

The critical role of personal and professional characteristics on teachers' efficacy and attitudes towards inclusion: A comparative study between Greece and United Kingdom

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Abstract

This study explores how self-efficacy responds to the challenges of inclusive education. Focusing particularly on the impact of personal and professional characteristics, the study analyses correlations between gender, professional experience and qualifications on teachers' attitudes towards inclusion and self-efficacy. In order to do so, the study makes comparisons between Greek and British teachers, identifying both similarities and differences when it comes to supporting disabled students in mainstream classrooms. The study concluded that teachers' self-efficacy beliefs predict their attitudes towards inclusion, and the teachers' individual characteristics predict their self-efficacy and attitudes towards inclusion. Specially, teachers from Greece and UK demonstrated statistically significant differences in their attitudes towards inclusion and in their self-efficacy beliefs. Moreover, in UK and Greece teachers' self-efficacy beliefs predict their attitudes towards inclusion while the teachers' individual characteristics predict their attitudes towards inclusion and self-efficacy.

Keywords: inclusion, attitudes, self-efficacy, personal/professional characteristics, cross-national comparison

Introduction

Teachers are in the forefront of implementing any educational policy and, as empirical evidence shows, their attitudes and beliefs play a crucial role to the success of inclusion of children with special educational needs into the general classroom (Bešić et al., 2017; Mazurek & Winzer, 2011; Boer et al., 2011; van Mieghem et al., 2020; Monsen et al., 2014). Teachers' positive attitudes towards inclusion are considered to be fundamental for the successful implementation of inclusive education (Boer et al., 2011; Monsen et al., 2014). However, teachers often face numerous challenges and feel frustrated in their attempt to meet students' diverse needs in inclusive classrooms (McKay, 2016; Yu, 2019; Yu & Park, 2020). Taking into consideration the important role teachers play and the challenges they face to teaching all students, they have been the focus of many studies.

A part of the research demonstrates the negative attitudes towards inclusion. For example, a review conducted by Avramidis and Norwich (2002) illustrates that, although mainstream education teachers were positive to the principles of inclusion, they believed it was difficult to be implemented. Another review of internationally published studies reveals that most of the primary school teachers were uncertain or negative about inclusion of children with disabilities into the mainstream classroom while clear positive attitudes were not reported in any study (Boer et al., 2011). Finally, a most recent review concludes that the attitudes of teachers towards inclusive education are rather negative (van Mieghem et al., 2020).

Other studies offer mixed results. For example, Qi and Ha (2012) found diverse attitudes in teachers of physical education ranging from positive to negative. Armstrong (2014) found that teachers with more experience with students presenting social, emotional and behavioural difficulties have more negative attitudes while they also demonstrated that physical education teachers have more positive attitudes towards students with severe cognitive impairment than towards students with emotional and behavioral difficulties. Gregory (2018) compared the educators' attitudes towards inclusion of children with mild to moderate disabilities in five countries (Australia, Barbados, Romania, Turkey and the United States) using the Attitudes Towards Teaching All Students (ATTAS-mm) scale (Gregory and Noto 2012). The findings suggested that the attitudes of educators from nations with less segregated special

education systems were more positive towards the inclusion of children with mild to moderate disabilities.

These studies demonstrate that it is difficult to make clear statements about teachers' positive or negative attitudes towards inclusion. Yet, according to the Theory of planned behavior (TBT), the level of intention to perform a certain behavior is a predictive factor of a person's engagement in the behavior. In fact, the more favorable the attitude, the stronger is the intention to perform the given behavior (Ajzen 1991). According to TBT, behavioural intention is influenced by three aspects: attitudes, which are consisting of cognitive and affective dimensions; subjective norm, which is determined by an individual's perception regarding how others that matter will assess their behaviour; and perceived behavioural control, which is defined based on the individual perceived ability or difficulty to perform a particular behaviour (Ajzen, 1991). In the context of education, previous studies indicated that the way teachers communicate or characterise students with disabilities offers a strong indication about how they will deal with these students in practice (Emmers et al. 2020; Cole and Cawthon 2015; Grimes et al. 2018). Other studies have indicated that the teachers' beliefs (cognitive dimension) and feelings (affective dimension) affect teachers' attitudes towards teaching all students (Eagly and Chaiken 2007; Gutshal, 2013). As Emmers et al. (2020) state, "in order to create an inclusive culture, it is important to focus on the attitudes of all those involved in an inclusive educational context, particularly the attitude of the teacher" (p.140). For the development of a learning environment that supports inclusiveness, it is important for teachers not only to develop inclusive values and positive attitudes, but also to have a sense of self-efficacy in order to use inclusive strategies (Savolainen et al., 2012).

It is therefore not surprising that many studies have tried to identify factors that are related to successful implementation of inclusive education looking at teachers' self-efficacy. Teacher self-efficacy is determined as self-referent decisions related to the smooth delivery of the lesson and student active engagement to the learning process. More specifically, "teacher self-efficacy beliefs reflect judgments of personal teaching capabilities, based on an appraisal of strengths and deficits, and judgments about the requirements of domain-specific teaching tasks, which include appraisals of external constraints and resources" (Tschannen-Moran et al., 1998 in Perera et al., 2019, p.187).

Recent research findings support that teachers' sense of efficacy is a powerful construct affecting student learning outcomes (Huber et al., 2016; Mojavezi & Tamiz, 2012; Tschannen-Moran et al., 1998). Moreover, self-efficacy influences teachers' enthusiasm about teaching, commitment to the teaching profession (van Rooij et al., 2019), goal setting (Wolf et al., 2018) and, as a consequence, their ambition. Efficacious teachers reflect on their educational approaches and adjust them for fostering students' competences. Finally, having a vibrant and healthy organizational climate at school is related to a higher level of teacher efficacy (Tschannen-Moran et al., 1998). Many researchers have also emphasized the importance of teacher self-efficacy in other areas, such as, instructional quality and student support (Holzberger et al., 2013), teacher engagement (Durksen et al., 2017), job satisfaction (Billingsley & Cross, 1992; Caprara et al., 2003; Koustelios & Tsigilis, 2005; Klassen & Chiu, 2010), well-being (Zee & Koomen, 2016), and occupational commitment (Klassen & Chiu, 2011) (Perera et al., 2019).

Teachers are at the center of the schools attempt to become more inclusive since, as many studies illustrate, there is a positive relationship between teacher self-efficacy and attitudes towards inclusive education (Savolainen et al., 2012; Yada et al., 2022; Avramidis & Kalyva, 2007; O'Toole & Burke, 2013). However, teachers' attitudes are also shaped by certain personal and professional characteristics. Particularly, studies highlight that attitudes towards teaching all students are affected by characteristics, such as age, gender and environmental factors (e.g. experiences with people with a disability, teachers common school beliefs, school culture etc.) (Avramidis et al., 2000).

Examples of personal/professional factors show that men have more negative attitudes towards students with disabilities than women (Avramidis & Norwich 2002). The gender and the level of education also affect teachers' attitudes with female and primary teachers being more accepting to inclusive practices than male and secondary education teachers (Avramidis & Norwich 2002; Mazurek & Winzer 2011; Qi & Ha 2012). Hwang and Evan's (2011) study also highlighted the role of age with older teachers illustrating more negative attitudes towards inclusion, explaining that the attitudes regarding inclusion become stronger as teachers gain experience and seniority.

Moreover, environmental factors also have an impact on teachers' attitudes. For example, previous teaching experience and contact with people with disabilities

increase teachers' attitudes towards inclusion (Ahmmed et al., 2012; Murray et al., 2011). Teachers with previous experience with inclusive education and training in special education were also found to have more positive attitudes (Boer, et al., 2011; Mazurek & Winzer, 2011; Qi & Ha, 2012; van Mieghem et al., 2020). The school ethos also affects teachers' attitudes with research suggesting that, if teachers are provided with the adequate resources and are supported by the school system, negative attitudes towards inclusion could be altered (Bešić et al., 2017; Avramidis & Norwich, 2002). Similarly, if the majority of the teachers at a school supports inclusion, it is more likely for the rest of the teachers to change their opinion towards inclusive education (Avramidis & Norwich, 2002). Finally, Charitaki et al., (2022) found that years of teaching experience, educational work level, and the highest degree completed have a significant effect on teachers' attitudes towards inclusion in all countries.

Despite the fact that there are plenty of studies that look at the associations between self-efficacy and attitudes towards inclusiveness as well as between attitudes and personal characteristics, there are limited studies that look at these three variables at the same time (e.g. Emmers et al., 2020; Dias & Cadime, 2016; Charitaki et al., 2022). It is even more difficult to find a study that has as central focus of the research the impact of personal characteristics on self-efficacy and teachers' attitudes towards inclusive education. The objective of this manuscript is to fill in this gap by putting at the centre of the attention personal and professional characteristics. In this way we add to extant knowledge that explores how self-efficacy responds to the challenges of inclusive education by studying whether personal and professional characteristics predict teachers' self-efficacy and attitudes towards inclusion.

