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**Author(s):** Yada, Akie; Alnahdi, Ghaleb H.

**Title:** A comparative study on Saudi and Japanese in-service teachers' attitudes towards inclusive education and self-efficacy in inclusive practices

**Year:** 2021

**Version:** Published version

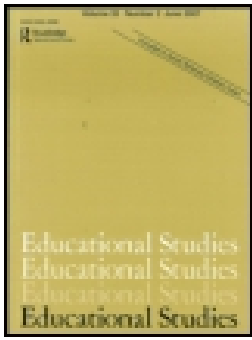
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**Please cite the original version:**

Yada, A., & Alnahdi, G. H. (2021). A comparative study on Saudi and Japanese in-service teachers' attitudes towards inclusive education and self-efficacy in inclusive practices. *Educational Studies*, Early online. <https://doi.org/10.1080/03055698.2021.1969646>



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To cite this article: Akie Yada & Ghaleb H. Alnahdi (2021): A comparative study on Saudi and Japanese in-service teachers' attitudes towards inclusive education and self-efficacy in inclusive practices, *Educational Studies*, DOI: [10.1080/03055698.2021.1969646](https://doi.org/10.1080/03055698.2021.1969646)

To link to this article: <https://doi.org/10.1080/03055698.2021.1969646>



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Published online: 31 Aug 2021.



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# A comparative study on Saudi and Japanese in-service teachers' attitudes towards inclusive education and self-efficacy in inclusive practices

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## ABSTRACT

Although providing equal educational opportunity for all children is the common goal for inclusive education around the world, the way of implementation is influenced by cultural, historical, and socio-economic factors of each country. This study aims to compare Saudi and Japanese teachers' attitudes and self-efficacy in inclusive education. Data were collected from 185 Saudi and 359 Japanese in-service teachers using a survey. Quantitative analysis revealed that there was no difference between Saudi and Japanese teachers' attitudes towards including students with disabilities. The Japanese teachers' overall self-efficacy was lower than that of the Saudi teachers, but this result was discussed with consideration to the modesty bias prevalent in Japanese culture. The findings provide useful insights for developing pre-service and in-service teacher education, where skills considering managing student behaviour and collaboration need to be more emphasised in Saudi Arabia and knowledge of policies regarding inclusive education should be stressed in Japan.

## ARTICLE HISTORY



Received 18 March 2021  
Accepted 15 August 2021

## KEYWORDS

Inclusive education; teacher; attitude; self-efficacy; comparative study

## 1. Introduction

In 1994, the Salamanca Statement on Principles, Policy, and Practice in Special Needs Education indicated that students with special educational needs should have access to regular classrooms, and 92 governments and 25 international organisations agreed with this document (UNESCO 1994). Alongside this declaration, inclusion has taken an effect in the education system in many countries through international documents such as the United Nations (2006) Convention on the Rights of Persons with Disabilities (Saudi Arabia ratified in 2008 and Japan in 2014) and the 2030 agenda for sustainable development (United Nations General Assembly 2015). An increasing number of children with special educational needs have been educated in mainstream schools since the Salamanca statement (UNESCO 1994), and inclusive education has become a key aspect of educational policies and systems throughout the world (Savolainen et al. 2012; Sharma, Loreman, and Forlin 2012). Despite this, the implementation of inclusive education in

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policies and practices differs between countries based on their cultural, historical, and political backgrounds (Savolainen et al. 2012). Thus, comparative research based on the cultural-historical framework may provide important insights for understanding the complexity and dynamics of each country in implementing inclusive education (Engelbrecht et al. 2013; Savolainen et al. 2012). From this point of view, a variety of studies have been conducted using comparative analysis between different countries (e.g. Jahnukainen 2011; Björn et al. 2016). However, much less is known about non-Western countries, including Saudi Arabia and Japan. To address this gap, this paper attempts to compare the inclusive education situations in Saudi Arabia and Japan from the teachers' perspective. Saudi Arabia and Japan have the following relevant similarities: a) they are both in Asia, the former in Western Asia and the latter in Eastern Asia; b) they are highly contextual, i.e. the context is a crucial part of communication and the culture, and people tend to be indirect (Borisoff and Victor 1989); c) both countries were considered as a high power distance country, where status hierarchy is recognised (Bjerke and Abdulrahim 1993; Hofstede, Hofstede, and Minkov 2010); d) Japan is one of the most uncertainty avoiding countries that try to control ambiguity in the future, and the situation is similar in Saudi Arabia (Bjerke and Abdulrahim 1993; Hofstede, Hofstede, and Minkov 2010); and e) in the light of education, both countries have a 6-3-3-4 education system. On the other hand, the two countries have several notable differences: a) they use completely different languages, Arabic and Japanese; b) Japan has a relatively homogeneous population, while Saudi Arabia has many immigrants due to foreign worker migration; c) Saudi Arabia is highly influenced by the Islamic and Arabic culture, where the society is generally religious (Bjerke and Abdulrahim 1993). Japanese people, in general, are not strictly religious, although spiritual traditions and beliefs related to Buddhism and Shinto are embedded in everyday life (Petkova 2015); and d) the education system in Saudi Arabia is segregated based on gender, unlike in Japan.

