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Further development of the Teacher Attitudes to Inclusion Scale: principal components and Rasch analysis

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ABSTRACT

Providing an effective and high-quality education for all children and young people remains a significant challenge throughout the world. Disputes and contradictions contribute to the prevailing debate as to the justification and merits of inclusive education. One of the reoccurring themes within the literature on inclusive education is the relationship between the successful application of teachers' knowledge, skills, and abilities utilised to include inclusive strategies in their classrooms, and their attitude towards inclusion. A teacher with more positive attitudes will be more accepting of students, build more successful relationships with them, aid in a child's sense of belonging, student academic success and social integration. To address this issue, the Teacher Attitudes to Inclusion Scale (TAIS) was developed by the first author to measure the attitudes of qualified (in-service) teachers towards inclusive education. Using an Exploratory Principal Components Analysis and Reliability, a revised version of the TAIS, the TAIS-R provides a psychometrically validated measure of two constructs – a global attitude and a personal attitude towards inclusive education that provides an accurate evaluation tool for research and practice.

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Introduction

Decades after the ratification of the Salamanca Statement, which positioned inclusive education as the prevailing philosophy for education in many countries (Anderson and Boyle 2019), the construct remains an elusive goal for governments throughout the world (Boyle and Anderson 2020). Research has identified a myriad of reasons for this. Despite years of debate, global consensus as to what inclusive education is, what it should look like, and who should take responsibility for its enactment, are yet to be realised (Boyle and Anderson 2020). Furthermore, consternation remains as to the merits of the approach for all students, with some arguing it does not support those

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with more complex education needs (e.g. Kaufman et al. 2020). These challenges have led to ambiguity and inconsistency in educational policy and practice and have presented significant barriers to the realisation of inclusive education (Dimitrellou, Hurry, and Male 2018).

Inclusive education emerged from dissent with the field of special education (Anderson and Page 2022), and since this time has evolved to encompass all students at risk of segregation or exclusion, regardless of characteristics such as ethnicity, disability, socio-economic status, indigeneity, and/or gender (Haug 2017). This has been an important step forward. Educational segregation and exclusion of students have been shown to result in significant consequences for not only the students who experience it, but for society at as whole (Slee 2018a). They come at a both an economic and social cost. Recent reports indicate the economic cost of educational segregation and exclusion to be in the billions of dollars globally, with young people less likely to gain employment and/or be active in their communities, and more likely to have chronic health issues and/or be incarcerated (e.g. Mont 2021; Gill et al. 2017). These outcomes mirror those expressed by Wilkinson and Pickett (2010) in their seminal publication *The Spirit Level*, more than a decade again. Education systems are still failing large groups of children and young people across the globe.

In recent years, an addendum to the Convention of the Rights of Persons with Disabilities centred on inclusive education (General Comment 4; UN 2016) and the publication of the United Nation's Sustainable Development Goals (UN 2018) have brought inclusive education back to the fore of educational discourse globally (Schwab, Resch, and Alnahdi 2021). These widely regarded and influential publications situate inclusive education as the key tenet in affording delivery of an equitable education to all children and young people throughout the world. Acknowledgment has been given to the contextual nature of inclusive practice, and the critical role of systemic and educational policy reform; necessary elements that have been noted by renowned scholars in the field or inclusive education for many years (e.g. Ainscow, Slee, and Best 2019; Slee 2018b). Reform at this level will not happen quickly. In some countries, systemic structures and educational policy have shifted away from more inclusive forms of schooling to higher rates of segregation and exclusion (Boyle and Anderson 2020). There is much work to be done.