In order to do so, our research compares British and Greek teachers' self-efficacy and attitudes towards inclusion with a particular focus on their personal and professional characteristics which could be associated with self-efficacy beliefs and attitudes towards inclusion. Particularly, our study builds on the findings of a cross-national study that explored the Teachers' attitudes towards inclusive education in five countries (Greece, the United Kingdom, the USA, Malaysia, and Turkey) (Charitaki et al., 2022). The research used confirmatory factor analysis (CFA) which included cognitive, behavioral and affective factors along with a category for overall attitudes towards teaching all students, which signified the personal and professional characteristics that influence attitudes. The findings demonstrated that in the cognitive factor United

Kingdom (UK) had the most positive attitudes while in the behavioral and affective factor Greece had the most positive attitudes with the UK having the least positive attitudes. Charitaki et al., (2022) study highlighted the difference between British and Greek teachers' attitudes. It also offered an initial exploration of the impact that teaching experience, educational work and educational degree have on attitudes towards inclusiveness.

Despite the significant insights that this study offered, it does not explore the role of self-efficacy, which could help understand the difference between Greece and UK. Moreover, Charitaki et al., (2022) only started to illustrate the role of personal and professional characteristics on teachers' attitudes. More research is required to understand the differences between UK and Greece, and explore the personal and professional characteristics that could explain the reasons that Greece and UK sit in different extremes of the CFA.

In order to do the study examines the following research questions and hypotheses:

Research Questions:

1. Are there statistically significant differences in teachers' self-efficacy beliefs and attitudes towards inclusion across countries?
2. To what extent are teachers' self-efficacy beliefs associated with their attitudes towards inclusion in Greece and UK?
3. To what extent are teachers' personal and professional characteristics associated with their self-efficacy beliefs in Greece and UK?
4. To what extent are teachers' personal and professional characteristics associated with their attitudes towards inclusion in Greece and UK?

Research Hypotheses:

H1: There are not statistically significant differences in teachers' self-efficacy beliefs across countries.

H2: There are not statistically significant differences in teachers' attitudes towards inclusion across countries.

H3: The teachers' self-efficacy beliefs are associated with their attitudes towards inclusion in Greece and United Kingdom.

H4: Teachers' personal characteristics are associated with their self-efficacy beliefs in Greece and United Kingdom.

H5: Teachers' personal characteristics are associated with their attitudes towards inclusion in Greece and United Kingdom.

H6: The theoretical model which describe the associations between the teachers' personal characteristics, their self-efficacy beliefs and their attitudes towards inclusion remain the same for the sub-samples (Greece & UK) and for the entire sample.

Method

The study is focused on providing an explanation regarding the relationships among measures of interest. Variable-centered approaches are favored in cases we intend to explain relationships among variables of interest in different populations (Howard & Hoffman, 2018). Consequently, for the aim of this study a variable-centered approach was employed. In order to evaluate potential differences in teachers' attitudes towards inclusion and self-efficacy beliefs across the participant countries and across professional and personal characteristics, we performed t-tests and Cohen's d. Moreover, in order to reveal potential causal relations, we employed structural equation modelling (SEM).

Participants

Participants were recruited from two different countries, Greece and UK. 431 participants were enrolled in the sample (Greece: n=245 and UK: n=186). These countries were selected because there are significant differences in their educational system and teachers' training. Research has indicated that starting the school early enables children to get a head start in learning (Harlen and Qualter, 2017) However, a main difference is the age that kids start primary school, in the UK at the age of 5 and in Greece at the age of 6. Moreover, the kids in the UK attend the second year of pre-school at the age of 4 in the Primary School premises while in Greece they do so at the age of 5 in independent premises. Another main difference between the countries is that, in contrast to Greece, in the UK, every classroom, according to the formal requirements, should include a child with special needs, which is supported by a

teaching assistant assigned to support inclusion of the child in the main classroom. As such, all UK teachers have received some, at least basic, special education training. These differences may provide sufficient evidence for interpretation in observed variability in attitudes across Greece and UK.

Simple random sampling technique was employed as the most appropriate for this study. Pre-service and in-service teachers were enrolled in the samples of the two countries. No direct or indirect experience working with individuals with disabilities in schools and/or human service agencies was an inclusion criterion for sampling selection. Specific teachers' personal/demographical and professional characteristics (current role in education, gender, highest completed degree, years of teaching, community of work/intern, number of college (or higher) completed courses in special education, extent of experience working with individuals with disabilities in schools and/or human service agencies, educational level of work/intern, socioeconomic status of the community of work/intern, years planning to teach, intention to become an administrator) were considered and are presented in detail in Table 1.

Table 1. Demographic and professional characteristics for Greece and United Kingdom.

<i>Country</i>	<i>Greece</i>	<i>UK</i>	<i>Overall</i>
<i>Participants (N)</i>	245	186	431
<i>Gender</i>			
Male	26	46	72 [16.70%]
Female	219	140	359 [83.30%]
<i>Community of work/intern</i>			
Rural	21	0	21 [4.88%]
Suburban	52	186	238 [55.22%]
Urban	172	0	172 [39.90%]
<i>Years of teaching</i>			
0–4	163	145	308 [71.46%]
5–9	31	39	70 [16.25%]
10–14	29	2	31 [7.19%]
15–19	15	0	15 [3.48%]
>20	7	0	7 [1.62%]
<i>Highest completed degree</i>			
Associates	26	91	117 [27.15%]
Bachelors	148	83	231 [53.59%]
Masters	67	12	79 [18.33%]
Masters +30 (6 th year)	0	0	0 [0.00%]
Doctorate	4	0	4 [0.93%]
<i>Number of college (or higher) completed courses in special education</i>			

None	33	94	127 [29.46%]
1–3	50	72	122 [28.31%]
4 or more courses	162	20	182 [42.23%]
<i>Extent of experience working with individuals with disabilities in schools and/or human service agencies</i>			
Minimal (1 hour or fewer per month)	100	83	183 [42.46%]
Some (2-10 hours per month)	53	44	97 [22.51%]
Considerable (11-80 hours per month)	51	59	110 [25.52%]
Extensive (more than 80 hours per month)	41	0	41 [9.51%]
<i>Current role in education</i>			
Student not yet in the field	97	71	168 [38.98%]
Intern	59	61	120 [27.84%]
Substitute Teacher/DSAP	47	11	58 [13.46%]
Paraprofessional	20	0	20 [6.64%]
Certified Teacher	16	43	59 [13.69%]
Other	6	0	6 [1.39%]
<i>Educational Level in which you work/intern</i>			
Elementary (k-2, k-3, k-4, k-5, or k-6)	36	115	151 [35.03%]
Middle (4-6, 5-6, 4-8, 6-8, 7-8)	149	0	149 [34.57%]
High (7-12, 8-12, 9-12)	43	0	43 [9.98%]
Other	17	71	88 [20.42%]
<i>Socioeconomic status of the community of work/intern</i>			
Poor (income/education in the lowest 20%)	30	0	30 [6.96%]
Moderate (income/education in the middle 60%)	203	175	378 [87.70%]
Affluent (income/education in the highest 20%)	12	11	23 [5.37%]
<i>Years planning to teach</i>			
Fewer than 5 years	10	17	27 [6.26%]
5-10 years	22	47	69 [16.01%]
11-20 years	42	64	106 [24.60%]
Greater than 20 years	171	58	9 [2.09%]
<i>Intention to become and administrator</i>			
Yes	192	34	226 [52.44%]
No	53	152	205 [47.56%]

*Relative frequencies percentages are written in brackets

**total $n = 431$

Measures

Attitudes Towards Teaching All Students Scales (ATTAS-mm)

The first part of ATTAS-mm consists of 11 items assessing teacher' personal/demographical and professional characteristics. More specifically, we assessed teachers' current role in education (RI1), gender (RI2), highest completed degree (RI3), years of teaching (RI4), community of work/intern (RI5), number of college (or higher) completed courses in special education (RI6), extent of experience working with individuals with disabilities in schools and/or human service agencies

(RI7), educational level in which you work/intern (RI8), socioeconomic status of the community of work/intern (RI9), years planning to teach (RI10), intention to become an administrator (RI11).

