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The influence of teaching experience and professional development on Greek teachers' attitudes towards inclusion

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On the assumption that the successful implementation of any inclusive policy is largely dependent on educators being positive about it, a survey was undertaken into the attitudes of Greek teachers to inclusion. The 155 respondents were general education primary teachers drawn from one region of Northern Greece, with a proportion deliberately selected from schools identified as actively implementing inclusive programmes. The analysis revealed positive attitudes towards the general concept of inclusion but variable views on the difficulty of accommodating different types of disabilities in mainstream classrooms. Teachers who had been actively involved in teaching pupils with SEN held significantly more positive attitudes than their counterparts with little or no such experience. The analysis also demonstrated the importance of substantive long-term training in the formation of positive teacher attitudes towards inclusion. The paper concludes with recommendations for developing critical professional development courses that can result in attitudinal change and the formulation of genuinely inclusive practices.

Keywords: *Integration; Inclusion; Teacher attitudes; Inclusive education*

Introduction

Philosophies regarding the education of children with learning difficulties and/or disabilities have changed dramatically over the past two decades, and several countries have implemented policies that foster the integration and, more recently, inclusion of these students into mainstream environments (Booth & Ainscow, 1998; Vislie, 2003). Such developments form part of a broad human rights agenda that can be traced back to the Salamanca Statement of the United Nations (Unesco, 1994), which stressed the value of education in the general education system and prompted the abandonment of special schools and special classes in favour of more inclusive

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forms of provision. As a means of stimulating educational change, the Salamanca Statement, alongside other UN declarations and proclamations on human rights, has been extremely powerful. However, even in nations well-attuned or deeply committed to inclusive schooling, efforts to realize inclusion are fraught with considerable difficulties, dilemmas and contradictions that often result in piecemeal reforms (Vlachou, 2004). Bearing this in mind, professional attitudes may act to facilitate or constrain the implementation of inclusion schemes, for the success of such innovative and challenging programmes must surely depend upon the cooperation and commitment of those most directly involved, namely classroom teachers (Butler & Shevlin, 2001; Forlin *et al.*, 1996).

Based on this assumption, a great deal of research has sought to examine teachers' attitudes towards the general philosophy of inclusion, while exploring factors that might influence their formation (Soodak *et al.*, 1998; Avramidis *et al.*, 2000; Van-Reusen *et al.*, 2000; Hastings & Oakford, 2003). What has been consistently reported in this literature is that mainstream teachers, albeit generally positive towards inclusion, are far from accepting a total inclusion or 'zero reject' approach to special educational provision (Scruggs & Mastropieri, 1996). Instead, their attitudes are strongly influenced by the nature and the severity of the disabling condition presented to them and, to a lesser extent, by teacher and school variables (see review by Avramidis & Norwich, 2002).

Specifically, various studies have found that children with mild intellectual disabilities, physical disabilities and sensory impairments, who are less likely to require extra instructional or management skills from the teacher, are generally viewed more positively as candidates for inclusion than children with complex needs (Center & Ward, 1987; Ward *et al.*, 1994). By contrast, severe intellectual disabilities and emotional and behavioural problems are typically viewed with more scepticism by mainstream teachers (Soodak *et al.*, 1998; Stoiber *et al.*, 1998; Avramidis *et al.*, 2000; Heiman, 2001; Lifshitz *et al.*, 2004).

Teacher variables found to influence inclusion attitudes include contact or experience with students with special educational needs (SEN) and professional development. For example, Janney and her collaborators found, in their US study (Janney *et al.*, 1995), that experience with lower-ability children was an important contributing factor to their eventual acceptance by teachers. Other studies in the USA (LeRoy & Simpson, 1996; Leatherman & Niemeyer, 2005), and in the UK (Avramidis *et al.*, 2000) and Australia (Campbell *et al.*, 2003), have also stressed the importance of increased experience and social contact with children with SEN in conjunction with the attainment of knowledge and specific skills in instructional and class management, in the formation of favourable attitudes towards inclusion. Similarly, it has been consistently found that professional development courses result in less resistance to inclusive practices (Dickens-Smith, 1995; Van-Reusen *et al.*, 2000; Leyser & Tappendorf, 2001) and a reduction in stress when coping with the demands of inclusion (Forlin, 2001).

Finally, school factors that have been found to be linked with teachers' inclusion attitudes include the availability of support at the classroom and school levels (e.g.

learning support assistants, special teachers, speech therapists, etc.); the availability of resources (teaching materials, IT equipment, etc.); the availability of non-contact time set aside for collaborative planning coupled with opportunities for regular in-service (INSET) training; and continuous encouragement from the head teacher, which is instrumental in the creation of an inclusive 'ethos' at school. All these environment-related factors have been associated with positive attitudes towards inclusion and high perceptions of self-efficacy, competence and teaching satisfaction (Avramidis & Norwich, 2002).

Researching teachers' attitudes towards inclusion in the Greek context

This paper draws on a study conducted in Greece where, despite supportive legislation, the Inclusive education movement is still facing considerable obstacles. Until recently, inclusive education in Greece was implemented through the operation of 'special classes' within a small number of primary schools in every county. These classes were first founded in 1985 with the Structure and Operation of Primary and Secondary Education Act 1985 (see Government of Greece, 1985) and aimed at promoting the integration of a wide range of children with 'learning difficulties' into ordinary primary schools. Pupils with learning difficulties were considered those whose access to the mainstream curriculum was limited because of short-term or persistent problems in one or more areas of literacy, numeracy and learning skills. Each 'special class' consisted of at least eight pupils with learning difficulties of a moderate to severe nature, and, on very rare occasions, pupils with significant disabilities, who were only placed there with their parents' consent. At this point, it is important to clarify that special classes in Greece functioned quite differently compared to most countries. As Vlachou (2006) elucidates: 'The Greek "special class" is much closer to the US resource or pull-out programmes, or to what the British describe as part-time withdrawal in a learning support base.' She then goes on to advocate the use of the term 'support room/class' instead of 'special class' as a more accurate description of such provision in Greece.