Teachers also have a role to play. Within their classrooms, teachers have a level of autonomy; their actions influence classroom culture, how lessons are taught, and how students engage with and express their understanding of curriculum content (Middleton 2019; Miller et al. 2020). Teachers bring knowledge, skills, and capabilities to their work, and, if aligned with the philosophy of inclusive education, these can be utilised to create and sustain inclusive classrooms (Boyle et al. 2020). Success (or not) has been shown to be influenced by several factors including experience, professional learning (both as a pre-service and an in-service teacher), attitude, and self-efficiency (Miller et al. 2020; Wilson, Marks Woolfson, and Durkin 2019; Hauerwas and Mahon 2018). Teachers need to know what inclusive education is, have a level of emotional intelligence, and be confident and competent using strategies that promote inclusive classrooms (Middleton 2019; Webster and Blatchford 2018), but most importantly, they need to value it.

Why teacher attitudes matter

Education reform globally is influenced by the dominant neoliberal agenda that has seen concepts such as choice, competition, standardisation and marketisation enter the educational lexicon of many countries (Done and Andrews 2019; Middleton 2019). Yet inclusive education is situated within a social justice paradigm and is considered by many as a basic human right (Pit-ten Cate et al. 2019). It is unsurprising to find that current educational discourse and policy are 'imbued with paradoxical values and colliding agendas' (Anderson and Boyle 2020, 29), many of which sit in contradiction to inclusive education. Within this complex educational landscape, teachers are influenced by the 'norms and values of their social world' (Schwab, Resch, and Alnahdi 2021, 2). Previous studies have found the values teacher hold influence their attitudes (Büssing et al. 2019; Pit-ten Cate and Glock 2019), and these attitudes have a significant impact on their teaching behaviour in the classroom (e.g. Hellmich, Löper, and Görel 2019; Schwab, Sharma, and Hoffmann 2019).

The influence of values and attitudes on the way teachers enact teaching is reflected in Figure 1 (adapted from Precey and Mazurkiewicz 2013, 115).

The values and attitudes teachers hold directly influence what they know and understand, how they respond, and what skills they choose to develop within themselves. Relationships between the constructs in the pyramid are reciprocal and dynamic; they continuingly influence and inform one another. These relationships are significant (Schrader and Lawless 2004); teachers will teach in a way that reflects their values and attitudes towards key aspects of education.

The attitude a teacher holds towards inclusive education plays a significant role in how they consider and understand the construct, and work to enact it in their classrooms. Research suggests that teachers with more positive attitudes towards inclusive education are more accepting of diversity, build more successful relationships with students, facilitate a stronger sense of belonging, and improve student academic and social success (Adams and Bourke 2021; Miller et al. 2020). It follows that positive teacher attitudes

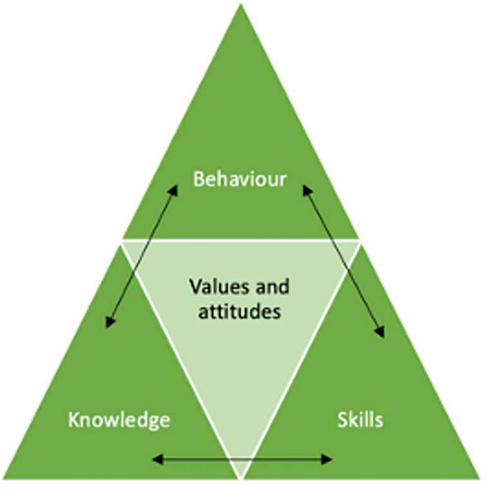

Figure 1. Influence of values and attitudes on the work of teachers.

are fundamental to creating sustainable inclusive classrooms and serve as a predictor to positive school experiences and outcomes for diverse cohorts of students (Avramidis, Bayliss, and Burden 2000; Sharma et al. 2018). Conversely, negative attitudes may result in unfavourable schooling experiences for particular groups of students, and ultimately lead to poor educational and social outcomes (Boyle, Anderson, and Allen 2020). Attitudes matter!