The second part of ATTAS-mm (Noto & Gregory, 2012) was used for the assessment of teachers' attitudes towards inclusion. The ATTAS-mm consists of 9 items. It is based on the theory of planned behavior to explore teachers' attitudes towards inclusion (Ajzen, 1991, 2020; Gregory & Noto, 2012, 2018, 2019). Consequently, ATTAS-mm assesses cognitive, affective, and behavioral dimensions of attitude. More specifically, cognitive dimension assesses teachers' belief that all students can succeed in general education classrooms (items 1-3). Affective dimension assesses the teachers' attitudes towards the development of personal and professional relationships (items 4-6). And, finally, behavioral dimension assesses the teachers' attitudes towards the creation of an accepting environment for all students to learn (items 6-9). The ATTAS-mm was scored on a 7-point Likert scale (1= very strongly agree to 7= very strongly disagree). As it is obvious, the lower the entire score is, the more positive the teachers' attitudes towards the inclusion of children with disabilities are. In the case of Greece, translation and back-translation processes were implemented. The psychometric properties of the measures in terms of reliability and validity have been assessed and presented in detail in previous studies for both Greece and the United Kingdom. Moreover, the data were normally distributed (Charitaki et al., 2022; Charitaki, et al. 2023).

Teachers' Self-Efficacy Scale (TSE)

The TSES self-report scale (Tschannen-Moran & Woolfolk Hoy, 1998) includes 24 questions, the combination of which creates 3 sub-scales. These subscales assess areas that include teaching strategies/instructional approaches (1 - 8), classroom management (9 - 16), and student engagement (17 - 24). It is a research tool with very good psychometric properties, which has been assessed by other researchers in Greek and British samples. The scale is scored via a 5-point Likert scale (from 1= not at all to 5= to a great extent). More specifically, higher scores on that scale, indicate a higher sense of teacher's teaching effectiveness (self-efficacy).

Data collection and analysis

There were no missing data. In the preliminary data analysis, we estimated means and standard deviations for all measures (cognitive, affective, behavioural, attitudes towards teaching all students, efficacy for instructional strategies (EIS), efficacy for classroom management (ECM), efficacy for student engagement (ESE) and teachers' sense of efficacy). Following that we estimated t-tests and Cohen's d for the above measures (Research Hypothesis 1-2). Finally, we performed 3 independent Confirmatory Factor Analyses (CFA). We assessed the measurement invariance of the suggested model across the different countries and estimated Δ CFIs and Δ RMSEAs (Research Hypothesis 3-6). In our efforts to reduce the influence of common method bias, we randomly changed the order of questions in the online survey. Consequently, there was no hint of the construct connotation (Podsakoff et al., 2003). Another significant issue that needs to be addressed with studies that employ self-reporting data is related with the possibility of a desirability bias (Van Diepen, Donkers, & Franses, 2009). In order to address the effect of desirability bias, we employed measures that are well-known and evaluated for their structures in a large number of studies across different countries. Their initial development and validation of structure was based on the collection of qualitative data from interviews and observations.

Results

Preliminary Analysis

Statistical analysis (t-tests) suggested that, compared to UK, teachers who were based in Greece tended to have higher rates on the measures related to their self-efficacy beliefs (efficacy for instructional strategies, efficacy for classroom management, efficacy for student engagement, and teachers' sense of efficacy) and cognitive aspect of attitudes towards inclusion. Furthermore, compared to UK, teachers who were based in Greece tended to have lower rates on the measures related to their attitudes towards inclusion (affective, behavioural, and attitudes towards teaching all students) (Table 2).

Table 2. Descriptive statistics for teachers from Greece (n=245) and United Kingdom (n=186), results of t-tests and Cohen's d

Group

Measures	Greece (n=245)		United Kingdom (n=186)		95% Confidence Interval of the Difference		d
	M	SD	M	SD	Lower	Upper	
ATTAS-mm							
Cognitive	11.33	3.734	9.54	3.856	1.065	2.513	.472
Affective	6.54	2.910	8.83	3.399	-2.893	-1.696	-.733
Behavioural	6.71	2.981	8.97	3.089	-2.846	-1.688	-.749
Attitudes Towards Teaching All Students	24.57	7.829	27.34	9.784	-4.441	-1.105	-.318
Self-Efficacy							
Efficacy for instructional strategies	55.98	8.596	46.45	4.147	8.185	10.873	1.355
Efficacy for classroom management	55.98	8.596	50.53	4.231	4.100	6.797	.773
Efficacy for student engagement	56.11	9.446	51.16	3.998	3.503	6.412	.652
Teachers' Sense of Efficacy	166.07	24.627	153.87	7.598	8.509	15.899	.633

*. P < .001

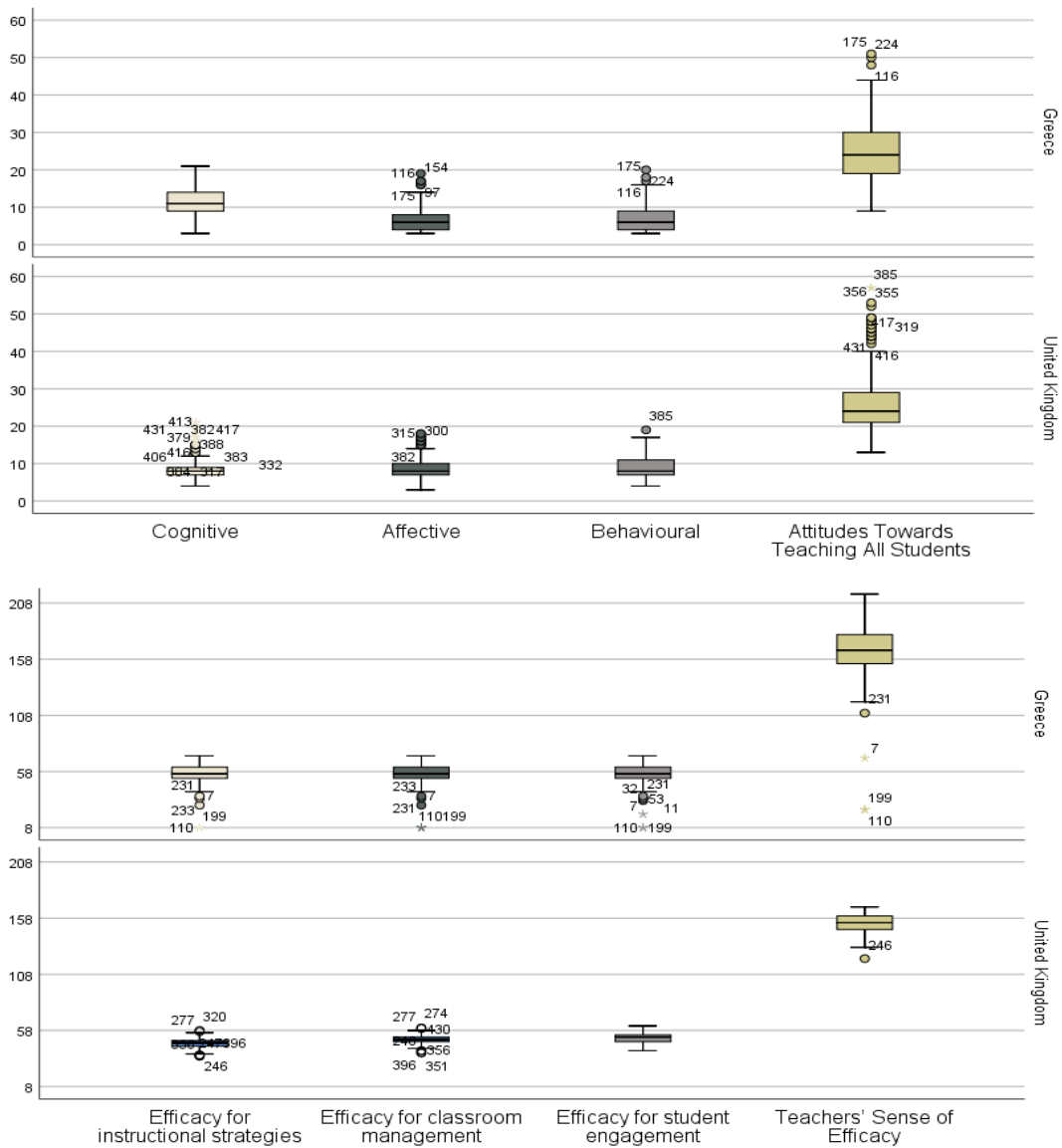


Figure 1. Boxplots for each measure (Cognitive, Affective, Behavioural, Attitudes Towards Teaching All Students, Efficacy for instructional strategies, Efficacy for classroom management, Efficacy for student engagement, Teachers' Sense of Efficacy) across each country.

Main Analysis

The multi-group analyses provided evidence to confirm that the structural paths between attitudes towards inclusion, personal characteristics and teachers' self-efficacy beliefs remain the same for teachers in Greece and UK. Examination of SEM results showed that all fit indices have met.

