an image of removing dirt/stains. Based on these comments, item number 5 was changed to "It rarely happens to drop out of the students with SEN from regular classrooms in order to meet their educational needs."

c. *Item Number 11. Inclusion of Students with SEN necessitates extensive retraining of regular classroom teachers.*

According to an expert's comment, the term "inclusion of Students with SEN" should be revised to "inclusive education for all students." In addition, the term "necessitates" is not commonly used and was therefore revised to "requires." Accordingly, item number 11 was changed to "Inclusive education for all students requires the extensive retraining of regular classroom teachers."

d. *Item Number 12. The inclusion of the students with SEN requires a significant change in regular classroom procedures.*

According to an expert's comment, the term "inclusion of students with SEN" should be revised to "inclusive education for all students." Therefore, item number 12 was revised to "Inclusive education for all Students requires a significant change in regular classroom procedures."

e. *Item Number 13. Most of the students with SEN do not make an adequate attempt to complete their assignments.*

According to an expert's suggestion, the term "attempt" should be changed to "effort." Thus, item number 13 was changed to "Most of the students with SEN don't make an adequate effort to complete their assignments."

f. *Item Number 14. The needs of students with SEN can best be served through special, separate classes.*

According to a comment, the term "special" can be deleted. Item number 14 was thus changed to "The needs of students with SEN can be served best through separate classes."

g. *Item number 16. I get upset when students with SEN cannot keep up with the lesson in my classroom.*

As per an expert's comment, the term "keep up" was replaced with "follow." Because this change was made, the word "with" in the term "with the lesson" was deleted. Item number 16 was changed to "I get upset when students with SEN cannot follow the lesson in my classroom."

h. *Item number 23. Inclusion is not a desirable practice for educating most typically developing students.*

According to a comment, the term "typically developing student" was replaced by the term "typical students." Item number 23 became "Inclusive education is not a desirable practice for educating the most typically students."

i. *Item number 24. Most special education teachers lack an appropriate knowledge base to educate typically developing students effectively.*

According to an expert's comment, the term "typically developing student" can be changed with the term "typical students." Also, the term "an appropriate knowledge base" can be changed to "an appropriate base knowledge." Based on the expert comment, item number 24 was rewritten as "Most special education teachers lack an appropriate base knowledge to educate typical students effectively."

j. *Item number 25. The individual needs of students with SEN cannot be addressed adequately by a regular education teacher.*

Item number 25 was deleted because it has a similar meaning to item number 14.

k. *Item number 26. I must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large-scale basis.*

According to an expert's comment, the term "basis" can be deleted. Based on this, item number 26 was changed to "I must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large scale."

l. *Item number 27. Students with SEN will probably develop academic skills more rapidly in a special, separate classroom than in an inclusive classroom.*

According to an expert's comment, the term "a special, separate classroom" can be shortened to "separated special classroom." Therefore, item number 27 was changed to

"Students with SEN will probably develop academic skills more quickly in a separate special classroom than in an inclusive classroom."

m. *Item number 28. Students with SEN are likely to be isolated by typically developing students in inclusive classrooms.*

Item number 28 was deleted because its meaning is close to that of item number 3.

n. *Item number 29. The presence of students with SEN promotes acceptance of individual differences on the part of typically developing students.*

According to an expert's comment, this item would be more appropriate if written as "The presence of students with SEN promotes acceptance of individual differences among students."

o. *Item number 37. It will be difficult to maintain discipline in an inclusive classroom.*

Item number 37 was deleted because its meaning is similar to that of item number 6.

p. *Item number 38. Students with SEN will not be accepted by non-disabled students and the rest of the class.*

Item number 38 was deleted because its meaning is close to that of item number 3.

q. *Item number 39. My schools will not have enough funds for implementing inclusion successfully.*

Item number 39 was deleted because its meaning is similar to that of item number 22.

r. *Item number 41. My schools will have difficulty in accommodating students with various types of SEN because of inappropriate infrastructure, e.g., architectural barriers.*

Item number 41 was deleted because it has a similar meaning as item number 22.

s. *Item number 42. There will be inadequate resources or special teachers available to support inclusion.*

According to a comment, item number 42 would be more appropriate if written as "There will be inadequate special teachers who are available to support inclusive education."

t. Item number 44. My performance as a classroom teacher will decline.

According to an expert's comment, item number 44 would be more appropriate if written as "My performance as a classroom teacher will decline if I implement an inclusive education program."

Based on the first revision process, the number of items on the scale decreased from 45 to 39. The instrument as it stood after the first revision process is provided in Appendix D. Although the instrument had gone through a validation process, errors could have still existed. Therefore, more possible revisions could be made to improve the instrument.

D. FIRST TRIAL AND SECOND REVISION OF THE INSTRUMENT

1. First Trial of the Instrument

The purposes of this step were to examine construct validity, criterion-referenced validity, and internal consistency of instrument of Indonesian teachers' attitudes toward inclusive education. In the first trial step, the English version of the instrument needed to be translated into Indonesian. The result of the translation is given in Appendix E.

a. Description of the Participants

The first trial consisted of 499 teachers from three provinces in Indonesia: East Java (n = 206, 41.0%), West Java (n = 153, 30.4%), and Yogyakarta (n = 144, 28.6%). These participants worked in either elementary (n = 275, 55.1%), junior high (n = 60, 12.0%), or senior high schools (n = 164, 32.9%). Regarding participants' gender, 27.5% (n = 137) were male, and 72.5% (n = 362) were female. Most participants (84.4%, n = 421) had a Bachelor of Education (B.Ed.) degree, and 15.6% (n = 78) had a Master of Education (M.Ed.) degree. Regarding participants' ages, 17.9% (n = 90) were under 31 years old, 35.6% (n = 179) were 31-40 years old, 19.8% (n = 99) were 41-50 years old, and 26.3% (*n* = 131) participants were 51 years old and over (Table 4.4).

b. Principal Component Analysis for the Instrument

Construct validity was performed using SPSS 23.0 (IBM, 2015) tools (Principal Component Analysis) on the 39-item data set (Field, 2009). In order to establish unidimensionality, a component analysis was run with the dataset collected from the sample of the 499 participants in the first trial. Varimax rotation with Kaiser normalization of the initial PCA (Tabachnick & Fidell, 2007) was used to investigate the underlying

Table 4.4
Descriptions of the Participants in the First Trial Step (Total Sample, n = 499)

Demographic Information	N	Percentage
Gender		
Male	137	27.5
Female	362	72.5
Age		
Under 31 years	90	17.9
31-40 years	179	35.6
41-50 years	99	19.8
Above 50 years	131	26.3
Province		
East Java	206	41.0
West Java	153	30.4
Yogyakarta	144	28.6
Type of School		
Inclusive School	445	91.2
Special School	44	8.8
Level of School		
Elementary	275	55.1
Junior High School	60	12.0
Senior High School	164	32.9
Last Education		
Bachelor	421	84.4
Higher than Bachelor	78	15.6
Teaching Experience		
10 years and under	197	39.5
11-20 years	168	33.7
21-30 years	88	17.6
Above 30 years	46	9.2
Training Program in Inclusive Education		
Have experience	104	20.8
Don't have experience	395	79.2
Interaction with Special Educational Needs Students		
Have experience	277	55.5
Don't have experience	222	44.5

structure and reduce the inter-component correlation of the items. The final component loading was appropriate for the data analysis in the first trial with a cutoff point of 0.4.

Table 4.5

The Principal Component Analysis of the First Trial Step

	1	2	3	4	5	6	7
Item Number 25	**.724**	-.058	.276	-.149	-.084	-.065	.124
Item Number 26	**.700**	.174	.031	.099	-.024	-.095	-.095
Item Number 11	**.692**	-.048	.294	-.212	-.018	-.014	.133
Item Number 12	**.589**	-.107	.142	.004	-.029	.137	.340
Item Number 14	**.588**	.209	.102	.209	.043	.251	-.079
Item Number 7	.193	**.645**	.036	.144	.108	.245	.260
Item Number 10	.075	**.639**	.112	.100	.128	-.141	.206
Item Number 6	.232	**.637**	.097	.107	.128	.199	.260
Item Number 8	-.299	**.613**	.140	.272	.081	-.060	-.046
Item Number 9	-.226	**.593**	-.053	.218	.352	.118	.084
Item Number 4	.337	**.490**	.222	.096	.071	.210	-.082
Item Number 36	.186	.161	**.741**	-.025	.111	.143	-.026
Item Number 37	.068	.044	**.706**	.129	-.107	.001	.311
Item Number 34	.157	.013	**.599**	.135	.212	-.026	.044
Item Number 33	.208	.016	**.499**	.183	.096	-.089	.342
Item Number 39	.142	.202	**.496**	.395	.109	.013	-.175
Item Number 24	.095	.062	**.402**	.270	-.012	-.212	.286
Item Number 35	.059	.100	.174	**.685**	.009	-.002	.009
Item Number 22	.032	.111	.063	**.677**	.071	-.011	.295
Item Number 38	-.338	.310	.001	**.526**	.226	-.037	.079
Item Number 23	.008	.184	.223	**.475**	.050	.072	.110
Item Number 16	.066	.049	.013	.065	**.805**	.054	.106
Item Number 17	-.028	.210	.128	-.065	**.771**	-.069	-.034
Item Number 15	-.038	.160	.218	.273	**.646**	-.007	.129
Item Number 18	-.258	.203	.049	.498	**.517**	-.005	.131
Item Number 3	.082	.164	-.009	-.119	-.027	**.737**	.057
Item Number 2	.008	.061	-.054	.056	.130	**.649**	.030
Item Number 19	.194	-.075	-.005	.295	-.094	**.592**	-.077
Item Number 5	-.241	.059	.153	-.230	-.109	**.550**	.148
Item Number 31	.143	.189	.227	.110	.110	.057	**.678**
Item Number 30	.014	.366	.097	.194	.116	.153	**.656**
Item Number 32	-.127	.191	.000	.453	.393	-.043	**.491**
Initial Eigenvalues	7.078	3.891	2.208	1.647	1.366	1.285	1.144
Rotated Eigenvalues	3.220	3.012	2.835	2.818	2.628	2.088	2.017
% of initial variance	20.817	11.444	6.494	4.844	4.019	3.778	3.364
% of rotated variance	9.471	8.858	8.338	8.289	7.729	6.142	5.932
Cronbach's Alpha	0.766	0.762	0.771	0.646	0.762	0.575	0.737
No. of items for Cronbach's Alpha	5	6	8	4	4	4	3

Note: Pattern of the matrix of the principal component analysis (PCA, varimax with Kaiser normalization)..

N=499 teachers.

Table 4.6
Component Correlation Matrix for the Instrument in the First Trial Step (N=499)

Component	Comp_1	Comp_2	Comp_3	Comp_4	Comp_5	Comp_6	Comp_7
Comp_1	1						
Comp_2	.170**	1					
Comp_3	.417**	.372**	1				
Comp_4	-.003	.480**	.400**	1			
Comp_5	-.036	.463**	.298**	.418**	1		
Comp_6	.127**	.223**	.021	.029	-.002	1	
Comp_7	.137**	.516**	.405**	.488**	.426**	.110*	1

Note: **. Correlation is significant at the 1% level (2-tailed)
***. Correlation is significant at the 5% level (2-tailed)**

Based on the component analysis using PCA and varimax rotation with the Kaiser normalization method, seven components were obtained with eigenvalues greater than 1.0 (Table 4.5). The first component consisted of five items (25, 26, 11, 12, 14). The second component consisted of six items (7, 10, 6, 8, 9, and 4). The third component consisted of six items (36, 37, 34, 33, 39, and 24). The fourth component consisted of four items (35, 22, 38, and 23). The fifth component consisted of four items (16, 17, 15, and 18). The sixth component consisted of four items (3, 2, 19, and 5). The seventh component consisted of three items (31, 30, and 32).

The results of the principal component analysis revealed 32 items comprising seven components. A Kaiser-Meyer-Olkin (KMO) value of 0.870 was obtained by the measure of sampling adequacy. In addition, the value of the total variance explained was 54.8%. The PCA of the set items resulted in several components (Table 4.5). The size of the components ranged from components with three items to components with six items. The calculated value of reliability for all 32 items is a Cronbach's alpha of 0.872.

Criterion-referenced validity was performed using SPSS 23.0 (IBM, 2015) tools (Pearson product-moment correlation) on the seven-component from the PCA analysis process. Pearson product-moment correlation uses the principle of correlating or connecting between each component. In general, each component has a significant correlation (see in Table 4.6). The level of significance of each component is, on average, 1%. Correlations with 5% significance were found in components 6 and 7. Meanwhile, component 1 with components 4 and 5 did not have a significant correlation. In addition, components 3, 4, and 5 with component 6 also do not have a significant correlation.

2. The Second Revision of the Indonesian Version of the Instrument

At this stage, the instrument contained 32 items and had been tested on 499 participants. The analysis showed that this instrument was valid and reliable. This instrument was deemed appropriate to be used to measure teacher attitudes towards inclusive education in Indonesia. For keeping the instrument originality and in line with the conditions of inclusive education in Indonesia, the new items are developed.

The new items were created using two methods. The first was based on the analysis of regulations and the inclusive education curriculum that applies to Indonesia. The second was based on the results of interviews with teachers who work in inclusive schools.

The regulations governing inclusive education in Indonesia are provided in the "Regulation of the National Education Minister of Republic of Indonesia (Peraturan Menteri Pendidikan Nasional, Republik Indonesia)" Number 70 Year 2009, in the provisions concerning inclusive education for learners who have disabilities or special intelligence, and/or are gifted.

The regulation is affirmed in Article 3, Paragraph (1):

> *"Any learner who has physical, emotional, mental, or social abilities or has the potential for special intelligence and/or talents is entitled to pursue the education in an inclusive education unit according to his or her needs and abilities."*

Furthermore, Paragraph (2) explains that students with disabilities include those with learning disabilities, deafness and other hearing difficulties, visual impairments, physical handicaps, speech/language impairments, mild/moderate emotional disturbances, mental disorders, autism, or traumatic brain injuries. The types of disabilities mentioned in the "Regulation of the National Education Minister of Republic of Indonesia" Number 70 Year 2009 were merged with item number 1: "All students should be educated in the same classroom regardless of their SEN."

Interviews were conducted with 23 teachers from five inclusive schools in Indonesia. In each school, teachers who had taught students with SEN were selected to be interviewed. The questions were related to inclusive education implementation in schools and the challenges related to teaching students with SEN. The interview questions can be found in Appendix F.

Table 4.7

Results of Interviews with Teachers about Inclusive Education in Indonesia

Teacher	A	B	C	D	E	F	G	H	I	J	K	L
1	✔				✔			✔		✔	✔	✔
2	✔	✔			✔		✔		✔			
3		✔	✔	✔		✔				✔	✔	
4			✔	✔					✔			✔
5				✔	✔	✔						
6		✔			✔		✔	✔	✔	✔		✔
7	✔		✔	✔	✔	✔						✔
8	✔	✔										✔
9	✔		✔	✔		✔	✔		✔	✔		
10			✔								✔	
11	✔	✔	✔	✔				✔				✔
12		✔							✔			
13	✔		✔	✔			✔					✔
14			✔									
15	✔			✔		✔						✔
16			✔				✔	✔				
17						✔			✔			
18			✔	✔								
19	✔		✔	✔		✔	✔					
20		✔										✔
21	✔	✔		✔								
22						✔	✔			✔	✔	
23	✔	✔		✔								
Total	11	9	11	12	5	8	7	4	6	5	4	9

Notes: A checkmark means that the teacher mentioned the corresponding topics during the interview.

A. The teacher focuses on students with SEN and ignores other students.

B. Schools will not be able to meet standards to serve and facilitate students with SEN because of their diverse and unmodified building facilities.

C. Typically, students feel disturbed by the presence of students with SEN in the classroom.

D. Classroom learning is not conducive to the presence of students with SEN in the classroom.

E. Students with SEN will not achieve competency standards in learning.

F. The teacher does not have enough time to master the competencies related to the inclusive education system.

G. Students with SEN are often bullied.

H. Parents often criticize children with SEN to gain academic development.

I. The school does not have special guidelines to help teachers master the competencies related to inclusive education.

J. Teachers have difficulty performing individual assessments for students with SEN.

K. Students with SEN are not accepted into regular schools because they do not qualify in the selection.

L. Indonesia does not yet have a curriculum for inclusive education, so it cannot be adequately applied.

Based on the interviews, it was concluded that the implementation of inclusive education has several challenges (Table 4.7). Eleven teachers mentioned problems with the teacher's time being monopolized by SEN students. Nine teachers mentioned the lack of facilities because it is challenging and expensive to modify school buildings. The disturbance of typical students by the presence of students with SEN in the classroom was discussed by 11 teachers. Other obstacles that were discussed include less conducive

classes (12 teachers), the inability of students with SEN to study adequately (five teachers), the lack of time given to teachers to learn about SEN students and inclusive education (eight teachers), and cases of promiscuity (seven teachers). Furthermore, four teachers talked about parents' expectations of their children with SEN, six teachers discussed the needs of special mentor teachers in schools, five teachers mentioned difficulties in making assessments, four teachers talked about new admissions systems, and nine teachers mentioned the unavailability of curricula.

From the interviews, 12 new items were developed for the Indonesian version of the instrument. The new items were combined with the items of the instrument used in the first trial. The items that had similar meanings were merged. At this point, the instrument contained 40 items, which were retried during the second trial step, which is described in the following section (See in Appendix G).

E. SECOND TRIAL AND THIRD REVISION OF THE INSTRUMENT

1. Second Trial of The Indonesian Version of the Instrument

The purposes of this step were to examine construct validity, criterion-referenced validity, and internal consistency of instrument of Indonesian teachers' attitudes toward inclusive education. Forty items were used for the second trial (See in Appendix G). Each item was translated into Indonesian, as were other parts of the instrument, such as demographic characteristics, instructions, and additional information.

a. Participants

The second trial was administered to 1,206 teachers from three provinces in Indonesia: East Java (n = 440, 36.5%), West Java (n = 595, 49.3%), and Yogyakarta (n = 171, 14.2%). These participants worked either at an elementary (n = 671, 55.6%), junior high (n = 226, 18.7%), or senior high school (n = 309, 25.6%). Regarding participants' gender, 23.3% (n = 281) were male, and 76.7% (n = 925) were female. The majority of the participants (93.9%, n = 1,132) had a B.Ed. degree and 6.1% (n = 74) had an M.Ed. degree. Detailed information about the participants is provided in Table 4.8.

Table 4.8
Descriptions of the Participants in the Second Trial Step

	n	Percentage
Gender		
Male	281	23.3
Female	925	76.7
Age		
Under 31 years	438	36.3
31-40 years	378	31.3
41-50 years	250	20.7
Above 50 years	140	11.6
Province		
East Java	440	36.5
West Java	595	49.3
Yogyakarta	171	14.2
Type of School		
Inclusive School	207	17.2
Special School	263	21.8
Regular School	736	61.0
Level of School		
Elementary	671	55.6
Junior High School	226	18.7
Senior High School	309	25.6
Last Education		
Bachelor's degree	1,132	93.9
Higher than a bachelor's degree	74	6.1
Teaching Experience		
10 and under years	654	54.2
11-20 years	365	30.3
21-30 years	143	11.7
Above 30 years	44	3.6
Training Program in Inclusive Education		
Have experience	192	15.9
Don't have experience	1014	84.1
Interaction with Students with SEN		
Have experience	667	55.3
Don't have experience	539	44.7
TOTAL SAMPLE	1206	100

b. Principal component analysis for the Indonesian version of the instrument

In the second trial process, the construct validation process of the 40-item data set was conducted using SPSS 23.0 (IBM, 2015) tools (Principal Component Analysis) (Field, 2009). Unidimensionality was established via a component analysis that was run with the dataset collected from the sample of 1,209 participants. Varimax rotation with Kaiser normalization of the initial PCA (Tabachnick & Fidell, 2007) was used to investigate the underlying structure and to reduce the inter-component correlation of the items. The final component loading was appropriate for the data analysis in the first trial with a cutoff point of 0.4.

Table 4.9

The Results of the Principal Component Analysis in the Second Trial Step

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.850	22.1	22.1	2.545	11.6	11.6
2	1.807	8.2	30.3	2.298	10.5	22.1
3	1.664	7.6	37.9	2.161	9.8	31.9
4	1.368	1.4	44.3	1.912	8.7	40.6
5	1.189	1.2	49.5	1.544	7.0	47.6
6	1.080	1.1	54.6	1.498	6.8	54.4

Rotated Component Matrix

	1	2	3	4	5	6
Item Number 40	**.728**	.027	.087	.251	.147	.071
Item Number 38	**.677**	.150	.199	.119	.083	-.008
Item Number 30	**.671**	.031	.029	.112	-.010	.190
Item Number 29	**.659**	.131	.173	-.022	.066	.171
Item Number 28	**.614**	.099	-.006	.198	-.064	-.122
Item Number 15	.120	**.800**	.046	.050	.004	.053
Item Number 14	.016	**.781**	.057	.003	.083	.018
Item Number 16	.156	**.628**	.107	.243	-.007	-.064
Item Number 13	.114	**.620**	.282	.223	-.011	.022
Item Number 5	.084	.050	**.723**	.204	.215	.080
Item Number 6	.039	.063	**.676**	.254	.282	.067
Item Number 8	.081	.150	**.647**	.103	-.082	-.040
Item Number 12	.227	.161	**.614**	-.053	-.058	.098
Item Number 24	.213	.064	.116	**.749**	.037	.115
Item Number 23	.206	.120	.193	**.692**	-.007	.011
Item Number 25	.166	.370	.114	**.689**	.055	-.002
Item Number 2	-.002	-.020	.184	.141	**.724**	.107
Item Number 17	.188	-.013	.182	.014	**.666**	-.075
Item Number 4	-.020	.084	-.136	-.070	**.600**	-.026
Item Number 21	-.001	-.010	-.139	.046	-.008	**.781**
Item Number 10	.079	.017	.106	-.033	-.109	**.671**
Item Number 22	.135	.017	.174	.098	.140	**.541**
Cronbach's alpha	0.746	0.733	0.681	0.703	0.760	0.742
No. of items for Cronbach's alpha	5	4	4	3	3	3

Note: Pattern of the matrix of the principal component analysis (PCA, varimax with Kaiser normalization). N = 1,206 teachers.

Based on the component analysis using PCA and varimax rotation with the Kaiser normalization method, six components were obtained with eigenvalues greater than 1.0 (Table 4.10). The first component consisted of five items (40, 38, 30, 29, and 28). The second component consisted of four items (15, 14, 16, and 13). The third component consisted of four items (5, 6, 8, and 12). The fourth component consisted of three items (24, 23, and 25). The fifth component consisted of three items (2, 17, and 4). The sixth component consisted of three items (21, 10, and 22).

Table 4.10
Component Correlation Matrix for the Instrument in the Second Trial Step (N=1206)

Component	Comp_1	Comp_2	Comp_3	Comp_4	Comp_5	Comp_6
Comp_1	1					
Comp_2	.314**	1				
Comp_3	.301**	.411**	1			
Comp_4	.284**	.282**	.305**	1		
Comp_5	.248**	.350**	.301**	.164**	1	
Comp_6	.296**	.244**	.311**	.261**	.088**	1

Note: **. Correlation is significant at the 1% level (2-tailed)

The result of the principal component analysis is a scale, including six components comprised of 22 items. A KMO value of 0.850 was obtained through the measure of sampling adequacy. In addition, the value of the total variance explained was 54.4%. The PCA of the set of items resulted in the identification of several components (Table 4.9). The size of the components ranged from components with three items to components with five items. The value of reliability for all 22 items was a Cronbach's alpha of 0.821.

Criterion-referenced validity was performed using SPSS 23.0 (IBM, 2015) tools (Pearson product-moment correlation) on the six-component from the PCA analysis process. Pearson product-moment correlation uses the principle of correlating or connecting between each component. In the second trial phase, the results of the correlation analysis show that each component is significant. The level of significance of each component is, on average, 1% (see in Table 4.10. Based on PCA and Correlation analysis, the finding shows that each component has a valid and significant correlation.

2. Third Revision of the Instrument

The purpose of this step was to reduce the number of invalid and unreliable items based on the analysis in the second trial. The result of this step is the final instrument to measure Indonesian teachers' attitudes toward inclusive education. The number of items in the instrument was reduced from 40 to 22. Finally, the final version of the instrument (Table 4.11) could now be used to measure teachers' attitudes towards inclusive education.

Besides the reversing score that needs to be considered in Table 4.11, it is necessary to change the order of the Likert scale on the instrument. The purpose of this is to simplify the process of tabulating data. Only three of the 22 items denote a positive attitude toward

Table 4.11

The Final Version and the Components of the Instrument to Measure Indonesian Teachers' Attitudes toward Inclusive Education

No	No Changed	Items	Component	R
2	1	Regular classrooms setting can create a comfortable classroom environment for all students, including students with SEN.	Creating an accepting environment for all students	
4	2	It rarely happens a case to drop out the students with SEN from regular classrooms in order to meet their educational needs.		
17	3	Entering students with SEN in regular classrooms is effective because they can learn the social skills necessary for success.		
5	4	It is difficult to maintain discipline in a regular classroom that contains students with SEN.	Problem students with SEN in the inclusive classroom	R
6	5	Students with SEN tend to create confusion in the regular classroom.		R
8	6	The behavior of the students with SEN gives a bad example for the other students.		R
12	7	Most of the students with SEN do not make an adequate effort to complete their assignments.		R
13	8	I get frustrated when I have difficulty communicating with students with SEN.	Professional responsibilities in the inclusive education	R
14	9	I get upset when students with SEN cannot follow the lesson in my classroom.		R
15	10	I get irritated when I am unable to understand students with SEN.		
16	11	I get frustrated when I have to adapt the lesson to meet the individual's needs of all students.		R
21	12	I must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large scale.	Professional knowledge about inclusive education	R
22	13	Students with SEN will probably develop academic skills more rapidly in a separate special classroom than in an inclusive classroom.		R
10	14	inclusive education for All Students requires extensive retraining of regular classroom teachers.		R
23	15	Students with SEN monopolize teachers' time.	The implication of inclusive education	R
24	16	My workload will be increased if I have students with SEN in my class.		R
25	17	I will be more stressed if I have students with SEN in my class.		R
28	18	I will not receive enough incentives (e.g., additional remuneration or allowance) to integrate students with SEN.	Inclusive education perspective in Indonesia	R
29	19	There will be inadequate special teachers who available to support inclusive education.		R
30	20	My school will not have adequate special education instructional materials and teaching aids, e.g., Braille.		R
38	21	Students with special educational needs are not accepted into regular schools because they do not qualify for the selection of new students.		R
40	22	Indonesia does not yet have a curriculum for inclusive education, so it cannot be adequately applied.		R

inclusive education. At first, the rating scale of the instrument ranged from 1 ("strongly agree") to 5 ("strongly disagree"). This means that after completing the instrument, the part that reversed is item number 1, 2, and 3. The item is given a distinctive mark to prevent confusion. The final version of the instrument is shown in Appendix H.