The importance of well-validated teacher attitude measurements

A recent bibliometric review of the literature into inclusive education identified pre- and in-service teacher attitudes towards the construct as the most commonly researched area in the field (Hernández-Torrano, Somerton, and Helmer 2020). A quick online search located articles pertaining to inclusive education and teacher attitudes from all corners of the globe, including England (Essex, Alexiadou, and Zwozdiak-Myers 2021), Austria (Schwab, Resch, and Alnahdi 2021), Japan (Moberg et al. 2020), Ghana (Butakor, Ampadu, and Suleiman 2020), Bhutan (Dorji et al. 2021), Chile (San Martin et al. 2021), and Australia (Gigante and Gilmore 2020; Page et al. 2021). Despite the large amount of work in this area, there remain inconsistencies in the way studies are conducted and the findings they produce. Consequently, it has not been possible to attribute a set of influencing factors to the attitudes of teachers around the globe towards the construct of inclusive education.

Teacher attitudes vary significantly, as does their self-efficacy. A study conducted across twenty countries found that teachers with positive attitudes and high self-efficacy generated better outcomes for diverse cohorts of students (Hauerwas and Mahon 2018) than those teachers who rated lower in one or both areas. Factors such as teaching experience, training, culture, and disability awareness were all noted as influencing the attitude of participating teachers towards inclusive education. Yet an interrogation into the first factor, teaching experience, raised some interesting contractions. Hauerwas and Mahon (2018) found that teachers had a less positive attitude after one year of teaching compared with their pre-service counterparts and suggested that experience in schools led to a decline in attitude. Conversely, a study by Roberts and Simpson (2016) found the more years of experience a teacher had, particularly if it included teaching students with additional educational needs, the more positive their attitude to inclusive education. Counter to both studies, Wilson, Marks Woolfson, and Durkin (2019) concluded from their research that teaching experience did not play a significant part in determining the attitude of a teacher.

One area on which the research does converge is the crucial link between attitudes and teacher self-efficacy (Hauerwas and Mahon 2018; Wilson, Marks Woolfson, and Durkin 2019). Positive attitudes facilitate successful implementation of inclusive classroom practices, which leads to improved self-efficacy, and in turn strengthens a teacher's positive attitude towards the construct. On the other hand, unsuccessful attempts at inclusive education can reduce a teacher's belief in their capacity to support heterogenous groups of students, and lead to more negative attitudes. Understanding the factors that influence a teacher's attitudes towards inclusive education is a complex task, but unquestionably essential. It follows that measures used to conduct research in this area must be well-validated. The development and validation of one such measure, the

Teacher Attitudes To Inclusion Scale, is presented as an accurate evaluation tool for research and practice into teacher attitudes of inclusive education.

Method

Participants

The sample comprised of 392 secondary school teachers drawn from 27 schools in a local education authority in Scotland. There were 137 male participants, 229 female participants and 26 who did not provide information on gender. The sample consisted of 330 mainstream teachers, 21 special education teachers and 41 teachers who did not provide information on type of school. Length of service was described in three groups, specifically up to 5 years ($N = 79$), 6–20 years ($N = 134$), and over 21 years ($N = 167$), with 12 participants not providing information relating to length of service.

Materials

The Teacher Attitudes to Inclusion Scale (TAIS) was developed by the first author of this paper and who is an educational psychologist (Boyle 2014; Boyle, Topping, and Jindal-Snape 2013) to measure the attitudes of qualified (inservice) teachers towards inclusive education. The TAIS consisted of 27 questions and has been demonstrated to be a reliable measure of attitudes towards inclusive education, with a Cronbach's alpha of .89. Higher scores on the TAIS indicated more positive attitudes, with a six-point Likert scale used for all scale questions and responses ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). An advantage of a six-point scale is that participants have no option to choose a middle (or neutral) score, and in effect are required to either agree or disagree with each statement.

The TAIS was developed following a consultation with previously published surveys by Van Reusen, Shoho, and Barker (2000), Wilczenski (1995), Villa and Thousand (1996), and Avramidis, Bayliss, and Burden (2000). The TAIS consisted of 27 scale questions, with seven questions reversed. After correction of the reversed questions, higher scores indicated more positive attitudes.