SEM results both for the Greek sample ($CFI=.95 \geq .90$, $RMSEA=.047 \leq .080$, $SRMR = .057 < 0.08$, $TLI=.97 > 0.95$), the UK sample ($CFI=.98 \geq .90$, $RMSEA=.044 \leq .080$, $SRMR = .052 < 0.08$, $TLI=.98 > 0.95$) and the overall dataset ($CFI=.93 \geq .90$, $RMSEA=.048 \leq .080$, $SRMR = .057 < 0.08$, $TLI=.96 > 0.95$), indicated a good fit for the hypothesized models (Figure 2, 3 & 4). The results, presented in Table 3, illustrate that Greek-speaking teachers' self-efficacy beliefs predict their attitudes towards inclusion ($b=.84$, $p=.000$) while teachers' personal characteristics are associated with teachers' self-efficacy beliefs ($b=.61$, $p=.000$) and their attitudes towards inclusion ($b=.59$, $p=.000$). The results, presented in Table 4, show that British teachers' self-efficacy beliefs predict their attitudes towards inclusion ($b=.71$, $p=.000$), while teachers' personal characteristics are associated with teachers' self-efficacy beliefs ($b=.63$, $p=.000$) and their attitudes towards inclusion ($b=.55$, $p=.000$). Finally, the analysis of the entire sample, presented in Table 5, suggests that teachers' self-efficacy beliefs predict their attitudes towards inclusion ($b=.77$, $p=.000$), while teachers' personal characteristics are associated with teachers' self-efficacy beliefs ($b=.68$, $p=.000$) and their attitudes towards inclusion ($b=.59$, $p=.000$). The overall presentation of the hypotheses and results is demonstrated in Table 6.

Table 3. Analysis of the paths for the case of Greece (n=245).

<i>Path</i>	<i>Estimate</i>	<i>SE</i>	<i>Sig.</i>
<i>TSE Beliefs to Attitudes towards inclusion</i>	.84	.084	.000
<i>Teachers' personal characteristics to TSE Beliefs</i>	.61	.115	.000
<i>Teachers' personal characteristics to Attitudes towards inclusion</i>	.59	.084	.000

Note. * statistically significant at the $p < .01$ level.

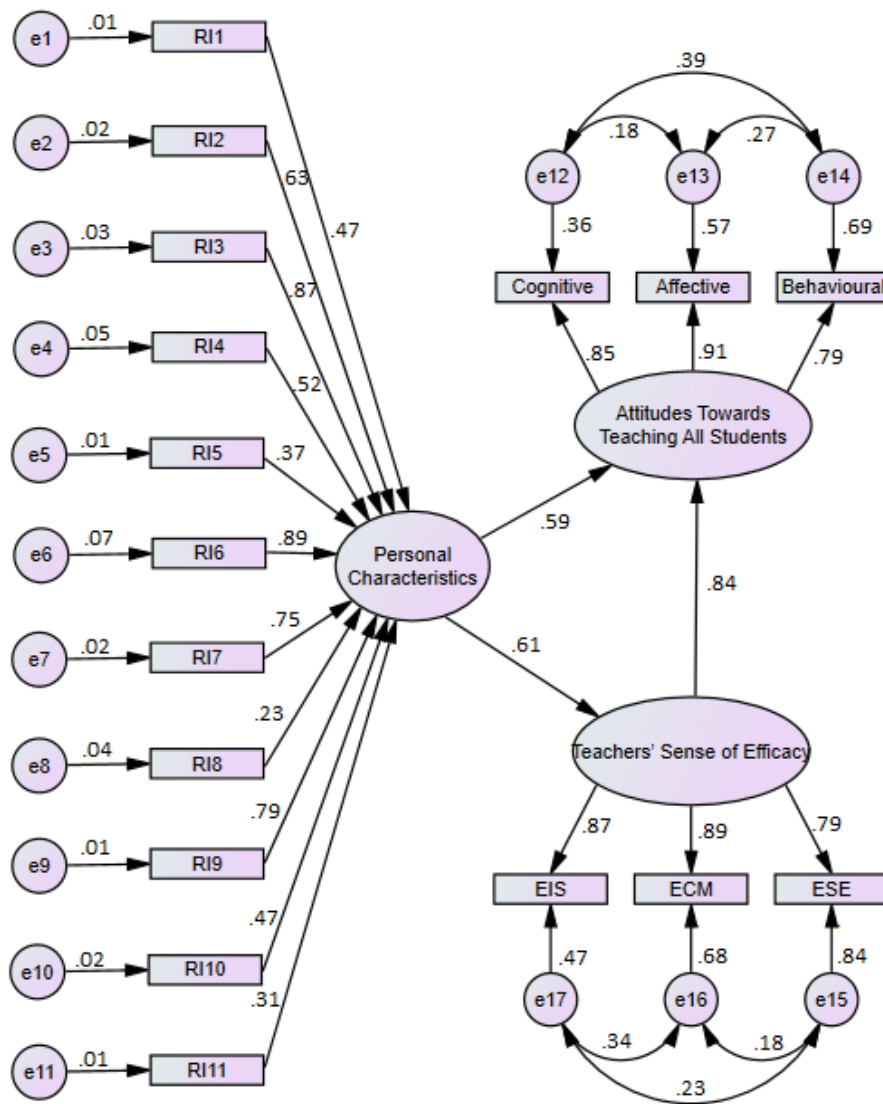


Figure 2. Hypothesized model of relationships between the endogenous variables (teachers' perceptions towards inclusion, personal characteristics and self-efficacy beliefs) in Greece.

Table 4. Analysis of the paths for the case of United Kingdom (n=186).

<i>Path</i>	<i>Estimate</i>	<i>SE</i>	<i>Sig.</i>
<i>TSE Beliefs to Attitudes towards inclusion</i>	.71	.081	.000
<i>Teachers' personal characteristics to TSE Beliefs</i>	.63	.134	.000
<i>Teachers' personal characteristics to Attitudes towards inclusion</i>	.55	.067	.000

Note. * statistically significant at the $p < .01$ level.

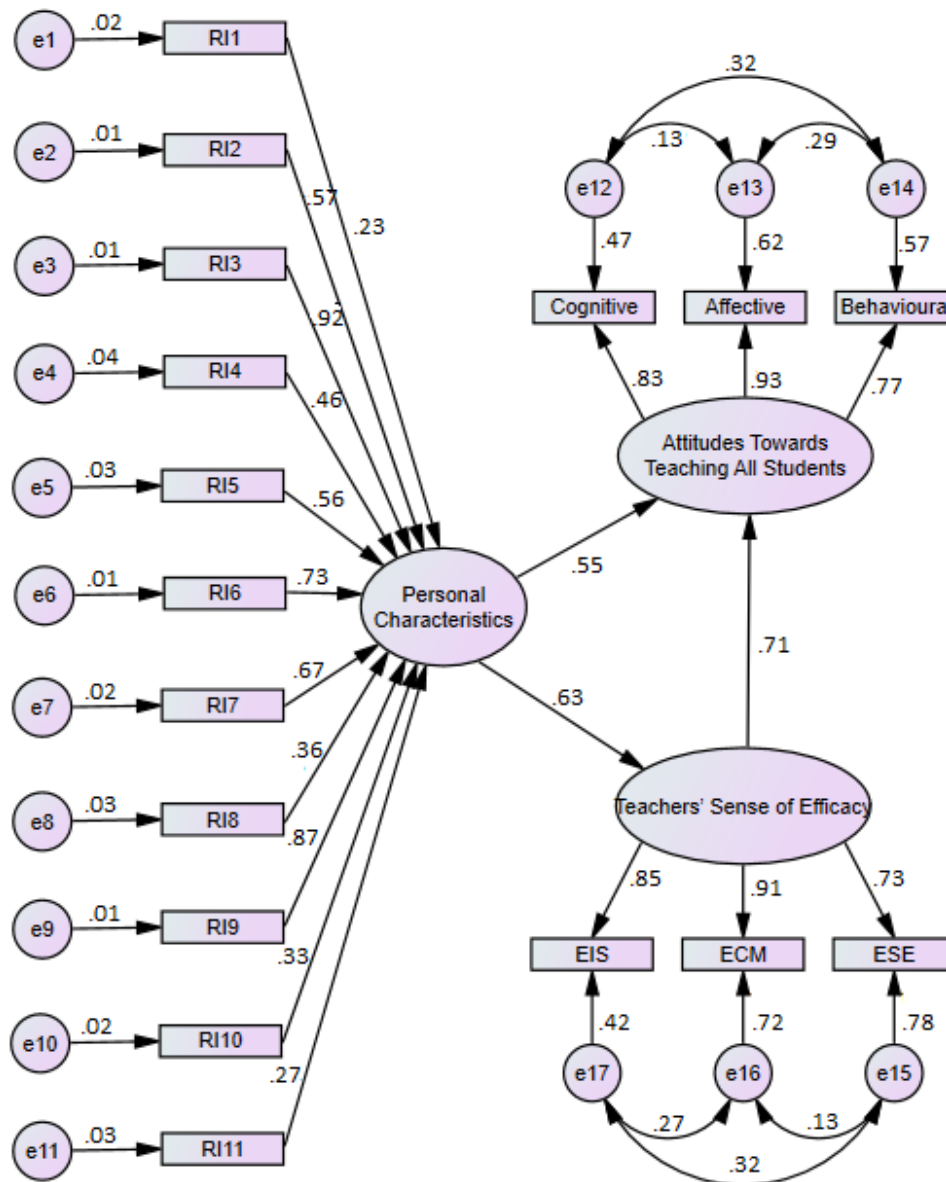


Figure 3. Hypothesized model of relationships between the endogenous variables (teachers' perceptions towards inclusion, personal characteristics and self-efficacy beliefs) in United Kingdom.