## 2. Literature review

### 2.1. Teachers' attitudes towards inclusive education

Teachers play a crucial role in implementing inclusive education. Previous research has established that teachers' positive attitudes towards inclusion are required for them to efficiently apply inclusive practices (e.g. Avramidis et al. 2019; Avramidis and Norwich 2002; de Boer, Pijl, and Minnaert 2011). The factors that influence teachers' attitudes are debated in the literature. For instance, Avramidis and Norwich (2002) pointed out three types of factors: a) child-related variables, containing types of children's disabilities and difficulties; b) teacher-related variables, including their gender, grade level they taught, the experience of contact with children with disabilities, amount of training, beliefs in inclusive education, and socio-political views; and c) educational environment-related variables, consisting of availability of support services such as encouragement from colleagues and support from specialists. Similarly, a review study by de Boer, Pijl, and Minnaert (2011) indicated that several variables, such as teachers' gender, years of teaching experience, training, and type of children's disability, were related to their attitudes towards inclusive education. In the

light of teachers' gender, two studies showed a gender difference in teachers' attitudes, where female teachers held more positive attitudes towards inclusive education (de Boer, Pijl, and Minnaert 2011).

Furthermore, several studies have investigated differences between countries in teachers' attitudes towards inclusion (e.g. Yada et al. 2018; Savolainen et al. 2012; Sharma et al. 2018). For instance, Leyser, Kapperman, and Keller (1994) compared teachers' attitudes towards the mainstreaming of students with special needs in six countries, finding more positive attitudes in the American and German samples than in those of Israel, Taiwan, Ghana, and the Philippines. Similarly, data from cross-cultural studies have indicated more positive teacher attitudes in Western nations than in non-Western ones (Alghazo and Gaad 2004; Malinen, Savolainen, and Xu 2012). In terms of teachers' attitudes in Saudi Arabia, while several studies have concluded that they are positive (Al-Ahmadi 2009; Aljlamdah 2014; AlWadaani 2013), some have concluded the opposite (Alquraini 2011; Hakeem 2009), and a recent study found that Saudi pre-service teachers expressed less positive attitudes than Finnish pre-service teachers (Alnahdi et al. 2019). On the other hand, Japanese teachers' attitudes were found to be somewhat above the neutral midpoint (Yada et al. 2017) and more positive than those of their Finnish counterparts (Moberg et al. 2019).

## **2.2. Teachers' self-efficacy in implementing inclusive education**

One of factors that influences teachers' attitudes towards inclusive practices is their self-efficacy (Desombre, Lamotte, and Jury 2019; Meijer and Foster 1988; Weisel and Dror 2006). Bandura (1997) uses this term to refer to a person's belief in his or her capability to produce expected outcomes, and teachers' self-efficacy is specific to the teaching profession. Both domain-specific (e.g. teaching science, maths, reading, or physical education) and general teacher self-efficacy have been studied (Klassen et al. 2011; Tschannen-Moran, Woolfolk Hoy, and Hoy 1998). Echoing the worldwide trend towards inclusion, the recent focus has been on teachers' self-efficacy in terms of inclusive practices. One study by Sharma and Jacobs (2016) found that teachers' intention to teach in inclusive settings was influenced by their self-efficacy in inclusive practices. In a similar vein, a recent study indicated that teachers' higher self-efficacy was associated with their willingness to implement a peer tutoring programme in inclusive classrooms (Avramidis et al. 2019).

Many published studies describe differences in teachers' self-efficacy in inclusive practices between countries (Yada et al. 2018; Sharma et al. 2018; Savolainen et al. 2012). For example, Savolainen et al. (2012) found that South African teachers were more confident in managing students' problematic behaviour than their Finnish colleagues, though their level of overall self-efficacy was similar. Another study found that Saudi teachers' self-efficacy in inclusive practices was somewhat neutral in general but high in some aspects (Alnahdi 2019a). Moreover, some evidence suggests that Japanese teachers' self-efficacy in inclusive practices is lower than in other countries (Yada and Savolainen 2017; Song 2016). However, these results should be discussed with caution because Japanese culture highly values modesty, so Japanese people may self-report lower scores (Markus and Kitayama 1991; National Institute for Educational Policy Research 2014).

Several lines of evidence suggest that teachers' self-efficacy in inclusive practices is related to their attitudes towards inclusive education (e.g. Avramidis et al. 2019; Meijer and Foster 1988; Saloviita 2020; Savolainen et al. 2012; Sharma and Jacobs 2016). Malinen,

Savolainen, and Xu (2012) found that Chinese teachers' self-efficacy in collaborating with other teachers and staff was the strongest and only predictor of their attitudes towards inclusive education. Likewise, a study by Sharma and Jacobs (2016) found that self-efficacy in collaboration positively predicted teachers' attitudes in both the Indian and the Australian sample, though self-efficacy in managing behaviour negatively predicted teachers' attitudes in the Australian sample.

