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Preschool Teachers' Attitudes towards Inclusive Education: A Survey in Indonesia and Taiwan

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Abstract

The study measures the attitudes of preschool teachers towards inclusive education in Taiwan and Indonesia with the Scale of Preschool Teachers' Attitudes towards Inclusion (SPTAI). A total of 637 participants (Indonesian = 233 and Taiwan = 404) participated in the survey. SPATI, developed in the study, was composed of 18 items, designated in a five-point Likert Scale with a response spanning from "strongly disagree (1)" to "strongly agree (5)". Four factors were extracted from SPTAI via exploratory factor analysis which explained 62.56% of the variance. Cronbach's alpha for the overall scale was .93 and coefficients for the four factors were .83, .84, .82, and .70, respectively. Overall, the average scores of SPATI in Indonesia and Taiwan were 3.65 and 3.20, which exceeded the mid-point of 3.0; and the difference between the two countries was statistically significant ($t = 10.98$, $p < .001$). Results indicated that the preschool teachers in Indonesia stood between "neutral" and "somewhat agree" with leaning towards the latter. The "Taiwan preschool teachers upheld positive attitudes of inclusive education but yet their stance was more "neutral". Significantly, Indonesian teachers were even more favourable to inclusive education than their Taiwanese counterparts. Several reasons that might explain the difference between these two countries are discussed in the study.

Keywords: Inclusive education, Preschool, Special education needs, Survey, Teacher attitude

1. Introduction

It is accepted that all students should enjoy an equal right to education. This value was assured in 1994 when 92 governments and 25 international organisations declared a joint Salamanca Statement and highlighted inclusive education as effective for all students, regardless of their linguistic, cultural, gender and disability background (United Nations Educational, Scientific and Cultural Organization, 1994). In achieving the goal, many counties have committed to providing inclusive education for students with disabilities. In Taiwan and Indonesia, a series of laws and policies favouring inclusive education have been introduced since the 1990s and 2000s, respectively (Taiwanese Department of Education, 2019; Ediyanto et al., 2017).

On the other hand, the learning quality of students with disabilities largely relies on teachers' capabilities to implement differential curricula, alternative assessments and flexible pedagogies, which in turn, requires substantial and effective pre-and in-service training (Sharma et al., 2009). Yet, massive concerns are raised on the possible compromise of the learning outcomes of students with disabilities in regular classes due to regular teachers' lack of expertise and non-welcoming attitudes (Sharma et al., 2003; Carroll et al., 2003). As such, it would be beneficial for the stakeholders to understand teachers' attitudes towards inclusive education so that some subsequent measures could be taken to improve educational practice.

This study attempts to gauge preschool teachers' attitudes towards including students with disabilities in Taiwan and Indonesia; and compare the differences in attitudes between the two countries. Accordingly, the following research questions guide this study:

(1) What are preschool teachers' attitudes towards inclusive education in Taiwan and Indonesia?

(2) Do Taiwanese preschool teachers' attitudes towards inclusive education differ significantly from their Indonesian counterparts?

2. Literature Review

2.1 Indonesian Context

In Indonesia, the law "Persons with Disability" was enacted in 1997 to protect the human rights of individuals with disabilities. Soon later the Law on the National Education System was introduced to assure the educational rights of students with disabilities. Since then, a bunch of educational measures have been devoted to guaranteeing the school education of students with disabilities (Ediyanto et al., 2017), including the National Education System Law in 2003, and the Law of Persons with Disabilities in 2011 which was modified in 2016 (Notoprayitno & Jalil, 2019).

A significant measure was initiated in 2003 when each province was ordered to opt for four regular schools to receive students with disabilities. In 2008, 925 regular schools were open to students with disabilities and the figure increased to 32 000 in 2017. Further, the number of special schools increased from 1 962 to 2 070 in the academic year of 2015 (Hasugian et al., 2018) and further jumped to 2 157 in 2016 (Notoprayitno & Jalil, 2019). The students served by special education are mainly those who have sensory disabilities (*e.g.*, blind, deaf), physical disabilities, speech disorders, psychiatric disorders and intellectual disability (Efendi, 2018).