Although no systematic evaluation of the workings of these settings can be found in the literature, it has been noted (Efstathiou, 2003) that the remedial tuition provided was largely dependent on the suggested guidelines set out by the Ministry of Education for children with SEN, often depriving the latter of access to the mainstream curriculum and learning experiences in regular classes alongside their typically developing peers. Following the more recent Law 2817/2000, the *Education of Persons with Special Education Needs* (Government of Greece, 2000), 'special classes' were renamed to 'integration units', reflecting an increased policy emphasis on inclusive education. The Law enacted the design and development of individualized educational plans for children with SEN, which must be accommodated within the general curriculum with the support of appropriately trained educational staff. It is, for the first time, specified that pupils with SEN should be educated for the most part in the mainstream classroom where they belong; attendance in the integration unit is, in turn, limited to a few hours per week (and no more than 10 hours). Since the

enactment of the Law, it is estimated that 70% of the identified population of children with SEN have been placed in over 1000 primary schools with integration units. The remaining 30% are being educated in special segregated provision (Stefa, 2001; Zoniou-Sideri *et al.*, 2005).

While, in principle, the acknowledgement of the right of all children to accessing the mainstream curriculum is a significant inclusive development, some commentators in the field have been critical of the introduction of a new terminology without further substantial reform of mainstream schooling. Zoniou-Sideri and her collaborators, for example, have viewed the model of 'integration units' as an 'add-on' policy that does not affect the overall operation of primary schools, thus leaving unchallenged the structures of mainstream education that perpetuate stigmatization and segregation (Zoniou-Sideri *et al.*, 2005). For these authors, the continuing emphasis on individual deficits and a remedial approach obscures the institutional restructuring needed for genuine inclusion (see for a similar critique Vlachou, 2006).

Notwithstanding the concerns voiced, it is generally agreed that the recent arrangements have placed considerable demands on mainstream teachers who are faced with the challenge of meeting the needs of an increasingly diverse student population. Pupils with SEN can no longer be seen as someone else's (i.e. the special teacher's) responsibility, whether in schools with additional learning support bases (integration units) or without. Interestingly, the recent inclusive developments appear to have been embraced by the general public, and the parents of typically developing children, in particular (Tafa & Manolitsis, 2003; Kalyva *et al.*, 2007).

By contrast, Greek teachers have traditionally been sceptical about the inclusion of children with severe special educational needs. For example, an early study by Padelidou and Lambropoulou (1997) showed that mainstream teachers held neutral attitudes towards integration, but these were more positive than the attitudes of their special counterparts. Another study by Karakoidas and Dimas (1998) found that mainstream teachers held negative attitudes towards the inclusion of children with deafness, blindness, serious behavioural problems and mild mental retardation. Although they acknowledged that inclusion could potentially enhance the children's social skills, they disagreed with the widespread implementation of the policy until sufficient resources are in place and appropriate training provided.

Similar concerns were reported in another recent nationwide study exploring Greek teachers' beliefs about disabled children and their inclusion in mainstream settings (the term 'disabled' was preferred in this study over the more commonly used 'special educational needs') (Zoniou-Sideri & Vlachou, 2006). Although the majority of teachers surveyed believed that disabled children could be educated in an ordinary school setting, at the same time almost half of them believed that 'special segregated schools are important as a means of providing a secure and protective "shelter" to disabled children' (p. 388). In line with previous research, the teachers' degree of acceptance of disabled children was largely dependent on the nature and severity of the disabling condition presented to them. Specifically, they were more inclined to accept physically disabled and visually impaired children in their classrooms than mentally disabled, deaf and hard of hearing children. Children with multiple disabilities were the least

likely to be accepted. Teachers' responses were also significantly related to the existence of prior teaching experience with disabled pupils, with those possessing such experience reporting more positive attitudes towards inclusion than their counterparts. Despite this, the majority of participants felt that the responsibility for implementing inclusion fell predominantly on specialist staff—i.e. special educators and psychologists—who possessed the necessary knowledge and instructional skills to teach children with complex needs effectively.

Taken collectively, the studies reviewed here seem to suggest that the successful implementation of inclusive education is largely perceived by Greek teachers as dependent on the provision of professional development courses to mainstream teaching staff, availability of support from specialists and generous resourcing of schools.

In view of these professional concerns, it was deemed promising to carry out attitudinal research in the Greek context following the introduction of Law 2817/2000 in 2000 and the establishment of more inclusive forms of provision. The study reported here differs from its predecessors in three respects: first, it measures attitudes towards the general philosophy of inclusion and towards different types of exceptionality; second, it compares the attitudes of Greek teachers with substantial experience of teaching pupils with SEN—i.e. those working in schools with 'integration units') with their counterparts with little or no such experience; and third, it examines the effect of training in SEN on the teachers' acceptance of the inclusion principle. This is significant because such training has only recently become available in Greece. Finally, the study seeks to identify barriers to the successful implementation of the policy and strategies for enhancing inclusive practice.

Specifically, the survey undertaken in one region of northern Greece addressed the following research questions:

1. What are the teachers' attitudes towards the inclusion of children with SEN into the mainstream school?
2. What are the teachers' perceptions regarding the amount of accommodation required and their current level of preparation for differing types of special educational needs?
3. To what extent does experience of teaching children with SEN and participation in professional development courses lead to more positive attitudes by teachers towards inclusion?
4. What are the teachers' perspectives on barriers to and preferred methods for improving inclusive practices?