Table 5. Analysis of the paths for the entire sample (n=431).

<i>Path</i>	<i>Estimate</i>	<i>SE</i>	<i>Sig.</i>
<i>TSE Beliefs to Attitudes towards inclusion</i>	.77	.079	.000
<i>Teachers' personal characteristics to TSE Beliefs</i>	.68	.165	.000
<i>Teachers' personal characteristics to Attitudes towards inclusion</i>	.59	.063	.000

Note. * statistically significant at the $p < .01$ level.

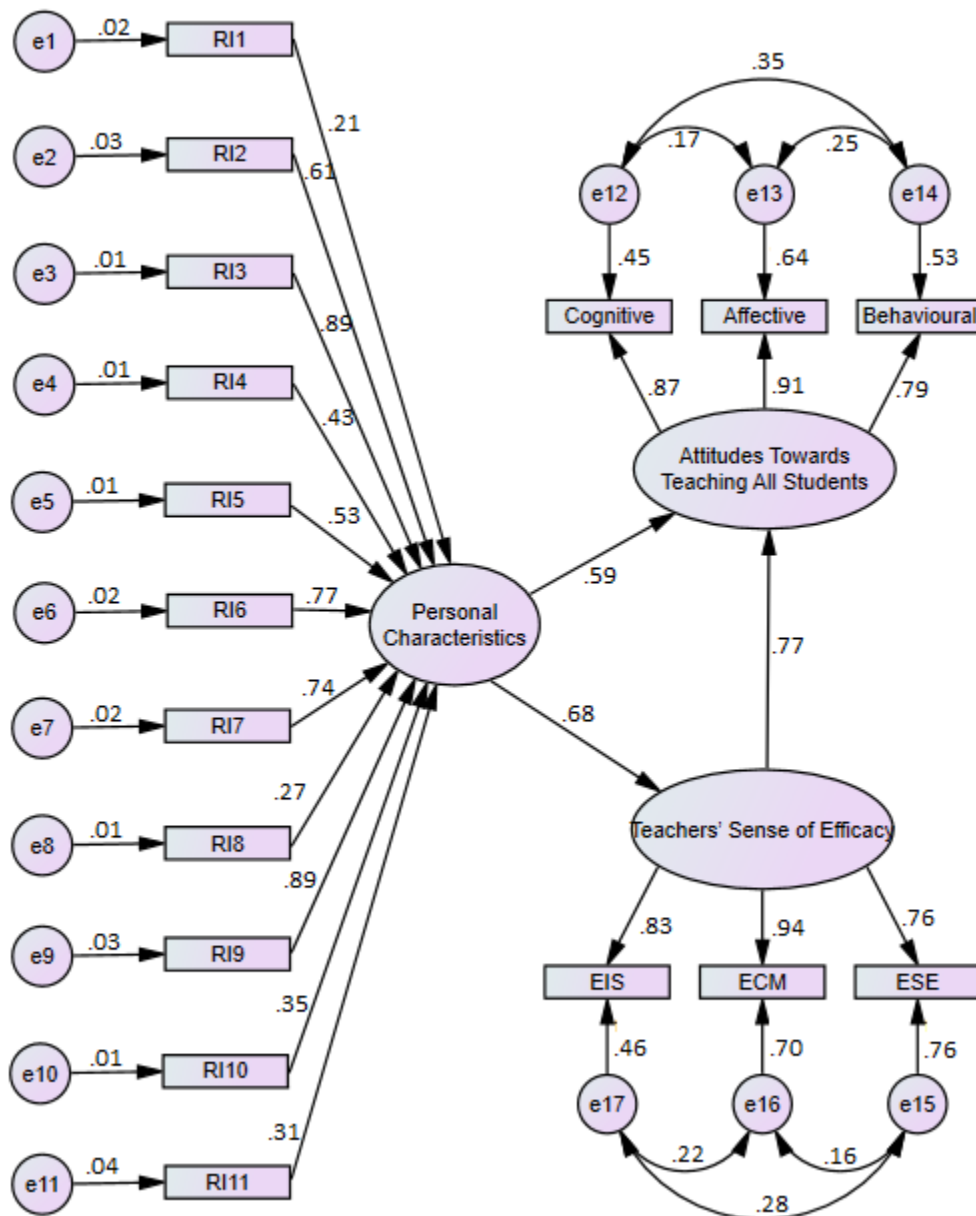


Figure 4. Hypothesized model of relationships between the endogenous variables (teachers' perceptions towards inclusion, personal characteristics and self-efficacy beliefs) (in the entire sample).

Table 6. Hypotheses and results.

<i>Hypothesis</i>	<i>Wording</i>	<i>Results</i>
1	There are not statistically significant differences in teachers' self-efficacy beliefs across countries.	Teachers from Greece and United Kingdom demonstrated statistically significant differences in their self-efficacy beliefs ($t(427)=6.492$, $p=.000$, $d=-.633$, Table 2, Figure 1). The hypothesis is not supported.
2	There are not statistically significant differences in	Teachers from Greece and United Kingdom demonstrated statistically significant

	attitudes towards inclusion across countries.	differences in their attitudes towards inclusion ($t(429)=-3.267, p=.001, d=-.318$, Table 2, Figure 1). The hypothesis is not supported.
3	The teachers' self-efficacy beliefs are associated with their attitudes towards inclusion in Greece and United Kingdom.	In the case of Greece, the teachers' self-efficacy beliefs predict their attitudes towards inclusion ($\beta(TSE \rightarrow ATTAS)=.84$, Figure 2). The hypothesis is supported. In the case of United Kingdom, the teachers' self-efficacy beliefs predict their attitudes towards inclusion ($\beta(TSE \rightarrow ATTAS)=.71$, Figure 3). The hypothesis is supported.
4	Teachers' personal characteristics are associated with their self-efficacy beliefs in Greece and United Kingdom.	In the case of Greece, the teachers' personal characteristics predict their self-efficacy beliefs ($\beta(PC \rightarrow TSE)=.61$, Figure 2). The hypothesis is supported. In the case of United Kingdom, the teachers' personal characteristics predict their self-efficacy beliefs ($\beta(PC \rightarrow TSE)=.63$, Figure 3). The hypothesis is supported.
5	Teachers' personal characteristics are associated with their attitudes towards inclusion in Greece and United Kingdom.	In the case of Greece, the teachers' personal characteristics predict their attitudes towards inclusion ($\beta(PC \rightarrow ATTAS)=.59$, Figure 2). The hypothesis is supported. In the case of United Kingdom, the teachers' personal characteristics predict their attitudes towards inclusion ($\beta(PC \rightarrow ATTAS)=.55$, Figure 3). The hypothesis is supported.
6	The theoretical model which describe the associations between the teachers' personal characteristics, their self-efficacy beliefs and their attitudes towards inclusion remain the same for the sub-samples (Greece & UK) and for the entire sample.	In the entire sample, the teachers' self-efficacy beliefs predict their attitudes towards inclusion ($\beta(TSE \rightarrow ATTAS)=.77$), the teachers' personal characteristics predict their self-efficacy beliefs ($\beta(PC \rightarrow TSE)=.68$), and the teachers' personal characteristics predict their attitudes towards inclusion

Discussion

The aim of our study was to put at the center of the research personal and professional characteristics and explore how self-efficacy responds to the challenges of inclusive education by studying whether personal characteristics predict teachers' self-efficacy and attitudes towards inclusion. In order to achieve this, we asked four main research questions which we have examined through relevant research hypotheses:

1. Are there statistically significant differences in teachers' self-efficacy beliefs and attitudes towards inclusion across countries?