### ***2.3. Situation of inclusive education in Saudi Arabia and Japan***

#### ***Inclusive education in Saudi Arabia***

The education system in Saudi Arabia has seen several stages of development, from aiming to provide education to everyone in the country several decades ago to serving around six million students at present. The development in the number of services provided and the expansion of school availability in the country's various regions have also had an impact on the provision of services related to individuals with disabilities.

Early initiatives to provide education services for people with disabilities began in the 1950s, and the first school for students with visual impairments was opened in the 1960s (Althabet 2002). Significant development in the quantity and quality of education services for students with disabilities has occurred in recent decades (Alnahdi et al. 2019), starting with including students with disabilities in some regular schools in many cities around the country. The number of such schools has increased gradually over the last two decades. Students with learning disabilities are included at the class level, while students with other disabilities (e.g. intellectual, hearing, or visual) are included at the school level in separate classrooms. Students with severe disabilities receive education in special schools.

Teachers in Saudi Arabia who work with students with disabilities are trained for specific disabilities (e.g. intellectual disabilities, autism, hearing impairment, learning disabilities, visual impairment, or severe disabilities). The Saudi Ministry of Education (MOE) is currently working on a big project to reshape teacher preparation in the country, expected to enter into effect in 2021 or 2022. As part of this change, a new general framework for developing teacher preparation programmes in Saudi universities was released in 2020, requiring that all teachers have at least two to three courses related to students with disabilities in their preparation programmes, which would mark a significant shift in teacher preparation (MOE 2020).

#### ***Inclusive education in Japan***

In Japan, compulsory education for all children, even those with severe disabilities, began in 1979 (Muta 2002; Yawata 2006). However, children with severe or moderate disabilities were only able to receive education in special schools or classes in the 1980s (Moberg et al. 2019), and special support had rarely been provided for children with mild disabilities in regular classrooms (Muta 2002). In 1993, the resource room system was established with an amendment to the School Education Law, making it possible for children with mild disabilities to receive special education support in regular classrooms (Nagano and Weinberg 2012; Muta 2002). In the 1990s, a growing phenomenon of student non-attendance was discussed in relation to children with behaviour problems or learning difficulties (Ichikawa 2014). The Japanese Ministry of Education, Culture, Sports, Science, and Technology (MEXT) submitted a report for the promotion of special

needs education in 2003, and traditional special education was replaced with the new version with a partial amendment to the School Education Law in 2007 (Han et al. 2013; Nagano and Weinberg 2012). Since this reform, children with mild disabilities have been able to receive special education services in all schools, including regular classes (MEXT 2007). More recently, the Committee of Elementary and Lower Secondary Education in the Central Council for Education (2012) submitted a report regarding the development of special needs education in terms of implementing inclusive education.

To date, the political reform towards inclusive education has been rapid in Japan; the term “inclusive education” was imported from abroad and has been used in policies without closely examining its meaning (Miyoshi 2009). Although the worldwide understanding of the term refers to including all children from all kinds of backgrounds in mainstream schools with the aim of preventing segregation (UNESCO 2005), the Japanese government still establishes special education schools annually (MEXT 2017b). Miyoshi (2009) has pointed out that the growing number of special schools is a retrograde step towards inclusive education.

Furthermore, research has demonstrated that Japanese teachers are not ready for this quick move towards inclusive education. Few courses in teacher certification programmes address inclusive education (Forlin, Kawai, and Higuchi 2015), and it has only recently become compulsory to take a one-credit course related to it (MEXT 2017a). Ueno and Nakamura (2011) found that Japanese primary teachers’ level of knowledge regarding inclusive education was relatively low, and they expressed anxiety towards implementing inclusive practices in regular classes. Similarly, another study found that teachers’ awareness of keywords related to special needs education and inclusive education was low, concluding that developing in-service teacher training for inclusive practices is crucial in Japan (Fujii 2014).

#### **2.4. Research questions**

The main objective of this study is to investigate Saudi and Japanese teachers’ attitudes towards inclusive education and their self-efficacy in inclusive practices with the following research questions:

- (1) What is the level of Saudi and Japanese teachers’ attitudes towards inclusive education?
- (2) What is the level of Saudi and Japanese teachers’ overall and specific self-efficacy in inclusive practices?
- (3) Does teachers’ self-efficacy in inclusive practices correlate with their attitudes towards inclusive education in Saudi Arabia and Japan?
- (4) Do three subtypes of teachers’ self-efficacy in inclusive practices predict teachers’ attitudes towards inclusive education in Saudi Arabia and Japan?