It is worth noting here that the Greek education system has always been entirely centralized and firmly controlled by the state. Unlike countries such as the UK, no regional variations in terms of policies and provision exist in Greece. The latter are prescribed centrally by the Ministry of Education and applied uniformly across the various Greek educational authorities. Consequently, the fact that the sample was drawn from one particular geographical area does not impact significantly on the generalizability of the results given the uniformity of school management, resources, curriculum content and teaching arrangements across the country.

Methodology

Participants

The 155 respondents were general education primary teachers, drawn from 30 primary schools, in one region of northern Greece. A quarter of the participants (39 teachers, 25%) came from ten schools chosen because they were operating integration units and their staff had substantial experience of teaching pupils with SEN. These schools were deliberately targeted. The remaining three-quarters of the sample (116 teachers, 75%) were drawn from 20 mainstream schools randomly selected across the rest of the region. The disproportionate number of schools in the two subgroups reflected the overall ratio (1:2) of settings with and without a unit in the region. There were 75 (48%) males and 80 (52%) females aged between 26 and 60 years old, with a mean age of 40 years 6 months who had been teaching in primary schools for an average of 15 years 3 months. More than one-third of the participants (58 teachers, 37%) had completed a course or had attended seminars on special needs, while the majority (97 teachers, 63%) had not received any additional training. The demographic characteristics of the sample are more analytically described in Table 1.

The two main subsets of respondents (i.e. from schools with and without integration units) were very similar in terms of their average age and teaching experience. More male teachers were working in schools with integration units, while the opposite was true for the schools without an integration unit. Chi-square analysis, however, failed to establish a significant association between gender and setting ($\chi^2 = 2.34$, $df = 1$, $p > 0.05$). By contrast, a second chi-square analysis did reveal a statistically significant link between participation in professional development courses and employment setting ($\chi^2 = 11.45$, $df = 2$, $p < 0.01$): from the 39 teachers who were teaching in schools with integration units, more than one-half (23 teachers, 59%) had undertaken training on special needs compared to one-third (35 teachers, 30%) of the 116 teachers from the other participating schools. It is worth noting, at this point, that short-term professional development refers to technical courses (European programmes of vocational evaluation and training (EPEAK), and other short seminars) normally focusing on a specific learning difficulty and disability. These courses, however useful they might be, are unlikely to have a significant impact on attitudes and beliefs concerning inclusion. By contrast, long-term professional development refers to extensive training lasting at least one year and leading to a formal postgraduate qualification; examples of such substantial professional development include national postgraduate training for in-service teachers (*Didaskaleio*), and university-based courses (Master's level). It can be argued that these courses are more likely to provide the critical experiences needed for significant attitude change.

Survey instrument

Data were gathered by means of a questionnaire consisting of a demographics section and the *My thinking about inclusion* (MTAI: Stoiber *et al.*, 1998) self-report instrument,

Table 1. Age, teaching experience, gender and professional development of teachers in schools with and without integration units

	Demographic characteristics				
	N	Age		F	
		Mean	Stand. dev.		
Schools with an integration unit	39	40.41	8.31	0.043	
Schools without a unit	116	40.67	6.20	(NS)	
Total	155	40.61	6.77		
	Teaching experience				
	N	Mean	Stand. dev.	F	
Schools with an integration unit	39	15.46	9.32	0.012	
Schools without a unit	116	15.30	7.17	(NS)	
Total	155	15.34	7.74		
	Gender				
	N	Male	Female	χ^2	
Schools with an integration unit	39	23 (59%)	16 (41%)	2.34	
Schools without a unit	116	52 (44.8%)	64 (55.2%)	(NS)	
Total	155	75 (48.4%)	80 (51.6%)		
	Prof. development				
	N	No training	Short-term	Long-term	χ^2
Schools with an integration unit	39	16 (41.0%)	13 (33.3%)	10 (25.7%)	11.45**
Schools without a unit	116	81 (69.8%)	24 (20.7%)	11 (9.5%)	
Total	155	97 (62.6%)	37 (23.9%)	21 (13.5%)	

** $p < 0.01$.

using a 28-item, five-point, forced-choice Likert scale. In the demographics section participants had to report their age, gender, years of teaching experience and professional development undertaken/qualifications gained (if any). The development of the MTAI scale was informed by earlier attitudinal studies and measures teachers' beliefs regarding inclusion (a cognitive conceptualization of 'attitude'). The MTAI reflects three belief domains related to inclusion: *Core perspectives* (12 items), *Expected outcomes* (11 items), and *Classroom practices* (5 items).

The *Core perspectives* dimension reflects the view that beliefs permeate one's perception of a concept (i.e. inclusion). It is grounded in research documenting the importance of a positive perspective towards integration of children with SEN on successful implementation of inclusion. As such, this dimension attempts to elicit individuals' values about what is ethically right in educating children with SEN and their mainstream peers. For example, this dimension includes statements such as:

Table 2. Mean scores and standard deviations of attitudes towards inclusion

Attitudes	Schools with integration units		F	Total sample M(SD)
	Yes M(SD)	No M(SD)		
Core perspectives ^a	2.69 (0.37)	2.92 (0.35)	12.33***	2.86 (0.37)
Expected outcomes ^a	2.43 (0.32)	2.39 (0.39)	0.28	2.41 (0.37)
Classroom practices ^a	3.69 (0.47)	3.79 (0.44)	1.47	3.76 (0.45)
Whole scale ^a	2.77 (0.24)	2.87 (0.29)	3.89*	2.84 (0.28)
	Professional development			F
	No training	Short-term	Long-term	
Core perspectives ^a	2.91 (0.36)	2.85 (0.38)	2.64 (0.31)	4.85**
Expected outcomes ^a	2.45 (0.37)	2.32 (0.41)	2.33 (0.26)	2.31
Classroom practices ^a	3.81 (0.41)	3.69 (0.55)	3.64 (0.39)	2.12
Whole scale ^a	2.89 (0.28)	2.79 (0.31)	2.69 (0.18)	5.16**

^aLower scores indicate more positive attitudes.