Yet, to date, the number in special and regular schools still lags far behind the needs of the student population of disabilities (Ediyanto et al., 2017; Efendi, 2018). Only 10% of the students with disabilities receive school education (Ediyanto et al., 2017) and merely .34% in 2015 were included in mainstream classes (Notoprayitno & Jalil, 2019). Still, the infrastructure (ramps, elevators) are not well-equipped and this situation is more amplified in remote schools (Aprilia, 2017). As a result, several concerns need to be addressed to increase the educational right of students with disabilities.

2.2 Taiwanese Context

In Taiwan, "the Special Education Law", legislation regarding the protection of educational rights of students with disabilities was promulgated for the very first time in 1984. The latest version was revised in 2019. In line with the legislative requirements, a series of codes, policies and regulations were set up to reinforce the education of students with disabilities, such as "Enforcement Rules of the Special Education Act (ERSE)" (ERSE, 2020). In addition, the law guarantees monetary support—4.5% and 5% of the annual budgets of the central and local governments are required (The Special Education Act, 2019).

Nowadays, special education services are mandated to cover from two-year-old toddlers to young adults enrolled in higher education (The Special Education Act, 2019). According to the Taiwanese Minister of Education (2019), in 2018, a total of 113 027 students, studying from preschools to senior high schools, were identified as experiencing disabilities. Among them, learning disability was the most prevailing category with more than 30%, followed by intellectual disability at approximately 20%, and then the categories of development delays and autism made up around 13%. In addition, 13 392 young adults with different types of disabilities (*e.g.*, learning disabilities, deaf and autism) studied in post-high schools, like vocational colleges or universities. As for placement, three out of four students with disabilities attended mainstream classes whereas around 5% and 10% were placed in special schools and special classes, respectively.

Focusing on preschool data, in 2018, 19 664 children were identified as experiencing disabilities, of whom 80% were predominantly (80%) reported as experiencing some forms of developmental delays. The second and third prevailing groups, autism and hearing impairments, merely made up of around 6% and 3% (Taiwanese Minister of Education, 2019). In fact, the predominance reflects a preference for a category label, which alleviates the stigmatisation effect and maintenance of the flexibility of early diagnosis. As a whole, in Taiwan a comprehensive and systematic education mechanism has been established for attending to the needs of students with disabilities.

2.3 Demographic Variables and Inclusive Attitudes

Given that teachers' beliefs of inclusion are subjective to personal background and contextual factors, some relationships might be inconclusive and some are more consistent (Avramidis & Norwich, 2002; De Boer et al., 2011; Saloviita, 2020). The relationship tends to be conclusive between the severity or nature of students' disability conditions and teachers' acceptance of inclusive education. For example, regular teachers are more likely to express resistance to including students with emotional and behavioural difficulties than those experiencing physical and sensory difficulties. Moreover, adequate support resources would play a determinant role on regular teachers' willingness to accept students with disabilities (Saloviita & Schaffus, 2016). As Shaukat, Sharma, and Furlonger (2013) noted that teachers' attitudes tended to be more realism-oriented instead of being guided by belief.

On the other hand, the relationship is inconsistent between teachers' characteristics, and their inclusion attitudes, based on age, gender, and teaching experience (Avramidis & Norwich, 2002). Some researchers (Betz & Hackett, 1997; Saloviita, 2020) show that female teachers are more favouring of including students with disabilities while other studies (Chhabra et al., 2010; Galaterou & Antoniou, 2017) point out that gender is not a significant factor.

The inconclusive relationship is also found in terms of the age of teachers. Younger teachers are founded to be more positive towards inclusion in some studies (*e.g.*, Balboni & Pedrabissi, 2000; Saloviita, 2020; Saloviita & Schaffus, 2016) whereas no significance is found in other studies (Chhabra et al., 2010).

Teachers' self-efficacy, an awareness of their competency to handle teaching is another main factor which somewhat impacts regular teachers' attitudes towards inclusive education (Avramidis & Norwich, 2002; Sharma et al., 2006; Savolainen et al., 2013; Saloviita, 2020). Put it straightforward, teachers who feel confident in handling curriculum and instruction tend to express more favourable attitudes to educate students with disabilities in classes. Therefore, pre-service (*e.g.*, interaction with students with disabilities) and in-service training (*e.g.*, curriculum adjustment and instructional skills) are viewed as vital for enhancing (student) teachers' attitudes towards the inclusion of students with disabilities (Subban & Sharma, 2006; Sharma et al., 2009; Carroll et al., 2003; Swain et al., 2012).