There are six components in the final instrument: The six components are 1) "creating an accepting environment for all students," 2) "problem students with SEN in the inclusive classroom," 3) "professional responsibilities in the inclusive education," 4) "professional knowledge about inclusive education," 5) "implications of inclusive classroom practice," and 6) "inclusive education perspective in Indonesia."

F. INDONESIAN TEACHERS' ATTITUDES TOWARD INCLUSIVE EDUCATION

The purpose of this step was to measure Indonesian teachers' attitudes toward inclusive education. The Indonesian teacher's attitude toward inclusive education is calculated using the instrument developed in the current study.

1. Demographic Information

The final version of the instrument was distributed to 683 teachers from the province of East Java to measure their attitudes toward inclusive education. The majority of these teachers (78.3%, n = 535) were female, and 21.7% (n = 148) were male. The age of teachers ranged from 22 to 58 years (M = 2.20, SD = 1,001). The most common age of teachers was 31-40 years (34.1%, n = 233). Out of 683 teachers, 540 teachers (79.1%) belonged to inclusive schools, and the rest came from special schools. The largest group of teachers in terms of the school level worked at elementary schools (41.7%, n = 285), followed by junior high schools (32.1%, n = 219) and senior high schools (26.2%, n = 179). The vast majority of the participants (94.7%, n = 647) had a Bachelor of Education degree, and 5.3% (n = 36) had a Master of Education degree. In terms of teaching experiences, 49.2% (n = 336) of teachers had under 10 years of experience, 33.8% (n = 231) had 11-20 years of experience, 12.4% (n = 85) had 21-30 years of experience, and 4.5% (n = 31) participants had more than 30 years of teaching experience. More detailed descriptive statistics concerning participants' demographic information can be found in Table 4.12.

Table 4.12

Descriptive Statistics for the Demographic Data

Item Demographic Data	N	%	M	SD
Gender			1.78	0.412
Male	148	21.7		
Female	535	78.3		
Age			2.20	1.001
Under 31 years	200	29.3		
31-40 years	233	34.1		
41-50 years	163	23.9		
Above 50 years	87	12.7		
Type of School			1.21	0.407
Inclusive School	540	79.1		
Special School	143	20.9		
Level of School			1.85	0.813
Elementary	285	41.7		
Junior High School	219	32.1		
Senior High School	179	26.2		
Last Education			1.05	0.224
Bachelor's degree	647	94.7		
Master's degree	36	5.3		
Teaching Experience			1.72	0.850
10 and under years	336	49.2		
11-20 years	231	33.8		
21-30 years	85	12.4		
Above 30 years	31	4.5		
Teaching Experience in Inclusive Education			1.99	0.663
Don't have experience	125	18.3		
1-5 years	467	68.4		
6-10 years	63	9.2		
More than 10 years	28	4.1		
Training Program in Inclusive Education			1.81	0.486
Have experience	128	18.7		
Don't have experience	555	81.3		
Interaction with Students with SEN			1.38	0.486
Have experience	423	61.9		
Don't have experience	260	38.1		
TOTAL SAMPLE	683	100		

Note: N = sample size, M = mean, SD = standard deviation

2. Indonesian Teachers' Attitudes toward Inclusive Education

The results for the 683 teachers who participated in this study were tabulated one by one using the scoring sheet of each teacher's attitudes toward inclusive education. The results revealed that 38.9% of teachers had positive attitudes, 40.9% had moderate attitudes, and 20.1% had negative attitudes toward inclusive education (Table 4.13).

Table 4.13
Indonesian Teachers' Attitudes toward Inclusive Education

Component	Negative		Moderate		Positive	
	F	%	f	%	f	%
Creating an accepting environment for all students	275	40.3	267	39.1	141	20.6
Problem students with SEN in the inclusive classroom	181	26.5	296	43.3	206	30.2
Professional responsibilities in the inclusive education	300	43.9	282	41.3	101	14.8
Professional knowledge about inclusive education	92	13.5	234	34.3	357	52.2
Implication of inclusive education	409	59.9	185	27.1	89	13.0
Inclusive education perspective in Indonesia	66	9.7	255	37.3	362	53.0
Teacher Attitudes toward inclusive education	137	20.1	280	40.9	266	38.9

3. Differences in Teachers' Attitudes toward Inclusive Education based on Demographic Characteristics

Male teachers had more positive attitudes than females. The mean score of male teachers' attitudes toward inclusive education was 71.89 (SD = 9.915), and that of female teachers was 71.15 (SD = 9.274). However, the analysis of gender showed that this difference was not significant (F (1,682) = 0.728, p>0.05).

In terms of teachers' age, the mean score of teachers younger than 31 years old was 70.16 (SD = 8.518). The score of teachers who are 31-40 years old was 71.61 (SD = 9.692). The score of teachers who are 41-50 years old was 72.23 (SD = 10.119). Finally, the score of teachers who were more than 50 years old was 71.40 (SD = 9.143). The analysis showed no significant differences among the groups (F (3,680) = 1.603, p>0.05). For components other than "creating an accepting environment for all students" and "professional knowledge about inclusive education," the analysis of age showed no significant differences.

According to a type of school data, the mean score for teachers who taught in inclusive schools was 71.27 (SD = 9.302), and the mean score for teachers who taught in special schools was 71.43 (SD = 9.856). The analysis showed no significant difference between the two groups (F (1,682) = 0.032, p>0.05).

In terms of school level, the mean score of teachers who taught in elementary schools was 72.64 (SD = 9.325), the mean score of teachers who taught in junior high schools was 70.27 (SD = 9.524), and the mean score of teachers who taught in senior high schools was 70.45 (SD = 9.209) (Table 4.14). The analysis showed a significant difference (F (2,681) = 4.990, p<0.05). A multiple comparative analysis (i.e., Tukey's test) showed that teachers who teach at elementary schools had had attitudes that are significantly different when compared to teachers at junior high schools (ΔM = 2.368, p<0.05) and senior high schools

Table 4.14

Teachers' Attitudes toward Inclusive Education based on Demographic Characteristics of the Participants

Demographic Characteristics	M	SD	F	p
Gender			0.728	>0.05
Male	71.89	9.915		
Female	71.15	9.274		
Age			1.603	>0.05
under 31 years	70.16	8.519		
31-40 years	71.61	9.692		
41-50 years	72.23	10.119		
above 50 years	71.40	9.143		
Type of School			0.032	>0.05
Inclusive School	71.27	9.302		
Special School	71.43	9.856		
Level of School			4.990	<0.05
Elementary	72.64	9.325		
Junior High School	70.27	9.524		
Senior High School	70.45	9.209		
Last Education			0.208	>0.05
Bachelor	71.35	9.315		
Master	70.61	11.164		
Teaching Experience			1.977	>0.05
10 and under years	70.48	8.694		
11-20 years	71.87	10.105		
21-30 years	72.91	10.157		
Above 30 years	71.68	9.027		
Teaching Experience in Inclusive Education			1.445	>0.05
Don't have experience	71.24	9.247		
1-5 years	71.24	9.247		
6-10 years	73.03	8.708		
More than 10 years	73.54	12.539		
Training Program in Inclusive Education			29.591	<0.05
Have experience	75.30	10.115		
Don't have experience	70.39	9.006		
Interaction with Special Educational Needs Students			16.650	<0.05
Have experience	72.45	9.362		
Don't have experience	69.45	9.218		

Note: M=mean, SD=standard deviation, Number of Participants = 683

(ΔM = 2.195, p<0.05). Elementary school teachers generally reported more positive attitudes toward inclusive education than high school teachers.

In terms of teachers' education levels, the mean score for teachers who hold a bachelor's degree was 71.35 (SD = 9.315), while the score for teachers who hold a master's degree was 70.61 (SD = 11.164) (Table 4.14). The analysis showed no significant difference between these two groups (F (1,682) = 0.208, p>0.05).

In terms of the teaching experiences of teachers, the mean score for teachers who had been teaching for under 11 years was 70.48 (SD = 8.694), the score for those with 11-20 years of experience was 71.87 (SD = 10.105), the score for those with 21-30 years of experience was 72.91 (SD = 10.157), and the score for those with more than 30 years of experience was 71.68 (SD = 9.027) (Table 4.14). The analysis revealed no significant differences among the groups (F (3,680) = 1.977, p>0.05).

Regarding participants' experience teaching in inclusive schools, the mean score for teachers with no experience was 71.24 (SD = 9.247). Meanwhile, those who had 1-5 years of experience had a mean score of 70.96 (SD = 9.323), those who had 6-10 years of experience had a mean score of 73.03 (SD = 8.708), and those with more than 10 years of experience had a mean score of 73.54 (SD = 12.539) (Table 4.14). The analysis did not indicate any significant differences among these groups (F (3,680) = 1.445, p>0.05).

In terms of training programs, the mean score of teachers who had received training was 75.30 (SD = 10.115), whereas the mean score of teachers with no experience was 70.39 (SD = 9.006) (Table 4.14). The analysis revealed a significant difference in the mean scores of the two groups (F (1,682) = 29.591, p<0.05). Specifically, teachers who had experience in an inclusive education training program had more positive attitudes toward inclusive education than teachers who didn't have such experience.

Finally, in terms of teachers' experiences interacting with SEN students, the mean score for teachers who had this kind of experience was 72.45 (SD = 9.362), and the score for teachers without this type of experience was 69.45 (SD = 9.218) (Table 4.14). The analysis revealed a significant difference between the two groups (F (1,682) = 16.650, p<0.05). Specifically, teachers who had experience interacting with SEN students had more positive attitudes toward inclusive education than teachers who didn't have this experience.

a. Gender

In terms of teachers' gender, the mean score of male teachers' attitudes toward Inclusive Education was 71.89 (*SD* = 9.915), and female teachers 71.15 (*SD* = 9.274), as shown in Table 4.15. The analysis of gender showed no significant difference (F (1,682) =0.728, p>0.05). According to gender data in each factor, the analysis of gender there is no significant difference.

Table 4.15
Gender Differences in Attitudes toward Inclusive Education

	Male		Female			
Factor	*M*	*SD*	*M*	*SD*	*F*	*p*
Creating an accepting environment for all students	10.05	1.857	9.86	1.788	1.279	0.259
Problematic students with SEN in the inclusive classroom	13.41	2.680	13.02	2.647	2.571	0.109
Professional responsibilities in the Inclusive Education	12.89	2.594	12.82	2.432	0.070	0.791
Professional knowledge about Inclusive Education	9.41	2.030	9.61	1.885	1.264	0.261
The Implication of Inclusive Education	9.18	2.004	9.08	1.918	0.334	0.564
Inclusive Education perspective in Indonesia	16.96	2.969	16.76	2.550	0.641	0.423
Teacher Attitudes toward Inclusive Education	71.89	9.915	71.15	9.274	0.728	0.394

Note: Male (n=148), Female (n=535), N=683

According to gender data in the factor of creating an accepting environment for all students, the mean score of male teachers was 10.05 (*SD* = 1.857) and female teachers 9.86 (*SD* = 1.788). The analysis of gender there is no significant difference (*F* (1,682) =1.279, *p*>0.05).

According to gender data in the factor of problematic students with SEN in the inclusive classrooms, the mean score of male teachers was 13.41 (*SD* = 2.680) and female teachers 13.02 (*SD* = 2.647). The analysis of gender there is no significant difference (*F* (1,682) =2.571, *p*>0.05).

According to gender data in the factor of professional responsibilities in the Inclusive Education, the mean score of male teachers was 12.89 (*SD* = 2.594) and female teachers 12.82 (*SD* = 2.432). The analysis of gender there is no significant difference (*F* (1,682) =0.070, *p*>0.05).

According to gender data in the factor of professional knowledge about Inclusive Education, the mean score of male teachers was 9.41 (*SD* = 2.030) and female teachers 9.61 (*SD* = 1.885). The analysis of gender there is no significant difference (*F* (1,682) =1.264, *p*>0.05).

According to gender data in the factor of the implication of Inclusive Education, the mean score of male teachers was 9.18 (*SD* = 2.004) and female teachers 9.08 (*SD* = 1.918). The analysis of gender there is no significant difference (*F* (1,682) =0.334, *p*>0.05).

According to gender data in the factor of Inclusive Education perspective in Indonesia, the mean score of male teachers was 16.96 (*SD* = 2.969) and female teachers 16.76 (*SD* = 2.550). The analysis of gender there is no significant difference (*F* (1,682) =0.641, *p*>0.05).

b. Age

In terms of teachers' ages, the mean score of full-scale of ITAIE, teachers who were younger than 31 years old was 70.16 (*SD* = 8.518), 31-40 years old was 71.61 (*SD* = 9.692), 41-50 years old was 72.23 (*SD* = 10.119), and teachers who were more than 50 years old was 71.40 (*SD* = 9.143) as shown in Table 4.16. The analysis of ages showed no significant difference (F (3,680) =1.603, $p>0.05$). For the factor other than "creating an accepting environment for all students" and "professional knowledge about Inclusive Education," there were no significant differences.

For the factor creating an accepting environment for all students, mean score of a teachers who younger than 31 years old was 9.53 (*SD* = 1.733), 31-40 years old was 10.00 (*SD* = 1.823), 41-50 years old was 10.12 (*SD* = 1.857), and teachers who were more than 50 years old was 10.09 (*SD* = 1.702). The analysis of ages to explain the factor creating an accepting environment for all students showed a significant difference (F (3,680) = 4.274, $p<0.05$). The analysis of a multiple comparative (Tukey) test showed that teachers who were 41-50 years old had a significant mean difference compared to those who were younger than 31 years old (ΔM=0.592, $p<0.05$). Teachers who were 31-40 years old had a significant mean difference compared to those who were younger than 31 years old (ΔM=0.471, $p<0.05$).

According ages data in the factor of professional knowledge about Inclusive Education, the mean score of teachers who were younger than 31 years old was 9.22 (*SD* = 1.730), 31-40 years old was 9.47 (*SD* = 2.026), 41-50 years old was 9.94 (*SD* = 1.911), and teachers who had more than 50 years old was 9.91 (*SD* = 1.896). The analysis of ages to explain the factor of professional knowledge about Inclusive Education showed a significant difference (F (3,680) =5.518, $p<0.05$). The analysis of a multiple comparative (Tukey) test showed that teachers who were 41-50 years old had a significant mean difference compared to teachers who were younger than 31 years old (ΔM=0.724, $p<0.05$). Teachers who were more than 50 years old had a significant mean difference compared to teachers who were younger than 31 years old (ΔM=0.693, $p<0.05$).

Table 4.16
Ages Differences in Attitudes toward Inclusive Education

	< 31		31-40		41-50		>50			
Factor	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*
Creating an accepting environment for all students	9.53	1.733	10.00	1.823	10.12	1.857	10.09	1.702	4.274	0.005
Problem students with SEN in the inclusive classroom	13.17	2.408	13.05	2.702	13.33	2.822	12.67	2.756	1.249	0.291
Professional responsibilities in the Inclusive Education	12.72	2.167	12.89	2.559	13.04	2.773	12.60	2.340	0.813	0.487
Professional knowledge about Inclusive Education	9.22	1.730	9.47	2.026	9.94	1.911	9.91	1.896	5.518	0.001
Implication of Inclusive Education	8.96	1.978	9.15	1.904	9.09	1.958	9.32	1.889	0.751	0.522
Inclusive Education perspective in Indonesia	16.57	2.569	17.06	2.746	16.72	2.580	16.82	2.652	1.301	0.273
Teacher Attitudes toward Inclusive Education	70.16	8.519	71.61	9.692	72.23	10.119	71.40	9.143	1.603	0.187

Note: <31 (n=200), 31-40 (n=233), 41-50 (n=163), >50 (n=87), N=683

c. Types of Schools

In terms of the teachers' school types, the mean score of teachers' attitudes toward Inclusive Education that taught in inclusive school was 71.27 (*SD* = 9.302) and teachers that teaching in special schools 71.43 (*SD* = 9.856) as shown in Table 4.17. The analysis of the types of schools showed no significant difference (F (1,682) =0.032, p>0.05). For the factor other than "creating an accepting environment for all students" and "professional knowledge about Inclusive Education," the analysis of ages there are no significant differences.

According to types of school's data in the factor professional knowledge about Inclusive Education, the mean score of the teachers that taught in inclusive school was 9.68 (*SD* = 1.866) and the teachers that taught in special schools 9.13 (*SD* = 2.052). In the analysis of the types of schools showed a significant difference (F (1,682) =9.481, p<0.05). The teachers that taught in inclusive school had more positive attitudes in factor professional knowledge about Inclusive Education than teachers that taught in the special school.

Table 4.17
Types of School Differences in Attitudes toward Inclusive Education

Factor	Inclusive School		Special School			
	M	*SD*	*M*	*SD*	*F*	*p*
Creating an accepting environment for all students	9.89	1.770	9.92	1.932	0.032	0.858
Problem students with SEN in the inclusive classroom	13.07	2.637	13.22	2.740	0.334	0.563
Professional responsibilities in the Inclusive Education	12.87	2.438	12.71	2.575	0.511	0.475
Professional knowledge about Inclusive Education	9.68	1.866	9.13	2.052	9.481	0.002
Implication of Inclusive Education	8.97	1.876	9.60	2.080	12.283	0.000
Inclusive Education perspective in Indonesia	16.79	2.555	16.86	2.973	0.078	0.781
Teacher Attitudes toward Inclusive Education	71.27	9.302	71.43	9.856	0.032	0.857

Note: <31 (n=200), 31-40 (n=233), 41-50 (n=163), >50 (n=87), N=683

According to types of school's data in the factor implication of Inclusive Education, the teachers mean score that taught in inclusive school was 8.97 (*SD* = 1.876), and the teachers that taught in special schools 9.60 (*SD* = 2.080). The analysis of the types of schools there is a significant difference (F (1,682) =12.283, p<0.05). The teachers that taught in special schools had more positive attitudes in factor implication of Inclusive Education than teachers that taught in an inclusive school.

According to types of school's data in the factor Inclusive Education perspective in Indonesia, the teachers' mean score that taught in inclusive school was 16.79 (*SD* = 2.555), and the teachers who taught in special schools 16.86 (*SD* = 2.973). The analysis of the types of schools there is no significant difference (F (1,682) =0.078, p>0.05).

d. Levels of Schools

In terms of teachers schools levels, the mean score of teachers attitudes toward Inclusive Education that taught in elementary school was 72.64 (*SD* = 9.325), the teachers that taught in junior high school 70.27 (SD = 9.524), and the teachers that taught in senior high school 70.45 (*SD* = 9.209) as shown in Table 4.18. The analysis of the school levels showed a significant difference (F (2,681) =4.990, p<0.05). Analysis of a multiple comparative (Tukey) test showed that teachers that teaching in elementary school had a significant mean difference compared to teachers that teaching in both juniors (ΔM=2.368, p<0.05) and senior high school (ΔM=2.195, p<0.05). The teachers in the elementary school were generally more positive attitudes toward Inclusive Education compared to teachers in high school.

Table 4.18
Level of School Differences in Attitudes toward Inclusive Education

Factor	Elementary		Junior High School		Senior High School			
	M	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*
Creating an accepting environment for all students	10.06	1.682	9.58	1.869	10.04	1.866	5.258	0.005
Problem students with SEN in the inclusive classroom	13.08	2.750	12.93	2.606	13.34	2.566	1.180	0.308
Professional responsibilities in the Inclusive Education	13.06	2.546	12.78	2.334	12.56	2.477	2.294	0.102
Professional knowledge about Inclusive Education	10.00	1.858	9.49	1.767	8.95	2.018	17.507	0.000
Implication of Inclusive Education	9.39	1.902	8.96	1.934	8.81	1.939	5.819	0.003
Inclusive Education perspective in Indonesia	17.06	2.648	16.53	2.576	16.74	2.703	2.500	0.083
Teacher Attitudes toward Inclusive Education	72.64	9.325	70.27	9.524	70.45	9.209	4.990	0.007

Note: Elementary School (n=285), Junior High School (n=219), Senior High School; (n=179), N=683

According to the schools levels data in the factor creating an accepting environment for all students, mean score of the teachers that taught in elementary school was 10.06 (*SD* = 1.682), the teachers that taught in junior high school 9.58 (SD = 1.869), and the teachers that taught in senior high school 10.04 (*SD* = 1.866). In the analysis of the school levels, there was a significant difference in the main effect (F (2,681) =5.258, $p<0.05$). Analysis of a multiple comparative (Tukey) test showed that teachers who worked in elementary (ΔM=0.481, $p<0.05$) and senior high school (ΔM=0.469, $p<0.05$) had significant mean differences compared to teachers that taught in junior high school. The teachers in the elementary and senior high school generally more positive attitudes in factor, creating an accepting environment for all students compared to teachers in the junior high school.

According to the schools levels data in the factor problem students with SEN in the inclusive classroom, mean score of a teachers that teaching in elementary school was 13.08 (*SD* = 2.750), the teachers that taught in junior high school 12.93 (SD = 2.606), and the teachers that teaching in senior high school 13.34 (*SD* = 2.566). In the analysis of the school levels, there was no significant difference in their attitudes toward Inclusive Education (F (2,681) =1.180, $p>0.05$).

According to the schools levels data in the factor professional responsibilities in the Inclusive Education, mean score of a teachers that taught in elementary school was 13.06 (*SD* = 2.546), the teachers that taught in junior high school 12.78 (SD = 2.334), and the

teachers that taught in senior high school 12.56 (*SD* = 2.477). The analysis of the school levels showed that there is no significant difference (F (2,681) =2.294, $p>0.05$).

According to the schools levels data in the factor professional knowledge about Inclusive Education, mean score of the teachers that taught in elementary school was 10.00 (*SD* = 1.858), the teachers that taught in junior high school 9.49 (SD = 1.767), and the teachers that taught in senior high school 8.95 (*SD* = 2.018). The analysis of the school levels showed that there was a significant difference in the main effect (*F* (2,681) =17.507, $p<0.05$). Analysis of multiple comparative (Tukey) tests showed that teachers that teaching in elementary school had a significant mean difference compared to teachers that teaching in junior (ΔM=0.507, $p<0.05$) and senior high school (ΔM=1.050, $p<0.05$). The teachers in the elementary school were generally more positive attitudes in the factor of professional knowledge about Inclusive Education compared to teachers in the junior and senior high school.

According to the schools levels data in the factor implication of Inclusive Education, mean score of the teachers that taught in elementary school was 9.39 (*SD* = 1.902), the teachers that teaching in junior high school 8.96 (SD = 1.934), and the teachers that teaching in senior high school 8.81 (*SD* = 1.939). The analysis of the school levels showed that there is any significant difference (*F* (2,681) =5.819, $p<0.05$). Analysis of a multiple comparative (Tukey) test showed that teachers in elementary schools had a significant mean difference compared to teachers in junior high school (ΔM=0.426, $p<0.05$) and senior high school (ΔM=0.579, $p<0.05$). However, there are no significant differences between the teacher that taught in junior high school and teacher that taught in senior high school (ΔM=0.153, p=0.708). The teachers in the elementary were generally more positives attitudes in factor implication of Inclusive Education compared to teachers in high school.

According to the schools levels data in the factor Inclusive Education perspective in Indonesia, mean score of the teachers that taught in elementary school was 17.06 (*SD* = 2.648), the teachers that taught in junior high school 16.53 (SD = 2.576), and the teachers that taught in senior high school 16.74 (*SD* = 2.703). The analysis of the school level showed that there was no significant difference (*F* (2,681) =2.500, $p>0.05$).

e. Levels of Education

In terms of teachers' education levels, the mean score of full-scale of teachers' attitude toward Inclusive Education, the teacher group who hold bachelor's degrees was

71.35 (*SD* = 9.315), and teachers' group who hold master's degree 70.61 (*SD* = 11.164) as shown in Table 4.19. The analysis of the education level showed there was no significant difference in teachers' attitudes toward Inclusive Education (*F* (1,682) =0.208, *p*>0.05).

According to the data of the school level in the factor creating an accepting environment for all students, the mean score of the teachers who hold bachelor's degrees was 9.92 (*SD* = 1.773), and the teachers who hold master's degrees 9.44 (*SD* = 2.261). The analysis of the education levels showed that there was no significant difference (*F* (1,682) =2.419, *p*>0.05).

According to the data of school level in the factor problem students with SEN in the inclusive classroom, the mean score of the teachers' who hold Bachelor's degrees was 13.11 (*SD* = 2.655), and the teachers' group who hold Master's degrees 12.97 (*SD* = 2.731). The analysis of the education levels showed that there was no significant difference (*F* (1,682) =0.091, *p*>0.05).

According to the data of the school level in the factor professional responsibilities in the Inclusive Education, the mean score of the teachers' who hold bachelor's degrees was 12.84 (*SD* = 2.473), and the teachers' group who hold master's degrees 12.78 (*SD* = 2.380). The analysis of the education levels showed that there was no significant difference (*F* (1,682) =0.022, *p*>0.05).

According to the data of the school level in the factor professional knowledge about Inclusive Education, the mean score of the teachers' who hold bachelor's degrees was 9.55 (*SD* = 1.884), and the teachers' group who hold master's degrees 9.72 (*SD* = 2.840). The analysis of the education levels there is no significant difference (*F* (1,682) =0.264, *p*>0.05).

According to the data of the school level in the factor implication of Inclusive Education, the mean score of the teachers' who hold bachelor's degrees was 9.11 (*SD* = 1.917), and the teachers' group who hold master's degrees 8.89 (*SD* = 2.265). In the analysis of the education levels, there was no significant difference in the attitudes toward Inclusive Education (*F* (1,682) =0.456, *p*>0.05).

According to the data of the school level in the factor Inclusive Education perspective in Indonesia, the mean score of the teachers' who hold bachelor's degrees was 16.81 (*SD* = 2.621), and the teachers' group who hold master's degrees 16.81 (*SD* = 3.087). The analysis of the education levels showed that there was no significant difference (*F* (1,682) =0.000, *p*>0.05).

Table 4.19
Level of Education Differences in Attitudes toward Inclusive Education

Factor	Bachelor		Master			
	M	*SD*	*M*	*SD*	*F*	*p*
Creating an accepting environment for all students	9.92	1.773	9.44	2.261	2.419	0.120
Problem students with SEN in the inclusive classroom	13.11	2.655	12.97	2.731	0.091	0.763
Professional responsibilities in the Inclusive Education	12.84	2.473	12.78	2.380	0.022	0.882
Professional knowledge about Inclusive Education	9.55	1.884	9.72	2.840	0.264	0.607
Implication of Inclusive Education	9.11	1.917	8.89	2.265	0.456	0.500
Inclusive Education perspective in Indonesia	16.81	2.621	16.81	3.087	0.000	0.999
Teacher Attitudes toward Inclusive Education	71.35	9.315	70.61	11.164	0.208	0.649

Note: Bachelor (n=647), Master (n=36), N=683

f. Teaching Experiences

In terms the teaching experiences of teachers, the mean score of full-scale of teachers' attitudes toward Inclusive Education, the teachers group who had teaching experiences under 11 years were 70.48 (*SD* = 8.694), 11-20 years were 71.87 (*SD* = 10.105), 21-30 years were 72.91 (*SD* = 10.157), and teachers who had more than 30 years teaching experiences were 71.68 (*SD* = 9.027) as shown in Table 4.20. The analysis of the teaching experiences showed that there was no significant difference (*F* (3,680) =1.977, *p*>0.05).