*p < 0.05; **p < 0.01; ***p < 0.001.

- 'Children with special educational needs have the right to be educated in the same classroom as typically developing students.'
- 'It is feasible to teach children with average abilities and exceptional needs in the same classroom.'

The *Expected outcomes* dimension reflects the view that beliefs not only permeate perceptions, but also influence educational practices and outcomes. It is grounded in previous research on teachers' expectations for student learning that have shown a link between expectations and actual outcomes. As such, this dimension attempts to elicit the participants' expectations of the academic and social outcomes of inclusion. For example, this dimension includes statements such as:

- 'The challenge of being in a regular education classroom promotes academic growth among children with special educational needs.'
- 'Children with special educational needs in inclusive classrooms develop a better self-concept than in a self-contained classroom.'

The *Classroom practices* dimension reflects thinking about how inclusion impacts on classroom life and actual instructional practices. It is grounded in research that has shown that beliefs determine the way teachers structure their classroom environment, instructional approaches and materials. As such, this dimension attempts to capture

beliefs related to how inclusion works (i.e. teaching adaptations, time and classroom management, etc.) in the 'typical day' of inclusive educators. For example, this dimension includes statements such as:

- 'The behaviours of students with special needs require significantly more teacher-directed attention than those of typically developing children.'
- 'A good approach to managing inclusive classrooms is to have a special education teacher be responsible for instructing the children with special needs.'

In order to acquaint the reader with the demands and the wording of the MTAI scale, some examples have been provided; the entire instrument used in this study is available from the authors on request, while the original version of the MTAI is provided in Stoiber *et al.* (1998).

To complete the MTAI Likert scale, the participants were asked to indicate the extent of their agreement with each statement by selecting among the following response choices: Strongly agree (1), Agree (2), Undecided/neutral (3), Disagree (4) and Strongly disagree (5). Fourteen out of the 28 items required reverse coding. Following reversal, the responses were totaled to generate a composite score for each domain, with low scores indicating positive attitudes.

A further section in the questionnaire, again adopted from Stoiber *et al.* (1998), asked participants to indicate the degree of accommodation required for the inclusion of the following 12 categories of impairment: Speech problems, Specific learning difficulty, Mild learning difficulty, Moderate learning difficulty, ADHD, Visual impairment, Hearing impairment, Physical disability, Emotional disorder, Challenging behaviour, Brain injury/neurological disorder and Autistic spectrum disorders. The response choices provided in this section were: No or Very little accommodation (1), Minor accommodation (2), Much accommodation (3), and Major accommodation (4) (see Table 3). Additionally, the same 12 categories of impairment were presented again, and participants were asked to indicate how well prepared they felt to teach them in a full inclusive classroom setting by selecting among the following response choices: Not prepared (1), Somewhat prepared (2), Very prepared (3) and Extremely prepared (4) (see Table 4). The final section was again adopted from Stoiber *et al.* (1998) and requested the practitioners to rate the extent to which eight factors, such as limited knowledge or lack of experience interfered with inclusion practices from 1 (Does not) to 4 (Does extremely); and to rank ten methods for improving inclusive practices in terms of their usefulness from best (1) to least (10) preferred (see Tables 5 and 6).

Procedures

In order to examine the translation validity of the MTAI scale, independent back translation was undertaken. Three Greek native speakers were asked to translate the Greek versions of the 28 items back into English, with the main emphasis given to maintaining the meaning of the statements. A pilot study was then conducted with a small group of teachers in order to check the clarity of the various questions and the

Table 3. Perceived degree of accommodation required for the inclusion of children with different types of impairment

Type	Whole sample (N = 155)			Teachers from schools with an inclusion unit (N = 39)			Teachers from schools without a unit (N = 116)			ANOVA F-ratio
	Mean	Std. dev.	Rank	Mean	Std. dev.	Rank	Mean	Std. dev.	Rank	
Mild cognitive difficulty	2.10	0.67	1	2.08	0.62	1	2.11	0.69	1	0.81
Specific learning difficulty	2.30	0.70	2	2.28	0.56	2	2.30	0.75	2	0.02
Moderate cognitive difficulty	2.43	0.76	3	2.41	0.68	3	2.44	0.79	3	0.04
Speech and language delay	2.67	0.70	4	2.74	0.68	5	2.65	0.71	4	0.55
Physical/motor impairment	2.72	1.07	5	2.85	1.11	7	2.67	1.05	5	0.77
ADHD	2.86	0.75	6	2.79	0.61	6	2.89	0.79	7	0.45
Challenging behaviour	2.92	0.68	7	2.72	0.65	4	2.99	0.68	10	4.84*
Emotional disturbance	2.94	0.77	8	2.90	0.72	8	2.96	0.78	9	0.17
Visual impairment	2.99	0.87	9	3.36	0.74	10	2.87	0.88	6	9.68*
Hearing impairment	3.03	0.87	10	3.26	0.85	9	2.96	0.87	8	3.50
Autism/PDD	3.65	0.60	11	3.54	0.68	11	3.68	0.57	11	1.65
Brain/neurological disorder	3.66	0.57	12	3.56	0.55	12	3.69	0.57	12	1.45

Note: Degree of accommodation was rated on a 1–4 scale, where 1 = Little accommodation, 2 = Minor accommodation, 3 = Much accommodation and 4 = Major accommodation.