Considering the existing research, the following hypotheses were formulated: First, it was expected that since contradictory results have been reported regarding Saudi teachers’ attitudes towards inclusive education (AlJlamdah 2014; Alquraini 2011; AlWadaani 2013), Japanese teachers’ attitudes would be more positive than those of Saudi teachers (Moberg et al. 2019). Second, it was hypothesised that Saudi teachers’ overall and specific self-efficacy will be higher than Japanese teachers’ self-efficacy (Yada and Savolainen 2017; Song 2016), which might be due to modesty bias (Markus and Kitayama 1991;

National Institute for Educational Policy Research 2014). Third, teachers' level of self-efficacy would be positively correlated with their attitudes towards inclusive education in both countries (Yada and Savolainen 2017; Savolainen et al. 2012). Finally, it is assumed that teachers' specific self-efficacy would be a predictor of their attitudes towards inclusive education in Saudi Arabia and Japan (Yada and Savolainen 2017; Savolainen et al. 2012).

### 3. Method

#### 3.1. Participants

A total of 544 Saudi and Japanese teachers working at the primary and secondary levels participated in this study. The Saudi sample was collected in 2015, comprising 185 in-service teachers from schools within the Riyadh region (16.8% female, 83.2% male) with an average of 12.80 (SD = 8.29) years of teaching experience. The Japanese sample was collected in 2014, comprising 359 Japanese in-service teachers (53.5% female, 43.7% male) from nine prefectures in the eastern and western regions of Japan with an average of 18.42 (SD = 11.92) years of teaching experience. Both samples were collected using snowball sampling, in which the researchers asked principals and teachers to tell their acquaintances about the present study (Emerson 2015). The data were collected at a different point in time because they were originally gathered in the different research projects.

#### 3.2. Research instruments

A survey was conducted including a cover letter that explained the aims of the study, data confidentiality, the voluntary nature of participation, and the participant's right to withdraw at any time. The participants answered survey questions regarding their background information and the two scales below.

Teachers' attitudes towards inclusive education were measured using four items taken from the attitude sub-scale of the Sentiments, Attitudes, and Concerns about Inclusive Education Revised (SACIE-R) scale (Forlin et al. 2011). One of the original five items ("students who are inattentive should be in regular classes") was excluded, as the researchers thought the Saudi sample might not understand it as intended after translation. Thus, to preserve comparability, only four items were used in the analysis for the Japanese sample as well. The participants responded on a four-point Likert scale from 1 ("strongly disagree") to 4 ("strongly agree"). The reliability of the four items was calculated using Cronbach's  $\alpha$  and was acceptable in both samples ( $\alpha = 0.726$  for Saudi Arabia and  $\alpha = 0.729$  for Japan).

Teachers' self-efficacy in inclusive education was measured using the Teacher Efficacy for Inclusive Practices (TEIP) scale (Sharma, Loreman, and Forlin 2012). The participants answered 18 questions on a Likert scale from 1 ("strongly disagree") to 6 ("strongly agree"), with higher TEIP scores indicating higher self-efficacy in inclusive practices. Cronbach's  $\alpha$  was 0.963 for Saudi Arabia and 0.927 for Japan, showing high reliability in both samples. Further, the scale consists of three sub-scales: efficacy in instruction, efficacy in collaboration, and efficacy in managing behaviour.



As the original versions of the two scales are in English, the researchers translated them into Arabic and Japanese (Alnahdi 2019b; Yada and Savolainen 2017). Confirmatory factor analysis for the attitude scale was conducted to examine whether the proposed factor structure can be found in both samples. The construct validity of the TEIP scale using Saudi and Japanese samples was already tested in previous studies (Alnahdi 2019b; Yada et al. 2018). A single-factor structure for the attitude scale was examined using Mplus Version 7.0 for Mac (Muthén and Muthén 2012). The model fit was assessed using the so-called two-index presentation strategy, in which a root mean square error of approximation (RMSEA) of 0.06 or lower and a standardised root mean square residual (SRMR) of 0.09 or lower are considered to indicate sufficient fit (Hu and Bentler 1999). The fit indices showed adequate fit in both countries (RMSEA = 0.000, SRMR = 0.014, CFI = 1.000 for Saudi Arabia, and RMSEA = 0.057, SRMR = 0.019, CFI = 0.987 for Japan). Therefore, the construct validity of the attitude scale was demonstrated.

### 3.3. Data analysis

The data were analysed using SPSS Statistics 24 (IBM 2016), and effect sizes were calculated with an online calculator (Lenhard and Lenhard 2016). First, the mean scores of the overall scales and sub-scales with confidence intervals and independent samples t-tests were used to assess the level of Saudi and Japanese teachers' attitudes and their self-efficacy in inclusive education. Second, chi-square tests for independence were conducted to compare responses on each item of the TEIP scale between the Saudi and Japanese samples. Third, Pearson's correlation coefficients were calculated to assess the relationship between teachers' attitudes and self-efficacy in both countries. Finally, regression analyses were conducted, with teachers' attitudes as a dependent variable and the three sub-dimensions of self-efficacy as independent variables, to explore the relationships between them.