Procedure

The data collected by Boyle, Topping, and Jindal-Snape (2013) was utilised for the development of the TAIS. Initial exploratory factor analysis was conducted using the Statistical Package for Social Sciences (SPSS) version 25. The resulting factors were explored for suitability of fit for the Rasch model using the Rasch Unidimensional Models for Measurement (RUMM2030) software. External validity was investigated using the results of the Rasch analysis.

Results

Exploratory principal components analysis and reliability

The 27 items that comprise the TAIS were subjected to principal components analysis. Suitability of the data for principal components analysis was assessed, with the

correlation matrix describing many coefficients of .3 and above. The Kaiser-Meyer-Olkin measure of sampling adequacy was .893, exceeding the recommended value of .6 (Kaiser 1970, 1974) and Bartlett's Test of Sphericity (Bartlett 1954) was significant ($p < .001$) which supported the factorability of the correlation matrix.

Principal components analysis revealed the presence of five components with eigenvalues exceeding 1, which accounted for 29.91%, 10.01%, 6.10%, 4.64%, and 4.03% of the variance respectively. The scree plot demonstrated a change after the third component. Watkins (2000) software for calculating Parallel Analysis suggested that only three components with eigenvalues exceeded the corresponding criterion values in a randomly generated data matrix of 27 variables and 390 respondents.

While the results of Catell's (1966) scree test and the Parallel Analysis suggested that three factors should be retained, Tabachnick and Fidell (2007) recommend that other solutions should also be considered. After consideration of two, three and four factor solutions, a two-solution factor was determined to be the most optimum solution. There was no evidence to support the use of a four-factor solution, and the third factor in the three-factor solution contained only four items. Direct oblimin rotation was chosen as it is the most used orthogonal rotation (Pallant 2020).

The two-component solution explained a total of 39.868% of the variance, with component 1 contributing 29.737%, component 2 contributing 10.131%. Three items (*Q13*, *Q16*, *Q4*) did not load on the two-component solution above .40 and were excluded. One item (*Q15: Students performing at a level more than three years below their chronological age should still be educated in mainstream classes*) loaded at .41, however was excluded due to the specificity of the item and the absence of any similar items. The rotated solution conformed to Thurstone's (1947) simple structure, and the component loadings are provided in Table 1.

The components were labelled based on the content of the items as described in the pattern matrix. Items that loaded on component 1 generally described personal attitudes towards training and perceived competency. For the purposes of further discussion, component 1 will be referred to as the Training and Perceived Competence (TAPC) scale. The initial TAPC scale was calculated to be reliable, with a Cronbach's alpha of .86.

In contrast to the Global Attitudes towards Inclusion (GAI) scale, items that loaded on component 2 described general or global attitudes towards inclusion and inclusive education. For the purposes of further discussion, component 2 will be referred to as the GAI scale. The initial GAI was calculated to be reliable, with a Cronbach's alpha of .86.

An aggregate inclusion score was utilised in the initial development of the TAIS (Boyle, Topping, and Jindal-Snape 2013). After removal of the non-loading items, initial reliability of the Total Inclusion Score (TIS) scale was calculated, with a Cronbach alpha of .90. Cronbach (1951) suggested that alpha levels of .70 and above indicate acceptable internal consistency for quantitative interpretation.

Rasch analysis

The Rasch model of data analysis tests achieved response patterns against expected response patterns (Pallant and Tennant 2007). Data was analysed using the RUMM2030 software (Andrich et al. 2010). For the purposes of evaluating differential item functioning (DIF), participants were classified into two groups for category of

Table 1. Pattern and structure coefficients by item for principal components analysis for TAIS (N = 390).