* $p < 0.05$.

Table 4. Perceived level of preparation to teach children with different types of impairment in a full inclusive classroom

Type	Whole sample (N = 155)		Teachers from schools with an inclusion unit (N = 39)		Teachers from schools without a unit (N = 116)		ANOVA F-ratio
	Mean	Std. dev.	Rank	Mean	Std. dev.	Rank	
Mild cognitive difficulty	2.22	0.71	12	2.69	0.77	12	26.67***
Specific learning difficulty	1.97	0.71	8	2.44	0.72	10	25.45***
Moderate cognitive difficulty	2.17	0.63	11	2.54	0.68	11	20.11***
Speech and language delay	1.72	0.79	5	1.87	0.73	3	1.89
Physical/motor impairment	2.08	0.90	10	2.18	0.99	8	0.58
ADHD	1.85	0.71	6	2.10	0.59	6	6.76**
Challenging behaviour	2.06	0.75	9	2.33	0.74	9	7.32**
Emotional disturbance	1.92	0.87	7	2.15	0.99	7	3.99*
Visual impairment	1.55	0.81	2	1.72	0.86	1	2.10
Hearing impairment	1.62	0.77	4	2.00	0.89	4	13.92***
Autism/PDD	1.61	0.91	3	2.08	0.96	5	15.28***
Brain/neurological disorder	1.46	0.82	1	1.85	0.93	2	12.23***

Note: Teachers' sense of preparation was recorded on a 1-4 scale, where 1 = Not prepared, 2 = Somewhat prepared, 3 = Very prepared and 4 = Extremely prepared. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 5. Mean ratings for degree of interference with inclusion practices

Type	Whole sample (N = 155)		Teachers from schools with an inclusion unit (N = 39)		Teachers from schools without a unit (N = 116)		ANOVA F-ratio
	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	
Lack of experience of integration	3.15	0.76	3.10	0.82	3.17	0.75	0.24
Limited knowledge of special education field	3.15	0.80	3.08	0.81	3.18	0.81	0.48
Insufficient support from school/community	3.08	0.80	2.82	0.88	3.17	0.76	5.74*
Limited time	3.07	0.67	3.00	0.56	3.09	0.71	0.57
Parents' attitudes	3.03	0.79	2.92	0.74	3.07	0.81	0.99
Limited opportunities for collaboration	3.01	0.66	2.90	0.68	3.05	0.66	1.58
Teachers' attitudes	2.94	0.87	3.03	0.71	2.91	0.92	0.48
Other parallel commitments	2.69	0.86	2.56	0.88	2.73	0.86	1.11

Note: Degree that interfered with inclusion rated on a 1–4 scale, where 1 = Does not and 4 = Does extremely.

Table 6. Mean rankings for methods of improving inclusive practices

Type	Whole sample (<i>N</i> = 155)		Teachers from schools with an inclusion unit (<i>N</i> = 39)		Teachers from schools without a unit (<i>N</i> = 116)		ANOVA <i>F</i> -ratio
	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	
Direct teaching experience with pupils with SEN	3.61	2.82	2.92	2.37	3.84	2.93	3.15
In-service training, i.e. seminars	4.02	2.49	4.18	2.32	3.97	2.57	0.21
Attending courses at the university	4.43	2.95	3.97	2.70	4.58	3.03	1.21
Observation of other teachers in inclusive settings	4.72	2.09	4.77	2.07	4.71	2.11	0.03
Consultation with teachers, specialists and parents	4.88	2.52	5.23	2.71	4.77	2.45	0.99
Exposition to children with SEN	5.78	2.45	5.85	2.75	5.76	2.36	0.04
Group discussions on integration practicalities	5.87	2.34	6.30	2.30	5.73	2.35	1.61
Collaborative relationship with university staff	6.25	2.59	6.23	2.49	6.26	2.64	0.003
Participation in research study/project	6.60	2.47	6.62	2.50	6.59	2.48	0.002
Independent study	8.87	1.80	9.00	1.60	8.83	1.89	0.26

Note: Items were ranked with 1 = Most preferred method and 10 = Least preferred method.

reliability of the MTAI scale. The respondents did not report any difficulties in completing the questionnaire, which also produced on this occasion reliable scores.

Data were collected through visiting 30 primary schools in one region of Northern Greece towards the completion of the 2004/05 school year. Face-to-face distribution was preferred as this provided the opportunity for the aim of the study to be explained and clarification made. It was emphasized that: (a) the teachers' responses would be confidential, and (b) the researchers had no intention of identifying individual schools in the research report. To further reassure participants over confidentiality of the study, they were asked to complete the questionnaires in their own time and return them to the researchers by post. From the 210 administered questionnaires (seven in every school), 155 were returned, representing a satisfactory return rate of 73.8%. There was no follow-up data collection.

The Cronbach alpha reliability coefficients for the three domains of the MTAI scale in this investigation were $\alpha = 0.78$ for *Core perspectives*, $\alpha = 0.82$ for *Expected outcomes*, and $\alpha = 0.65$ for *Classroom practices*. These coefficients were very similar to those reported in the Stoiber *et al.* (1998) study (0.80, 0.85 and 0.63 respectively).

Findings of the study

Teachers' attitudes towards inclusion

Since this was the first time that the MTAI instrument had been used with Greek teachers, it is not possible to compare the scores of the participants in this survey with previous studies to determine whether any attitudinal changes had occurred. However, considering the range of the Likert scale (from 1 to 5) and the direction of the scoring, the mean total MTAI score (2.84) of the participants indicated slightly positive attitudes towards the inclusion of children with SEN into mainstream schools. More specifically, the survey indicated positive attitudes towards the general philosophy of inclusive education (mean = 2.86 for the *Core perspectives* domain) and towards the academic and social effects of the process (mean = 2.41 for the *Expected outcomes* domain). By contrast, the negative mean score referring to the impact of inclusion on classroom life and actual instructional practices (mean = 3.76 for the *Classroom practices* domain) indicates the respondents' concerns about the practical difficulties they expected to encounter in the day-to-day functioning of an inclusive classroom (see Table 2).