## 4. Results

### 4.1. Saudi and Japanese teachers' attitudes towards inclusive education

Both Saudi and Japanese teachers' attitudes towards including children with disabilities were slightly above the neutral midpoint (2.5) of the scale ( $M = 2.52$  and  $2.56$ , respectively). There was no statistically significant difference between the Saudi and Japanese samples ( $t(234.74) = 0.55$ ,  $p = 0.58$ ). Thus, we found that the teachers did not express extreme attitudes for or against inclusive education in either country (Table 1).

**Table 1.** Attitude scale scores with 95% confidence intervals (CI) and result of independent sample t-test.

	Mean (SD)	Lower CI	Upper CI	<i>t</i>	<i>df</i>	<i>p</i>
Saudi Arabia	2.52 (.71)	2.41	2.64	.55	234.74	.58
Japan	2.56 (.60)	2.50	2.62			

## 4.2. Saudi and Japanese teachers' self-efficacy in inclusive practices

The Japanese teachers' overall self-efficacy in inclusive practices ( $M = 3.75$ ,  $SD = 0.66$ ) was significantly lower than that of the Saudi teachers ( $M = 4.55$ ,  $SD = 1.15$ ;  $t(250.23) = 8.81$ ,  $p < 0.001$ ,  $d = 1.11$ ). Moreover, in terms of different types of teacher self-efficacy, Saudi teachers' scores were significantly higher than those of the Japanese teachers in all three TEIP sub-scales (see Table 2).

However, these results must be carefully considered given the fact that Japanese participants show a significant modesty bias in self-reported surveys (Markus and Kitayama 1991; National Institute for Educational Policy Research 2014). Table 3 presents the distribution of the percentages in all TEIP items, where the Japanese sample had a tendency to choose the middle answers (i.e. 3 = "disagree somewhat" and 4 = "agree somewhat"), indicating a modesty bias. Therefore, the responses for the individual items were recoded into two categories (1 and 2 into 1, and 3, 4, 5, and 6 into 2), so that 1 included teachers who were certain that they did not have the stated ability and 2 included teachers who thought they had at least some level of the ability.

A series of chi-square tests for independence were conducted to compare the responses in the new categories between Saudi Arabia and Japan. The p-value of Bonferroni correction for multiple comparisons was calculated. The results indicated that significantly more teachers disagreed with items 1, 12, and 13 in the Saudi sample than in the Japanese sample (Table 4). On the other hand, significantly more teachers disagreed with item 16 in the Japanese sample than in the Saudi sample.

## 4.3. Correlation between teachers' self-efficacy in inclusive practices and attitudes towards inclusive education

The results of Pearson's correlation analyses are presented in Table 5. The Saudi teachers' attitudes are found to be correlated with overall self-efficacy in inclusive practices, self-efficacy in instruction, and self-efficacy in collaboration, but not with self-efficacy in managing behaviour. The Japanese teachers' attitudes are significantly correlated with overall self-efficacy and all the sub-dimensions.

**Table 2.** TEIP scale overall and sub-scale scores with 95% confidence intervals (CI).

Sample	N	Mean (SD)	Lower CI	Upper CI	t	df	p	d
<i>TEIP overall score</i>								
Saudi Arabia	185	4.55 (1.15)	4.39	4.72	8.81	250.23	< .000	1.11
Japan	344	3.75 (.66)	3.68	3.82				
<i>Efficacy in instruction</i>								
Saudi Arabia	185	4.65 (1.19)	4.48	4.82	8.91	254.23	< .000	1.12
Japan	344	3.80 (.70)	3.73	3.88				
<i>Efficacy in collaboration</i>								
Saudi Arabia	185	4.48 (1.26)	4.30	4.66	6.81	253.49	< .000	.86
Japan	344	3.79 (.74)	3.71	3.87				
<i>Efficacy in managing behaviour</i>								
Saudi Arabia	185	4.52 (1.22)	4.52	4.34	8.83	265.95	< .000	1.08
Japan	344	3.64 (.77)	3.56	3.73				