According to the teaching experiences data in the factor creating an accepting environment for all students, the mean score of a teachers group who had teaching experiences under 11 years was 9.77 (*SD* = 1.823), 11-20 years were 9.95 (*SD* = 1.795), 21-30 years were 10.05 (*SD* = 1.779), and teachers who had more than 30 years teaching experiences were 10.48 (*SD* = 1.630). The analysis of the teaching experiences there was no significant difference (*F* (3,680) =1.882, *p*>0.05).

According to the teaching experiences data in the factor problem students with SEN in the inclusive classroom, the mean score of the teachers group who had teaching experiences under 11 years was 13.08 (*SD* = 2.430), 11-20 years were 13.06 (*SD* = 2.842), 21-30 years were 13.53 (*SD* = 2.881), and teachers who had more than 30 years teaching experiences were 12.45 (*SD* = 2.908) as shown in Table 4.22. The analysis of teaching experiences there was no significant difference (*F* (3,680) =1.376, *p*>0.05).

According to the teaching experiences data in the factor professional responsibilities in the Inclusive Education, the mean score of a teachers group who had teaching experiences under 11 years was 12.69 (*SD* = 2.307), 11-20 years were 13.00 (*SD* = 2.597), 21-30 years were 12.95 (*SD* = 2.694), and teachers who had more than 30 years

Table 4.20
Teaching Experience Differences in Attitudes toward Inclusive Education

	< 11		11-20		21-30		>30			
Factor	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*
Creating an accepting environment for all students	9.77	1.823	9.95	1.795	10.05	1.779	10.48	1.630	1.882	0.131
Problem students with SEN in the inclusive classroom	13.08	2.430	13.06	2.842	13.53	2.881	12.45	2.908	1.376	0.249
Professional responsibilities in the Inclusive Education	12.69	2.307	13.00	2.597	12.95	2.694	12.90	2.521	0.835	0.475
Professional knowledge about Inclusive Education	9.17	1.814	9.87	1.970	10.01	1.809	10.29	2.101	9.978	0.000
Implication of Inclusive Education	9.07	1.954	9.10	1.971	9.31	1.903	8.97	1.581	0.404	0.750
Inclusive Education perspective in Indonesia	16.70	2.604	16.89	2.633	17.06	2.817	16.58	2.754	0.585	0.625
Teacher Attitudes toward Inclusive Education	70.48	8.694	71.87	10.105	72.91	10.157	71.68	9.027	1.977	0.116

Note: <11 (n=336), 11-20 (n=231), 21-30 (n=85), >30 (n=31), N=683

teaching experience were 12.90 (*SD* = 2.521). The analysis of the teaching experiences there was no significant difference (F (3,680) =0.835, p>0.05).

According to the teaching experiences data in the factor professional knowledge about Inclusive Education, the mean score of the teachers group who had teaching experiences under 11 years were 9.17 (*SD* = 1.814), 11-20 years were 9.87 (*SD* = 1.970), 21-30 years were 10.01 (*SD* = 1.809), and teachers who had more than 30 years teaching experiences were 10.29 (*SD* = 2.101). The analysis of the teaching experiences showed that there was a significant difference in the main effect (F (3,680) =9.978, p<0.05). Analysis of a multiple comparative (Tukey) test showed that teachers group who had teaching experiences 11-20 years (ΔM=0.693, p<0.05), 21-30 years (ΔM=0.839, p<0.05) and more than 30 years (ΔM=1.118, p<0.05) had significant mean differences compared to the teacher group who had teaching experiences under 11 years. Other than that, there are no significant mean differences among teachers' groups who have teaching experiences 11-20 years, 21-30 years, and more than 30 years.

According to the teaching experiences data in the factor implication of Inclusive Education, the mean score of a teachers group who had teaching experiences under 11 years was 9.07 (*SD* = 1.954), 11-20 years were 9.10 (*SD* = 1.971), 21-30 years were 9.31 (*SD* = 1.903), and teachers who had more than 30 years teaching experiences 8.97 (*SD* =

1.581). The analysis of the teaching experiences there is no significant difference (F (3,680) =0.404, p>0.05).

According to the teaching experiences data in the factor Inclusive Education perspective in Indonesia, the mean score of a teachers group who had teaching experiences under 11 years was 16.70 (SD = 2.604), 11-20 years were 16.89 (SD = 2.633), 21-30 years were 17.06 (SD = 2.817), and teachers who had more than 30 years teaching experiences were 16.58 (SD = 2.754). The analysis of teaching experiences there is no significant difference (F (3,680) =0.585, p>0.05).

g. Teaching Experiences in Inclusive School

In terms the teaching experience in inclusive school of teachers, the mean score of full-scale of teachers attitude toward Inclusive Education a teachers group who didn't have teaching experiences in inclusive school were 71.24 (SD = 9.247), a teachers group who had teaching experiences in inclusive school 1-5 years were 70.96 (SD = 9.323), 6-10 years were 73.03 (SD = 8.708), and teachers who had more than 10 years teaching experiences in inclusive school were 73.54 (SD = 12.539) as shown in Table 4.21. The analysis of teaching experiences in an inclusive school showed that there is no significant difference (F (3,680) =1.445, p>0.05).

According to the teaching experiences in inclusive school data in the factor creating an accepting environment for all students, the mean score of a teachers group who didn't have teaching experiences in inclusive school were 9.88 (SD = 1.953), a teachers group who had teaching experience in inclusive school 1-5 years were 9.87 (SD = 1.788), 6-10 years were 10.06 (SD = 1.635), and teachers who had more than 10 years teaching experiences in inclusive school were 10.07 (SD = 1.783). The analysis of teaching experiences there is no significant difference (F (3,680) =0.300, p>0.05).

According to the teaching experiences in inclusive school data in the factor problem students with SEN in the inclusive classroom, mean score of a teachers group who didn't have teaching experiences in inclusive school were 13.23 (SD = 2.664), a teachers group who had teaching experiences in inclusive school 1-5 years were 13.08 (SD = 2.587), 6-10 years were 12.94 (SD = 2.833), and teachers who had more than 10 years teaching experiences in inclusive school were 13.29 (SD = 3.420). The analysis of teaching experiences in an inclusive school showed that there was no significant difference (F (3,680) =0.236, p>0.05).

Table 4.21
Teaching Experience in Inclusive School Differences in Attitudes toward Inclusive Education

	0		1-5		6-10		>10			
Factor	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*
Creating an accepting environment for all students	9.88	1.953	9.87	1.788	10.06	1.635	10.07	1.783	0.300	0.825
Problem students with SEN in the inclusive classroom	13.23	2.664	13.08	2.587	12.94	2.833	13.29	3.420	0.236	0.871
Professional responsibilities in the Inclusive Education	12.73	2.563	12.86	2.563	13.03	2.155	12.46	3.156	0.442	0.723
Professional knowledge about Inclusive Education	9.10	2.023	9.54	1.851	10.30	1.828	10.32	2.109	7.175	0.000
Implication of Inclusive Education	9.56	2.049	8.94	1.859	9.17	1.819	9.57	2.545	4.053	0.007
Inclusive Education perspective in Indonesia	16.74	2.812	16.67	2.567	17.52	2.382	17.82	3.334	3.423	0.017
Teacher Attitudes toward Inclusive Education	71.24	9.247	70.96	9.323	73.03	8.708	73.54	12.539	1.445	0.228

Note: 0 (n=125), 1-5 (n=467), 6-10 (n=63), >10 (n=28), N=683

According to the teaching experiences in inclusive school data in the factor professional responsibilities in the Inclusive Education, mean score of a teachers group who didn't have teaching experiences in inclusive school were 12.73 (*SD* = 2.563), a teachers group who had teaching experiences in inclusive school 1-5 years were 12.86 (*SD* = 2.563), 6-10 years were 13.03 (*SD* = 2.155), and teachers who had more than 10 years teaching experiences in inclusive school were 12.46 (*SD* = 3.156). The analysis of teaching experiences in an inclusive school showed that there was no significant difference ($F(3,680) = 0.442$, $p > 0.05$).

According to the teaching experiences in inclusive school data in the factor professional knowledge about Inclusive Education, mean score of a teachers group who didn't have teaching experiences in inclusive school were 9.10 (*SD* = 2.023), a teachers group who had teaching experience in inclusive school 1-5 years were 9.54 (*SD* = 1.851), 6-10 years were 10.30 (*SD* = 1.828), and teachers who had more than 10 years teaching experiences in inclusive school were 10.32 (*SD* = 2.109). The analysis of teaching experiences in inclusive schools showed that there was any significant difference ($F(3,680) = 7.175$, $p < 0.05$). Analysis of a multiple comparative (Tukey) test showed that teacher groups who have teaching experience in inclusive school from 6 to 10 years

showed a significant mean differences compared to teachers group who did not have experience (ΔM=1.198, p<0.05) and had teaching experience from 1 to 5 years (ΔM=0.762, p<0.05) in inclusive school. Other than that, teacher groups who had teaching experiences in inclusive school more than ten years had a significant mean difference compared to teachers' group who didn't have experiences in Inclusive Education (ΔM=1.217, p<0.05).

According to the teaching experiences in inclusive school data in the factor implication of Inclusive Education, mean score of a teachers group who didn't have teaching experiences in inclusive school were 9.56 (SD = 2.049), a teachers group who had teaching experiences in inclusive school 1-5 years were 8.94 (SD = 1.859), 6-10 years were 9.17 (SD = 1.819), and teachers who had more than 10 years teaching experience in inclusive school were 9.57 (SD = 2.545). The analysis of teaching experience in an inclusive school showed that there was any significant difference (F (3,680) =4.053, p<0.05). Analysis of a multiple comparative (Tukey) test showed that teacher's group who didn't have teaching experiences in inclusive school had a significant mean difference compared to teachers' group who had teaching experiences in inclusive school 1-5 years (ΔM=0.620, p<0.05).

According to the teaching experiences in inclusive school data in the factor Inclusive Education perspective in Indonesia, score of a teachers group who didn't have teaching experiences in inclusive school was 16.74 (SD = 2.812), a teachers group who had teaching experience in inclusive school 1-5 years were 16.67 (SD = 2.567), 6-10 years were 17.52 (SD = 2.382), and teachers who had more than 10 years teaching experience in inclusive school were 17.82 (SD = 3.334). The analysis of teaching experiences in inclusive schools showed that there was a significant difference in the main effect (F (3,680) =3.423, p<0.05). The analysis of a multiple comparative (Tukey) test showed that teacher's group who had teaching experiences in inclusive school 6-10 years had a significant mean difference compared to teachers' group who had teaching experiences in inclusive school 1-5 years (ΔM=0.858, p<0.05).

h. Training Program in Inclusive Education

In terms of the training programs in Inclusive Education of teachers, the mean score of full-scale of teachers' attitude toward Inclusive Education, teachers who had experiences of receiving programs in Inclusive Education was 75.30 (SD = 10.115), and teachers who did not have experiences 70.39 (SD = 9.006) as shown in Table 4.22. The analysis of the

training program in Inclusive Education showed that there was a significant difference (F (1,682) =29.591, p<0.05). The teachers that had experiences in training program in Inclusive Education have more positive attitudes toward Inclusive Education than teachers that didn't have experiences in training program in Inclusive Education.

According to the training program in Inclusive Education data in the factor creating an accepting environment for all students, the mean score a teachers group who had experiences in training program in Inclusive Education was 10.19 (SD = 1.852), and teachers group who didn't have experiences in training program in Inclusive Education was 9.83 (SD = 1.787). The analysis of the training program in Inclusive Education showed that there was any significant difference (F (1,682) =4.050, p<0.05). The teachers that had experiences in training program in Inclusive Education have more positive attitudes in the factor, creating an accepting environment for all students than teachers that didn't have experiences in training program in Inclusive Education.

According to the training program in Inclusive Education data, the mean score a teachers group who had experiences in training program in Inclusive Education was 13.69 (SD = 2.836), and the teachers who didn't have experiences in training program in Inclusive Education was 12.97 (SD = 2.599). The analysis of the training program in Inclusive Education showed that there was a significant difference (F (1,682) =7.708, p<0.05). The teachers that had experiences in training program in Inclusive Education have more positive attitudes in the factor problem students with SEN in the inclusive classroom than teachers that didn't have experiences in training program in Inclusive Education.

According to the training program in Inclusive Education data the factor professional responsibilities in the Inclusive Education, the mean score a teachers group who had experiences in training program in Inclusive Education was 13.73 (SD = 2.616), and teachers group who didn't have experiences in training program in Inclusive Education was 12.63 (SD = 2.386). The analysis of the training program in Inclusive Education showed that there is a significant difference (F (1,682) =21.453, p<0.05). The teachers that have experiences in training program in Inclusive Education have more positive attitudes in factor professional responsibilities in the Inclusive Education than teachers that didn't have experiences in training program in Inclusive Education.

According to the training program in Inclusive Education data the factor professional knowledge about Inclusive Education, the mean score of the teachers' group who had experiences in training programs in Inclusive Education was 10.13 (SD = 1.976), and teachers' group who did not have any experience in the training program in

Table 4.22
Training Program in Inclusive Education Differences in Attitudes toward Inclusive Education

	Have Experience		Don't Have Experience			
Factor	*M*	*SD*	*M*	*SD*	*F*	*p*
Creating an accepting environment for all students	10.19	1.852	9.83	1.787	4.050	0.045
Problem students with SEN in the inclusive classroom	13.69	2.836	12.97	2.599	7.708	0.006
Professional responsibilities in the Inclusive Education	13.73	2.616	12.63	2.386	21.453	0.000
Professional knowledge about Inclusive Education	10.13	1.976	9.43	1.882	13.821	0.000
Implication of Inclusive Education	9.98	2.010	8.90	1.863	33.766	0.000
Inclusive Education perspective in Indonesia	17.59	2.824	16.62	2.571	14.265	0.000
Teacher Attitudes toward Inclusive Education	75.30	10.115	70.39	9.006	29.591	0.000

Note: Have Experience (n=128), Don't Have Experience (n=555), N=683

Inclusive Education was 9.43 (*SD* = 1.882). The analysis of the training program in Inclusive Education showed that there was any significant difference (F (1,682) =13.821, p<0.05). The teachers that had experiences in training program in Inclusive Education have more positive attitudes in factor professional knowledge about Inclusive Education than teachers that didn't have experiences in training program in Inclusive Education.

According to the training program in Inclusive Education data the factor implication of Inclusive Education, the mean score a teachers group who had experiences in training programs in Inclusive Education was 9.98 (*SD* = 2.010), and teachers group who didn't have experiences in training program in Inclusive Education was 8.90 (*SD* = 1.863). The analysis of the training program in Inclusive Education showed that there was any significant difference (F (1,682) =33.766, p<0.05). The teachers that had experiences in training program in Inclusive Education have more positive attitudes in factor implication of Inclusive Education than teachers that didn't have experiences in training program in Inclusive Education.

According to the training program in Inclusive Education data the factor Inclusive Education perspective in Indonesia, the mean score a teachers group who had experiences in training programs in Inclusive Education was 17.59 (*SD* = 2.824) and teachers group who didn't have experience in training program in Inclusive Education was 16.62 (*SD* = 2.571). The analysis of the training program in Inclusive Education showed that there were any significant differences (F (1,682) =14.265, p<0.05). The teachers that had experiences in training program in Inclusive Education have a more positive attitude in factor Inclusive Education perspective in Indonesia than teachers that didn't have experiences in training program in Inclusive Education.

i. Interaction with Special Educational Needs Students

In terms of the teachers' experiences in interaction with SEN students, the mean score of full-scale of teachers' attitude toward Inclusive Education, a teachers group who had experiences of interacting with SEN students was 72.45 (*SD* = 9.362), and teachers group who didn't have experiences was 69.45 (*SD* = 9.218) as shown in Table 4.23. The analysis of the interaction with SEN students showed that there is any significant difference (F (1,682) =16.650, $p<0.05$). The teachers that had experiences in interaction with SEN students have more positive attitudes toward Inclusive Education than teachers that didn't have experiences in interaction with SEN students.

According to the interaction with SEN students data in the factor creating an accepting environment for all students, the mean score a teachers group who had experiences in interaction with SEN students was 10.02 (*SD* = 1.805), and teachers group who didn't have experiences was 9.71 (*SD* = 1.788). The analysis of the interaction with SEN students there is any significant difference (*F* (1,682) =4.749, $p<0.05$). The teachers that had experiences in interaction with SEN students have more positive attitudes in the factor of creating an accepting environment for all students than teachers that didn't have experiences in interaction with SEN students.

According to the interaction with SEN students data in the factor problem students with SEN in the inclusive classroom, the mean score a teachers group who had experiences in interaction with SEN students was 13.28 (*SD* = 2.755) and teachers group who didn't have experiences was 12.81 (*SD* = 2.469). The analysis of the interaction with SEN students there is any significant difference (*F* (1,682) =5.197, $p<0.05$). The teachers that had experiences in interaction with SEN students have a more positive attitude in factor problem students with SEN in the inclusive classroom than teachers that didn't have experiences in interaction with SEN students.

According to the interaction with SEN students data in the factor professional responsibilities in the Inclusive Education, the mean score a teachers group who had experiences in interaction with SEN students was 13.02 (*SD* = 2.502), and teachers group who didn't have experiences was 12.53 (*SD* = 2.381). The analysis of experiences in interaction with SEN students there is any significant difference (*F* (1,682) =6.380, $p<0.05$). The teachers that had experiences in interaction with SEN students have more positive attitudes in factor professional responsibilities in Inclusive Education than teachers who did not have any experience to interact with SEN students.

Table 4.23
Interaction with SEN Students' Differences in Attitudes toward Inclusive Education

	Have Experience		Don't Have Experience			
Factor	*M*	*SD*	*M*	*SD*	*F*	*p*
Creating an accepting environment for all students	10.02	1.805	9.71	1.788	4.749	0.030
Problem students with SEN in the inclusive classroom	13.28	2.755	12.81	2.469	5.197	0.023
Professional responsibilities in the Inclusive Education	13.02	2.502	12.53	2.381	6.380	0.012
Professional knowledge about Inclusive Education	9.69	1.963	9.35	1.826	4.986	0.026
Implication of Inclusive Education	9.37	1.951	8.66	1.829	22.717	0.000
Inclusive Education perspective in Indonesia	17.06	2.645	16.39	2.599	10.370	0.001
Teacher Attitudes toward Inclusive Education	72.45	9.362	69.45	9.218	16.650	0.000

Note: Have Experience (n=423), Don't Have Experience (n=260), N=683

According to the interaction with SEN students data in the factor professional knowledge about Inclusive Education, the mean score a teachers group who had experiences in interaction with SEN students was 9.69 (*SD* = 1.963), and teachers group who didn't have experiences 9.35 (*SD* = 1.826). The analysis of experiences in interaction with SEN students there is any significant difference (F (1,682) =4.986, p<0.05). The teachers that had experiences in interaction with SEN students have more positive attitudes in the factor of professional knowledge about Inclusive Education than teachers that didn't have experience in interaction with SEN students.

According to the interaction with SEN students data in the factor implication of Inclusive Education, the mean score a teachers group who had experiences in interaction with SEN students was 9.37 (*SD* = 1.951), and teachers group who didn't have experiences in interaction with SEN students was 8.66 (*SD* = 1.829). The analysis of the interaction with SEN students there is any significant difference (F (1,682) =22.717, p<0.05). The teachers that had experiences in interaction with SEN students have more positive attitudes in the factor implication of Inclusive Education than teachers that didn't have experience in interaction with SEN students.

According to the interaction with SEN students data in the factor Inclusive Education perspective in Indonesia, the mean score a teachers group who had experiences in interaction with SEN students was 17.06 (*SD* = 2.645), and teachers group who didn't have experiences was 16.39 (*SD* = 2.599). The analysis of the interaction with SEN students there is any significant difference (F (1,682) =10.370, p<0.05). The teachers that had experience in interaction with SEN students have a more positive attitude in factor Inclusive Education perspective in Indonesia than teachers that didn't have experience in interaction with SEN students.

CHAPTER V
DISCUSSIONS AND CONCLUSIONS

A. STUDY OF PRODUCTS THAT HAVE BEEN REVISED

The product developed in the current research is an instrument capable of measuring the attitudes of Indonesian teachers toward inclusive education, specifically those in East Java, Yogyakarta, and East Java province. The development of this instrument involved a review of seven previously developed instruments (see Appendix A), which were supplemented with items that were appropriate for the context of inclusive education in Indonesia. As a result, 22 items were deemed suitable for measuring teachers' attitudes toward inclusive education.

Teachers' attitudes toward including children with SEN vary. For example, some teachers are willing to include children with SEN within the regular classroom when appropriate support is available to them, while other teachers believe that the inclusion of children with SEN may be harmful to teaching the rest of the class (Grieve, 2009). Others feel that children with SEN would be better if they are in special schools/classrooms, where they could receive a higher quality and level of support than that provided within regular classrooms (Grieve, 2009).

A range of factors influence the attitudes that teachers have about the concept and practice of inclusive education, such as perceived availability and quality of resources and support, teachers' perceptions of their own competence in facilitating an inclusive learning environment, and the behavior of students with SEN (Forlin, Keen, & Barrett, 2008; Monsen et al., 2014). For example, teachers expressed concerns about their students' difficulties, such as short attention spans, limited communication skills, and/or inappropriate social skills when implementing inclusive education in their classrooms (Forlin et al., 2008).

In addition, teachers were concerned about their competence to support children with SEN within their classrooms, with some teachers feeling insufficiently trained, and expressing difficulty in monitoring other students when they focus on students with SEN, and a reduced ability to teach the whole class as effectively (Forlin et al., 2008). Other

barriers include students' low academic attainment, inflexible staff attitudes towards adapting different teaching approaches, and parents' anxieties that their children will not have their needs met (Gibb, Tunbridge, Chua, & Frederickson, 2007). Those barriers towards inclusion can be related to less inclusive learning environments, where teachers with less positive attitudes toward inclusion, and students who report less satisfaction and cohesiveness within the classroom (Monsen et al., 2014).

In the current study, it was decided to use the instrument that had been developed to meet the Indonesian context. This decision was made because it would have been too complicated to develop new items, and many similar instruments which are valid and reliable, and are already available (Bohner, 2011; De Vellis, 2011; Jonkisz et al., 2012); however, they standardized in Western Countries, where the correct situation of public education system, the development process in inclusive education, are different from Indonesia, in addition to the cultural perspective. Several previous instruments were considered when developing the proposed instrument because this allowed the researcher to collect as many items as possible for further analysis. This decision was made because items related to teachers' attitudes toward inclusive education already existed in other instruments. Therefore, the procedure used in this study allowed the researcher to assume that the items in the proposed instrument could be separated and used only with a broad understanding of inclusive education. Strategies for developing new scales seemed unusual in the extant research on teachers' attitudes toward inclusive education. The strategy of using items from previous instruments to develop a new instrument to measure the attitudes of teachers toward inclusive education has been employed by several other researchers, such as Forlin et al. (2011), Gregory and Noto (2012), Cullen et al. (2010), Stoiber et al. (1998), Monsen et al. (2015), Mahat (2008), and Sharma and Desai (2002).

Another consideration in developing instruments in the current study is the adaptation to the Indonesian context. The method used is to analyze the curriculum, regulations, and interviews with teachers in Indonesia. The results from analyzing the curriculum, regulations, and interviews with teachers in Indonesia are 12 new items that were added based on the conditions of inclusive education specific to Indonesia.

However, new problems were found when adapting previously developed instruments to the context of the current study. In fact, if the conceptual understanding of inclusive education were generally agreed upon in the current empirical study, the previously developed instruments had different focuses and components. For example, in a study conducted by Sharma and Desai (2002), there were five components, namely

"concern," "resources," "acceptance," "academic standards," and "workload." In contrast, the study conducted by Mahat (2008) focused on only three components of inclusive education, namely "affective," "cognitive," and "behavioral." Furthermore, Forlin et al. (2011) developed an instrument that considered the broad scopes of "sentiments," "attitudes," and "concerns."

In reality, however, the items that consist of components might be different from an instrument to another. For example, the item "All students with mild to moderate disabilities should be educated in regular classrooms with nonhandicapped peers to the fullest extent possible" was categorized as "affective: developing personal and professional relationships" (Gregory & Noto, 2012). Meanwhile, in other instruments, the item was categorized under "attitudes toward students with disabilities in an inclusive setting (POS)" (Cullen, Gregory, & Noto, 2010). Moreover, Stoiber, Gettinger, and Goetz (1998) put the item "All students with mild to moderate disabilities should be educated in regular classrooms with nonhandicapped peers to the fullest extent possible" into the "Core Perspective" component.

In fact, this name was based on the process of analyzing the components that have been assorted into certain groups by previous researchers, namely, Forlin et al. (2011), Gregory and Noto (2012), Cullen et al. (2010), Stoiber et al. (1998), Monsen et al. (2015), Mahat (2008), and Sharma and Desai (2002). Thus, the current research instrument was divided into six components: namely "creating an accepting environment for all students," "problem students with SEN in the inclusive classroom," "professional responsibilities in the inclusive education," "professional knowledge about inclusive education," "implications of inclusive classroom practice," and "inclusive education perspective in Indonesia."

In the process of revising the instrument in the current study, indicators from the previous studies were selected and adapted (Nilholm & Göransson, 2017). For instance, some items on the instrument developed by Antonak and Larrivee (1995) were updated on some terms (e.g., "mainstreaming" was replaced by "integration"). Likewise, Monsen et al. (2015) and Taylor & Ringlaben (2012) changed the term "mainstreaming" to "inclusion" in their work. Meanwhile, the current study changed the term "inclusion" to "inclusive education" and "disability" to "special educational needs" (abbreviated as SEN). The overall comparison of components for each instrument is given in Table 5.1.