To explore differences in teachers' self-efficacy beliefs and attitudes towards inclusion between Greece and UK, we have formulated a) *H.1. There are not statistically significant differences in teachers' self-efficacy beliefs across countries*, and b) *H2. There are not statistically significant differences in attitudes towards inclusion across countries*. Both hypotheses were rejected suggesting that teachers from Greece and UK demonstrated statistically significant differences in their attitudes towards inclusion and in their self-efficacy beliefs. However, previous studies conducted in different countries reported that teaching experience had a significant effect in teachers' self-efficacy and attitudes towards inclusion (US: Janney, Snell, Beers & Raynes, 1995; Leatherman & Niemeyer, 2005; LeRoy & Simpson, 1996, UK: Avramidis et al., 2000; Greece: Avramidis & Kalyva, 2007). These studies support that high levels of experience and social contact with disabled children positively affected attitudes and self-efficacy, which may explain the differences between the UK and Greek population based on experience and social contact. Greek teachers indicated greater self-efficacy for instructional strategies, classroom management and student engagement. This suggests that Greek teachers will feel more confident in designing learning tasks to meet the individual needs of disabled students than British teachers (Bishop et al., 2010) while they will be more positive in nurturing an inclusive school environment (Mojavezi & Tamiz, 2012). The results also indicated that Greek teachers had lower affective, behavioural, and

attitudes rates towards teaching all students compared to British teachers. British teachers' sentiments towards interacting with disabled students were more positive and the teachers were less concerned about including disabled children in their classrooms. Considering previous research which recommends that collaboration and collaborative relationships positively affect attitudes towards inclusiveness (Salovita, 2020; Nilsen, 2020), increasing collaborative relationships between Greek teachers with positive attitudes and those that are more negative, could change the teachers' sentiments and make them more supportive of inclusion. Moreover, British teachers wanted to be viewed as supportive of inclusiveness. Ahmmed at al., (2012) found that perceived school support positively impacts teachers' attitudes towards inclusion. Moreover, Bishop et.al. (2010) explain that teachers feel more confident in designing learning tasks for students with disabilities when the school and their colleagues have positive attitudes towards inclusion. We can therefore conclude that British schools have a more positive attitude towards inclusion in comparison to Greek schools.

2. To what extent are teachers' self-efficacy beliefs associated with their attitudes towards inclusion in Greece and UK?

The second research question was explored through the following hypotheses: a) *H3. The teachers' self-efficacy beliefs are associated with their attitudes towards inclusion in Greece*, and b) *H4. The teachers' self-efficacy beliefs are associated with their attitudes towards inclusion in United Kingdom*. Both hypotheses were supported suggesting that in UK and Greece teachers' self-efficacy beliefs predict their attitudes towards inclusion. These findings agree with previous studies that have reported correlations between teachers' self-efficacy and their attitudes towards inclusive education in studies that involve teachers from different countries (e.g. Malinen et al., 2013; Savolainen et al., 2012; Sharma & Jacobs, 2016; Yada et al., 2022). These findings also agree with other studies conducted in different countries (e.g. (Bangladesh: Ahmmed et al., 2012; Croatia and Poland: Ćwirynkało et al., 2017; Romania: Crişan et al., 2020) and support our conclusion that, taking into consideration that teachers' self-efficacy is associated to their attitudes, equipping teachers with appropriate training, classroom experience and engagement with disabled students could increase their self-efficacy in inclusive

practices. This could gradually change their attitudes in a positive direction, which will eventually improve the possibility of inclusive education.

3. To what extent are teachers' personal and professional characteristics associated with their self-efficacy beliefs in Greece and UK?

The third question is also examined with two hypotheses: a) *H.5 Teachers' individual characteristics are associated with their self-efficacy beliefs in Greece*, and b) *H.6 Teachers' individual characteristics are associated with their self-efficacy beliefs in United Kingdom*. Both hypotheses were supported demonstrating that in the UK and Greece the teachers' individual characteristics predict their self-efficacy. With respect to professional experience, some studies reported that, the more experienced the teachers are, the more likely it is to illustrate self-efficacy with positive attitudes towards teaching disabled students (Almeida, 2005; Stoiber et al., 1998). However, other studies demonstrated the opposite (Leyser & Tappendorf, 2001). In our study the majority of the teachers in both countries had between 0-4 years of teaching experience. However, the Greek teachers indicated greater self-efficacy for inclusive education than British teachers. Our study therefore indicates that, regarding the effects of teachers' professional experience on their attitudes towards inclusion, a clear conclusion cannot be made. These results support other studies that also reported inconclusive results in this area (Mojavezi & Tamiz, 2012; Bangladesh: Ahmmed et al., 2012). In respect to higher academic degrees, although the difference between having an associate or bachelor degree was small, the majority of UK teachers had an associate degree. However, in Greece, the vast majority of teachers has a bachelor degree. Our study therefore supports previous studies which suggest that teachers with higher academic degrees have more positive attitudes towards inclusive education (e.g. Avramidis & Norwich, 2002; Boer et al., 2011; Kraska & Boil, 2014). With regards to experiences in teaching disabled students, research suggests a correlation between previous experience teaching disabled students and teachers' attitudes (e.g. Avramidis & Norwich, 2002; O'Toole & Burke, 2013) while studies also report that successful experiences have a stronger impact (Ahmmed et al., 2012). The majority of the teachers both in UK and Greece had between 1 hour (or fewer) to 10 hours per month of experience teaching disabled students. Yet, as illustrated above, Greek teachers had greater self-efficacy for inclusive education than British teachers. These inconsistent results contradict previous studies that support previous teaching experience with

disabled students impacts positively teachers' self-efficacy (Janney et al, 1995; Leatherman & Niemeyer, 2005; LeRoy & Simpson, 1996)

4. To what extent are teachers' personal and professional characteristics associated with their attitudes towards inclusion in Greece and UK?

To answer this question, we formulated two hypotheses: a) *H7. Teachers' individual characteristics are associated with their attitudes towards inclusion in Greece*, and b) *H8. Teachers' individual characteristics are associated with their attitudes towards inclusion in United Kingdom*. The results of the study demonstrated that British and Greek teachers' individual characteristics predict their attitudes towards inclusion, supporting the hypotheses. Greek teachers believe more than the UK teachers that all students could succeed in mainstream education classrooms. This could be attributed to the fact that more Greek teachers have completed bachelor and master degrees since, as previous studies indicate, the higher the degree the teachers have completed, the greater the impact towards attitudes to include all students (Avramidis & Norwich, 2002; Boer et al., 2011). These results contradict Dias and Cadime's study (2016) which reported that that academic degree/s was not a significant predictor for attitudes towards inclusion. However, taking into consideration the experience in teaching students with disabilities, these results support previous studies which suggest that teachers who have experience teaching disabled students have more positive attitudes towards inclusion than those with little or no experience (LeRoy and Simpson, 1996; Emmers et al., 2020) which is also supported by a UK survey (Avramidis et al., 2000). On the other hand, British teachers scored higher in the affective and behavioural dimension. Taking into consideration that more positive attitudes associated with male teachers have been reported before (Klassen & Chiu, 2010), this could be associated to gender, as the British sample consisted of twice more male participants than the Greek sample.

Our study also explored the associations assigned in each country separately for teachers' individual characteristics, self-efficacy beliefs and attitudes towards inclusion remain the same for the entire sample. The findings suggest that the teachers' self-efficacy beliefs predict their attitudes towards inclusion, and the teachers' individual characteristics predict their self-efficacy and attitudes towards inclusion. Our study could therefore be added to the great number of studies that have demonstrated correlations between teachers' self-efficacy in inclusive teaching and their attitudes

towards inclusion. These studies include teachers at different educational levels (Malak et al., 2018; Bešić et al., 2017), teachers from various counties (Savolainen et al., 2012; Sharma et al., 2018; Charitaki et al., 2022) and teachers with different qualifications (Avramidis & Kalyva, 2007; Dias & Cadime, 2016). Particularly, our study builds on a previous study conducted with a sample from five countries (Charitaki et al., 2022). We expand this study by exploring the differences between two countries in terms of self-efficacy beliefs and attitudes towards inclusion while also exploring potential correlations with personal and professional characteristics.

The multi-group analyses provided evidence to confirm that the structural paths between attitudes towards inclusion, personal and professional characteristics and teachers' self-efficacy beliefs remain the same for teachers in Greece and UK. Despite, the differences between the two educational systems there seems to exist causal effects of teachers' personal and professional characteristics and teachers' self-efficacy on their attitudes towards inclusion. As other studies suggest, these findings may be attributed to the fact that not only there is a positive relationship between teacher self-efficacy and attitudes towards inclusive education (Savolainen et al., 2012; Yada et al., 2022; Avramidis & Kalyva, 2007; O'Toole & Burke, 2013), but also teachers' attitudes are shaped by certain personal and professional characteristics. Particularly, studies highlight that attitudes towards teaching all students are affected by characteristics, such as age, gender and environmental factors (e.g. experiences with people with a disability, teachers common school beliefs, school culture etc.) (Avramidis et al., 2000; Janney et al, 1995; Crişan et al., 2020).

Limitations and future research

Our study reports that regarding the effects of teachers' professional experience on their attitudes towards inclusion, a clear conclusion cannot be made. Previous studies suggest that teachers illustrate more positive attitudes, particularly when their previous teaching experience with disabled students was positive (Ahmmed et al., 2012). A limitation of our study is that we did not explore the quality of the quality of the teachers' previous experiences. It is possible that the inconsistent results between professional experience and attitudes towards inclusion between Greece and UK could be related to previous experiences.