	Pattern coefficients		Structure coefficients		
Item	Comp 1	Comp 2	Comp 1	Comp 2	Communalities
19. Alternative	**.76**	-.16	**.71**	.07	.52
21. Adopted	**.75**	-.20	**.69**	.03	.51
20. Individual	**.75**	-.16	**.70**	.07	.51
22. Participate	**.66**	-.19	**.60**	.01	.40
11. Positive	**.63**	.26	**.71**	.46	.57
24. Cope	**.62**	.33	**.72**	.52	.61
17. Competent	**.58**	.16	**.63**	.34	.42
5. Training	**.57**	.13	**.61**	.30	.39
25. Resources	**.54**	.38	**.65**	.54	.55
9. Applicable	**.52**	.16	**.57**	.32	.35
14. Training	**.49**	.16	**.54**	.31	.31
8. Environment	-.06	**.76**	.17	**.74**	.56
2. Mainstream	-.02	**.74**	.20	**.73**	.54
3. Reduction	-.10	**.70**	.12	**.67**	.45
27. Support	.20	**.68**	.40	**.74**	.58
18. Beneficial	.16	**.65**	.36	**.69**	.51
26. Grouped	-.03	**.62**	.16	**.61**	.37
10. Difficulties	-.21	**.56**	-.04	**.50**	.29
23. Support	.41	**.46**	.55	**.59**	.49
6. Social	.22	**.46**	.36	**.53**	.32
1. Mainstream	.31	**.44**	.45	**.54**	.38
7. Effect	.32	**.44**	.46	**.53**	.38
12. Reject	-.01	**.43**	.13	**.43**	.18

Note: Major loadings for each item are bolded. Comp = component.

school (mainstream or special school) and three groups for length of teaching service (up to 5 years, 6–20 years, and greater than 20 years).

Global Attitude towards Inclusion (GAI) scale

Initial analysis of the GAI scale indicated reasonable fit to the Rasch model ($p = .018$). No serious person misfit was noted (person fit residual = 1.397); however the mean fit residual for items suggested a slight item misfit (item fit residual = 1.670). No disordered thresholds were observed, providing support for the response format. Individual item fit scores revealed one item (*Q24*) with a significant chi-square probability value, and two items with very high positive fit residuals (*Q9* fit residual = 3.28; *Q14* fit residual = 3.53). After the content of the two items was considered, one item was removed (*Q9: A lot of the learning strategies employed in the classroom are applicable to all students not just those with additional needs*), which resulted in improved model fit ($p = .10$), and a reduction in the item fit residual to 1.32. See Table 2 for further details of the GAI scale.

While item *Q14* demonstrated a high positive fit residual of 3.15, it was decided to retain the item due to the acceptable item fit residual. The Person Separation Index (PSI) value of .85 indicated good person reliability. No DIF was observed for gender, school category or years of teaching service. There was no evidence of multidimensionality, with a series of independent t-tests comparing person estimates from subtests identified using a principal components analysis of the residuals indicating only 6.20% [95% CI 0.040, 0.084] statistically significant tests. Figure 2 describes the person-item distribution for the GAI scale.

Table 2. Model fit statistics for Global Attitude towards Inclusion (GAI) scale.

Action	Overall model fit	Item Fit Resid Mean (SD)	Person Fit Resid Mean (SD)	PSI
1. Original scale	$\chi^2 = 79.12$ $p = .02$	0.76 (1.67)	-0.33 (1.40)	0.85
2. Removed item 9	$\chi^2 = 63.08$ $p = .10$	0.61 (1.32)	-0.33 (1.32)	0.85

Note: Fit Resid = Fit Residual, PSI = Person Separation Index.

Training and Perceived Competence (TAPC) scale

Rasch analysis of the TAPC scale revealed poor model fit. Six items (*Q1*, *Q6*, *Q10*, *Q12*, *Q26* and *Q27*) displayed disordered thresholds, however rescoring of these items did not improve model fit and the original scoring was retained. Two items (Q12 and Q10) had extreme positive item fit residuals and one item (Q27) had an extreme negative item fit residual. Three items (Q12, Q18 and Q27) had significant chi-square probability values. The optimal solution was achieved by the removal of items Q12, Q10 and Q27, and further details are available in Table 3.