Teachers' attitudes towards the accommodation of different types of SEN in a full inclusive classroom

A further set of questions examined the participants' perceptions of the degree of accommodation required in a mainstream class for 12 categories of impairment and their capability to meet their needs effectively. As anticipated, considerable variations of difficulty were reported depending on the severity and complexity of need presented. Overall, practitioners' regarded children with mild, specific and moderate

learning difficulties, speech and language delay and physical/motor impairment as the easiest to accommodate in primary inclusive settings, with mean ratings ranging from 2.10 to 2.72. These were followed by another set of difficulties relating to behavioural problems, that is children with ADHD, challenging behaviour and emotional problems, with mean ratings ranging from 2.86 to 2.94. Teachers felt that the greatest degree of classroom adaptation was needed for children with sensory impairments (visual, hearing), autism and brain injury or neurological disorder, with mean ratings ranging from 2.99 to 3.66.

It is interesting to note here that the one-way MANOVA performed to examine possible differences in the perceptions held by the two main subsets of respondents (i.e. teachers from schools with and without integration units) failed to reveal a statistically significant multivariate effect. With the exception of the *Challenging behaviour* and *Visual impairment* categories, all other categories received similar ratings (see Table 3, where only two univariate tests detected a statistically significant difference).

The participants' perceptions of the degree of accommodation children with different types of impairment require in a mainstream class largely corresponded with their perceptions of how well prepared they felt to teach them effectively (see Table 4). Teachers generally felt most ill-prepared at the prospect of including children with brain injury/neurological disorder, sensory impairments (visual, hearing), or autism. Conversely, they felt most confident at the possibility of including children with learning difficulties of a mild to moderate nature, or those with a physical/motor impairment. This time, however, the one-way MANOVA performed to examine possible differences in the perceptions held by the two main subsets of respondents revealed a statistically significant multivariate effect ($F(df6,300) = 2.49, p < 0.05$). The univariate tests revealed that the teachers from schools with integration units were significantly more prepared than their counterparts to teach nine out of the 12 categories: mild, specific and moderate learning difficulty; ADHD; challenging behaviour; emotional disorder; hearing impairment; autism; and brain injury/neurological disorder (see Table 4). This largely can be explained by the increased training in special needs matters that the first group had received, coupled with their considerable experience of implementing inclusion.

Factors affecting teachers' attitudes

The analysis went on to examine the impact that experience of inclusion and professional development had on the participants' responses to the three components and the whole MTAI scale. The variable 'experience of inclusion' comprised two groups: (a) teachers from schools operating integration units who had, therefore, substantial experience of accommodating pupils with SEN in their classrooms ($n = 39$), and (b) teachers from the other participating schools who were assumed to possess little or no such experience ($n = 116$). The variable 'Professional development' comprised three groups: (a) teachers with no formal professional training in SEN ($n = 97$), (b) teachers who had undertaken short-term professional development in SEN ($n = 37$) and (c) teachers who had undertaken long-term professional development courses leading

to a postgraduate qualification ($n = 21$). Where previous literature has shown that teachers' demographic characteristics might influence their attitudes, our analyses controlled the effect of age and teaching experience while also checking for gender differences.

The first two-way MANCOVA showed that when the covariates (age and years of teaching experience) were controlled for, teachers' gender did not influence their attitudes towards inclusion ($F(df3,147) = 0.68$) and neither did the interaction between the teachers' gender and their experience of inclusion ($F(df3,147) = 1.95$). However, the main effect of 'Experience of inclusion' on teachers' attitudes towards inclusion remained significant ($F(df3,147) = 6.56, p < 0.001$). Univariate ANOVAs showed that this main effect was evident in the *Core perspectives* ($F(df1,153) = 12.33, p < 0.001$) but not in *Expected outcomes* ($F(df1,153) = 0.28$) and in *Classroom practices* ($F(df1,153) = 1.47$). Means and standard deviations are presented in Table 2. Teachers from schools with integration units were more positive in relation to *Core perspectives* (and in the whole scale) compared to teachers from schools without integration units. Both groups reported remarkably similar scores in the *Expected outcomes* and the *Classroom practices* components.

The one-way MANCOVA between groups of participants with different levels of professional development in the area of SEN also showed that when the covariates (age and years of teaching experience) were controlled for, teachers' gender did not influence their attitudes towards inclusion ($F(df3,145) = 0.65$) and neither did the interaction between the teachers' gender and their level of professional development in SEN ($F(df6,290) = 0.93$). However, the main effect of the variable 'professional development' on teachers' attitudes towards inclusion remained significant ($F(df6,290) = 2.22, p < 0.05$). Univariate ANOVAs showed that this effect was evident in the *Core perspectives* ($F(df2,152) = 4.85, p < 0.01$) and in the whole scale ($F(df2,152) = 5.16, p < 0.01$), but not in *Expected outcomes* ($F(df2,152) = 2.31$) and in *Classroom practices* ($F(df2,152) = 12.12$). The post-hoc test (Tukey) revealed that the significant univariate effect was due to differences between participants who had undertaken long-term professional development and those who had received no training at all ($p < 0.01$). The former group was significantly more positive in the *Core perspectives* domain (and in the whole MTAI scale), while all three teacher groups provided very similar responses to the *Expected outcomes* and the *Classroom practices* domains of the MTAI scale (see Table 2).