Another limitation of our study is that we only collected data about experiences working with disabled students and we did not include data about knowing someone with special educational needs in a non-professional capacity (family member, relative or friend). Previous studies have illustrated that having associations inside or outside the work environment with people with disabilities, positively effect teachers' attitudes (Yada et al., 2022; Desombre et al., 2019). Making a distinction between professional and non-professional experiences with students with disabilities could have an impact on conclusions regarding the impact of previous experiences on teachers' attitudes while it could also offer more in-depth elaborations for the reasons behind this relationship.

The British sample included more male participants than the Greek sample, which may have affected the results of the study. Future research could use larger samples that are more representative in terms of the gender and incorporate similar number of male/female participants across countries. This could also be related with one of the results of our study, that British teachers have higher affective and behavioural scores than Greek teachers, which could be attributed to the sample of the study, with more male participants included in the British sample. However, only a few studies report that male teachers have more positive attitudes towards inclusion. The majority of the studies either suggests that there is no correlation between attitudes towards teaching all students (Savolainen et al., 2022; Desombre et al., 2019) or that female teachers have more positive attitudes (Alghazo & Gaad, 2004). Future research should focus more on gender differences to establish if there is a significant effect of gender on teachers' self-efficacy and attitudes.

Conclusion

A significant school reform that takes place in countries throughout the world is the movement towards teaching all students in mainstream classrooms. For this to be achieved, it is important for teachers, who are at the forefront of implementing this movement, to demonstrative self-efficacy to inclusive practices (Huber et al., 2016; Mojavezi & Tamiz, 2012) and positive attitudes towards teaching all students (Boer et al., 2011; Monsen et al., 2014). However, teachers' attitudes and self-efficacy could be shaped by personal and professional characteristics, such as gender, professional experience and qualifications (Dias & Cadime, 2016; Savolainen et al., 2012). There

are only a few studies that look at all these three variables (self-efficacy, attitudes and personal/professional characteristics) together while there are even few studies that put at the center of the research personal/professional characteristics. This study aimed to fill in this gap by exploring how self-efficacy responds to the challenges of inclusive education through an exploration of the impact that personal characteristics could have on teachers' self-efficacy and attitudes toward inclusion.

The study was conducted with two countries, Greece and UK, which allowed to draw interesting comparisons and conclusions regarding self-efficacy and attitudes towards inclusion, also in relation to teachers' personal/professional characteristics in these countries. The results of the research reported that teachers from Greece and UK demonstrated statistically significant differences in their attitudes towards inclusion and in their self-efficacy beliefs. Moreover, in UK and Greece teachers' self-efficacy beliefs predicted their attitudes towards inclusion. Finally, in the UK and Greece the teachers' individual characteristics predicted their attitudes towards inclusion and their self-efficacy. Overall, our study concluded that teachers' self-efficacy beliefs predict their attitudes towards inclusion, and the teachers' individual characteristics predict their self-efficacy and attitudes towards inclusion.

Declarations

-Funding

The research was not supported by funding.

-Conflicts of interest/Competing interests

Authors declare that they have no conflict of interest.

-Data Availability Statement

Data is available upon request.

-Authors' contributions

GC with the assistance of MK collected the data for Greece. GC was responsible for the coordination of the study across the 2 participating countries, GC analyzed the data and written the Method and Results parts of the article. MK assisted us with the editing process and general substantial corrections regarding the entire manuscript. IK collected the data for UK and supported the writing of the introduction and the discussion part. MK supported Author's Contact and Affiliations Page (include all

authors names, contact details and affiliations, only in this page). All authors contributed equally to the final form of the article.

-Ethics approval / Consent to participate

We complied with the principles of British Educational Research Association [BERA] (2018) Ethical Guidelines for Educational Research in implementing the study. The study was approved by the relevant Ethics Committee and consent forms were obtained from all teachers that participated in the study.

-Consent for publication

There are no identifying images or other personal or clinical details of participants that compromise anonymity of the participants. For the participants'/teachers' individual data in any form, written consent to publish was obtained from all participants.

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References

- Ahmed, 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/jrse.2012.12.issue-3.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211. doi:10.1016/0749-5978(91)90020-T
- Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, 2(4), 314–324. doi:10.1002/hbe2.195
- Alghazo, E. M., & Gaad, N. (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. doi:10.1111/j.0952-3383.2004.00335.x
- Armstrong, D. (2014). Educator Perceptions of Children Who Present with Social, Emotional and Behavioural Difficulties: A Literature Review with Implications for Recent Educational Policy in England and Internationally. *International*

Journal of Inclusive Education, 18(7), 731–45.
doi:10.1080/13603116.2013.823245.

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. doi:10.1080/713663717

Avramidis, E., & Norwich, B. (2002). Teachers' Attitudes towards Integration/Inclusion: A Review of the Literature. *European Journal of Special Needs Education*, 17(2): 129–147. doi:10.1080/08856250210129056

Avramidis, E., & Kalyva, E. (2007). The Influence of Teaching Experience and Professional Development on Greek Teachers' Attitudes towards Inclusion. *European Journal of Special Needs Education*, 22(4): 367–389. doi:10.1080/08856250701649989

Bešić, E., Paleczek, L., Mathias Krammer, M., & Gasteiger-Klicpera, B. (2017). Inclusive Practices at the Teacher and Class Level: The Experts' View. *European Journal of Special Needs Education*, 32(3), 329–45. doi:10.1080/08856257.2016.1240339.

Billingsley, B. S., & Cross, L. H. (1992). Predictors of commitment, job satisfaction, and intent to stay in teaching: A comparison of general and special educators. *The journal of special education*, 25(4), 453-471. doi:10.1177/0022466992025004

Bishop, A.G., Brownell, M.T., Klingner, K., Leko, M., & Sally, A.C. (2010). Differences in Beginning Special Education Teachers: The Influence of Personal Attributes, Preparation, and School Environment on Classroom Reading Practices. *Learning Disability Quarterly*, 33(2), 75–92. doi: 10.1177/073194871003300202.

Boer, A., Pijl, S. J., & Minnaert, A. (2011). Regular Primary Schoolteachers' Attitudes towards Inclusive Education: A Review of the Literature. *International Journal of Inclusive Education*, 15(3), 331–53. doi:10.1080/13603110903030089.

Caprara, G. V., Barbaranelli, C., Borgogni, L., & Steca, P. (2003). Efficacy Beliefs as Determinants of Teachers' Job Satisfaction. *Journal of Educational Psychology*, 95(4), 821-832. doi:10.1037/0022-0663.95.4.821

- Charitaki, G., Kourti, I., Gregory, J. L., Ozturk, M., Ismail, Z., Alevriadou, A., ... & Demirel, C. (2022). Teachers' Attitudes Towards Inclusive Education: a Cross-National Exploration. *Trends in Psychology*, 1-28. doi:10.1007/s43076-022-00240-0
- Charitaki, G., Kypriotaki, M., & Alevriadou, A. (2023). Greek adaptation of the teachers' Attitudes Towards Teaching All Students (ATTAS-mm) scale. *Equity in Education & Society*, 27526461231177457.
- Crişan, C., Albulescu, I., & Turda, S. E. (2020). Variables that influence teachers' attitudes regarding the inclusion of special needs children in the mainstream school system. *Education* 21, 21(18), 70–79. doi:10.24193/ed21.2020.18.07
- Ćwirynkało, K., Kisovar-Ivanda, T., Gregory, J. L., Żyta, A., Arciszewska, A., & Zrilić, S. (2017). Attitudes of Croatian and Polish elementary school teachers towards inclusive education of children with disabilities. *Hrvatska Revija Za Rehabilitacijska Istraživanja*, 53(Supplement), 252–264.
- Desombre, C., Lamotte, M., & Jury, M. (2019). French teachers' general attitude toward inclusion: The indirect effect of teacher efficacy. *Educational Psychology*, 39(1), 38-50. doi:10.1080/01443410.2018.1472219
- Dias, P.C., & Cadime, I. (2016). Effects of personal and professional factors on teachers' attitudes towards inclusion in preschool. *European Journal of Special Needs Education*, 31(1), 111-123. doi:10.1080/08856257.2015.1108040
- Durksen, T. L., Klassen, R. M., & Daniels, L. M. (2017). Motivation and collaboration: The keys to a developmental framework for teachers' professional learning. *Teaching and Teacher Education*, 67, 53–66. doi:10.1016/j.tate.2017.05.011.
- Eagly, A. H., and Chaiken, S. (2007). The Advantages of an Inclusive Definition of Attitude. *Social Cognition*, 25 (5): 582–602. doi:10.1521/soco.2007.25.5.582.
- Emmers, E., Baeyens, D., & Petry, K. (2020). Attitudes and self-efficacy of teachers towards inclusion in higher education. *European Journal of Special Needs Education*, 35(2), 139-153. doi:10.1080/08856257.2019.1628337