3. Research Method

3.1 Participants

A purposeful and convenience sampling was used to recruit respondents. In Indonesia, a google survey was created and sent to potential respondents in Bandung Province through the university's networks. The data was collected from May 1st to July 31st in 2018. In Taiwan, the google version of the survey was posted to three popular 'Facebook' organisations regarding preschool teachers, which included 32 000, 27 000, and 6 600 members. The data collection proceeded in four weeks, starting from May in 2018. Consequently, a total of 637 preschool teachers (Taiwan = 404 and Indonesia = 233) successfully filled out the survey form.

3.2 SPTAI

The Scale of Preschool Teachers' Attitudes toward Inclusion (SPTAI) was developed in this study to survey preschool teachers' attitudes towards inclusive education. The scale is composed of two parts. The first part tapped into respondents' demographic information, including gender, years of teaching, age range, class size, number of students with disabilities, and pre-service training. The second part aims to explore the inclusive attitudes of preschool teachers. Therefore, SPTAI contained 18 questions of which the response is designated in a five-point Likert Scale as follows: strongly disagree as "1", disagree as "2", neutral as "3", agree as "4", and strongly agree as "5".

The draft questions were initially designed focusing on the four themes, teachers' ideas of inclusion, teachers' expertise, support for students and teachers, and expectation on inclusion. The questions were developed with reference to the other questionnaires, including Attitudes towards Inclusive Education Scale (Wilczenski, 1992), the Concerns about Inclusive Education Scale (Sharma & Desai, 2002) and the Teacher Attitudes towards Inclusion Scale (Cullen et al., 2010). The initial draft contained 21 questions but later three questions were deleted due to statistical unfitness. One item appeared cross loading on two factors with the value above .50. The other two had low communality, below .30.

The data of all participants, 637 were used for running factor analysis. The Kaiser-Meyer-Olkin **(**KMO) and Bartlett's Test were conducted to test the adequacy for doing factor analysis. Consequently, KMO was .93 and Bartlett's Test reached a significant level ($p < 0.001$). Then, the principal component analysis with the varimax rotation was run

to extract the dimensions of SPTAI. The threshold of Eigenvalue was set as one and four factors lived up to the criteria.

Table 1. Rotated factor matrix

Item	I	II	III	IV
i5	.664	.334	.354	-.005
i4	.658	.217	.071	.353
i2	.653	.096	.250	.160
i3	.602	.130	.361	.221
i7	.529	.512	.203	.135
i8	.491	.219	.137	.380
i18	.135	.875	.089	.182
i16	.167	.795	.253	.167
i17	.302	.616	.161	.301
i15	.253	.367	.730	.098
i6	.245	.018	.719	.016
i12	.262	.194	.684	.356
i11	.388	.220	.552	.331
i10	.161	.216	.063	.766
i9	.305	.274	.270	.633
i1	.386	-.012	.015	.594
i14	.242	.308	.369	.555
i13	-.178	.212	.484	.554

As shown in Table 1, the four factors were labelled as culture and engagement, fitting needs of all, bearing responsibility and competency, and professional training, which contributed to 18.79%, 16.10%, 15.08%, 12.58% of the variance, respectively. Altogether, the factors accounted for 62.48% of the total variance. On the other hand, the internal consistency of SPATI, calculated by Cronbach's alpha reached to .92. The alpha for four extracted factors valued .83 .84 .82 .70. Overall, SPTAI was a sound instrument.

3.3 Data Analysis

Descriptive statistics (*i.e.*, Mean, SD) were applied to analyze the demographic background of the respondents and the questionnaire responses. Furthermore, independent t-tests were

conducted to test whether a statistical significance exists on any SPTAI items between the Indonesian and Taiwanese subsamples.