Perceived barriers to implementing inclusion

With regard to the barriers to the implementation of inclusion, 'Lack of experience of inclusion' and 'Limited knowledge of the special education field' received the highest ratings. This is largely unsurprising as inclusive education has only recently gained momentum in Greece (with forms of implementation far from a full inclusive model), while teacher training courses do not normally cover comprehensively special education matters. The next higher ratings were 'Insufficient support from the school and the local community', 'Limited time', 'Parental attitudes' and 'Limited opportunities

for collaboration'. Finally, 'Teachers' attitudes' and 'Other parallel commitments' received the lowest rating (see Table 5). The one-way MANOVA performed to examine possible differences in the mean ratings of teachers from schools with an integration unit and their counterparts failed to reveal a statistically significant multivariate effect. Further examination of the two groups' responses indicated that they only differed in their ratings of 'Insufficient support from the school and the local community', with the teachers from schools with integration units significantly underplaying the importance of this factor.

Preferred methods for improving inclusive practices

A further section comprised a list of ten methods identified in the literature as conducive to inclusion. In accordance with the perceived barriers mentioned earlier, the participants reported 'Direct teaching experience with pupils with SEN', 'In-service training' and 'Attending courses at the university' as the most preferred methods for improving inclusive practices. These rankings are indicative of the perceived training needs of Greek teachers often reported in the literature. Similarly, the next higher rankings were 'Observation of other teachers in inclusive settings', 'Consultation with teachers, specialists and parents', 'Exposition to children with SEN' and 'Group discussions on inclusion practicalities'. Again, all these presuppose considerable engagement and commitment, which requires time to be set aside either for training or exposition to practices in inclusive settings (in this case, schools with integration units). Finally, 'Collaborative relationship with university staff', 'Participation in research study/project' and 'Independent study' were the least preferred methods, perhaps due to the current rare opportunities for involvement in large-scale research projects and for conducting action research in Greece (see Table 6).

Again, the one-way MANOVA performed to examine possible differences in the mean ratings of teachers from schools with an integration unit and their counterparts failed to reveal a statistically significant multivariate effect. As both sets of participants reported remarkably similar ratings, none of the ten univariate analyses yielded statistically significant results.

Discussion

The results of this investigation should be interpreted cautiously in the light of several limitations of the study. Specifically, respondents were drawn from one region of northern Greece, with a proportion of them drawn from schools specifically selected for their active implementation of inclusive programmes. Moreover, the assessment of our respondents' attitudes was solely based on their responses to the self-report instrument administered. Consequently, as no direct measures of their actual class behaviour were recorded, any conclusions drawn should be treated with caution. Finally, in the absence of any previous administration of the MTAI scale to Greek teachers, it was not possible to determine any attitudinal changes that might have occurred since the introduction of Law 2817/2000 (Government of Greece, 2000)

and the establishment of more inclusive forms of provision. Notwithstanding these limitations, the results reported here advance the existing knowledge base and offer important practical implications for policy-makers and professionals in the field.

Overall, Greek mainstream teachers in this survey held generally positive attitudes towards the concept of inclusion. Specifically, the participants' responses to the *Core perspectives* subscale indicate strong adherence to the principle that children with SEN have a right to be educated alongside their mainstream peers and that such provision is feasible in ordinary primary schools. More importantly, their responses to the *Expected outcomes* subscale reflected a belief that inclusion in a mainstream environment would also bring benefits to children with SEN in terms of their cognitive and social development. By contrast, the participants' negative responses to the *Classroom practices* subscale reflect their concerns over the practical difficulties they could encounter if increasing numbers of children with SEN were placed in their classroom. Such contradictory attitudes can be largely attributed to the fact that the responsibility for implementing inclusion in Greece has fallen on 'expert' professionals such as special education teachers and related professionals (Zoniou-Sideri & Vlachou, 2006). When confronted therefore with questions that directly examine the implications of undertaking full responsibility to implement inclusion in their own classroom, the surveyed teachers' reactions were negative.

The participants' variable responses to the difficulty of accommodating children with different types of SEN are also very revealing of their attitudes towards inclusion. While children with learning difficulties of a mild to moderate nature were viewed as unproblematic, children with more severe and complex needs (brain/neurological disorders, autistic spectrum disorders or sensory impairments (hearing, visual) were regarded as a major challenge to accommodate (see Table 3). Far from indicating a blanket ethical commitment to 'teach all pupils', as genuine 'inclusion' presupposes, such views demonstrate Greek teachers' enculturation within an 'integration' paradigm in which the manner and extent of children's integration is predicated on their own needs and the school's circumstances. This paradigm is also reflected in the respondents' view of successful inclusion as being dependent on the availability of training opportunities, support, resources and time (see Table 5).

The contradictory attitudes reported in this survey—on the one hand being supportive of inclusive education, but on the other hand viewing the process as dependent on the severity of the child's 'needs' and extra resources—are by no means unique to Greece. Similar findings were reported in Scruggs and Mastropieri's (1996) meta-analysis of the results of 28 studies published between 1958 and 1995. Their major finding was that, although, on average, 65% of teachers surveyed (10,560 in total) supported the general concept of inclusion, only one-third or less believed they had sufficient time, skills, training and resources necessary for implementing inclusive programmes. Interestingly, there was no correlation between positive attitudes towards inclusion and date of publication, suggesting that teachers' views had not substantially changed over the years. Other reviewers of the literature have also concluded that teachers' attitudes are strongly influenced by the nature and the severity of the disabling condition presented to them and perceive the process as dependent

on the availability of adequate support and resources (Avramidis & Norwich, 2002). Given the consistency of this trend both across different countries and across different periods, governments wishing to promote inclusive education for *all* children have a difficult task in convincing their educators about the feasibility of the policy.