TEIP = Teacher Efficacy for Inclusive Practices

**Table 3.** Distribution of responses on items of the TEIP scale.

Items	Country	Responses						Total (%)	Missing (%)	3 & 4 (%)	5 & 6 (%)
		1. Strongly disagree (%)	2. Disagree (%)	3. Disagree somewhat (%)	4. Agree somewhat (%)	5. Agree (%)	6. Strongly agree (%)				
1.	Saudi	6.5	7	9.7	20.5	22.7	33	99.5	0.5	30.2	55.7
	Japan	0.8	4.5	18.4	40.1	24.5	7.5	95.8	4.2	58.5	32
2.	Saudi	5.4	6.5	9.2	16.8	24.3	37.3	99.5	0.5	26	61.6
	Japan	2.2	11.4	26.7	40.1	12.5	2.5	95.5	4.5	66.8	15
3.	Saudi	4.3	3.9	6.5	17.8	24.3	41.6	98.9	1.1	24.3	65.9
	Japan	0.8	3.9	15.9	43.7	24.2	6.7	95.3	4.7	59.6	30.9
4.	Saudi	3.8	5.4	10.8	15.1	27	37.3	99.5	0.5	25.9	64.3
	Japan	1.1	9.5	27.6	41.8	13.1	2.8	95.8	4.2	69.4	15.9
5.	Saudi	5.4	4.9	9.7	20.5	26.5	32.4	99.5	0.5	30.2	58.9
	Japan	0.8	6.4	18.9	51.3	15.3	3.1	95.8	4.2	70.2	18.4
6.	Saudi	5.4	5.4	5.9	17.3	27.6	36.8	98.4	1.6	23.2	64.4
	Japan	0.8	3.9	21.4	45.4	18.4	5.8	95.8	4.2	66.8	24.2
7.	Saudi	6.5	5.9	14.1	19.5	25.4	28.1	99.5	0.5	33.6	53.5
	Japan	4.7	14.2	32	36.8	7.2	0.6	95.5	4.5	68.8	7.8
8.	Saudi	3.8	6.5	9.7	16.2	27.6	35.7	99.5	0.5	25.9	63.3
	Japan	3.3	10.6	30.6	42.3	7.2	1.7	95.8	4.2	72.9	8.9
9.	Saudi	7	9.2	15.1	15.7	21.6	30.3	98.9	1.1	30.8	51.9
	Japan	2.2	8.9	35.9	35.9	10.6	1.9	95.5	4.5	71.8	12.5
10.	Saudi	7	9.2	15.1	15.7	21.6	30.3	98.9	1.1	30.8	51.9
	Japan	4.7	12	40.9	29.2	7.2	0.8	95	5	70.1	8
11.	Saudi	3.8	5.4	9.2	16.8	27.6	36.8	99.5	0.5	26	64.4
	Japan	1.1	3.9	15	49	21.7	4.2	95	5	64	25.9
12.	Saudi	7	6.5	8.6	14.6	23.8	39.5	100	0	23.2	63.3
	Japan	0.8	3.6	10	37.3	31.5	12.3	95.5	4.5	47.3	43.8
13.	Saudi	10.8	5.9	12.4	16.2	18.9	35.1	99.5	0.5	28.6	54
	Japan	1.7	4.2	15	41.8	25.6	7.5	95.8	4.2	56.8	33.1
14.	Saudi	5.9	3.8	10.3	20	19.5	40	99.5	0.5	30.3	59.5
	Japan	1.9	3.3	19.2	45.1	21.2	4.7	95.5	4.5	64.3	25.9
15.	Saudi	4.3	3.2	8.1	16.8	29.2	36.8	98.4	1.6	24.9	66

(Continued)

**Table 3. (Continued).**

Items	Country		Responses									
			2.5	9.5	34.3	35.1	10.9	3.1	95.3	4.7	69.4	14
16.	Japan	Saudi	8.1	6.5	15.1	17.8	22.7	28.6	98.9	1.1	32.9	51.3
	Japan	Japan	10	21.4	36.5	21.4	5	1.4	95.8	4.2	57.9	6.4
17.	Japan	Japan	7	5.9	15.7	19.5	24.3	27	99.5	0.5	35.2	51.3
	Japan	Japan	5.6	11.7	32.9	35.1	8.9	1.7	95.8	4.2	68	10.6
18.	Japan	Japan	4.3	3.8	8.1	11.9	27	44.3	99.5	0.5	20	71.3
	Japan	Japan	0.8	2.5	12	50.4	23.7	5.8	95.3	4.7	62.4	29.5

TEIP = Teacher Efficacy for Inclusive Practices

**Table 4.** Percentage of item responses and results from chi-square tests for independence.

Items	Country	1. Dis. (%)		2. Not Dis. (%)		$\chi^2$	df	p	Corrected p	$\phi$
		Dis. (%)	Not Dis. (%)	Dis. (%)	Not Dis. (%)					
1. I can make my expectations clear about student behaviour.	Saudi Arabia	13.6	86.4	9.176	1	.002	.044	.139		
	Japan	5.5	94.5							
6. I can provide appropriate challenges for very capable students.	Saudi Arabia	11.0	89.0	5.763	1	.016	.295	–		
	Japan	4.9	95.1							
7. I am confident in my ability to prevent disruptive behaviour in the classroom before it occurs.	Saudi Arabia	12.5	87.5	4.000	1	.046	.819	–		
	Japan	19.8	80.2							
12. I can collaborate with other professionals (e.g. school nurse or school counsellor) in designing educational plans for students with disabilities.	Saudi Arabia	13.5	86.5	11.932	1	.001	.009	.158		
	Japan	4.7	95.3							
13. I am able to work jointly with other professionals and staff (e.g. aides and other teachers) to teach students with disabilities in the classroom.	Saudi Arabia	16.8	83.2	14.397	1	.000	.003	.172		
	Japan	6.1	93.9							
16. I am confident in informing others who know little about laws and policies relating to the inclusion of students with disabilities.	Saudi Arabia	14.8	85.2	19.132	1	.000	.000	.195		
	Japan	32.8	67.2							
18. I am able to provide an alternate explanation or example when students are confused.	Saudi Arabia	8.2	91.8	4.386	1	.036	.652	–		
	Japan	3.5	96.5							

Corrected *p* values were calculated using the Bonferroni method; only results with significant primary *p* values are presented.