While the final chi-square value was significant, this value is sensitive to larger sample sizes. To confirm the suitability of the scale, the Rasch model was adjusted for sample size and the resulting chi-square value was not significant. The final PSI was 0.83, indicating good person separation reliability. No DIF was observed for gender, school category or years of teaching service. Independent t-tests comparing person estimates from subtests identified using principal components analysis of the residuals resulted in 7.20% [95% CI 0.050, 0.094] statistically significant tests, which supports the unidimensionality of the scale. Figure 3 describes the person-item distribution for the TAPC scale.

Total Inclusion Score (TIS) scale

The possibility of an aggregate or total score similar to the original TIS utilised by Boyle, Topping, and Jindal-Snape (2013) was investigated. The remaining 19 items were combined and subjected to Rasch analysis with the results indicating a poor fit to the Rasch model ($p < .001$). Some person misfit was noted (person fit residual = 1.69) and considerable item fit residual was noted (item fit residual = 2.01). Disordered thresholds were

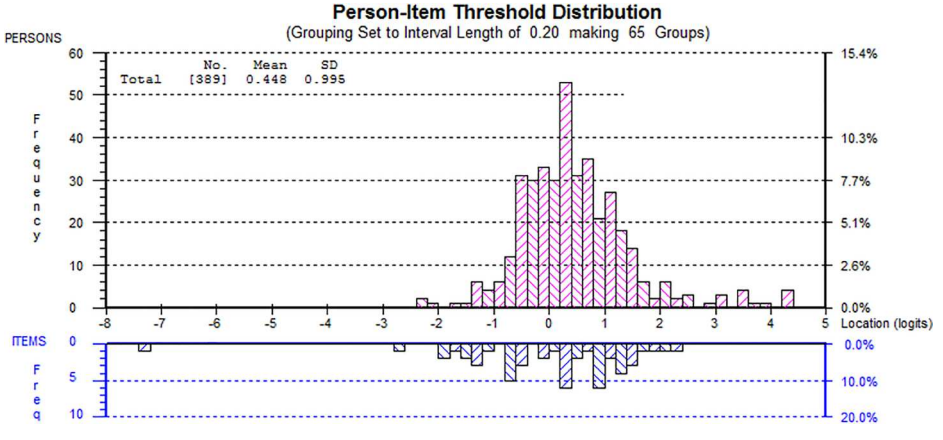

Figure 2. Person-item distribution graph for GAI scale.

Table 3. Model fit statistics for Training and Perceived Competence (TAPC) scale.

Action	Overall model fit	Item Fit Resid Mean (SD)	Person Fit Resid Mean (SD)	PSI
1. Original scale	$\chi^2 = 135.47$ $p < .001$	0.74 (2.22)	−0.37 (1.49)	0.85
2. Removed item 12	$\chi^2 = 138.22$ $p < .001$	0.69 (1.87)	−0.37 (1.41)	0.86
3. Removed item 10	$\chi^2 = 114.38$ $p < .001$	0.66 (1.72)	−0.43 (1.48)	0.85
4. Removed item 27	$\chi^2 = 79.06$ $p < .001$	0.73 (1.34)	−0.42 (1.45)	0.83
5. Adjusted sample size to 250	$\chi^2 = 50.94$ $p = .25$	0.73 (1.34)	−0.42 (1.45)	0.83

Note: Fit Resid = Fit Residual, PSI = Person Separation Index.

observed for seven items. Four items had extreme positive item fit residuals and one item had an extreme negative item fit residual. Five items had significant chi-square probability values. Independent t-tests comparing person estimates from subtests identified using principal components analysis of the residuals resulted in 20.21% [95% CI 0.180, 0.224] statistically significant tests, which suggested a degree of multidimensionality was present.