4. Results

4.1 Demographic Information

Table 2. Demographic information of the respondents

	Indonesia		Taiwan	
	Frequency	percentage	Frequency	Percentage
Gender				
Male	28	12	4	1
Female	205	88	400	99
Age				
Below 30	209	90	105	26
30-40	13	5	152	37
41-50	11	4	124	31
Above 50	0	0	23	6
Teaching experience				
0-10	208	90	207	51
11-20	15	6	121	30
21-30	10	4	63	16
Above 30	0	0	11	3
Sped student				
0	4	2	0	0
1	207	88	80	20
2	20	9	184	46
3	0	1	77	19
Above 3	0	0	63	15
Class size				
Below11	208	89	39	10
11-15	25	11	84	21
Above 15	0	0	281	69
Total	233	36.58	404	63.42

The demographic information of the respondents is shown in Table 2. A total of 637 preschool teachers were recruited in this study, 36.6% (N = 233) and 63.4% (N = 404) from Indonesia and Taiwan, respectively. Overall, the females accounted for 88% (N = 205) and 99% (N = 400) of the Indonesian and Taiwanese subsamples. The Taiwanese respondents were older and had more teaching years than the Indonesian counterparts. 74% of the Taiwanese respondents aged above 30 years old, as opposed to around 90% of the Indonesian respondents aged under 30. The teaching years generally were in line with the age distribution. 90% of the Indonesian sample had less than ten years of teaching experience while 10% had more than 10 years of teaching experience. In contrast, around half of the Taiwanese respondents had below ten years of teaching experience and the other half had teaching experience of over ten years.

Moreover, the data showed a bigger class size and more students with disabilities were included in the Taiwanese classes. In Indonesia, 90% had less than ten students and the other 10% had between 11 to 15 students. In stark contrast, 69% of the Taiwanese teachers reported their classes included more than 15 students, and only 10% had less than ten students. In terms of the number of students with disabilities, only 10% of Indonesian teachers reported more than one student with disabilities in their classes whereas all of the Taiwanese teachers had at least one student with a disability - that is, nearly 20% had one, 46% had two and 34% had more than 3.

4.2 Exploring Teachers' Attitudes

Table 3. Summary of t-tests

Item	Indonesia *Mean (SD)* (N = 233)	Taiwan *Mean (SD)* (N = 404)	t-values
Factor I: culture and engagement			
2. Meeting students' rehabilitative needs	3.98(.65)	3.37(1.04)	9.23***
3. SEN students able to engage in class activities.	3.58(.72)	3.20(.98)	5.56***
4. Welcoming students with disabilities.	4.06(.71)	3.65(.89)	6.49***
5. Having sufficient time to do stationery work	3.84(.63)	2.45(1.00)	21.66***
6. Capable to handle SEN students' behaviours.	3.67(.66)	3.12(.90)	8.25***
7. Staff's willingness to support	3.73(.83)	3.29(1.08)	5.66***
Factor II: fitting needs of all			
10. Administration support can ease burdens	3.71(.85)	3.22(1.13)	6.21***
11. Benefits regular students' academic learning.	4.12(.70)	3.32(.98)	11.89***
12. Inclusive education is the most effective model for SEN students.	3.85(.74)	3.19(.98)	9.67***
13. Itinerant teachers are helpful.	4.07(.69)	3.91(.94)	2.40*
14 Benefits regular students' social development.	4.09(.74)	3.73(.88)	5.44***
15. All students' needs can be met	4.08(.67)	2.92(1.03)	17.08***
Factor III: bearing responsibility and competency			
16. Adjusting appropriate materials and equipment	3.39(.86)	3.01(.96)	5.06***
17. My responsibility for teaching students with SEN	3.86(.66)	3.43(1.01)	6.60***
18. Differentiated curriculum for SEN students.	3.33(.89)	3.13(.96)	2.56***
Factor IV: professional training			
1. Pre-service training is helpful	4.00(.73)	3.95(.99)	0.79
8. Inclusion benefits SEN students' social development	4.13(.73)	3.89(.82)	3.62***
9. In-service training is helpful	3.91(.62)	3.93(.83)	-.48
Mean	3.65(.44)	3.20(.59)	10.98***
Sum	65.73(7.94)	57.59(10.61)	10.98***

Note. *P < .05. **P < .01. ***P < .001.