However, our survey revealed more positive attitudes from the teachers who had been working in schools with integration units than their counterparts who had presumably little or no experience of inclusion. The former group also felt more prepared to teach children with different types of needs in a 'full inclusive classroom' (see Table 4). In this, our study is consonant with previous research undertaken by LeRoy and Simpson (1996), Villa *et al.* (1996) and Avramidis *et al.* (2000), who concluded that teacher commitment often emerges at the end of the implementation cycle, after the teachers have gained mastery of the professional expertise needed to implement inclusive programmes. Our evidence also gives support to a social constructivist view of attitude as context dependent and responsive to factors within a particular socio-cultural context (Carrington, 1999); that is, the positive attitudes reported by teachers working in schools with integration units had, in large part, developed as a result of working in a setting with an inclusive ethos.

A further important finding of our study refers to the influence of training in the formation of positive attitudes towards inclusion. The study revealed that teachers with further training in SEN and inclusion matters hold significantly more positive attitudes than those with little or no training concerning inclusion. This is hardly surprising given the abundance of attitudinal studies in the literature confirming the influence of training in the formation of positive attitudes towards inclusion (Leyser *et al.*, 1994; Avramidis *et al.*, 2000; Van-Reusen *et al.*, 2000; Shade & Stewart, 2001; Lifshitz *et al.*, 2004). This literature suggests that teachers may not hold 'negative attitudes'; rather they may not see solutions to problems they feel are outside their competence or control. Consequently, if teachers are guided and supported through careful and well-planned training courses, then it can be anticipated that considerable attitude change can be obtained. This is especially important in the Greek context as training relative to SEN has only recently become available. In view of this, it is not surprising that when our participants were asked to rank ten methods for improving practice in terms of their usefulness, 'In-service training' and 'Attending courses at the university' received the second and third highest ranking respectively. Interestingly, the method 'Direct teaching experience with pupils with SEN', which received the highest ranking, could have also been interpreted by our respondents as forming part of a training course (i.e. a short placement in an inclusive setting).

With regard to the nature (duration and content) of the training courses needed, the present study reveals that respondents who had undertaken long-term professional development hold significantly more positive attitudes than their colleagues with short-term professional development. This suggests that short 'overview' courses may not be sufficient to produce substantial positive changes in teachers' attitudes towards inclusion (Leyser & Tappendorf, 2001; Martinez, 2003). What is required therefore is to rethink professional development away from low (INSET) level technical responses to specific 'needs' or 'syndromes' and towards longer-term reflective

training. Such critical self-reflective courses result in the acquisition of 'generic' teaching skills that allow teachers to modify their practice in ways which are conducive to meeting the needs of *all* learners within 'inclusive' (holistic) frameworks. Similarly, Initial Teacher Training (ITT) courses should provide training both on the psychological principles of teaching and learning and knowledge resulting in a critical understanding of the educational process. Central to ITT training should also be, among others, topics such as differentiating the curriculum, assessing academic progress, managing behaviour, developing IEPs and working collaboratively with colleagues. This curriculum will enable prospective teachers to respond creatively to the challenges of inclusion. The underlying assumption is that, if teachers receive assistance in mastering the skills required to implement an innovation such as 'inclusion', they become more committed to the change (and more effective) as their effort and skill increase.

Conclusion

Inclusive education in Greece is currently associated with the development and expansion of integration (resource) units in mainstream schools. The absence of a rigorous evaluation of the academic and social outcomes of these arrangements renders the need for large-scale systematic research in Greece more urgent than ever. The recent policy development might be a significant (though by no means adequate) step forward. In a country with a long history of segregation and lack of appropriate provision in ordinary settings, other aspects of mainstream schooling will have to change if efforts towards genuine inclusion are to succeed. As Zoniou-Sideri and Vlachou (2006) have shown in their analysis of the organization and operation of the Greek educational system, the inclusion project can only be promoted if the strict adherence to an academically orientated curriculum and its inflexible (undifferentiated) application across all primary schools are abandoned.

Our study has shown that those teachers who had been actively involved in teaching pupils with SEN held significantly more positive attitudes than their counterparts with little or no such experience. This finding indicates that the more inclusion becomes part of the landscape the more inclusive attitudes and practices will become. The implication for policy-makers is therefore to support this process through the allocation of additional human and material resources. Given that our study also demonstrated the importance of training on the formation of positive teacher attitudes towards inclusion, the development of substantial in-service (INSET) training to enhance regular educators' knowledge and skills in teaching students with learning difficulties and disabilities is essential.

However, at a deeper level of analysis, a critical aspect of the fundamental changes needed in schools relates to the way teachers conceptualize difference and, in particular, educational failure. Traditional approaches to professional development may not produce any change in teachers' attitudes and, in turn, in mainstream school *praxis* since they reinforce the popular conception that inclusive education is about 'special' children who will prove problematic as they are resettled in mainstream settings (Slee,

2001). In this respect, professional development courses should make room for critical discussion of the concept of inclusion, together with a consideration of pedagogic issues at school. Such courses explicitly challenge the processes of pathologizing 'difference' (and, ultimately, excluding individuals) currently operating in schools, while instigating reconstructed educational thinking and practice (Avramidis, 2006). Similarly, at the pre-service level, Slee (2001) advocates that 'teacher education faculties might consider the possibility of interdisciplinary studies of exclusion and inclusion with a view to weaving the preparation for "inclusive" teachers right across the fabric of their teacher-training curriculum' (p. 120). Such an approach, far from viewing teachers' attitudes as immutable and inevitable, has the potential of providing practitioners with a vision and skills to modify their practice in genuinely inclusive ways.

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