Table 5.1

Comparison of the Components for Each Instrument

Items	Kind of Instruments							
	E	**S**	**A**	**T**	**B**	**I**	**M**	**C**
Regular classrooms setting can create a comfortable classroom environment for all students, including students with SEN.	A		A				A	
It rarely happens a case to drop out the students with SEN from regular classrooms in order to meet their educational needs.	A			POS				
Entering students with SEN in regular classrooms is effective because they can learn the social skills necessary for success.	C		C	BEI	EO	SB	C	
It is difficult to maintain discipline in a regular classroom that contains students with SEN.	B							AC
Students with SEN tend to create confusion in the regular classroom.	B					PI		
The behavior of the students with SEN gives a bad example for the other students.	B				CP	PI		
Most of the students with SEN do not make an adequate effort to complete their assignments.	B					IT		
I get frustrated when I have difficulty communicating with students with SEN.	A						A	
I get upset when students with SEN cannot follow the lesson in my classroom.	A						A	
I get irritated when I am unable to understand students with SEN.	A						A	
I get frustrated when I have to adapt the lesson to meet the individual's needs of all students.	A						A	
I must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large scale.	C				CP			
Students with SEN will probably develop academic skills more rapidly in a separate special classroom than in an inclusive classroom.	C				EO		C	
inclusive education for All Students requires extensive retraining of regular classroom teachers.	C					II		
Students with SEN monopolize teachers' time.	B		B	BEI	CT			
My workload will be increased if I have students with SEN in my class.	C	CO						W
I will be more stressed if I have students with SEN in my class.	C	CO						AS
I will not receive enough incentives (e.g., additional remuneration or allowance) to integrate students with SEN.	C							W
There will be inadequate special teachers who available to support inclusive education.	A							R
My school will not have adequate special education instructional materials and teaching aids, e.g., Braille.	A							R
Students with special educational needs are not accepted into regular schools because they do not qualify for the selection of new students.	A							
Indonesia does not yet have a curriculum for inclusive education, so it cannot be adequately applied.	C							

Notes:

- E = ITAIE scale, S = SACIE-R scale, A = ATTAS-mm, T = TATIS, B = MTAI scale, I = TAIS, M = MATIES, C = CIE;
- Columns E, A, and M: A = Affective, B = Behavioral, and C = Cognitive; Column S: CO = Concerns;
- Column T: POS = Attitudes toward students with disabilities in an inclusive setting, and BEI = Beliefs about the efficacy of inclusion; Column B: EO = Expected outcomes, CP = Core prospective, CT = Classroom practice;
- Column I: SB = Social benefits for all of the inclusion of SEN pupils in mainstream classes, PI = Problems of inclusion of SEN in mainstream classes, IT = Implications for teachers addressing the needs of children with SEN, and II = Implications of inclusion for teaching practice
- columns C: AC = Acceptance, W = Workload, AS = Academic standards, and R = Resources

Finally, 125 items were collected from seven previously developed instruments (Forlin et al., 2011, Gregory & Noto, 2012, Cullen et al., 2010, Stoiber et al., 1998, Monsen et al., 2015, Mahat, 2008, and Sharma & Desai, 2002). After completing the content, construct, criterion-referenced validity and reliability analysis processes, 125 items were then reduced to 45 items after eliminating items that had similar meanings. Subsequently, these 45 items were validated by five experts and then decreased to 39 items, which constituted the initial English version of the instrument. After that, 39 items were reduced to 34 items following the second validation and revision process. Then, 12 new items were added based on the conditions of inclusive education specific to Indonesia, and 41 items were used for the third stage of the validation and revision process. As a result, 22 items were ready to be used in the final instrument to measure the attitudes of teachers toward inclusive education in Indonesia. This instrument was called the "Indonesian Teacher Attitudes toward Inclusive Education" (ITAIE) Scale.

B. INTERNAL STRUCTURE OF THE ITAIE SCALE

1. Creating an Accepting Environment for All Students

The "creating an accepting environment for all students" component has three items: 1) The regular classroom setting can create a comfortable classroom environment for all students including those with SEN. 2) It rarely happens that students with SEN drop out from regular classrooms in order to meet their educational needs. 3) Entering students with SEN in regular classrooms is effective because they can learn the social skills necessary for success.

In classrooms, all students should be able to learn the various skills that are essential for achieving success in life (Hannah, 2013). In a regular classroom, the teacher must teach students about social skills in a way that promotes positive interactions among students (Lindblad Jr, 1994; Ferguson, 2014). Thus, for all students, an inclusive classroom is a place to experience a sense of belonging, as well as a place to practice using social skills (Parekh, 2014) and to promote a favorable climate for friendship (Underwood, 2013). In addition, a regular classroom for all students (including students with SEN) can support self-organization (Greenstein, 2013).

2. Problem Students with SEN in the Inclusive Classroom

The "problem students with SEN in the inclusive classroom" component has four items: 1) It is difficult to maintain discipline in a regular classroom that contains students

with SEN; 2) Students with SEN are likely to create confusion in the regular classroom; 3) The behavior of the students with SEN sets a bad example for the other students, and; 4) Most of the students with SEN do not make an adequate effort to complete their assignments.

This component is the concern of teachers in classes that have students with SEN. In the interview phase of the current study, 11 of 23 teachers said that teachers should focus on students with SEN, and other students should be ignored. Also, eight of these teachers mentioned that students with SEN disturb the classroom activities. Furthermore, 12 of them commented that if students with SEN were in the class, the classroom setting would not be conducive to learning.

The success of students in classroom is determined by teachers who can create classes that support learning. Comfortable classrooms can support student success in learning (Hannah, 2013; Bucholz & Sheffler, 2009). Therefore, the presence of students with SEN in the classroom should not be a barrier to the progress of other students in the classroom.

The teacher must trust all students to be responsible and learn actively. For example, students with visual impairments can learn science through appropriate methods if they are given the right facilities (Ediyanto & Kawai, 2019). Learning media, such as assistive computer-based technology (Johnstone, Altman, Timmons, & Thurlow, 2009, Azeta, Inam, & Daramola, 2018, Eligi & Mwantimwa, 2017), verbal communication and physical help (Suveren-Erdogan & Suveren, 2018), orientation, and mobility skills (Arslantekin, 2017), and Braille (Mobaraki, Nazarloo & Toosheh, 2017, Nannemann, Bruce, Hussey, Vercollone, & McCarthy, 2017) can also help these students to understand many concepts. Furthermore, students with autism spectrum disorder can learn science through effective strategic mathematics (Su, Lai, & Rivera, 2012), computer-based interventions (Aliee, Jomhari, Rezaei, & Alias, 2013), Science eText (Knight, Wood, Spooner, Browder, & O'Brien, 2015), and the touch math technique (Yikmis, 2016).

3. Professional Responsibilities in Inclusive Education

The "professional responsibilities in the inclusive education" component have four items specifically: 1) I get frustrated when I have difficulty communicating with students with SEN. 2) I get upset when students with SEN cannot follow the lessons in my classroom. 3) I get irritated when I am unable to understand students with SEN. 4) I get frustrated when I have to adapt the lessons to meet the individual needs of all students.

Teachers are professionals. In inclusive classes, they should identify and accept students with SEN, provide them with an advantageous learning environment, and involve them in almost all regular classroom activities (Tyagi, 2016). However, in reality, as Furuta and Alwis (2017) have mentioned, teachers in Sri Lanka experienced stress when typical students and students with SEN were together in the classroom. The study found that 75% of teachers had difficulty coping with students with SEN.

4. Professional Knowledge about Inclusive Education

The "professional knowledge about inclusive education" component has three items: 1) I must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large scale. 2) Students with SEN will probably develop academic skills more rapidly in a separate special classroom than in an inclusive classroom. 3) Inclusive education for all students requires extensive retraining of regular classroom teachers.

Inclusive education is not assimilation (Slee, 2018). It is not intended to normalize students or to create sameness within a classroom but rather to celebrate diversity among all students (Parekh & Underwood, 2015). In inclusive classrooms, teachers should exhibit professional competence (Zulfija, Indira, & Elmira, 2013). Teachers in inclusive schools must be organized and responsive to all students in the classroom (Artiles, Kozleski & Waitoller, 2011). The teacher must learn and practice student-centered pedagogy (McDonnel, 1998; as cited in Mitchell, 2010) and teach not only the material in the curriculum but also social skills (Hannah, 2013).

5. Implications of Inclusive Classroom Practice

The "implications of inclusive classroom practice" component had three items: 1) Students with SEN monopolize teachers' time. 2) My workload will be increased if I have students with SEN in my class. 3) I will be more stressed if I have students with SEN in my class.

The classroom environment is a critical aspect of inclusive classrooms' success (Hannah, 2013). Thus, inclusive classroom environments need to be modified to accommodate all students (Parekh & Underwood, 2015).

6. Inclusive Education Perspective in Indonesia

The "inclusive education perspective in Indonesia" component has five items: 1) I will not receive enough incentives (e.g., additional remuneration or allowance) to integrate students with SEN. 2) There will be inadequate special teachers available to support inclusive education. 3) My school will not have adequate special education instructional materials and teaching aids, e.g., Braille. 4) Students with special educational needs are not accepted into regular schools because they are not qualified for the selection of new students. 5) Indonesia does not yet have an inclusive education curriculum so that it cannot be adequately applied. The curriculum used must comply with national education standards. The curriculum standard in Indonesia is the K13 curriculum. However, in the assessment, students with special needs have different assessment standards. Ideally, teachers in an inclusive school at least consist of a classroom teacher, special guidance teachers, and an orthopedagogic teacher. Facilities in inclusive schools should be tailored to students with SEN. The commitment of the Indonesian government is to provide inclusive education as well as possible and periodically provide appropriate facilities (Ediyanto et al., 2017).

C. VALIDATION OF THE ITAIE SCALE

The instrument was tested for reliability and validity (Mahat, 2007; Sharma & Desai, 2002). Specifically, the ITAIE Scale has undergone three stages of validation: experts' validation, the first pilot study, and the second pilot study. In the development of "concerns about integration education," Sharma and Desai (2002) conducted a validation by having an expert panel review to check the scale and the pilot study. Differently, when developing the MATIES, Mahat (2008) validated his scale by testing teachers without experts' validation. Likewise, the development of the TAIS by Monsen, Ewing, and Boyle (2015) and the TATIS by Cullen and Noto (2010) did not pass experts' validation.

A panel of five experts in the field of inclusive education was provided for content validation. The 45-items was reviewed by terms of clarity, wordiness, negative wording, overlapping responses, balance, use of jargon, appropriateness of listed responses, use of technical language, application to praxis, and relationship to the problem criteria's (Carmines & Zeller, 1991; Fink, 1995). The panel rated all items as "decent quality." The panel also suggested a few terminological changes and rephrasing of a few items in the scale. In measuring teacher attitudes toward inclusive education, there is only one study by Sharma and Desai (2002) that uses Experts to conduct content validity. Regarding to an experts panel review, the CIE scale (Sharma and Desai, 2002) used three assessment

indicators which were: the importance of each item in the context of the unique socio-educational; the clarity, conciseness, and wordings of each items in the cases; and the clarity and conciseness of the directions for completing the scale.

In the construct validation process, the lowest value of Principal Component Analysis is 0.541, i.e., on items "Students with SEN will probably develop academic skills more rapidly in a separate special classroom than in an inclusive classroom." The 21 other items have the value of Principal Component Analysis more than 0.600, with a cumulative variance of 54.4%, which is generally accepted as a valid instrument (Kahn, 2013). In the study by Forlin et al. (2011) in developing SACIE-R, construct validity was confirmed through the PCA using the Promax rotation. In the SACIE-R (Forlin et al., 2011), the lowest value of PCA is 0.347, i.e., "I dread the thought that I could eventually end up with a disability" and the highest value 0.746. The total proportion of variance of SACIE-R explained by the scale was 47.31%. In the other study, ATTA-mm by Gregory and Noto (2012), the lowest value of PCA is 0.639, i.e., "Students with mild to moderate disabilities can be more effectively educated in regular classrooms as opposed to special education classrooms." and the highest value 0.952 with total variance 79.85%. In the study by Cullen et al. (2010), the TATIS were processed and analyzed using PCA to confirm the construct validity. As for the results, 14 items that qualify have a variance of 58% (of three components), the component matrix ranges from 0.584 to 0.88.

Results of the Criterion-referenced validity analyses are displayed in Table 4.6 in the first trial step, and Table 4.10 in the second trial step. Pearson product-moment correlation uses the principle of correlating or connecting between each component can measure concurrent validity. The ITAIE scale significantly explained variance in instrument teachers' attitudes toward inclusive education measure. According to the first trial, Seven components of the Principal Component Analysis process have a significant correlation value with a significance level of 1%. At the second trial, six components of the Principal Component Analysis process have a significant correlation value with a significance level of 1%. In other studies, the SACIE-R (Forlin et al., 2011) have a significant correlation value with a significance level of 10%, and the TAIS (Monsen et al., 2015) has a varies significant correlation value for each component which as significant level 1% and 5%. While some other instruments do not have information about correlation analysis, this measurement shows that the ITAIE scale is valid based on concurrent validity.

Considering that teachers' attitudes towards inclusion predict whether or not inclusive behaviors are intended and adopted within mainstream classrooms (Monsen et al., 2014), it is important to be able to measure such attitudes towards the inclusion of children with SEN so that any barriers towards the successful implementation of inclusive education policies can be identified and addressed. This is particularly important given the research evidence that teachers' attitudes have a significant impact on whether or not the learning environment is enabling children and young people with SEN (Monsen et al., 2014). Indeed, understanding teachers' attitudes towards inclusion is a key initial step in the design and evaluation of initiatives to improve attitudes towards children with SEN (Antonak & Livneh, 2000) and, by implication, to increase inclusive behaviors (MacFarlane & Woolfson, 2013) and to develop more inclusive classroom learning environments (Monsen et al., 2014).

The current study provides compelling evidence for the predictive validity of the ITAIE scale. The ITAIE scale is predicted to be able to measure teachers' attitudes toward inclusive education. In ITAIE, there are three basic components of attitude measurement, namely affective, cognitive, and behavioral. The affective component, which refers to the feelings, responses, and emotions linked to attitudinal objects (Bizer et al., 2003; Watt et al., 2011). Bizer et al. (2003) and Eagly and Chaiken (1993) define that feelings, moods, and emotions associated with the attitudinal object through past or current cognitive experience. An individual, who has enough knowledge of certain attitudes object and good feelings about it, will have positive attitudes toward the object. Teachers' responses and feelings on inclusive education as an affective component have to be evaluated to obtain an understanding of how teachers feel when they include all students (including students with SEN) with different educational needs in their classrooms. In the affective component, the ITAIE scale has nine items including: Regular classrooms setting can create a comfortable classroom environment for all students, including students with SEN (Gregory and Noto, 2012; Mahat, 2008); It rarely happens a case to drop out the students with SEN from regular classrooms in order to meet their educational needs (Cullen et al., 2010); I get frustrated when I have difficulty communicating with students with SEN (Mahat, 2008); I get upset when students with SEN cannot follow the lesson in my classroom (Mahat, 2008); I get irritated when I am unable to understand students with SEN (Mahat, 2008); I get frustrated when I have to adapt the lesson to meet the individual's needs of all students (Mahat, 2008); There will be inadequate special teachers who available to support inclusive education (Sharma & Desai, 2002); My school will not have adequate special

education instructional materials and teaching aids, e.g., Braille (Sharma & Desai, 2002); and Students with special educational needs are not accepted into regular schools because they do not qualify for the selection of new students. A cognitive component of attitudes refers to the thoughts and knowledge that are associated with an attitude object (Watt et al., 2011). The person's attitudes toward an object might be evaluated based primarily upon his or her knowledge, which is associated with an object, situation, or environment (Watt et al., 2011). Hence, in order to evaluate Indonesian teachers' attitudes toward inclusive education, it will be necessary to explore how they conceptualize inclusive education in general education classrooms. Teachers' knowledge (the cognitive component) on inclusive education should be measured as the starting point to evaluate teachers' attitudes toward inclusive education. In the cognitive component, the ITAIE scale has 8 items including: Entering students with SEN in regular classrooms is effective because they can learn the social skills necessary for success (Gregory and Noto, 2012; Cullen et al., 2010; Stoiber et al., 1998; Monsen et al., 2015; Mahat, 2008); I must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large scale (Stoiber at al., 1998); Students with SEN will probably develop academic skills more rapidly in a separate special classroom than in an inclusive classroom (Stoiber at al., 1998; Mahat, 2008); inclusive education for All Students requires extensive retraining of regular classroom teachers (Monsen et al., 2015); My workload will be increased if I have students with SEN in my class (Forlin et al., 2011; Sharma and Desai, 2002); I will be more stressed if I have students with SEN in my class (Forlin et al., 2011; Sharma and Desai, 2002); I will not receive enough incentives (e.g., additional remuneration or allowance) to integrate students with SEN (Sharma and Desai, 2002); and Indonesia does not yet have a curriculum for inclusive education, so it cannot be adequately applied. Knowledge and feeling toward the attitudes object have to go with how Indonesian teachers create inclusive cultures and develop inclusive practices in their classrooms, which is the behavioral component of attitudes (Eagly & Chacken, 1993; Watt et al., 2011). The behavioral component of attitudes consists of peoples' actions with respect to the attitudes object. The ways people act upon a certain attitude object reflect their attitudes (Eagly & Chacken, 1993). In the behavioral component, the ITAIE scale has five items including: It is difficult to maintain discipline in a regular classroom that contains students with SEN (Sharma and Desai, 2002); Students with SEN tend to create confusion in the regular classroom (Monsen et al., 2015); The behavior of the students with SEN gives a bad example for the other students (Stoiber at al., 1998; Monsen et al., 2015); Most of the

students with SEN do not make an adequate effort to complete their assignments (Monsen et al., 2015); Students with SEN monopolize teachers' time (Gregory and Noto, 2012; Cullen et al., 2010; Stoiber at al., 1998).

Each component on the ITAIE scale that emerged had a Cronbach's alpha of at least 0.681. Five of the components had Cronbach's alpha of more than 0.700, which is the generally accepted minimum level of reliability (Field, 2013). Results of the current study that the ITAIE scale exhibited good internal consistency: Alphas in the range of .700 are comparable to consistency coefficients shown by instrument measures. Test-retest reliability of the ITAIE scale, however, was lower than the stability coefficients in the .70s that are usually found to measure teachers' attitudes toward inclusive education (Forlin et al., 2011; Cullen et al., 2010). On the other hand, the component on the ITAIE scale that emerged by a Cronbach's alpha of 0.681 is considerably higher than that reported for other teachers' attitudes measures. Teachers' attitudes toward inclusive education measures pattern of results is very similar to the previous studies SACIE-R (Forlin et al., 2011), ATTAs-mm (Gregory & Noto, 2012), TATIS (Cullen et al., 2010), MTAI (Stoiber, Gettinger, & Goetz, 1998), TAIS (Monsen et al., 2015), MATIES (Mahat, 2008), and CIES (Sharma & Desai, 2002) and provides a promising base for further research with the development of instrument to measure teachers' attitudes toward inclusive education.

The ITAIE Scale was used in two field trials. The first included 499 teachers, and the second involved 1,206 teachers. After being considered valid and reliable, the ITAIE Scale was used to measure the attitudes of as many as 683 Indonesian teachers. The large sample likely yielded reliable component analysis results (Oppenheim, 1992). The instruments utilized in other studies (Forlin et al., 2011; Stoiber et al., 1998; Sharma & Desai, 2002) were validated through trials on more than 500 participants. In contrast, the instruments developed by Gregory and Noto (2012) and Cullen et al. (2010) were tested on only 200-300 participants. However, Mahat (2008) suggests that a minimum of 112 respondents is acceptable for survey research (Borg & Gall, 1989). Still, Monsen et al. (2015) validated their scale by testing it on only 95 participants.

D. INDONESIAN TEACHERS' ATTITUDES TOWARD INCLUSIVE EDUCATION

Teachers must develop an appropriate attitude toward inclusivity to create a productive learning environment that accommodates all students so that they can interact and learn together. In creating inclusive practices in general education classrooms, some

studies have shown that teachers' attitudes are vital for inclusive education's success (De Boer, Pijl, & Minnaert, 2011; Kurniawati et al., 2012; Sharma, Forlin & Loreman, 2008). Inclusive education can create an environment that brings typical and SEN students together.

The results from Chapter IV showed that Indonesian teachers' attitudes toward inclusive were generally positive. According to the ITAIE Scale results, teachers more often scored within the positive range than the negative range. However, teachers more often scored within the neutral range than the positive range.

Kurniawati et al. (2012), Sutisna and Retnayu (2016), Muzdalifah and Billah (2017), Fitrianasari (2015), Elisa and Wrastari (2013), and Huroiyati and Paramitha (2015) have suggested that teachers generally have positive attitudes toward inclusive education. On the other hand, Elisa and Wrastari (2013) suggested that teachers' attitudes toward inclusive education might be grouped into positive and negative categories. In general, therefore, these studies suggested that teachers have a more positive attitude toward inclusive education than pre-service teachers. However, further investigations are needed to confirm this result.

In other countries, teachers have expressed positive attitudes toward inclusive education (Greene, 2017; Saloviita & Schaffus, 2016; Alharti & Evans, 2017; Wilkerson, 2012; Subban & Sharma, 2005). Nonetheless, before 2011, a review of 26 international journal articles revealed that most teachers had either neutral or negative attitudes (De Boer et al., 2011). The results of the current study were not surprising, as inclusive education has been a commitment of the Indonesian government since the Declaration of Bandung was introduced in 2004.

1. Attitudes Based on Gender

In the current study, gender did not play a significant role in teachers' attitudes toward inclusive education. Similar findings have been identified in recent studies (Alharti & Evans, 2017; Thaver & Lim, 2014; Dapudong, 2014; Todorovic et al., 2011). However, the findings of the current study also contradict evidence from previous studies. In a variety of studies, males were found to have more positive attitudes than females (Ahmad, 2012; Ahmmed, Sharma, & Deppeler, 2012; Bhatnagar & Das, 2014; Sharma, Shaukat, & Furlonger, 2015). Other studies, however, found that female teachers tend to have more positive attitudes than males do (Alghazo & Gaad, 2004; Avramidis et al., 2000; Boyle et al., 2013; Saloviita & Schaffus, 2016; Tsakiridou & Polyzopoulou, 2014).

A closer look at most recent studies reveals that gender differences are relatively weak. Gender differences in favor of female teachers were relatively small for a Finnish sample and not present at all for a German sample (Saloviita & Schaffus, 2016). Similarly, in a Greek sample analyzed by Tsakiridou and Polyzopoulou (2014), gender differences regarding "behavior-related problem" attitudes were significant only at the 5% level. Also, weak evidence was found in studies reporting that males have more favorable attitudes than females (Sharma et al., 2015; Bhatnagar and Das, 2014). Taken together, the evidence presented in recent studies does not suggest that gender affects teachers' attitudes toward inclusive education.

2. Attitudes Based on Age

In the current study, there was no difference detected between teachers' attitudes toward inclusive education based on their age. In previous studies, the relationships between age and teachers' attitudes were inconsistent. Dukmak (2013) revealed that there was no relationship between the attitudes of teachers toward inclusion and their age. However, the findings also showed that a year of experience was negatively correlated with attitudes toward inclusion. Dapudong (2014) found that there was no significant difference in the attitudes of teachers toward inclusion when grouped according to age or teaching experience, as was also the case in the current study. Dapudong's (2014) findings imply that young and old teachers with either little or extensive teaching experience could have either highly unfavorable or favorable attitudes toward the inclusive education of children with SEN.

The multivariate ANOVA revealed the overall effect of age on attitudes. The group of 31-50-year-old teachers tends to be more positive with regards to "creating an accepting environment for all students," especially when compared to the youngest group of teachers. Yet, as discussed previously, this effect was relatively weak due to overlapping confidence intervals. The analysis for the "professional knowledge about inclusive education" component suggested that teachers over 40 years old had a more positive attitude toward inclusive education than younger teachers.

3. Attitudes Based on School Type

This section compared the attitudes of teachers at inclusive and special schools toward inclusive education. No significant differences were detected between these two

groups. A special school was defined as a formal educational institution that provided education to children with SEN (Pramartha, 2015).

The result of the current study is similar to the findings of Dapudong (2014), who showed that there was no significant difference in the attitudes of international school teachers when they were grouped according to school type. In contrast, other studies have revealed that teachers at special schools have a more positive attitude toward inclusive education than general education teachers (Alharti & Evans, 2017; Dapudong, 2013; Hernandez, 2016). However, according to Kumar and Midha (2017), teachers in mainstream schools have more favorable attitudes than those in special schools. In the current study, significant differences could be seen regarding only two components: "professional knowledge about inclusive education" and "implication of inclusive education." For the component of "professional knowledge about inclusive education," teachers at inclusive schools had a more positive attitude than teachers at special schools.

On the other hand, on the "implication of inclusive education component," the attitude of teachers at special schools was more positive than that of teachers at inclusive schools. The reason for this finding might be that teachers at special schools have more interactions with students with SEN.

4. Attitudes Based on School Level

The study indicated that, in general, elementary school teachers have moderately more positive attitudes toward inclusive education than senior high school educators do. Most elementary school teachers expressed a relatively good attitude in the components "creating an accepting environment for all students," "professional knowledge about inclusive education," "implication of inclusive education," and "inclusive education perspective in Indonesia."

This finding is in line with the study of Ahsan, Sharma, and Deppeler (2012), which was conducted in Bangladesh. Also, other studies have revealed that elementary school teachers generally have a positive attitude toward inclusion (Kurniawati et al., 2012; Maulia & Kurniawati, 2018; Avramidis & Norwich, 2002; Leatherman & Niemeyer, 2005). In addition, other studies found that teachers in elementary schools have more positive attitudes toward inclusive education than secondary school teachers do (Todorovic et al., 2011).

In contrast, other studies have indicated that general education teachers tend to have unfavorable perceptions about inclusion (Heflin & Bullock, 1999). On the other hand, a

study by Emam and Mohamed (2011) found that there were no differences between the attitudes of teachers from preschool and elementary school, although elementary school teachers showed a higher sense of self-efficacy regarding the management and teaching of students with disabilities. Moreover, Unianu (2011) suggested that teachers with more experience in elementary school are more convinced that they can adapt to educational activities to consider all children's needs. Therefore, the attitudes of teachers toward inclusive education might vary in different areas and are influenced by many components.

5. Attitudes Based on Education Level

In the current study, Indonesian teachers' level of education did not have a significant effect on their attitudes toward inclusive education concerning their beliefs about the efficacy of inclusion, professional roles, and responsibilities. This study revealed that teachers who hold a master's degree have the same attitudes toward inclusive education as teachers who hold only a bachelor's degree.

Previously, Dapudong (2014) and Bansal (2016) found that there was no significant difference in the attitudes of teachers when they were grouped according to their degree. However, regarding beliefs about the efficacy of inclusive education and perceptions of professional roles and functions, teachers with a master's degree hold a more positive attitude than teachers with only a bachelor's degree. This result is similar to the findings of Forlin et al. (2007), who found that teachers who held either a doctoral or master's degree showed a more positive attitude toward inclusion than those with bachelor's degrees. The suggested reason for this is that teachers with higher levels of education have acquired more comprehensive insights and more knowledge than those with lower levels of education.

In contrast with the results of Forlin et al. (2007), Ahmmed et al. (2012) reported teachers with a lower qualification had more positive attitudes than those with a higher degree. Although it would be reasonable to assume that highly educated teachers would be aware of the positive effects of inclusive education, this finding needs to be interpreted with caution, mainly because the empirical evidence presented by Ahmmed et al. (2012) pointed in a different direction.