The SPTAI's performances of the participants from both countries are summarized in Table 3. The average score for the overall scale of the Indonesian participants was 3.65 (SD = .44) and meanwhile, all items on Factor I, culture and engagement, Factor II, fitting needs of all, and Factor IV, professional training, had an average score above 3.5. That meant that the respondents' replies leaned towards "somewhat agree". In addition, two of the three items on Factor III, bearing responsibility and competency, item 16 "adjusting appropriate materials and equipment" and item 18 "planning differentiated curriculum for students with disabilities" yielded the scores of 3.39 and 3.33 below the cut-off score of "somewhat agree" (*i.e.*, 3.5). Therefore, Indonesian respondents demonstrated a neutral position on their competency in preparing appropriate curricula and teaching materials.

As shown in Table 3, the average score of the entire scale for Taiwanese respondents was 3.20 (SD = .59) which stood between "neutral" and "somewhat agree" but leaning towards neutral. The large portion of the items in Factor I, Culture and Engagement, Factor II, Fitting Needs of All, and Factor III, Responsibility and Competency did not exceed the middle line between neutral and somewhat agree (*i.e.*, 3.5). Exceptionally, the participants' responses lean to somewhat agree on items 4, 13 and 14. These were statements related to "welcoming students with disabilities", "itinerant teachers are helpful", and "benefits regular students' social development".

The participants performed higher on Factor IV, professional training in which all three items on average scored close to the answer category of "somewhat agree" (Mean = 4,0). In stark contrast, the mean value of item 5 "having sufficient time for stationary work" was 2.45. This meant the respondents somewhat disagreed with this statement. Also, the statement of item 15 "all students' needs could be met" received 2.92 responses and therefore, the respondents expressed a neutral stance on satisfying regular and special children's learning demands.

4.3 Testing Attitude Difference

Results of independent t-tests are summarized in Table 3. The average score of the total scale between the Indonesian participants and their Taiwanese counterparts differed significantly ($t = 8.058$, $p < .001$). While measuring each individual item, a significant difference could be found except for item 1 ($t = .79$, $p > .05$) and item 9 ($t = -4.8$, $p > .05$). These two questions enquired whether they think "pre-service" or "in-service" training was helpful in dealing with inclusive practice, respectively. Overall, the Indonesian preschool teachers generally had more positive attitudes on inclusive education than their Taiwanese counterparts except for the evaluation of the usefulness of pre-and in-service training programs.

5. Conclusion and Discussion

The first main finding of this study is that the 10-item SPTAI was a sound instrument to measure the inclusive attitudes of preschool teachers. The scale was constructed by four factors: culture and engagement, needs satisfaction, responsibility and competency, and professional training, which explained 62% of the total variance. SPTAI also had an excellent alpha value of more than 90 in the overall scale, and good alpha values in each subscale between .70 to .83.

As for teachers' attitudes, the findings suggested that the Indonesian and Taiwanese preschool respondents scored more than the midpoint of 3 in SPATI and meanwhile, the former outperformed the latter on the entire scale and all items expect two related to pre- and in-service training. This meant that while preschool teachers in both countries upheld a positive attitude towards inclusive education, Indonesian teachers are more favorable to inclusive education.

However, it was unexpected to find Taiwanese teachers had a less favourable attitude given the country's increased commitments of resources and legislation for inclusive education. This result contradicts the presumption that legislative and policy commitment towards inclusion would foster positive attitudes in teachers (Bowman, 1986; Sharma et al., 2003). Several possible reasons are raised here.

Firstly, teachers' positions tend to take into account practical conditions (Avramidis & Norwich, 2002). For example, smaller class size and extra people are crucial for teachers to maintain positive attitudes of inclusive education (Saloviita & Consegnati, 2019). In this study, an overall larger class size and more students with disabilities in educational practice may drive Taiwanese preschool teachers to feel challenged or overwhelmed in addressing diverse needs of students. Several of studies (*e.g.*, Montgomery & Mirenda, 2014; Sharma et al., 2009; Swain et al., 2012) indicate that a perception of low competency compromises teachers' acceptance of students with disabilities.