#### 4.4. Self-efficacy as a predictor of attitudes towards inclusive education

Using multiple regression analysis, the mean scores of three sub-scales of the TEIP scale were used as a predictor of attitudes towards inclusive education (Table 6). The results indicate that teachers' self-efficacy in inclusive education explained their attitudes towards inclusive education in both Saudi Arabia and Japan, although the  $R^2$  values were relatively low ( $R^2 = 0.093$  and  $0.038$ , respectively). For the Saudi sample, while the self-efficacy in instruction and in collaboration correlated positively and statistically significantly with their attitudes in Table 5, considering the associations of the other subtype of self-efficacy, the individual relationship of them and attitudes was not statistically significant. For the Japanese sample, self-efficacy in collaboration had a statistically significant effect on their attitudes: the more the teachers reported self-efficacy in collaboration, the more positive attitudes the teachers showed.

### 5. Discussion

With the first research question, this study sought to determine whether there is a difference between Saudi and Japanese teachers' attitudes towards inclusive education. The results of the analysis indicate no difference, with teachers being neither extremely in favour of nor against the inclusion of children with special needs. This is consistent with the findings of a previous review which indicated that teachers in many studies were undecided or neutral in their beliefs about inclusive education (de Boer, Pijl, and Minnaert 2011).

Regarding the second research question, Japanese teachers' self-efficacy in overall and sub-scale scores was found to be significantly lower than that of their Saudi counterparts. However, these results must be interpreted with caution because Japanese people have a tendency towards a modesty bias in self-reporting (National Institute for Educational Policy Research 2014). When we carefully examined the distribution of responses in each TEIP sub-scale (Table 3), around 70% of participants chose 3 ("Disagree somewhat") or 4 ("Agree somewhat") in the Japanese sample, whereas around 50%–60% of Saudi participants chose 5 ("Agree") or 6 ("Strongly agree"). Therefore, new categorical variables were created, one for teachers who were certain in their inability and another for the rest. Based on an analysis using the new categorical variables, significantly more Saudi teachers said they do not have self-efficacy in making clear expectations about student behaviour (item 1) or in collaborating with other school staff and professionals (items 12 and 13). The former may be explained in terms of the teachers being conservative due to the

**Table 5.** Pearson correlations between the attitudes and TEIP scale overall and sub-scale scores.

	1	2	3	4	5
1. Attitude	-	.234**	.258**	.261**	.157
2. TEIP all	.168**	-	.951***	.929***	.940***
3. Instruction	.131*	.924***	-	.845***	.841***
4. Collaboration	.193***	.869***	.731***	-	.799***
5. Managing behaviour	.122*	.884***	.754***	.599***	-

TEIP = Teacher Efficacy for Inclusive Practices; Correlations from the Saudi data are above the diagonal, and correlations from the Japanese data are below it; \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

**Table 6.** Regression models predicting attitudes towards inclusive education.

	Saudi Arabia			Japan		
	Std. Beta	t-value	p	Std. Beta	t-value	p
Instruction	.291	1.660	.099	-.044	-.457	.648
Collaboration	.235	1.493	.138	.206	2.627	.009
Managing behaviour	-.276	-1.774	.078	.032	.387	.699
Model statistics	$F_{3,141} = 4.825$			$F_{3,339} = 4.460$		
$R^2$	.093			.038		

predictive aspect of the statements, as they were more comfortable with another item regarding controlling the disruptive student behaviour. The latter may be explained in terms of the reality of work in practice, as schools may lack teamwork in many respects based on individuals' efforts (Alnahdi 2014). On the other hand, more Japanese teachers did not have self-efficacy in informing others about laws and policies relating to inclusion (item 16). This is consistent with previous research finding that Japanese teachers' knowledge levels regarding inclusive education were relatively low (Fujii 2014; Ueno and Nakamura 2011). Positive associations between teacher knowledge, attitudes and self-efficacy have been discussed in previous research (Forlin, Loreman, and Sharma 2014), and it is crucial to develop pre- and in-service teacher training in Japan to ensure teachers receive the necessary knowledge and skills regarding inclusive education, as pointed out in previous studies (Forlin, Kawai, and Higuchi 2015; Ueno and Nakamura 2011).

The third research question concerned whether teachers' self-efficacy in inclusive practices relates to their attitudes towards inclusive education in Saudi Arabia and Japan. This study confirms that teachers' overall and specific self-efficacy is associated with their attitudes in all cases except for Saudi teachers' self-efficacy in managing students' problematic behaviour. This may be because this kind of self-efficacy is high among Saudi teachers in general, and variation in attitudes would not have a positive impact on it, as it is one of the core competencies teachers believe they should have in Saudi society. This is consistent with the finding of a recent study (Alnahdi et al. 2019) that a Saudi sample of pre-service teachers was more willing than their Finnish counterparts to accept students with behavioural problems in their classrooms.