Table 5.2

The Results the Studies of Teachers Attitudes toward Inclusive Education based on the Demographic Characteristics of the Participants

Studies by	Demographic Characteristic								
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**
Ediyanto (2020)	X	X	X	O	X	X	X	O	O
Alharti & Evans (2017)	X		O						
Thaver & Lim (2014)	X								
Dapudong (2014)	X	X			X	X		X	X
Todorovic et al. (2011)	X			O		O			
Ahmad (2012)	O								
Ahmmed et al. (2012)	O				O				
Bhatnagar & Das (2014)	O								
Sharma et al. (2015)	O								
Alghazo & Gaad (2004)	O								
Avramidis et al. (2000)	O								
Boyle et al. (2013)	O								
Saloviita & Schaffus (2016)	O								
Tsakiridou & Polyzopoulou (2014	O								
Dukmak (2013)		X							
Dapudong (2013)			O					X	
Hernandez (2016)			O						
Kumar & Midha (2017)			O						
Ahsan et al. (2012)				O		O			
Kurniawati et al. (2012)				O					
Maulia & Kurniawati (2018)				O					
Avramidis & Norwich (2002)				O		O			
Leatherman & Niemeyer (2005)				O				O	
Heflin & Bullock (1999)				X					
Emam & Mohamed (2011)				X		O			
Bansal (2016)					X	O			
Forlin et al. (2007)					O				
Forlin et al. (2009)						O			
Subban & Sharma (2005)						O			
Center & Ward (1987)						O			
Clough & Lindsay (1991)						O			
Barnes & Gaines (2015)						O			
Avradimis & Kalyva (2007)							O	O	O
Kalyva et al. (2007)							O		
Everington et al. (1999)							O		
Opdal et al. (2001)							O		
Lambe (2007)								O	
Kuyini (2004)								O	
Lifshitz et al. (2004)								O	
Kuyini and Desai (2008)								O	
Parasuram (2006)									O
Loreman et al. (2007)									O

Notes: A = Gender, B = Ages, C = Type of School, D = Level of School, E = Level of Education, F = Teaching Experiences, G = Teaching Experiences in Inclusive School, H = Training Program in Inclusive Education, and I = Experiences with SEN students in classroom

O = significant difference

X = no significant difference

6. Attitudes Based on Teaching Experiences

In the current study, the attitudes of Indonesian teachers toward inclusive education did not differ significantly based on their teaching experience. This finding corroborates the result of the research conducted by Dapudong (2014), which showed that there was no significant difference in the attitudes of teachers when they were grouped according to their teaching experiences. The finding showed that teachers' experience was negatively correlated with their attitudes toward inclusion. The results of Dapudong (2014) implied that young and old teachers could have either an extensively unfavorable or favorable attitudes toward inclusive education regardless of whether they have spent very many or very few years teaching.

Conversely, another study found that teachers with more experience had more positive attitudes than teachers with less experience (Emam & Mohamed, 2011). Forlin, Loreman, Sharma, and Earle (2009) indicated that teachers with prior teaching experience showed significantly more positive attitudes than those without this experience. Furthermore, the study conducted by Ahsan, Sharma, and Deppeler (2012) supported the current finding that as the level of experience in handling students with SEN increases, the level of concerns decreases. Moreover, based on Subban and Sharma's (2005) work, experience interacting with people who have SEN is a strong predictor of positive attitudes. A significant interaction effect of SEN helped to form positive attitudes toward inclusive education.

In another case in India, teachers with 0-10 years of teaching experience showed a more positive attitude toward inclusive education than teachers with more than 10 years of experience (Bansal, 2016). In line with Bansal's (2016) research, some studies (Center & Ward 1987; Clough & Lindsay, 1991; Avramidis & Norwich, 2002) revealed that young teachers with little teaching experience have a supportive attitude toward integration. Teachers with less work experience have more positive attitudes toward inclusion than teachers with more work experience (Todorovic et al., 2011; Barnes & Gaines, 2015).

7. Attitudes Based on Teaching Experiences in Inclusive Schools

In the current study, no significant differences were found in attitudes toward inclusive education based on teachers' experiences in inclusive schools. Several scholars have described familiarity with inclusive education as a predictor of teachers' attitudes, owing to three components that promote significant differences in the experience of teachers in inclusive schools (Avramidis & Kalyva, 2007; Kalyva, Gojkovic, & Tsakiris,

2007; Everington, Stevens, & Winters, 1999; Opdal, Wormnaes, & Habayed, 2001). Avramidis and Kalyva (2007) and Kalyva et al. (2007) found that teachers with inclusive education experience had significantly more positive attitudes toward inclusive education than teachers with little or no experience. Furthermore, Everington et al. (1999) and Opdal et al. (2001) reported that teachers who had previous experience with inclusive education were significantly more favorable than those without experience.

Several scholars have described familiarity with inclusive education as an influence which affects the attitudes of teachers due to three factors that had significant differences in the experience of teaching teachers in inclusive schools (Avramidis & Kalyva, 2007; Kalyva, Gojkovic, & Tsakiris, 2007; Everington, Stevens, & Winters, 1999; Opdal, Wormnaes, & Habayed, 2001). Avramidis and Kalyva (2007) and Kalyva et al. (2007) found a significant difference between schools that had much experience and those with little or no experience with inclusive education. Teachers with experience had significantly more positive attitudes toward inclusive education than teachers with little or no experience. Furthermore, Everington et al. (1999) and Opdal et al. (2001) also reported that teachers who had previous experience with inclusive education were significantly more positive than those without experience (Table 5.2).

8. Attitudes Based on Training Program Participation

The results of this study indicated that teachers who had participated in inclusive education training programs had a more positive attitude than teachers who had not participated in training programs. A more positive attitude in teachers who had participated in inclusive education training programs was also seen in all the ITAIE Scale components.

This result of the current study is supported by several studies (Lambe, 2007; Kuyini, 2004; Leatherman & Niemeyer 2005) that have reported that training in inclusive education has a positive impact on teachers' attitudes. In addition, such positive attitudes supported the potential for more successful inclusive programs or experiences for students (Kuyini & Desai, 2008). Of the selected studies, Avramidis and Kalyva (2007) found that long-term training led to teachers making more positive statements about inclusive education when compared with those who did not receive training. Lifshitz et al. (2004) investigated whether in-service training comprising 28 hours for regular teachers influenced their attitudes. The results showed that the scores of the regular teachers on the attitude questionnaire increased significantly after the intervention.

In contrast, Dapudong (2014) found no significant difference in attendance to any special education training program or workshop. Dapudong (2013) pointed out that the attitudes of teachers toward inclusive education revealed their abilities to meet the individual needs of students with SEN. Wilkins and Nietfeld (2004) showed many differences between a group of teachers who participated in an experimental group and the control group. The results indicated that the intervention did not influence the attitudes of teachers toward inclusive education. Also, Sari (2007) evaluated the influence of an In-Service Teacher Training (INSET) program on teachers' attitudes toward inclusion. This work accentuated the finding that teachers who are knowledgeable and have the training and a background in handling children with SEN hold positive attitudes toward inclusive education.

9. Attitudes Based on Interactions with SEN Students

The results of the current study indicated that teachers who have experience interacting with SEN students in the classroom have a more positive attitude toward inclusive education than teachers who did not have experience. This pattern was seen in all the ITAIE Scale components. Experience with inclusive education and prior contact with students with SEN also appeared to be related to the attitudes of teachers. Teachers who have been acquainted with students with SEN have more positive attitudes toward inclusive education than other teachers (Parasuram, 2006).

In line with the current research, a study conducted across four countries by Loreman, Forlin, and Sharma (2007) indicated that components such as close contact with a person with disabilities, teaching experience, knowledge of policy and law, and level of confidence had significant impacts on the attitudes of teachers. The researchers reported that experience in teaching or relating to students with SEN had a positive effect on attitudes. On the other hand, Dapudong (2014) reported that there was no significant difference in teaching experience in attitudes toward Inclusive Education for students with disabilities in the classroom. In addition, teachers without experience teaching children with SEN had more negative attitudes regarding the core perspectives of inclusion, possibly because they lack the knowledge and specific skills in instruction and classroom management that teachers with relevant experience have (Avramidis & Kalyva, 2007).

E. CONCLUSIONS

The ITAIE Scale was developed in the current study to measure the attitudes of teachers toward inclusive education. This instrument was developed in the following broad stages: 1) potential and problems; 2) planning; 3) development of the product; 4) validation and revision; and 5) publication (Borg & Gall, 1989). During the validation and revision process stages, the ITAIE Scale underwent three stages of validation and revision. The first validation was carried out by experts, and the second and third validations were done via trials on teachers in the three provinces of East Java, Yogyakarta, and West Java. Regarding Hypothesis I, the development of this instrument is in accordance with the Research and Development method by Borg and Gall (1989).

Based on validation by five experts, the instrument to measure the attitudes of Indonesian teachers towards inclusive education developed in this study fulfills the content validity requirements. Each item has been declared eligible with a minimum score of 70%, which means it has quite decent quality. In the other items validate the process, generally score obtained for each item is 80%, which means it has decent quality. Regarding Hypothesis II, the development of this instrument is valid.

The ITAIE Scale contains 22 items, which were grouped into six components: 1) "creating an accepting environment for all students" (3 items), 2) "problem students with SEN in the inclusive classroom" (4 items), 3) "professional responsibilities in the inclusive education" (4 items), 4) "professional knowledge about inclusive education" (3 items), 5) "implication of inclusive education" (3 items), and 6) "inclusive education perspective in Indonesia" (5 items).

The ITAIE Scale was developed from items available in seven previous scales, which were combined with several new items intended to represent the context of inclusive education in Indonesia (Forlin et al., 2011; Gregory & Noto, 2012; Cullen et al., 2010; Stoiber et al., 1998; Monsen et al., 2015; Mahat 2008; and Sharma & Desai 2002). Meanwhile, five items for the Indonesian context were developed from an analysis of government regulations and interviews with teachers.

The ITAIE Scale was found to be valid and reliable. The first validation process was carried out by five experts, of which two have doctoral degrees, and the other three have master's degrees. In the second validation process that took the form of a trial that included 499 teachers, the smallest value of principal component analysis was 0.336. The second validation process, which was carried out with 1,206 teachers, yielded a minimum principal component analysis value of 0.541, which means valid for construct analysis.

Cronbach's alpha value in the current study was at the level of reliability of 0.821, which means reliable.

The final ITAIE Scale was used to measure the attitudes of 683 Indonesian teachers toward inclusive education. It was found that 38.9% of teachers have a positive attitude toward inclusive education, while 45.3% have a moderate attitude, and 15.8% have a negative attitude. Thus, Indonesian teachers tend to have positive attitudes toward inclusive education rather than negative ones.

Comparisons of teachers' demographic data, type of school, experience in training programs in inclusive education, and experience interacting with SEN students showed some significant differences. Teachers who teach in elementary schools have a more positive attitude toward inclusive education than teachers who teach in secondary schools. Furthermore, teachers who have participated in inclusive education training programs and who have experience interacting with SEN students have a more positive attitude toward inclusive education than other teachers. Meanwhile, gender, age, school type, education level, and teaching experience did not appear to influence teachers' attitudes.

F. LIMITATIONS OF THE CURRENT STUDY

Even though the current study used relevant methodologies and standards in the development process, some limitations were unavoidable. Limitations in the current study are needed to prevent over-interpretation of findings and show specific gaps that can be addressed in subsequent studies.

The first limitation concerns the reliability of the ITAIE Scale, which measured the attitudes of teachers directly. If there was an item on the ITAIE Scale that intersected with a personal aspect of teachers, then teachers might be able to give a response even if this aspect was not really related to their actual attitudes. Therefore, some attitudes might have been hidden or implied. Such attitudes can only be brought to light through indirect attitude measurements. Furthermore, as discussed in the methodology chapter, relying on a teacher's self-report might be pragmatic and justified. However, the criticism that further research on attitudes toward inclusive education can use indirect measurement methods or using better ways to complement the results of this study.

The ITAIE Scale validation process took place in three provinces (East Java, Yogyakarta, and West Java). In the current study, more than 2,000 teachers participated; the sample may not contain a widespread population. Therefore, this study might not provide an accurate picture of the teacher population in the three mentioned provinces.

Regarding the selection of participants in the current study, although the sample was randomly selected, the selection process did not follow a random sample design. The first and most apparent limitation is that teachers were not randomly selected, although schools were. Consequently, the results cannot be applied to teachers in general (in East Java, Yogyakarta, and West Java). Second, if a selected school refused to participate, another school was chosen. In a completely randomized study, clarifying the design of the random sample, which school should be asked (second choice random school, etc.), are necessary. Therefore, the results of the current study must be applied with caution to the broader teacher population. In the future, the ITAIE scale will be used to measure teacher attitudes towards inclusive education in all provinces in Indonesia.

To confirm that the ITAIE Scale can measure the attitudes of teachers toward inclusive education, a standard instrument that could be used more widely was needed to ensure that the attitudes of teachers were truly measurable. Although items were created for the ITAIE scale through interviews with teachers, this exploration was a limitation in itself, as the current study could only begin to understand some parts of teachers' experiences with inclusive education. However, updates were made to the ITAIE Scale to precisely fit the conditions in Indonesia. In the end, further research is needed to understand the attitudes of teachers more deeply. Empirical developments are not only required to move forward, but (perhaps even more urgently) theoretical development in teacher research and inclusive education are needed.

G. FUTURE DIRECTIONS AND RECOMMENDATIONS

The ITAIE Scale can measure the attitudes of Indonesian teachers toward inclusive education. Therefore, in the future, it would be worthwhile to measure teachers' attitudes more broadly and cover a broader area in Indonesia. In this way, the measurement of teachers' attitudes toward inclusive education is more apparent. Teacher training should be based on inclusive education, as training has a strong influence on inclusive education attitudes according to the current study.

The ITAIE Scale can be revised to a better standard if needed. In this way, the ITAIE Scale could truly measure the attitudes of teachers toward inclusive education, and the group items can accurately illustrate the components that influence their attitudes.

Educational leadership has evolved; teachers have been involved in leadership as professionals (Hallinger, 2003). Principals and teachers are expected to collaborate in building an inclusive education system through learning. To facilitate changes in teacher

attitudes towards inclusive education, teachers need support from school leaders and the government. The ITAIE Scale instrument developed in this study can support the formative assessment process for teachers and guide professional learning. Attitude measurement instruments also make it possible to measure the success of a teacher's professional training (Forlin et al., 2011). For the Government, the instrument that developed in the current study can be used as a standard tool for measuring teacher attitudes towards inclusive education in all regions in Indonesia.

References

Abell, N., Springer, D. W., & Kamata, A. (2009). *Developing and validating rapid assessment instruments.* Oxford: Oxford University Press. doi:10.1093/acprof:oso/9780195333367.001.0001

Ahmed, L. (2012). *Attitude of teachers, administrators and policymakers towards inclusive education.* (doctoral dissertation), University of Punjab, Retrieved March 8, 2019, from http://prr.hec.gov.pk/Thesis/2853S

Ahmmed, M., Sharma, U., & Deppeler, J. (2012). Variables affecting teachers' attitudes towards inclusive education in Bangladesh. *Journal of Research in Special Educational Needs, 12*(3), 132-140. doi:10.1111/j.1471-3802.2011.01226.x

Ahsan, M. T., Sharma, U., & Deppeler, J. M. (2012). Exploring pre-service teachers' perceived teaching-efficacy, attitudes and concerns about inclusive education in Bangladesh. *International Journal of Whole Schooling*, *8*(2), 1-20.

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control* (pp. 11-39). Berlin: Springer.

Ajzen, I. (2012). Attitudes and persuasion. In K. Deaux & M. Snyder (Eds.), *The Oxford handbook of personality and social psychology* (pp. 367–393). New York: Oxford University Press.

Alfian, A. (2013). Pendidikan Inklusif di Indonesia. *Jurnal Pendidikan Biologi*, 4, 68-80.

Alghazo, E. M., & Naggar Gaad, E. E. (2004). General education teachers in the United Arab Emirates and their acceptance of the inclusion of students with disabilities. *British Journal of Special Education*, *31*(2), 94-99.

Alharti, N., & Evans, D. (2017). Special education teachers' attitudes towards teaching students with learning disabilities in middle schools in Saudi Arabia. *International Journal of Modern Education Studies*, *1*(1), 1-15.

Aliee, Z. S., Jomhari, N., Rezaei, R., & Alias, N. (2013). The effectiveness of managing split attention among autistic children using computer-based intervention. *Turkish Online Journal of Educational Technology*, *12*(2), 281-302.

Alwin, D. F. (2001). Parental values, beliefs, and behavior: A review and promulgate for research into the new century. *Advances in Life Course Research*, *6*, 97-139.

Alwin, D. F. (2007). *Margins of error: A study of reliability in survey measurement*. Hoboken, NJ: John Wiley & Sons.

Angelides, P. (2008). Patterns of inclusive education through the practice of student teachers. *International Journal of Inclusive Education*, *12*(3), 317-329.

Antonak, R. F., & Larrivee, B. (1995). Psychometric analysis and revision of the opinions relative to mainstreaming scale. *Exceptional Children*, *62*(2), 139-149.

Antonak, R., & Livneh, H. (2000). Measurement of attitudes towards persons with disabilities. *Disability and Rehabilitation*, *22*(5), 211-224.

Artiles, A. J., Kozleski, E. B., & Waitoller, F. R. (2011). *Inclusive education: Examining equity on five continents*. Cambridge: Harvard Education Press.

Arslantekin, A, B. (2017). Evaluation of the level of students with visual impairments in Turkey in terms of the concepts of mobility prerequisites (Body Plane/Traffic). *Eurasian Journal of Educational Research*, *67*, 71-85.

Avramidis, E., Bayliss, P., & Burden, R. (2000). A survey into mainstream teachers' attitudes towards the inclusion of children with special educational needs in the ordinary school in one local education authority. *Educational Psychology*, *20*(2), 191-211.

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:10.1080/09956250210129056.

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.

Azeta, A. A., Inam, I. A., & Daramola, O. (2018). A voice-based e-examination framework for visually impaired students in open and distance learning. *Turkish Online Journal of Distance Education*, *19*(2), 34-46.

Bandung Declaration. (2004). www.idpeurope.org.

Bansal, S. (2016). Attitude of teachers towards inclusive education in relation to their professional commitment. *Indian Journal of Educational Studies: An Interdisciplinary Journal*, *3*(1), 2349-6908.

Barnes, M. C., & Gaines, T. (2015). Teachers' attitudes and perceptions of inclusion in relation to grade level and years of experience. *Electronic Journal for Inclusive Education*, *3*(3), 1-20.

Beattie, J. R., Anderson, R. J., & Antonak, R. F. (1997). Modifying attitudes of prospective educators toward students with disabilities and their integration into regular classrooms. *The Journal of Psychology, 131*(3), 245-259.

Berry, R. A. (2010). Preservice and early career teachers' attitudes toward inclusion, instructional accommodations, and fairness: Three profiles. *The Teacher Educator*, *45*(2), 75-95.

Bhatnagar, N., & Das, A. (2014). Attitudes of secondary school teachers towards inclusive education in New Delhi, India. *Journal of Research in Special Educational Needs, 14*(4), 255-263. doi:10.1111/1471-3802.12016

Bizer, G. Y., Barden, J. C., & Petty, R. E. (2003). Attitudes. In *Encyclopedia of cognitive science* (pp. 247-253). London, UK: Nature.

Bohner, G., & Dickel, N. (2011). Attitudes and attitude change. *Annual Review of Psychology*, *62*, 391-417.

Borg, W. R., & Gall, M. D. (1989). *Educational research: An introduction*. *NY: Longman*.

Boyle, C., Topping, K., & Jindal-Snape, D. (2013). Teachers' attitudes towards inclusion in high schools. *Teachers and Teaching*, *19*(5), 527-542.

Bucholz, J. L., & Sheffler, J. L. (2009). Creating a warm and inclusive classroom environment: Planning for all children to feel welcome. *Electronic Journal for Inclusive Education*, *2*(4), 1-13.

Carmines, E. G. & Zeller, R. A. (1991). *Reliability and validity assessment*. Newbury Park: Sage.

Center, Y., & Ward, J. (1987). Teachers' attitudes towards the integration of disabled children into regular schools. *The Exceptional Child*, *34*(1), 41-56.

Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment, 7*(3), 309-319. doi:10.1037/1040-3590.7.3.309

Clough, P., & Lindsay, G. (1991). *Integration and the support services: Changing roles in special education*. Abingdon, Oxon, UK: NFER-Nelson.

Camporesi S., Vaccarella, M., & Davis, M. (2017). Investigating public trust in expert knowledge: Narrative, ethics, and engagement. *Journal of Bioethical Inquiry, 14*, 23-30.

Crano, W. D., & Prislin, R. (2006). Attitudes and persuasion. *Annual Review of Psychology, 57*, 345-374.

Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research.* Upper Saddle River, New Jersey: Pearson Education.

Cullen, J., & Noto, L. (2007). The assessment of pre-service general education teachers' attitudes toward the inclusion of students with mild to moderate disabilities. *Journal for the Advancement of Educational Research*, *3*(1), 23-33.

Cullen, J. P., Gregory, J. L., & Noto, L. A. (2010). The teacher attitudes toward inclusion scale (TATIS) Technical Report. *Online Submission*.

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.

Dapudong, R. C. (2014). Teachers' knowledge and attitude towards inclusive education: Basis for an enhanced professional development program. *International Journal of Learning and Development*, *4*(4), 1-24.

De Boer, A., Pijl, S. J., & Minnaert, A. (2011). Regular primary school teachers' attitudes towards inclusive education: A review of the literature. *International journal of inclusive education*, *15*(3), 331-353.

De Vellis, R. F. (2003). *Scale development* (2nd ed.). Thousand Oaks, CA: Sage.

De Vellis, R. F. (2011). *Scale development: Theory and applications* (vol. 3). Thousand Oaks, CA: Sage.

Dickens-Smith, M. (1995). *The effect of inclusion training on teacher attitude towards iInclusion*. (ERIC Document Reproduction Service No. ED 381 486). Retrieved February 7, 2018, from EBSCOHost ERIC database.

Dukmak, S. J. (2013). Regular classroom teachers' attitudes 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. San Diego, CA: Harcourt Brace Jovanovich College Publishers.

Ediyanto, E., Atika, I. N., Kawai, N., & Prabowo, E. (2017). Inclusive education in Indonesia: From the perspective of Widyaiswara in Centre for Development and Empowerment of Teachers and Education Personnel of Kindergartens and Special Education. *Indonesian Journal of Disability Studies, 4*(2), 104-116.

Ediyanto, E., & Kawai, N. (2019, June). Science learning for students with visually impaired: A literature review. In *Journal of Physics: Conference Series* (Vol. 1227, No. 1, p. 012035). IOP Publishing.

Eligi, I., & Mwantimwa, K. (2017). ICT accessibility and usability to support learning of visually-impaired students in Tanzania. *International Journal of Education and Development using Information and Communication Technology*, *13*(2), 87-102.

Elisa, S., & Wrastari, A. T. (2013). Sikap guru terhadap pendidikan inklusi ditinjau dari faktor pembentuk sikap. *Jurnal Psikologi Perkembangan dan Pendidikan*, *2*(1), 1-10.

Emam, M. M., & Mohamed, A. H. H. (2011). Preschool and primary school teachers' attitudes towards inclusive education in Egypt: The role of experience and self-efficacy. *Procedia-Social and Behavioral Sciences*, *29*, 976-985.

Everington, C., Stevens, B., & Winters, V. R. (1999). Teachers' attitudes, felt competence, and need of support for implementation of inclusive educational programs. *Psychological Reports*, *85*(1), 331-338.

Fazio, R. H. (1990). Multiple processes by which attitudes guide behavior: The MODE model as an integrative framework. In *Advances in experimental social psychology* (Vol. 23, pp. 75-109). San Diego, CA: Academic Press.

Ferguson, H. (2014). Researching social work practice close up: Using ethnographic and mobile methods to understand encounters between social workers, children and families. *The British Journal of Social Work*, *46*(1), 153-168.

Field, A. (2013). *Discovering statistics using IBM SPSS Statistics* (4th ed.). London: Sage.

Fidan, A., Cihan, H., & Özbey, F. (2014). An important component in successful inclusion practices: Instructional adaptations. *Procedia-Social and Behavioral Sciences*, *116*, 4894-4898.

Fink, A. (1995). *How to measure survey reliability and validity* (vol. 7). Thousand Oaks, CA: Sage.

Firdaus, E. (2010). Pendidikan inklusif dan implementasinya di Indonesia. In *Seminar Nasional Pendidikan*.

Fishbein, M., & Ajzen, I. (1980). Predicting and understanding consumer behavior: Attitude-behavior correspondence. *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall, 148-172.

Fitrianasari, H. (2015). Persepsi guru terhadap penyelenggaraan pendidikan inklusif sesuai latar pendidikan. *Jurnal Pendidikan Khusus*, *7*(2), 95.

Forlin, C. (2010). Reframing teacher education for inclusion. In *Teacher education for inclusion* (pp. 29-38). Routledge.

Forlin, C., Earle, C., Loreman, T., & Sharma, U. (2011). The sentiments, attitudes, and concerns about inclusive education revised (SACIE-R) scale for measuring pre-service teachers' perceptions about inclusion. *Exceptionality Education International*, *21*(3), 50-65.

Forlin, C., Keen, M., & Barrett, E. (2008). The concerns of mainstream teachers: Coping with inclusivity in an Australian context. *International Journal of Disability, Development and Education, 55*(3), 251–264. doi:10.1080/10349120802268396

Forlin, C., Loreman, T., Sharma, U., & Earle, C. (2009). Demographic differences in changing pre−service teachers' attitudes, sentiments and concerns about inclusive education. *International Journal of Inclusive Education*, *13*(2), 195-209.

Forlin, C., Sharma, U., & Loreman, T. (2007). An international comparison of pre-service teacher attitudes towards inclusive education. *Disability Studies Quarterly*, *27*(4), 1-13.

Furuta, H., & Alwis, K. A. C. (2017). Teaching students with special educational needs in an inclusive educational setting in Sri Lanka: Regular class teachers' view. *Journal of International Cooperation in Education*, *19*(2), 1-18.

Garnida, D. (2015). Pengantar pendidikan inklusif. *Bandung: Refika Aditama*.

Gething, L. (1991). Interaction with Disabled Persons Scale: Manual and kit. Sydney: University of Sydney.

Gibb, K., Tunbridge, D., Chua, A., & Frederickson, N. (2007). Pathways to inclusion: Moving from special school to mainstream. *Educational Psychology in Practice*, *23*, 109-127. doi:10.1080/02667360701320770

Greene, B. L. (2017). Teachers' attitudes toward inclusive classrooms. Walden Dissertation and Doctoral Studies Collection.