On the other hand, the Indonesian participants might reply in accordance with professionally must-do or inclusive philosophy given the low enrollment rate of students with disabilities in early education. The statistics estimate that the school enrollment rate of children aged 3 to 5 as a whole from 2018 to 2020 was around 37% (Statista Research Department, 2021). Despite a lack of official figures, it is reasonable to guess a lower rate for children with disabilities.

Thirdly, two subsamples' in equivalence on age and teaching experience may contribute to the significant difference of SPTAI. Some studies (*e.g.*, Balboni & Pedrabissi, 2000; Saloviita, 2020; Saloviita & Schaffus, 2016) indicate that teachers with younger age or fewer years of teaching experience are more likely to favour the inclusion of students with disabilities. Hence, younger age and fewer years of teaching may partially explain favourable attitudes among Indonesian participants. Nevertheless, it is worth repeating that positive attitudes of inclusive education are presented in both countries.

In addition, presumably national policy may influence teachers' attitudes (Sharma et al., 2003), however, the top-down policy forming process (Saloviita, 2020) and one-shot pre-service training (Woodcock et al., 2012) are not sufficient to enhance teachers' attitudes towards inclusive education. In Taiwan, the top-down process (Wu, 2007) and the compulsory one-course training of special education in pre-service training (The Special Education Act, 2019) could explain the inability to dramatically enhance preschool teachers' attitudes towards inclusive education.

Finally, disability discourse may trigger a significant barrier for moving forward with inclusive education in Taiwan (Author, 2013). Even though Taiwanese and Indonesian legislation are both grounded on the personal deficit perspective, we argue that the degree differs. For example, mathematics or literacy problems in Taiwan tend to be interpreted as personal deficits related to cognitive processes, such as phonological awareness (American Psychiatric Association, 2016). Learning disability is not adopted in Indonesian educational context. The disability identification is confined to sensory, physical or psychiatric difficulties. The deficit perspective aligned with the legislative protection for special services provides a framework to conceptualize, interpret and address a disability. In fact, this impacts how preschool teachers view resources and challenges regarding the inclusion of students with disabilities.

Yet, it should be noticed that the application of the study's results is subjective to the convenience and purposeful sampling method, which produced two unequal samples between Taiwan and Indonesia. An unbalanced distribution of the demographic information is obvious in the subsamples, such as age and teaching experience, which largely limits the generalization of the findings.

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Appendix A

The scale of preschool teachers' attitudes toward inclusion

Questions	SD				SA
1. The pre-service training is helpful for me in addressing the educational needs of students with disabilities	1	2	3	4	5
2. The rehabilitative demands of my students with disabilities, such as the speech therapy are met.	1	2	3	4	5
3. Generally, my students with disabilities can involve in class activities.	1	2	3	4	5
4. I welcome any students with disabilities in my class.	1	2	3	4	5
5. I have sufficient time to do the stationery work regarding the students with disabilities	1	2	3	4	5
6. I am capable to handle the behavioral problems of the students with SEN in my class.	1	2	3	4	5
7. I feel that my school staff are willing to help me care students with disabilities.	1	2	3	4	5
8. I believe that inclusive education is beneficial to social development of students with disabilities.	1	2	3	4	5
9. The in-service professional development programs are useful for me in addressing the needs of students with SEN.	1	2	3	4	5
10. I feel that the school's administration supports effectively ease my burdens of caring students with special needs.	1	2	3	4	5
11. I believe that inclusive education is beneficial to academic learning for regular students.	1	2	3	4	5
12. I believe that inclusive education is the most effective model to educate students with disabilities.	1	2	3	4	5
13. I feel that the regular visits of itinerant teachers are helpful in addressing the needs of students with disabilities.	1	2	3	4	5
14. I believe that inclusive education is beneficial to social development of regular students.	1	2	3	4	5
15. The educational needs of all students, including those with disabilities can be tailored in regular preschools.	1	2	3	4	5
16. I am capable to adjust the materials and equipment's for the students with disabilities in my class.	1	2	3	4	5
17. I believe that it is my responsibilities to teach the students with disabilities.	1	2	3	4	5
18. I am capable to provide the differentiated curriculum of the students with disabilities in my class.	1	2	3	4	5