Revised scale reliability

The reliability of the revised GAI scale and TAPC scale was calculated using SPSS. The revised scales were calculated to be reliable, with Cronbach's alpha of .85 and .83 respectively. Reliability was not calculated for the revised TIS due to the lack of support for the validity of the scale when measured against the Rasch model. The revised two-component scale is in Appendix 1.

Discussion

Principal components analysis and Rasch analysis were applied to the TAIS scale for the purposes of identifying the underlying constructs and increasing internal validity. Two

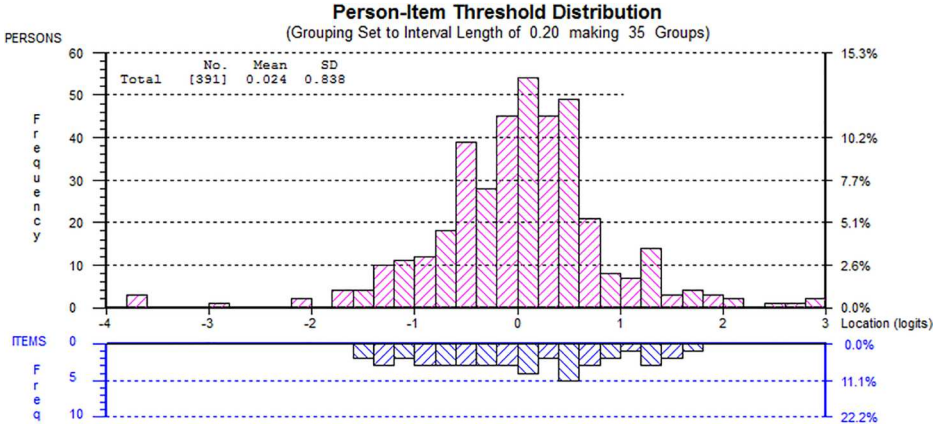

Figure 3. Person-item distribution graph for TAPC scale.

components were identified and labelled according to their item content. Several items were deleted during the principal components analysis, and a number of items were deleted during the Rasch analysis, which resulted in two scales that met the criteria for fit against the Rasch model.

Initial reliability for the GAI scale was higher than for the final revised GAI scale, and a similar pattern was observed for the TAPC scale. This is to be expected when items are deleted; however, both revised scales demonstrated good reliability. It should be noted that the revised reliability scores were calculated from the same sample, and this is not an ideal practice. Further reliability tests are suggested with new samples to improve validity.

The original TAIS reported an aggregate measure, or TIS (Boyle, Topping, and Jindal-Snape 2013). The results of the Rasch analysis did not support the use of the revised TIS due to poor fit, disordered thresholds and multidimensionality. An underlying assumption of item response theory is that scales are unidimensional (Allen and Yen 2002; Nia et al. 2017), and the presence of multiple constructs may often prevent model fit. Stout (1990) suggested that multidimensionality does not preclude model fit if there is evidence for a single overarching factor; however, in this instance there was no evidence that any reliable utility could be achieved by combining the two revised scales.

The content of the items in the GAI scale represented a measure of an individual's global or general attitude towards the concept of inclusive education. General attitudes towards inclusion have been found to be an important predictor of the inclusive education, with teachers who reported successful classroom inclusion holding more positive attitudes towards inclusion (Avramidis, Bayliss, and Burden 2000; Sharma et al. 2018). The majority of items were weighted towards attitudes that did not require anything of the individual teacher, such as accommodations made, lessons changed or additional effort. Items included content that measured attitudes towards having children with special education needs in a mainstream class; grouping children according to needs; and the perceived impact to the learning environment.

The content of the items in the TAPC scale represented a measure of an individual's attitude towards their professional training, ongoing professional development, and personal feelings of competency regarding the implementation of inclusive education. Professional training has been demonstrated to impact on attitudes towards inclusive education (Forlin, Keen, and Barrett 2008; Hauerwas and Mahon 2018). In another study, Lambe and Bones (2006) found that while pre-service teacher attitudes towards the philosophy of inclusive education were generally positive, there was a marked concern about training and competence regarding implementation. This also supports the usefulness of the two separate and distinct revised scales as a method of quantifying both general and personal attitudes towards inclusive education.