Greenstein, A. (2014). Is this inclusion? Lessons from a very 'special' unit. *International Journal of Inclusive Education, 18*(4), 379−391. doi: 10.1080/13603116.2013.777130

Gregory, J. L., & Noto, L. A. (2012). Technical manual for attitudes towards teaching all students (ATTAS-mm) instrument. *Online Submission*.

Grieve, A. M. (2009). Teachers' beliefs about inappropriate behaviour: Challenging attitudes? *Journal of Research in Special Educational Needs, 9*(3), 173–179. doi:10.1111/j.1471-3802.2009.01130.x

Hallinger, P. (1992). The evolving role of American principals: From managerial to instructional to transformational leaders. *Journal of Educational Administration*, *30*(3), 35-48. doi:10.1108/09578239210014306

Hannah, R. (2013). The effect of classroom environment on student learning. *Honors Theses.* Paper 2375.

Harkness, J. A., Edwards, B., Hansen, S. E., Miller, D. R., & Villar, A. (2010). Designing questionnaires for multipopulation research. In J. A. Harkeness, M. Braun, B. Edwards, T. P. Johnson, L. Lyberg, P. P. Mohler, B. E. Pennell, T. W. Smith (Eds.),

Survey methods in multinational, multiregional, and multicultural contexts (pp. 31-57). Hoboken, NJ: Wiley & Sons.

Heflin, L. J., & Bullock, L. M. (1999). Inclusion of students with emotional/behavioral disorders: A survey of teachers in general and special education. *Preventing School Failure: Alternative Education for Children and Youth*, *43*(3), 103-111.

Hernandez, D. A., Hueck, S., & Charley, C. (2016). General education and special education teachers' attitudes towards inclusion. *Journal of the American Academy of Special Education Professionals*, *79*-93.

Huroiyati, A., & Paramitha, P. P. (2015). Studi Deskriptif Sikap Guru Terhadap Pendidikan Inklusi di SMP Negeri Inklusi Se-Surabaya. *Jurnal Psikologi Pendidikan dan Perkembangan*, *4*(1), 1.

Indonesia, P. R. (2005). Undang-undang Republik Indonesia nomor 14 tahun 2005 tentang Guru dan Dosen. *Sekretariat Negara. Jakarta*.

Indonesia, P. P. R. 1 No. 70. (2009). *Tentang Pendidikan Inklusif (Pensif) Bagi Peserta Didik Yang Memiliki Kelainan Dan Memiliki Potensi Kecerdasan Dan/Atau Bakat Istimewa*.

Irwanto, E. R., Fransiska, A., Lusli, M., & Siradj, O. (2010). Analisis Situasi Penyandang Disabilitas Di Indonesia: Sebuah Desk Review. *Jakarta: Fakultas Ilmu-Ilmu Sosial Dan Politik Universitas Indonesia*.

Ishartiwi (2010). Implementasi Pendidikan Inklusif Bagi Anak Berkebutuhan Khusus dalam Sistem Persekolahan Nasional. *Jurnal Pendidikan Khusus*, 6(2), 1-9.

Jerlinder, K., Danermark, B., & Gill, P. (2010). Swedish primary−school teachers' attitudes to inclusion–the case of PE and pupils with physical disabilities. *European Journal of Special Needs Education*, *25*(1), 45-57.

Johnstone, C., Altman, J., Timmons, J., & Thurlow, M. (2009). *Students with visual impairments and assistive technology: Results from a cognitive interview study in five states*. Minneapolis, MN: The University of Minnesota, Technology Assisted Reading Assessment (TARA).

Jolliffe, I. T., & Cadima, J. (2016). Principal component analysis: a review and recent developments. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, *374*(2065), 20150202.

Jonkisz, E., Moosbrugger, H., & Brandt, H. (2012). Planung und Entwicklung von Tests und Fragebogen. [Planning and developing tests and questionnaires]. In H. Moosbrugger & A. Kelava (Eds.), *Testtheorie und Fragebogenkonstruktion* (pp. 27-74). Berlin: Springer.

Kahn, J. (2006). Factor analysis in counseling psychology research, training, and practice: Principles, advances, and applications. *The Counseling Psychologist, 34*(5), 684-718. doi:10.1177/0011000006286347

Kalyva, E., Gojkovic, D., & Tsakiris, V. (2007). Serbian teachers' attitudes towards inclusion. *International Journal of Special Education*, *22*(3), 31-36.

Katz, D. (1960). The functional approach to the study of attitudes. *Public Opinion Quarterly*, *24*(2), 163-204.

Kristiana, I. F., & Widayanti, C. G. (2017). Teachers' attitude and expectation on inclusive education for children with disability: A frontier study in Semarang, Central Java, Indonesia. *Advanced Science Letters*, *23*(4), 3504-3506.

Kinsella, W., & Senior, J. (2008). Developing inclusive schools: a systemic approach. *International Journal of Inclusive Education*, *12*(5-6), 651-665.

Knight, V. F., Wood, C. L., Spooner, F., Browder, D. M., & O'Brien, C. P. (2015). An exploratory study using science eTexts with students with autism spectrum disorder. *Focus on Autism and Other Developmental Disabilities*, *30*(2), 86-99.

Kumar, A., & Midha, P. (2017). Attitudes toward inclusive education among school teachers: A comparative study. *The International Journal of Indian Psychology, 4*(2), 52-60.

Kurniawati, F., Minnaert, A., Mangunsong, F., & Ahmed, W. (2012). Empirical study on primary school teachers' attitudes towards inclusive education in Jakarta, Indonesia. *Procedia-Social and Behavioral Sciences*, *69*, 1430-1436.

Kuyini, A. A. B. (2004). Principals' and teachers' attitudes toward and knowledge of inclusive education as predictors of inclusive school practices in Ghana. *Unpublished doctoral dissertation). University of Melbourne, Melbourne, Australia*.

Kuyini, A. B., & Desai, I. (2008). Providing instruction to students with special needs in inclusive classrooms in Ghana: Issues and challenges. *International Journal of Whole Schooling*, *4*(1), 22-39.

Larrivee, B., & Cook, L. (1979). Mainstreaming: A study of the variables affecting teacher attitude. *The Journal of Special Education, 13*, 315-324.

Lambe, J. (2007). Northern Ireland student teachers' changing attitudes towards inclusive education during initial teacher training. *International Journal of Special Education*, *22*(1), 59-71.

Leatherman, J. M., & Niemeyer, J. A. (2005). Teachers' attitudes toward inclusion: Factors influencing classroom practice. *Journal of Early Childhood Teacher Education*, *26*(1), 23-36.

Lever, J., Krzywinski, M., & Altman, N. (2017). Points of significance: Principal component analysis. *Nature Methods, 14*(7), 641-642.

Leyser, Y., Kapperman, G., & Keller, R. (1994). Teacher attitudes toward mainstreaming: a cross ‐ cultural study in six nations. *European Journal of Special Needs Education*, *9*(1), 1-15.

Lietz, P. (2010). Research into questionnaire design: A summary of the literature. *International Journal of Market Research, 52*(2), 249-272. doi:10.2501/s147078530920120x.

Lifshitz, H., Glaubman, R., & Issawi, R. (2004). Attitudes towards inclusion: The case of Israeli and Palestinian regular and special education teachers. *European Journal of Special Needs Education*, *19*(2), 171-190.

Lindblad Jr, A. H. (1994). You can avoid the traps of cooperative learning. *The Clearing House*, *67*(5), 291-293.

Loreman, T., Earle, C., Sharma, U., & Forlin, C. (2007). The development of an instrument for measuring pre-service teachers' sentiments, attitudes, and concerns about inclusive education. *International Journal of Special Education*, *22*, 150-159.

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. Retrieved from http://search.proquest.com/docview/1430186848?accountid=14182

Mahat, M. (2008). The development of a psychometrically-sound instrument to measure teachers' multidimensional attitudes toward inclusive education. *International Journal of Special Education*, *23*(1), 82-92.

Mahzarin, R. B., & Heiphetz, L. (2010). Attitudes. In S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *The handbook of social psychology* (5th ed.) (pp. 353–393). Hoboken, NJ: John Wiley & Sons.

Malinen, O. P. (2013). Inclusive education from teachers' perspective. Examining pre- and in-service teachers' self-efficacy and attitudes in mainland China. *Doctoral Dissertation at the University of Eastern Finland*.

Marfo, K., Harris, D. M., & Dedrick, R. F. (2002, April). *Empirical analysis of co-teaching and inclusive education*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Maulia, M., & Kurniawati, F. (2018) Inclusive education in primary school: Do teachers' attitudes relate to their classroom management? In Ariyanto et al. (Ed.), *Diversity in Unity: Perspective from Psychology and Behavioral Sciences* (pp. 323-329). London: Taylor & Francis.

McLeskey, J., Waldron, N., So, T., Swanson, K., & Loveland, T. (2001). Perspectives of teachers toward inclusive school programs. *Teacher Education and Special Education*, *24*, 108-115. Retrieved February 7, 2010, from ERIC database.

Mitchell, D. (2010). *Education that fits: Review of international trends in the education of students with special educational needs*. Christchurch, New Zealand: University of Canterbury. Retrieved from http://www.educationcounts.govt.nz/__data/assets/pdf_file/0016/86011/Mitchell - Review - Final.pdf

Mobaraki, M., Nazarloo, S. A., & Toosheh, E. (2017). A comparative analysis of contracted versus alphabetical English Braille and attitudes of English as a foreign language learners: A case study of a Farsi-speaking visually impaired student. *Journal of Visual Impairment & Blindness*, *111*(5), 471-474.

Monsen, J. J., Ewing, D. L., & Boyle, J. (2015). Psychometric properties of the revised teachers' attitude toward inclusion scale. *International Journal of School & Educational Psychology*, *3*(1), 64-71.

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

Muzdalifah, F., & Billah, H., Z. (2017) Pengaruh Efikasi pada Sikap Guru terhadap Pendidikan Inklusif. *Jurnal Penelitian dan Pengukuran Psikologi*, 6(1), 26-34.

Nannemann, A. C., Bruce, S. M., Hussey, C., Vercollone, B. S., & McCarthy, M. (2017). Oral Braille reading decoding strategies of middle school students who are blind or have low vision. *Journal of Visual Impairment & Blindness*, *111*(3), 284-288.

Nilholm, C., Almqvist, L., Göransson, K., & Lindqvist, G. (2013). Is it possible to get away from disability-based classifications in education? An empirical investigation of the Swedish system. *Scandinavian Journal of Disability Research, 15*(4), 379-391. doi:10.1080/15017419.2012.735201

Ni'matuzahroh, & Nurhamida, Y. (2016). *Individu berkebutuhan khusus dan pendidikan inklusif*. Penerbitan Universitas Muhammadiyah Malang.

Olson, M. R., Chalmers, L., & Hoover, J. H. (1997). Attitudes and attributes of general education teachers identified as effective inclusionists. *Remedial and Special Education*, *18*(1), 28-35.

Opdal, L. R., Wormnaes, S., & Habayed, A. (2001). Teachers' opinions about inclusion: A pilot study in a Palestinian context. *International Journal of Disability, Development and Education*, *48*(2), 143-162.

Oppenheim, A. N. (1992). Questionnaire design, *interviewing and attitude measurement*. London: Bloomsbury Academic.

Parasuram, K. (2006). Variables that affect teachers' attitudes towards disability and inclusive education in Mumbai, India. *Disability & Society*, *21*(3), 231-242.

Parekh, G. (2014). *Social citizenship and disability: Identity, belonging, and the structural organization of education* (Unpublished doctoral dissertation). York University, Toronto, Ontario, Canada. Retrieved from

http://yorkspace.library.yorku.ca/xmlui/bitstream/handle/10315/28217/Parekh_Gillian_G_2014_PhD.pdf?sequence=2

Parekh, G., & Underwood, K. (2015). *Inclusion: Creating school and classroom communities where everyone belongs. Research, tips, and tools for educators and administrators*. (Research Report No. 15/16−09). Toronto, Ontario, Canada: Toronto District School Board.

Pramartha, I. N. B. (2015). Sejarah Dan Sistem Pendidikan Sekolah Luar Biasa Bagian a Negeri Denpasar Bali. *HISTORIA Jurnal Program Studi Pendidikan Sejarah*, *3*(2), 67-74.

Purbani, W. (2013). Equity in the classroom: The system and improvement of inclusive schools in Yogyakarta, Indonesia. *US_China Education Review B, 3*(7), 507-518.

Regulation of the National Education Minister of Indonesia Republic Number 70. (2009). *Inclusive Education for Learners who have abnormalities and have special intelligence and/or gifted*. Jakarta: Depdiknas.

Saloviita, T., & Schaffus, T. (2016) Teacher attitudes towards inclusive education in Finland and Brandenburg, Germany and the issue of extra work, *European Journal of Special Needs Education, 31*(4),458-471.

Sari, H. (2007). The influence of an in-service teacher training (INSET) programme on attitudes towards inclusion by regular classroom teachers who teach deaf students in primary schools in Turkey. *Deafness & Education International*, *9*(3), 131-146.

Sideridis, G. D., & Chandler, J. P. (1995). Attitudes and characteristics of general music teachers toward integrating children with developmental disabilities. *Update: Applications of Research in Music Education*, *14*(1), 11-15.

Sharma, U., & Desai, I. (2002). Measuring concerns about integrated education in India. *Asia & Pacific Journal on Disability, 5*(1), 2-14. Retrieved from http://www.dinf.ne.jp/doc/english/asia/resource /z00ap/vol5no1/measure.html.

Sharma, U., Shaukat, S., & Furlonger, B. (2015). Attitudes and self-efficacy of pre-service teachers towards inclusion in Pakistan. *Journal of Research in Special Educational Needs, 15*(2), 97-105. doi:10.1111/1471-3802.12071

Slee, R. (2018). Inclusive education: From policy to school implementation. In *Towards inclusive schools?* (pp. 30-41). Philadelphia, PA: Routledge.

Stoiber, K. C., Gettinger, M., & Goetz, D. (1998). Exploring factors influencing parents' and early childhood practitioners' beliefs about inclusion. *Early Childhood Research Quarterly*, *13*(1), 107-124.

Stubbs, S. (2002) Inclusive education: Where there are few resources, *Oslo: The Atlas Alliance*.

Su, H. F. H., Lai, L., & Rivera, H. J. (2012). Effective mathematics strategies for pre-school children with autism. *Australian Primary Mathematics Classroom*, *17*(2), 25-30.

Subban, P., & Sharma, U. (2005). Understanding educator attitudes toward the implementation of inclusive education. *Disability Studies Quarterly*, *25*(2), 1-19.

Sudjana, N. 2011. *Penilaian Hasil Proses Belajar Mengajar*. Bandung: PT Remaja Rosdakarya.

Sutisna, N., & Retnayu, I. (2016). Sikap Guru SLB terhadap Pendidikan Inklusif. *Jassi Anakku*, *11*(1), 58-60.

Sutratinah, T. (1984). Sejarah Penelitian dan Perkembangan Pendidikan Khusus untuk Anak Supernormal. *Cakrawala Pendidikan*, *3*(12), 149-161.

Suveren-Erdogan, C., & Suveren, S. (2018). Teaching of basic posture skills in visually impaired individuals and its implementation under aggravated conditions. *Journal of Education and Learning*, *7*(3), 109-116.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). New York: Allyn and Bacon.

Taylor, R. W., & Ringlaben, R. P. (2012). Impacting pre-service teachers' attitudes toward inclusion. *Higher Education Studies, 2*(3), 16-23. doi:10.5539/hes.v2n3p16

Thaver, T., & Lim, L. (2014). Attitudes of pre-service mainstream teachers in Singapore towards people with disabilities and inclusive education. *International Journal of Inclusive Education*, *18*(10), 1038-1052.

Todorovic, J., Stojiljkovic, S., Ristanic, S., & Djigic, G. (2011). Attitudes towards inclusive education and dimensions of teacher's personality. *Procedia-Social and Behavioral Sciences*, *29*, 426-432.

Towner, A. G. (1984). Modifying attitudes toward the handicapped: A review of the literature and methodology. In R. Jones (Ed.), *Attitudes and attitude change in special education: Theory and practice*. Reston, VA: Council for Exceptional Children.

Tsakiridou, H., & Polyzopoulou, K. (2014). Greek teachers' attitudes toward the inclusion of students with special educational needs. *American Journal of Educational Research, 2*(4), 208-218. doi:10.12691/education-2-4-6

Tyagi, G. (2016). Role of teacher in inclusive education. *International Journal of Education and Applied Research*, *6*(1), 115-116.

Underwood, K. (2013). *Everyone is welcome: Inclusive early childhood education and care.* Ministry of Education. Retrieved from

http://www.edu.gov.on.ca/childcare/Underwood.pdf

UNESCO (1994). The Salamanca Declaration and framework for action. Paris: UNESCO.

Unianu, E. M. (2012). Teachers' attitudes towards inclusive education. *Procedia-Social and Behavioral Sciences*, *33*, 900-904.

Villa, R. A., Thousand, J. S., Meyers, H., & Nevin, A. (1996). Teacher and administrator perceptions of heterogeneous education. *Exceptional Children*, *63*, 29-45.

Watt, S. E., Maio, G. R., Haddock, G., & Johnson, B. T. (2011). Attitude functions in persuasion: Matching, involvement, self-affirmation, and hierarchy. *Attitudes and Attitude Change*, 189-212.

Weijters, B., Cabooter, E., & Schillewaert, N. (2010). The effect of rating scale format on response styles: The number of response categories and response category labels. *International Journal of Research in Marketing, 27*(3), 236-247. doi:10.1016/j.ijresmar.2010.02.004.

Wilczenski, F. L. (1992). Measuring attitudes toward inclusive education. *Psychology in the Schools*, *29*(4), 306-312.

Wilkerson, S. E. (2012). Assessing teacher attitude toward the inclusion of students with autism. Electronic Theses and Dissertations. Paper 1571. https://doi.org/10.18297/etd/1571

Wilkins, T., & Nietfeld, J. L. (2004). The effect of a school: Wide inclusion training programme upon teachers' attitudes about inclusion. *Journal of Research in Special Educational Needs*, *4*(3), 115-121.

Wilson, M. (2003). On choosing a model for measuring. *Methods of Psychological Research Online, 8*(3), 1-22.

Wilson, M. (2005). Subscales and summary scales: issues in health-related outcomes. In J. Lipscomb, C. C. Gotay & C. Snyder (Eds.), *Outcomes assessment in cancer: Measures, methods and applications* (pp. 465-479). Cambridge: Cambridge University Press.

Yikmis, A. (2016). Effectiveness of the touch math technique in teaching basic addition to children with autism. *Educational Sciences: Theory and Practice*, *16*(3), 1005-1025.

Yin, R. K. (2017). *Case study research and applications: Design and methods*. Thousand Oaks, CA: Sage.

Yuker, H. (1988). The effects of contact on attitudes toward disabled persons: Some empirical generalizations. In H. Yuker (Ed.), *Attitudes toward persons with disabilities* (pp. 262-274). New York: Springer.

Zulfija, M., Indira, O., & Elmira, U. (2013). The professional competence of teachers in inclusive education. *Procedia-Social and Behavioral Sciences*, *89*, 549-554.

Appendix A

Table of All Items and Coding System for All Instruments

No	Code	Items
The Sentiments, Attitudes, and Concerns about Inclusive Education Revised (SACIE-R) Scale (Forlin, Earle, Loreman, & Sharma, 2011)		
1	S1	I am concerned that students with disabilities will not be accepted by the rest of the class.
2	S2	I dread the thought that I could eventually end up with a disability.
3	S3	Students who have difficulty expressing their thoughts verbally should be in regular classes.
4	S4	I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom.
5	S5	I tend to make contacts with people with disabilities brief, and I finish them as quickly as possible.
6	S6	Students who are inattentive should be in regular classes.
7	S7	I am concerned that my workload will increase if I have students with disabilities in my class.
8	S8	Students who require communicative technologies (e.g., Braille/sign language) should be in regular classes.
9	S9	I would feel terrible if I had a disability.
10	S10	I am concerned that I will be more stressed if I have students with disabilities in my class.
11	S11	I am afraid to look directly at a person with a disability.
12	S12	Students who frequently fail exams should be in regular classes.
13	S13	I find it difficult to overcome my initial shock when meeting people with severe physical disabilities.
14	S14	I am concerned that I do not have the knowledge and skills required to teach students with disabilities.
15	S15	Students who need an individualized academic program should be in regular classes.
Attitudes toward Teaching All Students (ATTAS-mm) (Gregory & Noto, 2012)		
16	A1	All students with mild to moderate disabilities should be educated in regular classrooms with nonhandicapped peers to the fullest extent possible.
17	A2	Students with mild to moderate disabilities can be trusted with responsibilities in the classroom.
18	A3	I would like people to think that I can create a welcoming classroom environment for students with mild to moderate disabilities.
19	A4	Most of all separate classrooms that exclusively serve students with mild to moderate disabilities should be eliminated.
20	A5	Students with mild to moderate disabilities can be more effectively educated in regular classrooms as opposed to special education classrooms.
21	A6	Students with mild to moderate disabilities should be taught in regular classes with nondisabled students because they will not require too much of the teacher's time.
22	A7	I would like to be mentored by a teacher who models effective differentiated instruction.
23	A8	I want to emulate teachers who know how to design appropriate academic interventions.

24	A9	I believe including students with mild/moderate disabilities in regular classrooms is effective because they can learn the social skills necessary for success.
The Teacher Attitudes Toward Inclusion Scale (TATIS) (Cullen, Gregory, & Noto, 2010)		
25	T1	All students with mild to moderate disabilities should be educated in regular classrooms with non-handicapped with non-handicapped peers to the fullest extent possible.
26	T2	It is seldom necessary to remove students with mild to moderate disabilities from regular classrooms to meet their educational needs.
27	T3	Most of all separate classrooms that exclusively serve students with mild to moderate disabilities should be eliminated.
28	T4	Most of all regular classrooms can be modified to meet the needs of students with mild to moderate mild to moderate disabilities.
29	T5	Students with mild to moderate disabilities can be more effectively educated in regular classrooms as opposed to special education classrooms.
30	T6	Inclusion is a more efficient model for educating students with mild to moderate disabilities because it reduces transition time (i.e., the time required to move from one setting to another).
31	T7	Students with mild to moderate disabilities should not be taught in regular classes with non-disabled students because they will require too much of the teacher's time.
32	T8	I have doubts about the effectiveness of including students with mild/moderate disabilities in regular classrooms because they often lack the academic skills necessary for success.
33	T9	I have doubts about the effectiveness of including students with mild/moderate disabilities in regular classrooms because they often lack the social skills necessary for success.
34	T10	I find that general education teachers often do not succeed with students with mild to moderate disabilities, even when they try their best.
35	T11	I would welcome the opportunity to team teach as a model for meeting the needs of students with mild/moderate disabilities in regular classrooms.
36	T12	All students benefit from team teaching; that is, the pairing of a general and a special education teacher in the same classroom.
37	T13	The responsibility for educating students with mild/moderate disabilities in regular classrooms should be shared between general and special education teachers.
38	T14	I would welcome the opportunity to participate in a consultant teacher model (i.e., regular collaborative meetings between special and general education teachers to share ideas, methods, and materials) as a means of addressing the needs of students with mild/moderate disabilities in regular classrooms
My Thinking about Inclusion (MTAI) scale (Stoiber, Gettinger, & Goetz , 1998)		
39	B1	Students with special needs have the right to be educated in the same classroom as typically developing students.
40	B2	Inclusion is NOT a desirable practice for educating most typically developing students. (R)
41	B3	It is difficult to maintain order in a classroom that contains a mix of children with exceptional education needs and children with average abilities.
42	B4	Children with exceptional education needs should be given every opportunity to function in an integrated classroom.

43	B5	Inclusion can be beneficial for parents of children with exceptional education needs
44	B6	Parents of children with exceptional needs prefer to have their child placed in an inclusive classroom setting
45	B7	Most special education teachers lack an appropriate knowledge base to educate typically developing students effectively. (R)
46	B8	The individual needs of children with disabilities CANNOT be addressed adequately by a regular education teacher. (R)
47	B9	We must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large scale basis. (R)
48	B10	The best way to begin educating children in inclusive settings is just to do it.
49	B11	Most children with exceptional needs are well behaved in integrated education classrooms.
50	B12	It is feasible to teach children with average abilities and exceptional needs in the same classroom.
51	B13	Inclusion is socially advantageous for children with special needs.
52	B14	Children with special needs will probably develop academic skills more rapidly in a special, separate classroom than in an integrated classroom. (R)
53	B15	Children with exceptional needs are likely to be isolated by typically developing students in inclusive classrooms.
54	B16	The presence of children with exceptional education needs promotes acceptance of individual differences on the part of typically developing students.
55	B17	Inclusion promotes social independence among children with special needs.
56	B18	Inclusion promotes self-esteem among children with special needs.
57	B19	Children with exceptional needs are likely to exhibit more challenging behaviors in an integrated classroom setting.
58	B20	Children with special needs in inclusive classrooms develop a better self-concept than in a self-contained classroom.
59	B21	The challenge of a regular education classroom promotes academic growth among children with exceptional education needs.
60	B22	Isolation in a special class does NOT have a negative effect on the social and emotional development of students prior to middle school.
61	B23	Typically developing students in inclusive classrooms are more likely to exhibit challenging behaviors learned from children with special needs.
62	B24	Children with exceptional needs monopolize teachers' time. (R)
63	B25	The behaviors of students with special needs require significantly more teacher-directed attention than those of typically developing children.
64	B26	Parents of children with exceptional education needs require *more* supportive services from teachers than parents of typically developing children. (R)
65	B27	Parents of children with exceptional needs present no greater challenge for a classroom teacher than do parents of a regular education student.
66	B28	A good approach to managing inclusive classrooms is to have a special education teacher be responsible for instructing children with special needs
Teachers' Attitude toward Inclusion Scale (TAIS) (Monsen, Ewing, &Boyle, 2015)		
67	I1	It is difficult to maintain order in a normal classroom that contains an SEN child.
68	I2	SEN children are likely to create confusion in the regular classroom.