- Gregory, J. L. (2018). Not My Responsibility: The Impact of Separate Special Education Systems on Educators' Attitudes toward Inclusion. *Educational Policy Analysis and Strategic Research*, 13(1),127–48. doi:10.29329/epasr.2018.137.8.
- Gregory, J. L., & Noto, L. (2012). Technical manual for attitudes towards teaching all students (ATTAS-mm) instrument. *ERIC*. <http://eric.ed.gov/?id=ED537530>
- Gregory, J. L., & Noto, L. A. (2018). Attitudinal instrument development: Assessing cognitive, affective, and behavioral domains of teacher attitudes toward teaching all students. *Cogent Education*, 5(1), 1422679. doi:10.1080/2331186x.2017.1422679
- Gregory, J. L., & Noto, L. A. (2019). Revalidating an instrument to gain insights into changing attitudes towards teaching all students. *NERA Conference Proceedings 2019*, 1–18. <https://opencommons.uconn.edu/nera-2019/2>
- Grimes, S., Southgate, E. Scevak, J. and Buchanan. J. (2018). University Student Perspectives on Institutional Non-Disclosure of Disability and Learning Challenges: Reasons for Staying Invisible. *International Journal of Inclusive Education*, 1–17. doi:10.1080/13603116.2018.1442507.
- Gutshall, C. A. (2013). Teachers' mindsets for Students with and without Disabilities. *Psychology in the Schools*, 50 (10): 1073–1083. doi:10.1002/pits.21725.
- Harlen, W. & Qualter, A. (2017). The teaching of science in Primary schools. London: Routledge.
- Holzberger, D., Philipp, A., & Kunter, M. (2013). How teachers' self-efficacy is related to instructional quality: A longitudinal analysis. *Journal of Educational Psychology*, 105(3), 774. doi:10.1080/08856257.2019.1628337
- Howard, M. C., & Hoffman, M. E. (2018). Variable-centered, person-centered, and person-specific approaches: Where theory meets the method. *Organizational Research Methods*, 21(4), 846-876.
- Huber, M. J., Fruth, J. D., Avila-John, A., & López-Ramírez, E. (2016). Teach-er self-efficacy and student outcomes: A transactional approach to prevention. *Journal of Education and Human Development*, 5(1), 46-54. doi:10.15640/jehd.v5n1a5

- Hwang, Y.-S., & Evans, D. (2011). Attitudes Towards Inclusion: Gaps between Belief and Practice. *International Journal of Special Education*, 26(1), 136–146.
- Janney, R. Snell, E., Beers, M. E. & Raynes, M. (1995). Integrating children with moderate and severe disabilities into general education classes. *Exceptional Children*, 61(5), 425–439. doi:10.1177/001440299506100503
- Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology*, 102(3), 741-756. doi:10.1037/a0019237.
- Koustelios, A., & Tsigilis, N. (2005). The relationship between burnout and job satisfaction among physical education teachers: a multivariate approach. *European Physical Education Review*, 11(2), 189-203. doi:10.1037/a0019237
- Kraska, J., & Boyle, C. (2014). Attitudes of Preschool and Primary School Pre-service Teachers towards Inclusive Education. *Asia-Pacific Journal of Teacher Education*, 42(3), 228–246. doi:10.1080/1359866X.2014.926307
- Leatherman, J. M., & Niemeier, J. A. (2005). Teachers' attitudes toward inclusion: factors influencing classroom practice. *Journal of Early Childhood Teacher Educators*, 26(1), 23–36. doi:10.1080/10901020590918979
- LeRoy, B. & Simpson, C. (1996). Improving student outcomes through inclusive education. *Support for Learning*, 11(1), 32–36. doi:10.1111/j.1467-9604.1996.tb00046.x
- Malinen, O. P., Savolainen, H., Engelbrecht, P., Xu, J., Nel, M., Nel, N., & Tlale, D. (2013). Exploring teacher self-efficacy for inclusive practices in three diverse countries. *Teaching and Teacher Education*, 33, 34-44. doi:10.1016/j.tate.2013.02.004.
- Mazurek, K., & Winzer., K. (2011). Teacher Attitudes Toward Inclusive Schooling: Themes From the International Literature. *Education and Society*, 29(1), 5–25. doi:10.7459/es/29.1.02.

- McKay, L. (2016). Beginning Teachers and Inclusive Education: Frustrations, Dilemmas and Growth. *International Journal of Inclusive Education*, 20(4), 383–96. doi:10.1080/13603116.2015.1081635.
- Mojavezi, A., & Tamiz, M. P. (2012). The Impact of Teacher Self-efficacy on the Students' Motivation and Achievement. *Theory & Practice in Language Studies*, 2(3), 483-491. doi:10.4304/tpls.2.3.483-491
- 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.
- Murray, C., Lombardi, A., & Wren, C.T. (2011). The Effects of Disability-Focused Training on the Attitudes and Perceptions of University Staff. *Remedial and Special Education*, 32(4), 290–300. doi:10.1177/0741932510362188.
- Nilsen, S. (2020). Inside but still on the outside? Teachers' experiences with the inclusion of pupils with special educational needs in general education. *International Journal of Inclusive Education*, 24(9), 980–996. doi:10.1080/13603116.2018.1503348.
- O'Toole, C., & N. Burke. (2013). Ready, Willing and Able? Attitudes and Concerns in Relation to Inclusion amongst a Cohort of Irish Pre-service Teachers. *European Journal of Special Needs Education*, 28(3), 239–253. doi:10.1080/08856257.2013.768451
- Perera, H. N., Calkins, C., & Part, R. (2019). Teacher self-efficacy profiles: Determinants, outcomes, and generalizability across teaching level. *Contemporary Educational Psychology*, 58, 186-203. doi:10.1016/j.cedpsych.2019.02.006
- Qi, J., & Ha, A. S. (2012). Inclusion in physical education: A review of literature. *International Journal of Disability, Development and Education*, 59(3), 257-281. doi:10.1080/1034912X.2012.697737.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*, 88(5), 879.

- Saloviita, T. (2020). Teacher attitudes towards the inclusion of students with support needs. *Journal of Research in Special Educational Needs*, 20(1), 64–73. doi:10.1111/1471-3802.12466.
- Savolainen, H., Engelbrecht, P., Nel, M., & Malinen, O. P. (2012). Understanding teachers' attitudes and self-efficacy in inclusive education: Implications for pre-service and in-service teacher education. *European journal of special needs education*, 27(1), 51-68. doi:10.1080/08856257.2011.613603
- Savolainen, H., Malinen, O.P., & Schwad, S. (2022). Teacher efficacy predicts teachers attitudes towards inclusion – a longitudinal cross lagged analysis. *International Journal of Inclusive Education*, 26(9), 958-972. doi:10.1080/13603116.2020.1752826
- Sharma, U., & Jacobs, D. K. (2016). Predicting in-service educators' intentions to teach in inclusive classrooms in India and Australia. *Teaching and Teacher Education*, 55, 13-23. doi:10.1016/j.tate.2015.12.004
- Tschannen-Moran, M., Hoy, A. W., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of educational research*, 68(2), 202-248.
- van Diepen, M., Donkers, B., & Franses, P. H. (2009). Does irritation induced by charitable direct mailings reduce donations?. *International journal of research in marketing*, 26(3), 180-188.
- van Mieghem, A., Verschueren, K., Petry, K., & Struyf, E. (2020). An Analysis of Research on Inclusive Education: A Systematic Search and Meta Review. *International Journal of Inclusive Education*, 24(6), 675–89. doi:10.1080/13603116.2018.1482012.
- van Rooij, E. C. M., Fokkens-Bruinsma, M., & Goedhart, M. (2019). Preparing Science Undergraduates for a Teaching Career: Sources of Their Teacher Self-Efficacy. *The Teacher Educator*, 54(3), 270-294. doi:10.1080/08878730.2019.1606374
- Wolf, B. M., Herrmann, M., & Brandstätter, V. (2018). Self-efficacy vs. action orientation: Comparing and contrasting two determinants of goal setting and goal striving. *Journal of Research in Personality*, 73, 35-45. doi:10.1016/j.jrp.2017.11.001

- Yada, A., Leskinen, M., Savolainen, H., & Schwab, S. (2022). Meta-analysis of the relationship between teachers' self-efficacy and attitudes toward inclusive education. *Teaching and Teacher Education, 109*, 1-15.
- Yu, S. Y. (2019). Head Start Teachers' Attitudes and Perceived Competence Toward Inclusion. *Journal of Early Intervention, 41*(1), 30–43. doi:10.1177/1053815118801372.
- Yu, S. Y., & Park, H. (2020). Early Childhood Preservice Teachers' Attitude Development Toward the Inclusion of Children with Disabilities. *Early Childhood Education Journal, 48*(4), 497–506. doi:10.1007/s10643-020-01017-9.
- Zee, M., & Koomen, H. M. (2016). Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: A synthesis of 40 years of research. *Review of Educational research, 86*(4), 981-1015. doi:10.3102/003465431562680