The revised Teacher Attitudes Towards Inclusion scale (or TAIS-R) provides a shortened but more psychometrically validated measure of two constructs – a global attitude and a personal attitude towards inclusive education. The new measure to be known as TAIS-R can be found in Appendix 2. There is support in previously published literature for the necessity of measuring these two constructs. Further research may be used in validating the measure internationally, and also for the potential for use as a measure of training effectiveness in professional teacher training programs.

Disclosure statement

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

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Data availability

The data that supports the findings of this study are available from the corresponding author upon reasonable request.

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Apendices

Appendix 1

Teacher attitudes to Inclusion Scale (Revised)

Original question numbers with new factors

Factor 1 – General Attitude towards Inclusion (GAI)

1. Students with additional support needs should be in mainstream schools
2. Educating children with additional support needs in mainstream class is not good for other children
3. There needs to be a reduction in the amount of work given to my class because of the inclusion of children with additional support needs.
4. Students with additional support needs need to have the required social skills to behave in class
5. The presence of children with additional support needs in my mainstream class has minimal effect on my teaching
6. Including children with additional support needs in the classroom can adversely affect the learning environment of my class
7. It is not beneficial for children with additional support needs to be educated in the mainstream schools
8. With appropriate support, I could teach all students (including those with additional support needs) in the same class
9. Children with additional support needs learn best when grouped with others with similar needs

Factor 2 – Training and Perceived Competence (TAPC)

10. I feel competent to work with students who have varying levels of difficulties
11. I am able to make a positive educational difference to students with additional support needs in my classroom
12. I receive adequate training to help me with the day-to-day management of children with additional support needs
13. I have had relevant CPD training in the last five years that allows me to work with students with additional support needs
14. In my classroom I provide alternative materials for students who have additional support needs
15. I give individual instructions to students with additional support needs to ensure that they are reasonably able to attempt the tasks as set

16. The formative assignments that I give my class are adopted for children with additional support needs
17. I ensure that the children in my class, irrespective of levels of ability, are able to participate in the class
18. Students with additional support needs can cope with the work that is set within my class
19. If I am given appropriate resources, I can teach the vast majority of children with additional support needs in my classroom

Appendix 2

Teacher Attitudes to Inclusion Scale (Revised) [TAIS-R]

Factor 1 – General Attitude towards Inclusion (GAI)

1. Students with additional support needs should be in mainstream schools
2. Educating children with additional support needs in mainstream class is not good for other children
3. There needs to be a reduction in the amount of work given to my class because of the inclusion of children with additional support needs.
4. Students with additional support needs need to have the required social skills to behave in class
5. The presence of children with additional support needs in my mainstream class has minimal effect on my teaching
6. Including children with additional support needs in the classroom can adversely affect the learning environment of my class
7. It is not beneficial for children with additional support needs to be educated in the mainstream schools
8. With appropriate support, I could teach all students (including those with additional support needs) in the same class
9. Children with additional support needs learn best when grouped with others with similar needs

Factor 2 – Training and Perceived Competence (TAPC)

10. I feel competent to work with students who have varying levels of difficulties
11. I am able to make a positive educational difference to students with ASN in my classroom
12. I receive adequate training to help me with the day-to-day management of children with ASN
13. I have had relevant CPD training in the last five years that allows me to work with stu- dents with ASN
14. In my classroom I provide alternative materials for students who have ASN
15. I give individual instructions to students with ASN to ensure that they are reasonably able to attempt the tasks as set
16. The formative assignments that I give my class are adopted for children with ASN
17. I ensure that the children in my class, irrespective of levels of ability, are able to partici- pate in the class
18. Students with additional support needs can cope with the work that is set within my class
19. If I am given appropriate resources, I can teach the vast majority of children with ASN in my classroom

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