69	I3	Inclusion is likely to have a negative effect on the emotional development of the SEN child.
70	I4	The SEN child probably develops academic skills more rapidly in a special classroom than in a regular classroom.
71	I5	The behavior of SEN students sets a bad example for the other students.
72	I6	It is likely that an SEN child will exhibit behavior problems in a normal classroom setting.
73	I7	The extra attention SEN students require is to the detriment of the other students.
74	I8	Isolation in a special class has a negative effect on the social and emotional development of an SEN child.
75	I9	SEN students should be given every opportunity to function in the regular classroom setting where possible.
76	I10	The inclusion of SEN students can be beneficial for non-SEN students.
77	I11	Including the SEN child in the regular classroom promotes his or her social independence.
78	I12	Most SEN children are well behaved in the classroom.
79	I13	The inclusion of SEN children necessitates extensive retraining of regular classroom teachers.
80	I14	The inclusion of SEN children requires a significant change in regular classroom procedures
81	I15	Diagnostic-prescriptive teaching is better done by special education teachers than by normal classroom teachers.
82	I16	Increased freedom in the classroom creates too much confusion.
83	I17	SEN children need to be told exactly what to do and how to do it.
84	I18	An SEN child's classroom behavior generally requires more patience from the teacher that does the behavior of a non-SEN child.
85	I19	Most SEN children do not make an adequate attempt to complete their assignments.
86	I20	The needs of SEN students can best be served through special, separate classes.
Multidimensional Attitudes toward Inclusive Education Scale (MATIES) (Mahat, 2008)		
87	M1	I believe that an inclusive school is one that permits academic progression of all students regardless of their ability.
88	M2	I believe that students with a disability should be taught in special education schools
89	M3	I believe that inclusion facilitates socially appropriate behavior amongst all students.
90	M4	I believe that any student can learn in the regular curriculum of the school if the curriculum is adapted to meet their individual needs.
91	M5	I believe that students with a disability should be segregated because it is too expensive to modify the physical environment of the school.
92	M6	I believe that students with a disability should be in special education schools so that they do not experience rejection in regular school.
93	M7	I get frustrated when I have difficulty communicating with students with a disability.
94	M8	I get upset when students with a disability cannot keep up with the day-to-day curriculum in my classroom.

95	M9	I get irritated when I am unable to understand students with a disability.
96	M10	I am uncomfortable including students with a disability in a regular classroom with other students without a disability.
97	M11	I am disconcerted that students with a disability are included in the regular classroom, regardless of the severity of the disability.
98	M12	I get frustrated when I have to adapt the curriculum to meet the individual needs of all students.
99	M13	I am willing to encourage students with a disability to participate in all social activities in the regular classroom.
100	M14	I am willing to adapt the curriculum to meet the individual needs of all students regardless of their ability.
101	M15	I am willing to physically include students with a severe disability in the regular classroom with the necessary support.
102	M16	I am willing to modify the physical environment to include students with a disability in the regular classroom.
103	M17	I am willing to adapt my communication techniques to ensure that all students with an emotional and behavioral disorder can be successfully included in the regular classroom.
104	M18	I am willing to adopt the assessment of individual students for inclusive education to take place.
Concern about Integrated Education (CIE) (Sharma & Desai, 2002)		
105	C1	I will not have enough time to plan educational programs for students' disabilities
106	C2	It will be difficult to maintain discipline in class
107	C3	I do not have the knowledge and skills required to teach students with disabilities
108	C4	Students with disabilities will not be accepted by non-disabled students
109	C5	Parents of children without disabilities may not like the idea of placing their children in the same classroom where there are students with disabilities
110	C6	My Schools will not have enough funds for implementing integration successfully
111	C7	There will be inadequate paraprofessional staff available to support integrated students (e.g., speech therapist, physiotherapist, occupational therapist, etc.).
112	C8	My schools will have difficulty accommodating students with various types of disabilities because of inappropriate infrastructure, e.g., architectural barriers.
113	C9	There will be inadequate resources or special teachers available to support integration.
114	C10	My school will not have adequate special education instructional materials and teaching aids, e.g., Braille.
115	C11	There will be inadequate administrative support to implement the integration program.
116	C12	I will not receive enough incentives (e.g., additional remuneration or allowance) to integrate students with disabilities.
117	C13	My workload will increase.
118	C14	Other staff members of the school will be stressed.
119	C15	I will have to do additional paperwork
120	C16	The overall academic standards of the school will suffer.
121	C17	My performance as a classroom teacher or school principal will decline.
122	C18	The academic achievement of students without disabilities will be affected.

123	C19	It will be difficult to give equal attention to all students in an integrated classroom.
124	C20	I will not be able to cope with disabling students who do not have adequate self-care skills, e.g., students who are not toilet trained.
125	C21	The integration of a student with a disability in my class or school will lead to a higher degree of anxiety and stress in me.

Appendix B

The Instrument of Teacher Attitude toward Inclusive Education for Validation by Experts

TEACHERS ATTITUDES TOWARD INCLUSIVE EDUCATION

Demographic Data of The Teachers'

No	Questions	Answers
1	Gender*	1. Male 2. Female
2	Age	…. Years
3	Province	…….
4	Type of Schools*	1. Inclusive School 2. Special School 3. Regular School
5	Level of Schools*	1. Elementary School/ equivalent level 2. Junior High School/ equivalent level 3. Senior High School/ equivalent level
6	Level of Education*	1. Bachelor 2. Master 3. Doctor 4. Other programs, specify ……
7	Subject of Teaching	1. Science (Science, Physics, Biology or Chemistry) 2. Other Subject, specify …….
8	Teaching Experience	…. Years
9	Experience in Inclusive Schools	…. Years
10	Training Program in Inclusive Education*	1. Ever 2. Never
11	Interaction with Special Education Needs Students*	1. Ever 2. Never

Noted: * Circle or cross in the numbers that fit on you

Directions:

The purpose of this confidental survey is to obtain an accurate and valid appraisal of your attitude toward inclusive education i.e. students with special education needs in the regular classroom (inclusive schools) with mild to moderate disabilities. Because there are no "right" or "wrong" answers to these items and confidential, please respond candidly.

Definition of Inclusive Education:

In accordance with the Regulation of the Minister of National Education of the Republic of Indonesia Number 70 Year 2009, Inclusive Education is defined as an education system that provides opportunities for all students who have disabilities and have the potential of intelligence and / or special talents to follow education or learning in an educational environment together with learners in general. Student disabilities include Learning Disabilities; Deaf and Hard of Hearing; Visually Impaired; Physical Handicaps; Speech/Language Impairments; mild/moderate Emotional Disturbance; Mental Retardation; Autism; or Trauma Brain Injury.

Directions for filling the Questionnaire:
The extent to which you **(1) Strongly Disagree (SD), (2) Disagree (D), (3) Neutral (N), (4) Agree (A), or (5) Strongly Agree (SA)** statement below by encircling or crossing the corresponding answer in the right column of each statement.

No	Statements	SD	D	N	A	SA
1	All students should be educated in the same classroom regardless of their SEN.	1	2	3	4	5
2	Students with SEN can be trusted with responsibilities in the classroom.	1	2	3	4	5
3	Regular classrooms can create a welcoming classroom environment for students with SEN with other students without SEN.	1	2	3	4	5
4	Students with SEN cannot be effectively educated in regular classrooms.	1	2	3	4	5
5	It is seldom necessary to remove students with SEN from regular classrooms in order to meet their educational needs.	1	2	3	4	5
6	It is difficult to maintain order in a normal classroom that contains students with SEN.	1	2	3	4	5
7	Students with SEN are likely to create confusion in the regular classroom.	1	2	3	4	5
8	Inclusive education is likely to have a negative effect on the emotional development of the students with SEN.	1	2	3	4	5
9	The behavior of the students with SEN sets a bad example for the other students.	1	2	3	4	5
10	It will be difficult to give appropriate attention to all students in an inclusive classroom.	1	2	3	4	5
11	Inclusion of Students with SEN necessitates extensive retraining of regular classroom teachers.	1	2	3	4	5
12	The inclusion of the students with SEN requires a significant change in regular classroom procedures.	1	2	3	4	5
13	Most of the students with SEN do not make an adequate attempt to complete their assignments.	1	2	3	4	5
14	The needs of students with SEN can best be served through special, separate classes.	1	2	3	4	5
15	I get frustrated when I have difficulty communicating with students with SEN.	1	2	3	4	5
16	I get upset when students with SEN cannot keep up with the lesson in my classroom.	1	2	3	4	5
17	I get irritated when I am unable to understand students with SEN.	1	2	3	4	5
18	I get frustrated when I have to adapt the lesson to meet the individual needs of all students.	1	2	3	4	5
19	Including students with SEN in regular classrooms is effective because they can learn the social skills necessary for success.	1	2	3	4	5
20	I find that general education teachers often do not succeed with students with SEN, even when they try their best.	1	2	3	4	5
21	The responsibility for educating students with SEN disabilities in regular classrooms should be shared between general and special education teachers.	1	2	3	4	5
22	Students with SEN should be segregated from an inclusive classroom because it is too expensive to modify the physical environment of the school.	1	2	3	4	5
23	Inclusion is not a desirable practice for educating most typically developing students.	1	2	3	4	5
24	Most special education teachers lack an appropriate knowledge base to educate typically developing students effectively.	1	2	3	4	5

No	Statements	SD	D	N	A	SA
25	The individual needs of students with SEN cannot be addressed adequately by a regular education teacher.	1	2	3	4	5
26	I must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large-scale basis.	1	2	3	4	5
27	Students with SEN will probably develop academic skills more rapidly in a special, separate classroom than in an inclusive classroom.	1	2	3	4	5
28	Students with SEN are likely to be isolated by typically developing students in inclusive classrooms.	1	2	3	4	5
29	The presence of students with SEN promotes acceptance of individual differences on the part of typically developing students.	1	2	3	4	5
30	Inclusion promotes self-esteem among students with SEN.	1	2	3	4	5
31	Students with SEN in inclusive classrooms develop a better self-concept than in a self-contained classroom.	1	2	3	4	5
32	Students with SEN monopolize teachers' time.	1	2	3	4	5
33	My workload will increase if I have students with SEN in my class.	1	2	3	4	5
34	I will be more stressed if I have students with SEN in my class.	1	2	3	4	5
35	I do not have the knowledge and skills required to teach students with SEN.	1	2	3	4	5
36	There will be inadequate resources/staff available to support inclusion.	1	2	3	4	5
37	It will be difficult to maintain discipline in an inclusive classroom.	1	2	3	4	5
38	Students with SEN will not be accepted by non-disabled students and the rest of the class.	1	2	3	4	5
39	My schools will not have enough funds for implementing inclusion successfully.	1	2	3	4	5
40	I will not receive enough incentives (e.g., additional remuneration or allowance) to integrate students with SEN.	1	2	3	4	5
41	My schools will have difficulty in accommodating students with various types of SEN because of inappropriate infrastructure, e.g., architectural barriers.	1	2	3	4	5
42	There will be inadequate resources or special teachers available to support inclusion.	1	2	3	4	5
43	My school will not have adequate special education instructional materials and teaching aids, e.g., Braille.	1	2	3	4	5
44	My performance as a classroom teacher will decline.	1	2	3	4	5
45	There will be inadequate administrative support to implement the inclusion program.	1	2	3	4	5

THANKS FOR COMPLETING THIS QUESTIONNAIRE

Appendix C

The Instrument Validation Sheet by Experts

INSTRUMENT of VALIDATION SHEET

1. Validate each item

2. Validation overall

Title

DEVELOPMENT OF THE TEACHERS ATTITUDES TOWARD INCLUSIVE EDUCATION INSTRUMENT

By

EDIYANTO

D171740

Doctoral Student at Graduate School for International Development and Cooperation, Hiroshima University

ediace09@yahoo.co.id

Supervisor

Prof. NORIMUNE KAWAI

Department of Special Needs Education, Graduate School of Education, Hiroshima University, Japan

nkawai@hiroshima-u.ac.jp

Definition of Inclusive Education:

In accordance with the Regulation of the Minister of National Education of the Republic of Indonesia Number 70 Year 2009, Inclusive Education is defined as an education system that provides opportunities for all students with special education needs and have the potential of intelligence and / or special talents to follow education or learning in an educational environment together with learners in general. The student with special needs includes Learning Disabilities, Deaf and Hard of Hearing; Visually Impaired; Physical Handicaps; Speech/Language Impairments; Mild/Moderate Emotional Disturbance; Mental Disorder; Autism; or Traumatic Brain Injury.

1

VALIDATE EACH ITEM

Directions:

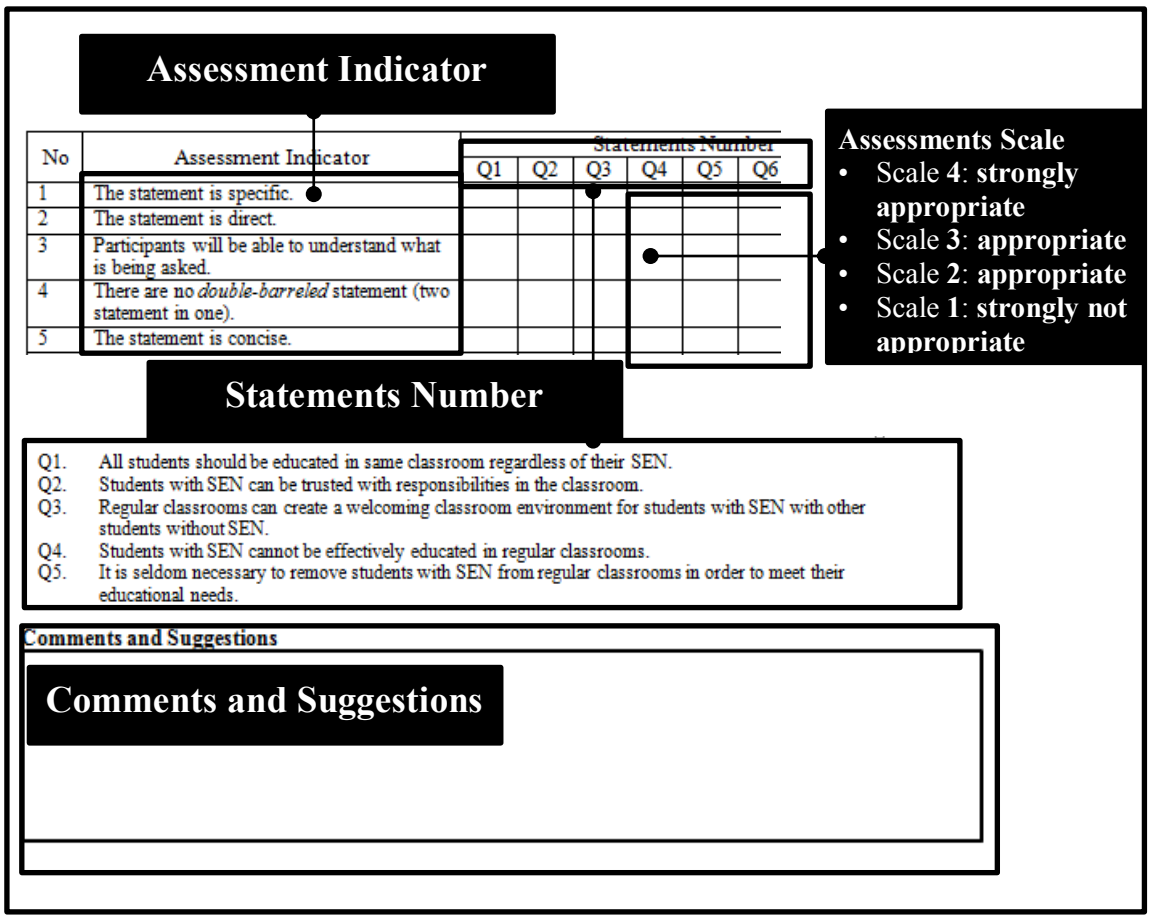
Please feel free to read the instructions below to make it easier to fill in.

1. You are requested to read the validations instrument sheet and complete the identity on the sheet provided.
2. You are required to assess each item's questionnaire.
3. You are requested to check the instrument validation sheet **with assessment indicator, assessment criteria, assessment scale**.
4. Please give your response scale on the assessment scale cells if the quality of the book content meets the criteria provided that.
   - Scale 4: If you give an assessment **strongly appropriate** to the assessment indicator.
   - Scale 3: If you give an assessment **appropriate** to the assessment indicator.
   - Scale 2: If you give an assessment not **appropriate** to the assessment indicator.
   - Scale 1: If you give an assessment **strongly not appropriate** to the assessment indicator.
5. You are requested to fill the **comments and suggestions** in every chapter of this questionnaire.
6. Thank you so much.

Identity

Name with the degree : .....
Areas of expertise : .....
Affiliation : .....
E-mail : .....

Validation sheet sample



No	Assessment Indicator	Statements Number							
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
1	The statement is specific.								
2	The statement is direct.								
3	Participants will be able to understand what is being asked.								
4	There is no *double-barreled* statement (two statements in one).								
5	The statement is concise.								
6	No unnecessary words								
7	The statement is asked using the affirmative (e.g., Instead of asking, "Which methods are not used?", the researcher asks, "Which methods *are* used?")								
8	The response includes only one option.								
9	Unambiguous sentence.								
10	The statement is unbiased and does not lead the participants to a response.								
11	The statement is asked using a neutral tone.								
12	The terms used in the statement is understandable by the target population.								
13	The words in the question do not contain clichés or hyperboles								
14	Communicative sentence.								
15	The language used in the statement is good and correct according to the language.								
16	The formulation of sentences does not contain words that can offend readers.								
17	The responses apply to all situations or offer a way for those to respond with unique situations.								
18	The use of technical language is appropriate.								
19	The use of technical language is clear.								
20	The statement is related to the daily practices or expertise of the participants.								

Q1. All students should be educated in the same classroom regardless of their SEN.
Q2. Students with SEN can be trusted with responsibilities in the classroom.
Q3. Regular classrooms can create a welcoming classroom environment for students with SEN with other students without SEN.
Q4. Students with SEN cannot be effectively educated in regular classrooms.
Q5. It is seldom necessary to remove students with SEN from regular classrooms in order to meet their educational needs.
Q6. It is difficult to maintain order in a normal classroom that contains students with SEN.
Q7. Students with SEN are likely to create confusion in the regular classroom.
Q8. Inclusive education is likely to have a negative effect on the emotional development of the students with SEN.

Comments and Suggestions

No	Assessment Indicator	Statements Number							
		Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
1	The statement is specific.								
2	The statement is direct.								
3	Participants will be able to understand what is being asked.								
4	There is no *double-barreled* statement (two statements in one).								
5	The statement is concise.								
6	No unnecessary words								
7	The statement is asked using the affirmative (e.g., Instead of asking, "Which methods are not used?", the researcher asks, "Which methods *are* used?")								
8	The response includes only one option.								
9	Unambiguous sentence.								
10	The statement is unbiased and does not lead the participants to a response.								
11	The statement is asked using a neutral tone.								
12	The terms used in the statement is understandable by the target population.								
13	The words in the question do not contain clichés or hyperboles								
14	Communicative sentence.								
15	The language used in the statement is good and correct according to the language.								
16	The formulation of sentences does not contain words that can offend readers.								
17	The responses apply to all situations or offer a way for those to respond with unique situations.								
18	The use of technical language is appropriate.								
19	The use of technical language is clear.								
20	The statement is related to the daily practices or expertise of the participants.								

Q9. The behavior of the students with SEN sets a bad example for the other students.
Q10. It will be difficult to give appropriate attention to all students in an inclusive classroom.
Q11. Inclusion of Students with SEN necessitates extensive retraining of regular classroom teachers.
Q12. Inclusion of the students with SEN requires a significant change in regular classroom procedures.
Q13. Most of the students with SEN do not make an adequate attempt to complete their assignments.
Q14. The needs of students with SEN can best be served through special, separate classes.
Q15. I get frustrated when I have difficulty communicating with students with SEN.
Q16. I get upset when students with SEN cannot keep up with the lesson in my classroom.

Comments and Suggestions

No	Assessment Indicator	Statements Number							
		Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24
1	The statement is specific.								
2	The statement is direct.								
3	Participants will be able to understand what is being asked.								
4	There is no *double-barreled* statement (two statements in one).								
5	The statement is concise.								
6	No unnecessary words								
7	The statement is asked using the affirmative (e.g., Instead of asking, "Which methods are not used?", the researcher asks, "Which methods *are* used?")								
8	The response includes only one option.								
9	Unambiguous sentence.								
10	The statement is unbiased and does not lead the participants to a response.								
11	The statement is asked using a neutral tone.								
12	The terms used in the statement is understandable by the target population.								
13	The words in the question do not contain clichés or hyperboles								
14	Communicative sentence.								
15	The language used in the statement is good and correct according to the language.								
16	The formulation of sentences does not contain words that can offend readers.								
17	The responses apply to all situations or offer a way for those to respond with unique situations.								
18	The use of technical language is appropriate.								
19	The use of technical language is clear.								
20	The statement is related to the daily practices or expertise of the participants.								

Q17. I get irritated when I am unable to understand students with SEN.
Q18. I get frustrated when I have to adapt the lesson to meet the individual needs of all students.
Q19. Including students with SEN in regular classrooms is effective because they can learn the social skills necessary for success.
Q20. I find that general education teachers often do not succeed with students with SEN, even when they try their best.
Q21. The responsibility for educating students with SEN disabilities in regular classrooms should be shared between general and special education teachers.
Q22. Students with SEN should be segregated from an inclusive classroom because it is too expensive to modify the physical environment of the school.
Q23. Inclusion is not a desirable practice for educating most typically developing students.
Q24. Most special education teachers lack an appropriate knowledge base to educate typically developing students effectively.

Comments and Suggestions

No	Assessment Indicator	Statements Number						
		Q25	Q26	Q27	Q28	Q29	Q30	Q31
1	The statement is specific.							
2	The statement is direct.							
3	Participants will be able to understand what is being asked.							
4	There is no *double-barreled* statement (two statements in one).							
5	The statement is concise.							
6	No unnecessary words							
7	The statement is asked using the affirmative (e.g., Instead of asking, "Which methods are not used?", the researcher asks, "Which methods *are* used?")							
8	The response includes only one option.							
9	Unambiguous sentence.							
10	The statement is unbiased and does not lead the participants to a response.							
11	The statement is asked using a neutral tone.							
12	The terms used in the statement is understandable by the target population.							
13	The words in the question do not contain clichés or hyperboles							
14	Communicative sentence.							
15	The language used in the statement is good and correct according to the language.							
16	The formulation of sentences does not contain words that can offend readers.							
17	The responses apply to all situations or offer a way for those to respond with unique situations.							
18	The use of technical language is appropriate.							
19	The use of technical language is clear.							
20	The statement is related to the daily practices or expertise of the participants.							

Q25. The individual needs of students with SEN cannot be addressed adequately by a regular education teacher.
Q26. I must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large-scale basis.
Q27. Students with SEN will probably develop academic skills more rapidly in a special, separate classroom than in an inclusive classroom.
Q28. Students with SEN are likely to be isolated by typically developing students in inclusive classrooms.
Q29. The presence of students with SEN promotes acceptance of individual differences on the part of typically developing students.
Q30. Inclusion promotes self-esteem among students with SEN.
Q31. Students with SEN in inclusive classrooms develop a better self-concept than in a self-contained classroom.

Comments and Suggestions

No	Assessment Indicator	Statements Number						
		Q32	Q33	Q34	Q35	Q36	Q37	Q38
1	The statement is specific.							
2	The statement is direct.							
3	Participants will be able to understand what is being asked.							
4	There is no *double-barreled* statement (two statements in one).							
5	The statement is concise.							
6	No unnecessary words							
7	The statement is asked using the affirmative (e.g., Instead of asking, "Which methods are not used?", the researcher asks, "Which methods *are* used?")							
8	The response includes only one option.							
9	Unambiguous sentence.							
10	The statement is unbiased and does not lead the participants to a response.							
11	The statement is asked using a neutral tone.							
12	The terms used in the statement is understandable by the target population.							
13	The words in the question do not contain clichés or hyperboles							
14	Communicative sentence.							
15	The language used in the statement is good and correct according to the language.							
16	The formulation of sentences does not contain words that can offend readers.							
17	The responses apply to all situations or offer a way for those to respond with unique situations.							
18	The use of technical language is appropriate.							
19	The use of technical language is clear.							
20	The statement is related to the daily practices or expertise of the participants.							

Q32. Students with SEN monopolize teachers' time.
Q33. My workload will increase if I have students with SEN in my class.
Q34. I will be more stressed if I have students with SEN in my class.
Q35. I do not have the knowledge and skills required to teach students with SEN.
Q36. There will be inadequate resources/staff available to support inclusion.
Q37. It will be difficult to maintain discipline in an inclusive classroom.
Q38. Students with SEN will not be accepted by non-disabled students and the rest of the class.

Comments and Suggestions

No	Assessment Indicator	Statements Number						
		Q39	Q40	Q41	Q42	Q43	Q44	Q45
1	The statement is specific.							
2	The statement is direct.							
3	Participants will be able to understand what is being asked.							
4	There is no *double-barreled* statement (two statements in one).							
5	The statement is concise.							
6	No unnecessary words							
7	The statement is asked using the affirmative (e.g., Instead of asking, "Which methods are not used?", the researcher asks, "Which methods *are* used?")							
8	The response includes only one option.							
9	Unambiguous sentence.							
10	The statement is unbiased and does not lead the participants to a response.							
11	The statement is asked using a neutral tone.							
12	The terms used in the statement is understandable by the target population.							
13	The words in the question do not contain clichés or hyperboles							
14	Communicative sentence.							
15	The language used in the statement is good and correct according to the language.							
16	The formulation of sentences does not contain words that can offend readers.							
17	The responses apply to all situations or offer a way for those to respond with unique situations.							
18	The use of technical language is appropriate.							
19	The use of technical language is clear.							
20	The statement is related to the daily practices or expertise of the participants.							

Q39. My schools will not have enough funds for implementing inclusion successfully.
Q40. I will not receive enough incentives (e.g., additional remuneration or allowance) to integrate students with SEN.
Q41. My schools will have difficulty in accommodating students with various types of SEN because of inappropriate infrastructure, e.g., architectural barriers.
Q42. There will be inadequate resources or special teachers available to support inclusion.
Q43. My school will not have adequate special education instructional materials and teaching aids, e.g., Braille.
Q44. My performance as a classroom teacher will decline.
Q45. There will be inadequate administrative support to implement the inclusion program.

Comments and Suggestions

2
VALIDATION OVERALL

Directions:

Please feel free to read the instructions below to make it easier to fill in.

1. You are requested to read the instrument sheet.
2. You are required to assess the questionnaire as a whole by comparing it with the questionnaire sheet (questionnaire sheet attached).
3. You are requested to check the instrument validation sheet with criteria of assessment indicator, score, and comment, and suggestion.
4. Put a checklist (√) on the assessment criteria column if the quality of the book content meets the criteria, provided that.
   - Scale 4: If you give an assessment **strongly appropriate** to the assessment indicator.
   - Scale 3: If you give an assessment **appropriate** to the assessment indicator.
   - Scale 2: If you give an assessment not **appropriate** to the assessment indicator.
   - Scale 1: If you give an assessment **strongly not appropriate** to the assessment indicator.
5. If the statement on the questionnaire does not meet the standards, then write down the pages and numbers that require revision and provide an explanation of the input and recommendation cells.
6. Thank you so much.

No	Assessment Indicator	Score				Comment and Suggestion
		1	2	3	4	
1	The choices listed allow participants to respond appropriately.					
2	All acronyms are defined.					
3	The statements are sufficient to resolve the problem in the study.					
4	The statements are sufficient to answer the research questions.					
5	The statements are sufficient to obtain the purpose of the study.					
6	The questionnaire view does not overlap.					
7	The content on the page is not too dense.					