Finally, the study aimed to identify whether three subtypes of self-efficacy in inclusive practices predict teachers' attitudes towards inclusive education in the two countries. It was found that the three types of teachers' self-efficacy jointly explained their attitudes in both countries, confirming the importance of developing teachers' self-efficacy in order to positively affect their attitudes. However, no significant individual relationship between the three self-efficacy variables and teachers' attitudes was found in Saudi Arabia. A possible explanation for this might be due to the small sample size. Since two independent variables (i.e. self-efficacy in instruction and managing behaviour) were nearly statistically indicative ( $p < .10$ ), a future study with a larger sample could reveal which subtypes of self-efficacy individually predict Saudi teachers' attitudes. On the other hand, teachers' self-efficacy in collaboration individually related to their attitudes in Japan. This finding supports the work of other studies linking teachers' self-efficacy in collaboration with attitudes, which suggested the need for pre- and in-service teacher training in this area (Malinen, Savolainen, and Xu 2013; Savolainen et al. 2012). All in all, this study has shown that teachers' self-efficacy is one of the crucial elements that influence their attitudes towards inclusive education in Saudi Arabia and Japan. This

research has posed a question in need of further investigation: how teachers' self-efficacy in inclusive education can be developed? Researchers attempted to evaluate the impact of pre- and in-service teacher training programmes related to inclusive education on teachers' self-efficacy in inclusive practices and found that the training resulted in positive improvements (Forlin, Loreman, and Sharma 2014; Sharma and Nuttal 2016). Future research should be undertaken to explore what and how teacher training programmes affect teachers' self-efficacy in Saudi Arabia and Japan.

## 6. Limitations and future implications

Although the current study revealed interesting similarities and differences in teachers' attitudes and self-efficacy in implementing inclusive education between Saudi Arabia and Japan, there were some limitations. First, the generalisability of these results is subject to certain limitations because we collected data using convenience sampling. Second, it is unfortunate that the study was not able to collect the data at the same time point in Saudi Arabia and Japan. Thus, the credibility of the findings subjects to certain limitation. Third, though we utilised the same instruments to measure teachers' self-efficacy and attitudes, the scale was translated into different languages (i.e. Arabic and Japanese). Thus, there is a possibility that the translated versions of the scale lost certain aspects of the original English version. Further, the two studied countries have large cultural differences, which may have affected the participants' response styles. While we have taken modesty bias into account in our analysis, further research using more sophisticated methods such as a latent class factor analysis is needed to account for extreme response style differences (Morren, Gelissen, and Vermunt 2011). Finally, although we found that teachers' self-efficacy in inclusive practices was positively associated with their attitudes towards inclusive education in both countries, a causal relationship cannot be conclusively determined using cross-sectional data. Therefore, future longitudinal research should explore how teachers' self-efficacy influences their attitudes towards inclusive education in both countries.

The main goal of the current study was to determine whether there are similarities and differences in teachers' attitudes towards inclusive education and their self-efficacy in inclusive practices in Saudi Arabia and Japan, finding no significant differences in teachers' attitudes. The study found some differences in teachers' self-efficacy in inclusive practices, as Saudi teachers were less confident in putting forward clear expectations about student behaviour and in collaborating with other school staff and professionals, while Japanese teachers were less confident in their knowledge about policies and laws regarding inclusive education. These findings suggest that each country should develop pre- and in-service teacher training to improve the relevant skills and knowledge levels. One way to improve teachers' self-efficacy in managing students' problematic behaviour might be to gain and use knowledge of intervention approaches regarding student disruptive behaviour such as positive behavioural interventions and supports (PBIS; Närhi et al. 2015). Moreover, collaborative experience in a teaching practicum (e.g. practiced planning and conducting a co-taught lesson) for pre-service teachers who major in special education and general education may promote their collaborative skills (Hamilton-Jones and Vail 2014). As both countries are in



a transitional phase of developing pre-service teacher training regarding inclusive education (MEXT 2017a; MOE 2020), the findings of the current study are especially useful in considering which contents to include in each country's teacher education programme.

In conclusion, this study supports the idea that comparing inclusive education in different countries could provide useful insights for the development of each country's inclusive education (Engelbrecht et al. 2013; Savolainen et al. 2012). Though such an approach is challenging and requires paying special attention that is sensitive to cultural diversity, the findings from this study as well as future comparative education research will help not only researchers but also governments to understand each country's situation in an international context and to assess the development of each country's inclusive education.

### Disclosure statement

No potential conflict of interest was reported by the author(s).

### Funding

This project was supported by the Deanship of Scientific Research at Prince Sattam Bin Abdulaziz University, Saudi Arabia, under research group #2020/02/11930 [research group #2020/02/11930].

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