No	Assessment Indicator	Score				Comment and Suggestion
		1	2	3	4	
8	The font size used is appropriate.					
9	The font size used is easy to read.					
10	The font type used is consistent.					
11	The questionnaire filling instructions are easily learned by the participant.					
12	Participants will be able to answer the questionnaire easily					
13	The navigation system is consistent throughout the questionnaire.					
14	No statements are repeated.					
15	The number of questions in this questionnaire is sufficient to measure attitudes toward inclusive education.					
16	These directions on the first page make it easier for teachers to fill out the questionnaires.					
17	The definition of inclusive education on the first page of the questionnaire provides a clear picture of inclusive education.					
18	These filling directions on the first page make it easier for teachers to fill out the questionnaires.					

Place/Date-Month-year ……/……

Signature …….

Appendix D

Table of the First Revision of Teachers Attitudes toward Inclusive Education Instrument

Initial Item Number	Revision Item	New Item Number	Remarks
1	All students should be educated in the same classroom regardless of their SEN.	1	NC
2	Students with SEN can be trusted with responsibilities in the classroom.	2	NC
3	Regular classrooms setting can create a welcoming classroom environment for all students, including students with SEN.	3	EC
4	Students with SEN cannot be effectively educated in regular classrooms.	4	EC
5	It rarely happens a case to drop out the students with SEN from regular classrooms in order to meet their educational needs.	5	EC
6	It is difficult to maintain discipline in a regular classroom that contains students with SEN.	6	NC
7	Students with SEN are likely to create confusion in the regular classroom.	7	NC
8	Inclusive Education is likely to have a negative effect on the emotional development of students with SEN.	8	NC
9	The behavior of the students with SEN gives a bad example for the other students.	9	NC
10	It will be difficult to give appropriate attention to all students in an inclusive classroom.	10	NC
11	Inclusive Education for All Students requires extensive retraining of regular classroom teachers.	11	EC
12	Inclusive Education for All Students requires a significant change in regular classroom procedures.	12	EC
13	Most of the students with SEN do not make an adequate effort to complete their assignments.	13	EC
14	The needs of students with SEN can be served best through separate classes.	14	EC
15	I get frustrated when I have difficulty communicating with students with SEN.	15	NC
16	I get upset when students with SEN cannot follow the lesson in my classroom.	16	EC
17	I get irritated when I am unable to understand students with SEN.	17	NC
18	I get frustrated when I have to adapt the lesson to meet the individual's needs of all students.	18	NC
19	Entering students with SEN in regular classrooms is effective because they can learn the social skills necessary for success."	19	NC
20	I find that general education teachers often do not succeed with students with SEN, even when they try their best.	20	NC
21	The responsibility for educating students with SEN in regular classrooms should be shared between general and special education teachers.	21	NC
22	Students with SEN should be segregated from an inclusive classroom because it is too expensive to modify the physical environment of the school.	22	NC
23	Inclusive education is not a desirable practice for educating the most typical students.	23	EC
24	Most special education teachers lack an appropriate base knowledge to educate typically developing students effectively.	24	EC
25	The individual's needs of students with SEN cannot be addressed adequately by a regular education teacher.		D
26	I must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large scale.	25	EC
27	Students with SEN will probably develop academic skills more rapidly in a separate special classroom than in an inclusive classroom.	26	EC
28	Students with SEN are likely to be isolated by typically developing		D

Initial Item Number	Revision Item	New Item Number	Remarks
	students in inclusive classrooms.		
29	The presence of students with SEN promotes acceptance of individual differences among students.	27	EC
30	Inclusion promotes self-esteem among students with SEN.	28	NC
31	Students with SEN in inclusive classrooms develop a better self-concept than in a self-contained classroom.	29	NC
32	Students with SEN monopolize teachers' time.	30	NC
33	My workload will be increased if I have students with SEN in my class.	31	NC
34	I will be more stressed if I have students with SEN in my class.	32	NC
35	I do not have any knowledge and skills required to teach students with SEN.	33	NC
36	There will be inadequate resources/staff available to support Inclusive Education.	34	NC
37	It will be difficult to maintain discipline in an inclusive classroom.		D
38	Students with SEN will not be accepted by non-disabled students and the rest of the class.		D
39	My schools will not have enough funds for implementing inclusion successfully.		D
40	I will not receive enough incentives (e.g., additional remuneration or allowance) to integrate students with SEN.	35	NC
41	My schools will have difficulty in accommodating students with various types of SEN because of inappropriate infrastructure, e.g., architectural barriers.		D
42	There will be inadequate special teachers who available to support Inclusive Education.	36	EC
43	My school will not have adequate special education instructional materials and teaching aids, e.g., Braille.	37	NC
44	My performance as a classroom teacher will decline if I implement an Inclusive Education program.	38	EC
45	There will be inadequate administrative support to implement the Inclusive Education program.	39	NC

Note: NC = No Change, EC = Editorial Changes, D = Deleted

Appendix E

Table of the Translation Results of Instrument of Teachers' Attitudes toward Inclusive Education

No	English Version	Indonesian Version
1	All students should be educated in the same classroom regardless of their SEN.	Semua siswa harus dididik di kelas yang sama tanpa memandang kebutuhan khusus yang mereka miliki.
2	Students with SEN can be trusted with responsibilities in the classroom.	Siswa berkebutuhan khusus dapat dipercaya dengan tanggung jawab di kelas.
3	Regular classrooms setting can create a welcoming classroom environment for all students, including students with SEN.	Kelas reguler dapat menciptakan lingkungan kelas yang nyaman bagi siswa berkebutuhan khusus bersama siswa tanpa kebutuhan khusus.
4	Students with SEN cannot be effectively educated in regular classrooms.	Siswa berkebutuhan khusus tidak dapat diajar secara efektif di kelas reguler.
5	It rarely happens a case to drop out the students with SEN from regular classrooms in order to meet their educational needs.	Sangat jarang terjadi adanya kasus mengeluarkan siswa berkebutuhan khusus dari kelas reguler untuk memenuhi kebutuhan pendidikan yang sesuai dengan mereka.
6	It is difficult to maintain discipline in a regular classroom that contains students with SEN.	Sulit untuk menjaga ketertiban di kelas reguler yang terdapat siswa berkebutuhan khusus.
7	Students with SEN are likely to create confusion in the regular classroom.	Siswa berkebutuhan khusus cenderung menciptakan kebingungan di kelas reguler.
8	Inclusive Education is likely to have a negative effect on the emotional development of students with SEN.	Pendidikan inklusif cenderung memiliki efek negative pada perkembangan emosional siswa berkebutuhan khusus.
9	The behavior of the students with SEN gives a bad example for the other students.	Perilaku siswa berkebutuhan khusus memberi contoh buruk bagi siswa lain.
10	It will be difficult to give appropriate attention to all students in an inclusive classroom.	Akan sulit untuk memberikan perhatian yang tepat kepada semua siswa di kelas inklusif.
11	Inclusive Education for All Students requires extensive retraining of regular classroom teachers.	Pendidikan inklusif untuk siswa berkebutuhan khusus memerlukan pelatihan ulang yang ekstensif dari guru kelas reguler.
12	Inclusive Education for All Students requires a significant change in regular classroom procedures.	Pendidikan inklusif untuk siswa berkebutuhan khusus membutuhkan perubahan signifikan dalam prosedur kelas reguler.
13	Most of the students with SEN do not make an adequate effort to complete their assignments.	Sebagian besar siswa berkebutuhan khusus tidak melakukan upaya yang memadai untuk menyelesaikan tugas mereka.
14	The needs of students with SEN can be served best through separate classes.	Kebutuhan siswa berkebutuhan khusus dapat terlayani yang terbaik melalui kelas khusus yang terpisah.
15	I get frustrated when I have difficulty communicating with students with SEN.	Saya frustrasi ketika saya mengalami kesulitan berkomunikasi dengan siswa berkebutuhan khusus.
16	I get upset when students with SEN cannot follow the lesson in my classroom.	Saya kecewa ketika siswa berkebutuhan khusus tidak dapat mengikuti pelajaranku di kelas.
17	I get irritated when I am unable to understand students with SEN.	Saya merasa jengkel ketika saya tidak dapat memahami siswa berkebutuhan khusus.
18	I get frustrated when I have to adapt the lesson to meet the individual's needs of all students.	Saya merasa frustrasi ketika saya harus menyesuaikan pembelajaran untuk memenuhi kebutuhan individu semua siswa.
19	Including students with SEN in regular classrooms is effective because they can learn the social skills necessary for success."	Memasukkan siswa berkebutuhan khusus di kelas reguler adalah efektif karena mereka dapat berlatih keterampilan sosial yang diperlukan untuk meraih kesuksesan.
20	I find that general education teachers often do not succeed with students with SEN, even when they try their best.	Saya menemukan bahwa guru pendidikan umum sering tidak berhasil pada siswa berkebutuhan khusus, bahkan ketika mereka mencoba yang terbaik.

No	English Version	Indonesian Version
21	The responsibility for educating students with SEN in regular classrooms should be shared between general and special education teachers.	Tanggung jawab untuk mendidik siswa berkebutuhan khusus di kelas reguler harus dibagi antara guru pendidikan umum dan khusus.
22	Students with SEN should be segregated from an inclusive classroom because it is too expensive to modify the physical environment of the school.	Siswa berkebutuhan khusus harus dipisahkan dari kelas inklusif karena terlalu mahal untuk memodifikasi lingkungan fisik sekolah.
23	Inclusive Education is not a desirable practice for educating most typically students.	Pendidikan inklusif bukan merupakan praktik yang diinginkan untuk mendidik siswa secara umum.
24	Most special education teachers lack appropriate base knowledge to educate typical students effectively.	Sebagian besar guru pendidikan khusus tidak memiliki basis pengetahuan yang memadai untuk mendidik siswa normal secara efektif.
25	I must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large scale.	Saya harus belajar lebih banyak tentang efek kelas inklusif sebelum kelas inklusif berlangsung dalam skala besar.
26	Students with SEN will probably develop academic skills more rapidly in a separate special classroom than in an inclusive classroom.	Siswa berkebutuhan khusus mungkin akan mengembangkan keterampilan akademik lebih cepat dalam kelas khusus yang terpisah daripada di kelas inklusif.
27	The presence of students with SEN promotes acceptance of individual differences among students.	Kehadiran siswa berkebutuhan khusus mempromosikan penerimaan perbedaan individu pada bagian dari siswa normal.
28	Inclusion promotes self-esteem among students with SEN.	Pendidikan inklusi mengangkat harga diri siswa berkebutuhan khusus.
29	Students with SEN in inclusive classrooms develop a better self-concept than in a self-contained classroom.	Siswa berkebutuhan khusus di kelas inklusif mengembangkan konsep diri yang lebih baik daripada di ruang kelas mandiri.
30	Students with SEN monopolize teachers' time.	Siswa berkebutuhan khusus memonopoli waktu guru.
31	My workload will be increased if I have students with SEN in my class.	Beban kerja akan meningkat jika saya memiliki siswa berkebutuhan khusus di kelas saya.
32	I will be more stressed if I have students with SEN in my class.	Saya akan lebih tertekan jika saya memiliki siswa berkebutuhan khusus di kelas saya.
33	I do not have any knowledge and skills required to teach students with SEN.	Saya tidak memiliki pengetahuan dan keterampilan yang dibutuhkan untuk mengajar siswa berkebutuhan khusus.
34	There will be inadequate resources/staff available to support Inclusive Education.	Akan ada sumber daya / staf yang tidak memadai yang tersedia untuk mendukung kelas inklusif.
35	I will not receive enough incentives (e.g., additional remuneration or allowance) to integrate students with SEN.	Saya tidak akan menerima insentif yang cukup (misalnya, remunerasi atau tunjangan tambahan) untuk mengintegrasikan siswa berkebutuhan khusus.
36	There will be inadequate special teachers who available to support Inclusive Education.	Akan ada kekurangan guru khusus yang tersedia untuk mendukung pendidikan inklusif.
37	My school will not have adequate special education instructional materials and teaching aids, e.g., Braille.	Sekolah saya tidak akan memiliki materi pengajaran pendidikan yang memadai dan alat bantu pengajaran, misalnya Braille.
38	My performance as a classroom teacher will decline if I implement an Inclusive Education program.	Performa saya sebagai guru kelas akan menurun, jika saya mengimplementasikan program pendidikan inklusif.
39	There will be inadequate administrative support to implement the Inclusive Education program.	Akan ada dukungan administratif yang tidak memadai untuk melaksanakan program pendidikan inklusif.

Appendix F

The Interview Questions of 23 Teachers

Guidelines for conducting interviews with teachers

First, all teachers get the same question, which is:
How is the implementation of inclusive education in your school?
Interview with Teacher 1 as follows.

By looking at the answers from the teacher, then the interviewer can continue with the following questions.

- What are the difficulties of implementing this inclusive education?
- How about children with special needs in learning in the classroom?
- Have you learned about students with special needs?
- Have you learned about an inclusive education system?
- How about the facilities for student services with SEN in your school?
- Do you have other constraints?

Appendix G

Table of the Second Revision of Instrument of Teachers' Attitudes toward Inclusive Education

No	The instrument of Teachers Attitude toward Inclusive Education	New items that conducted based on Indonesia situation
1	Students with SEN can be trusted with responsibilities in the classroom.	
2	Regular classrooms setting can create a comfortable classroom environment for all students, including students with SEN.	Classroom learning is not conducive to the presence of students with special educational needs in the classroom.
3	Students with SEN cannot be effectively taught in regular classrooms.	
4	It rarely happens a case to drop out the students with SEN from regular classrooms in order to meet their educational needs.	
5	It is difficult to maintain discipline in a regular classroom that contains students with SEN.	
6	Students with SEN tend to create confusion in the regular classroom.	
7	Inclusive education tends to have a negative effect on the emotional development of students with SEN.	
8	The behavior of the students with SEN gives a bad example for the other students.	
9	It will be difficult to give appropriate attention to all students in an inclusive classroom.	
10	Inclusive Education for All Students requires extensive retraining of regular classroom teachers.	
11	Inclusive Education for All Students requires a significant change in regular classroom procedures.	
12	Most of the students with SEN do not make an adequate effort to complete their assignments.	
13	I get frustrated when I have difficulty communicating with students with SEN.	
14	I get upset when students with SEN cannot follow the lesson in my classroom.	
15	I get irritated when I am unable to understand students with SEN.	
16	I get frustrated when I have to adapt the lesson to meet the individual's needs of all students.	
17	Entering students with SEN in regular classrooms is effective because they can learn the social skills necessary for success.	
18	I find that general education teachers often do not succeed with students with SEN, even when they try their best.	
19	Inclusive education is not a desirable practice for educating most typically students.	
20	Most special education teachers lack appropriate base knowledge to educate typical students effectively.	

No	The instrument of Teachers Attitude toward Inclusive Education	New items that conducted based on Indonesia situation
21	I must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large scale.	
22	Students with SEN will probably develop academic skills more rapidly in a separate special classroom than in an inclusive classroom.	Students with special educational needs will not achieve competency standards in learning.
23	Students with SEN monopolize teachers' time.	The teacher focuses on students with special educational needs and ignores other students.
24	My workload will be increased if I have students with SEN in my class.	The teacher does not have enough time to master the competencies related to the Inclusive Education system.
25	I will be more stressed if I have students with SEN in my class.	
26	I do not have any knowledge and skills required to teach students with SEN.	
27	There will be inadequate resources/staff available to support Inclusive Education.	
28	I will not receive enough incentives (e.g., additional remuneration or allowance) to integrate students with SEN.	
29	There will be inadequate special teachers who available to support Inclusive Education.	The school does not have a special guideline teacher that mastering the competence of Inclusive Education.
30	My school will not have adequate special education instructional materials and teaching aids, e.g., Braille.	
31	My performance as a classroom teacher will decline if I implement an Inclusive Education program.	
32	There will be inadequate administrative support to implement the inclusion program.	
33		All students should be educated in the same classroom regardless of their SEN."
34		Typically, students feel disturbed by the presence of students with special educational needs in the classroom.
35		Students with special educational needs are often bullied.
36		Parents often criticize their children with special educational needs to gain academic development.
37		I will get difficulty doing individual assessments for students with special educational needs.
38		Students with special educational needs are not accepted into regular schools because they do not qualify for the selection of new students.
39		Schools will not be able to meet standards to service and facilities for students with special educational needs because of their diverse and unmodified building facilities.
40		Indonesia does not yet have a curriculum for Inclusive Education, so it cannot be applied properly.

Appendix H

The Instrument to Measure Indonesian Teachers" Attitudes toward Inclusive Education

THE INSTRUMENT TO MEASURE INDONESIAN TEACHERS' ATTITUDES TOWARD INCLUSIVE EDUCATION

Data Filler Questionnaire

No	Questions	Anwers
1	Gender*	1. Male 2. Female
2	Age	…. Years
3	Province	…….
4	Type of Schools*	1. Inclusive School 2. Special School 3. Regular School
5	Level of Schools*	1. Elementary School/ equivalent level 2. Junior High School/ equivalent level 3. Senior High School/ equivalent level
6	Level of Education*	1. Bachelor 2. Master 3. Doctor
7	Subject of Teaching	1. Science (Science, Physics, Biology or Chemistry) 2. Other Subject, specify …….
8	Teaching Experience	…. Years
9	Experience in Inclusive Schools	…. Years
10	Training Program in Inclusive Education*	1. Ever 2. Never
11	Interaction with Special Education Needs Students*	1. Ever 2. Never

Noted: * Circle or cross in the numbers that fit on you

Directions:

The purpose of this confidental survey is to obtain an accurate and valid appraisal of your attitude toward inclusive education i.e. students with special education needs in the regular classroom (inclusive schools) with mild to moderate disabilities. Because there are no "right" or "wrong" answers to these items and confidential, please respond candidly.

Definition of Inclusive Education:

In accordance with the Regulation of the Minister of National Education of the Republic of Indonesia Number 70 Year 2009, Inclusive Education is defined as an education system that provides opportunities for all students who have disabilities and have the potential of intelligence and / or special talents to follow education or learning in an educational environment together with learners in general. Student disabilities include Learning Disabilities; Deaf and Hard of Hearing; Visual Impairments; Physical Handicaps; Speech Disorders; Mild/Moderate Emotional Disturbance; Intellectual Disabilities; Mental Disorder; Autism; or Trauma Brain Injury.

Directions for filling the Questionnaire:
The extent to which you **(1) Strongly Agree (SA), (2) Agree (A), (3) Neutral (N), (4) Disagree (D), or (5) Strongly Disagree (SD)** statement below by encircling or crossing the corresponding answer in the right column of each statement.

No	Statements	SA	A	N	D	SD
1	Regular classrooms setting can create a welcoming classroom environment for all students, including students with SEN.	1	2	3	4	5
2	It rarely happens a case to drop out the students with SEN from regular classrooms in order to meet their educational needs.	1	2	3	4	5
3	It is difficult to maintain discipline in a regular classroom that contains students with SEN.	1	2	3	4	5
4	Students with SEN are likely to create confusion in the regular classroom.	1	2	3	4	5
5	The behavior of the students with SEN gives a bad example for the other students.	1	2	3	4	5
6	Inclusive Education for All Students requires extensive retraining of regular classroom teachers.	1	2	3	4	5
7	Most of the students with SEN do not make an adequate effort to complete their assignments.	1	2	3	4	5
8	I get frustrated when I have difficulty communicating with students with SEN.	1	2	3	4	5
9	I get upset when students with SEN cannot follow the lesson in my classroom.	1	2	3	4	5
10	I get irritated when I am unable to understand students with SEN.	1	2	3	4	5
11	I get frustrated when I have to adapt the lesson to meet the individual's needs of all students.	1	2	3	4	5
12	Including students with SEN in regular classrooms is effective because they can learn the social skills necessary for success.	1	2	3	4	5
13	I must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large scale.	1	2	3	4	5
14	Students with SEN will probably develop academic skills more rapidly in a separate special classroom than in an inclusive classroom.	1	2	3	4	5
15	Students with SEN monopolize teachers' time.	1	2	3	4	5
16	My workload will be increased if I have students with SEN in my class.	1	2	3	4	5
17	I will be more stressed if I have students with SEN in my class.	1	2	3	4	5
18	I will not receive enough incentives (e.g., additional remuneration or allowance) to integrate students with SEN.	1	2	3	4	5
19	There will be inadequate special teachers who available to support Inclusive Education.	1	2	3	4	5
20	My school will not have adequate special education instructional materials and teaching aids, e.g., Braille.	1	2	3	4	5
21	Students with SEN are not accepted into regular schools because they do not qualify for the selection of new students.	1	2	3	4	5
22	Indonesia does not yet have a curriculum for inclusive education, so it cannot be applied properly.	1	2	3	4	5

THANKS FOR COMPLETING THIS INSTRUMENT

SIKAP GURU INDONESIA TERHADAP PENDIDIKAN INKLUSIF

Data Pengisi Kuisioner

No	Pertanyaan	Jawaban
1	Jenis Kelamin*	1. Laki-laki 2. Perempuan
2	Usia	…. Tahun
3	Provinsi	……..
4	Jenis Sekolah*	1. Sekolah Inklusif 2. Sekolah Luar Biasa 3. Sekolah Reguler
5	Jenjang Sekolah*	1. SD sederajat 2. SMP sederajat 3. SMA sederajat
6	Pendidikan Terakhir*	1. Sarjana 2. Pasca Sarjana
7	Mata Pelajaran yang Diampu*	1. IPA (IPA, Fisika, Biologi atau Kimia) 2. Selain IPA
8	Pengalaman Mengajar	…. Tahun
9	Pengalaman di Sekolah Inklusif	…. Tahun
10	Pelatihan di Pendidikan Inklusif*	1. Pernah 2. Tidak Pernah
11	Berinteraksi dengan siswa berkebutuhan khusus*	1. Pernah 2. Tidak Pernah

Keterangan : * Lingkari atau silang angka yang paling sesuai dengan Anda

Petunjuk:
Tujuan dari survei ini adalah untuk memperoleh penilaian yang akurat dan benar mengenai sikap Anda tentang pendidikan inklusif yaitu siswa berkebutuhan khusus di kelas reguler (sekolah inklusif) dengan tingkat ketunaan ringan sampai sedang. Karena tidak ada jawaban **"BENAR"** atau **"SALAH"** dan bersifat **RAHASIA**, mohon jawab kuisioner ini secara jujur.

Definisi Pendidikan Inklusif:
Sesuai dengan Peraturan Menteri Pendidikan Nasional Republik Indonesia Nomor 70 Tahun 2009, pendidikan inklusif didefinisikan sebagai sistem penyelenggaraan pendidikan yang memberikan kesempatan kepada semua siswa yang memiliki kelainan dan memiliki potensi kecerdasan dan/atau bakat istimewa untuk mengikuti pendidikan atau pembelajaran dalam satu lingkungan pendidikan secara bersama-sama dengan peserta didik pada umumnya. Kelainan siswa mencakup Ketidakmampuan Belajar; Gangguan Pendengaran; Gangguan Penglihatan; Cacat Fisik; Gangguan Bahasa; Gangguan emosional ringan; Retardasi mental; Autis; atau Trauma cedera otak.

Petunjuk Pengisian:
Tolong tunjukkan sejauh mana Anda **(1) Sangat Setuju (SS), (2) Setuju (S), (3) Netral (N), (4) Tidak Setuju (TS), atau (5) Sangat Tidak Setuju (STS)** dengan setiap pernyataan di bawah ini dengan melingkari atau menyilang jawaban yang sesuai di kolom sebelah kanan setiap pernyataan.

No	Statements	SS	S	N	TS	STS
1	Kelas reguler dapat menciptakan lingkungan kelas yang nyaman bagi siswa berkebutuhan khusus bersama siswa tanpa kebutuhan khusus.	1	2	3	4	5
2	Sangat jarang terjadi adanya kasus mengeluarkan siswa berkebutuhan khusus dari kelas reguler untuk memenuhi kebutuhan pendidikan yang sesuai dengan mereka.	1	2	3	4	5
3	Sulit untuk menjaga ketertiban di kelas reguler yang terdapat siswa berkebutuhan khusus.	1	2	3	4	5
4	Siswa berkebutuhan khusus cenderung menciptakan kebingungan di kelas reguler.	1	2	3	4	5
5	Perilaku siswa berkebutuhan khusus memberi contoh buruk bagi siswa lain.	1	2	3	4	5
6	Pendidikan inklusif untuk siswa berkebutuhan khusus memerlukan pelatihan ulang yang ekstensif dari guru kelas reguler.	1	2	3	4	5
7	Sebagian besar siswa berkebutuhan khusus tidak melakukan upaya yang memadai untuk menyelesaikan tugas mereka.	1	2	3	4	5
8	Saya frustrasi ketika saya mengalami kesulitan berkomunikasi dengan siswa berkebutuhan khusus.	1	2	3	4	5
9	Saya kecewa ketika siswa berkebutuhan khusus tidak dapat mengikuti pelajaranku di kelas.	1	2	3	4	5
10	Saya merasa jengkel ketika saya tidak dapat memahami siswa berkebutuhan khusus.	1	2	3	4	5
11	Saya merasa frustrasi ketika saya harus menyesuaikan pembelajaran untuk memenuhi kebutuhan individu semua siswa.	1	2	3	4	5
12	Memasukkan siswa berkebutuhan khusus di kelas reguler adalah efektif karena mereka dapat berlatih keterampilan sosial yang diperlukan untuk meraih kesuksesan.	1	2	3	4	5
13	Saya harus belajar lebih banyak tentang efek kelas inklusif sebelum kelas inklusif berlangsung dalam skala besar.	1	2	3	4	5
14	Saya harus belajar lebih banyak tentang efek kelas inklusif sebelum kelas inklusif berlangsung dalam skala besar.	1	2	3	4	5
15	Siswa berkebutuhan khusus memonopoli waktu guru.	1	2	3	4	5
16	Beban kerja akan meningkat jika saya memiliki siswa berkebutuhan khusus di kelas saya.	1	2	3	4	5
17	Saya akan lebih tertekan jika saya memiliki siswa berkebutuhan khusus di kelas saya.	1	2	3	4	5
18	Saya tidak akan menerima insentif yang cukup (misalnya, remunerasi atau tunjangan tambahan) untuk mengintegrasikan siswa berkebutuhan khusus.	1	2	3	4	5
19	Akan ada sumber daya / staf yang tidak memadai yang tersedia untuk mendukung kelas inklusif.	1	2	3	4	5
20	Sekolah saya tidak akan memiliki materi pengajaran pendidikan yang memadai dan alat bantu pengajaran, misalnya Braille.	1	2	3	4	5
21	Siswa berkebutuhan khusus tidak akan diterima di sekolah reguler karena mereka tidak memenuhi persyaratan pada penerimaan siswa baru.	1	2	3	4	5
22	Indonesia belum memiliki kurikulum khusus tentang pendidikan inklusif, Sehingga tidak dapat diterapkan secara baik.	1	2	3	4	5

TERIMAKASIH TELAH MENGISI INSTRUMEN INI