

Teachers' experience, attitudes, feelings and behavioural intentions towards children with special educational needs

THERESE LEVINS*, LAUREL BORNHOLT and BROOK LENNON
School of Development and Learning, University of Sydney, Building A35, NSW 2006, Australia

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Abstract. This project examined teachers' attitudes to children with special educational needs. Understanding the implicit and explicit attitudes of teachers is an important precursor to improving teaching practices for children with special needs. Participants ($N = 77$) were pre-service teachers and experienced teachers during in-service training courses. Results showed that behavioural intentions related to explicit rather than implicit attitudes, and that feelings of guilt and anxiety were associated with intentions for negative actions. Profiles of attitudes were substantially similar in terms of personal and teaching experiences. However, attitudes were less positive about children with low social skills and more positive about children with low cognitive skills. Findings have direct application to training teachers of children with special educational needs.

Key words: teacher attitudes; feelings; intentions; learning disabilities; hearing impairment; attention deficit/hyperactivity disorder

The attitudes that teachers hold about children with special education needs are strategic for good teaching practice, and therefore for educational outcomes for children. Children with special educational needs may cover a wide range of specific physical, social as well as cognitive abilities. There are increasing demands for educational policies to require the inclusion of more children with special needs in regular classrooms. For instance, in Australia, the 1992 Disability Discrimination Act requires that educational services in schools make reasonable accommodations for children with disabilities in the regular classroom. Consequently, the education of many children with special educational needs has become the responsibility of regular classroom teachers. As teachers assume this ever-broadening scope of duties, it is reasonable to expect that they express a mix of positive, negative and neutral attitudes towards children with disabilities. For inclusion to be successful, regular classroom teachers need to develop appropriate attitudes toward children with disabilities (see e.g., Chow & Winzer, 1992).

*Author for correspondence: e-mail: tlev1@hotmail.com

The project was conceptualised within a model of cognitive, affective and behaviour intentions that are components of attitudes (see Eagley & Chaiken, 1993). The model of attitudes in Figure 1 was adapted from a recent study of attitudes by beginning teachers towards others, highlighting intentions to gain experience (see Bornholt, 2002). This project examined the role of experience, in terms of both teaching experience and personal experience in attitudes to children with special educational needs. The model includes positive and negative aspects of thoughts, feelings and intentions expressed by teachers about these children. It was extended to include implicit and explicit aspects within the cognitive component of attitudes.

The attitudes of teachers towards children with special needs are an important part of effective teaching. Teachers' attitudes vary according to the type of disability and the extent of instructional adaptations to be made to accommodate the student (Center & Ward, 1987, in Avramidis, Bayliss, & Burden, 2000). The research also shows that teacher attitudes are critical variables in the success of managing children with special needs (Bacon & Schultz, 1991) and the success of the integration of children with disabilities into regular classrooms (Stewart, 1990).

The need to understand the complexities in attitudes of teachers towards children with special needs is evident in current health as well as education policy. For instance, the Australian National Health and Medical Research Council (NHMRC) policy on treatment for Attention Deficit/ Hyperactivity Disorder (AD/HD) (1997, p. 38, in Salmelainen, 2002, p. 50) advocates a multimodal approach that includes 'simultaneous medication use, behaviour management, family counselling and support, educational

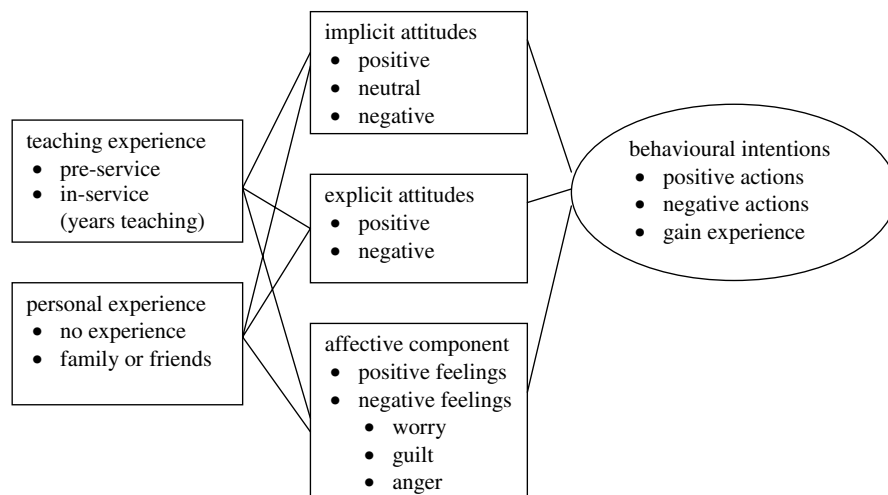


Figure 1. Conceptual model of the role of experience, implicit and explicit teacher's attitudes, feelings and behavioural intentions towards children with special educational needs.

management, and specific development issues relevant to the child involved'. This approach is also supported by current research, which examines the diagnosis and treatment of AD/HD (Burcham, 1995; Fell & Pierce, 1995; Levy, 2001; MTA Co-operative group, 1999). To play an effective role in this holistic approach to the diagnosis and treatment of AD/HD, teachers need information and teaching strategies at the preservice and in-service levels (Barkley, 1990; Hepperlen, Clay, Henly, & Barke, 2002; Jerome, Gordon, & Hustler, 1994; Rief, 1993; Whitworth, Fossler, & Harbin, 1997; Worthington, Wortham, Blocker-Smith, & Patterson, 1997; Yasutake, Lerner, & Ward, 1994). Recent studies by Scitutto, Terjesen, and Bender Frank (2000) and Whitworth et al. (1997) recommend initial evaluation of teachers' attitudes towards AD/HD so that educational interventions and school-based referrals can be effective. In particular, Hepperlen et al. (2002) found that teachers' attitudes could have a negative impact on children with AD/HD. Research by Jerome et al. (1994), Scitutto et al. (2000) Worthington et al. (1997), and Yasutake et al. (1994) also found that teachers' lack of knowledge and misconceptions about AD/HD adversely affected the diagnosis and treatment of these children.

1. Overview of this project

This project examined the attitudes of teachers to children with special learning needs. The model of attitudes goes beyond what teachers think about these children. We considered positive as well as negative thoughts, as forms of stereotyping about children with special needs compared to other children. In the current climate, teachers are generally aware of anti-discrimination legislation and inclusive education policies. This means that explicit expression of such stereotypical attitudes about children with special needs may not be particularly strong. So we also examined implicit forms of teachers' attitudes using recall of positive, neutral and negative information, and a wide range of positive and inter-related negative feelings.

The project had four main aims. The first aim was to examine the effects of personal experience with special educational needs on attitudes. It was expected that personal experience of children with special needs would modify teachers' attitudes, in particular, that teachers with a special needs child in their family would express less stereotypical attitudes.

The second aim was to examine the effects of professional experience on attitudes, in particular attitudes by pre-service and in-service teachers. Professional experience was also expected to modify teachers' attitudes, in particular, it was expected that teachers who had more experience in teaching children with special needs would also express less stereotypical attitudes.

The third aim was to explore attitudes to children with particular needs, in this case learning disability, AD/HD and hearing impairment. It is unclear whether attitudes would vary across particular content.

Consequently we posed an open question about content on teachers' attitudes, in this case about children with a learning disability (cognitive needs), AD/HD (social needs) and hearing impairment (physical needs).

The fourth aim was to articulate the components of attitudes that relate to teachers' behavioural intentions, which in turn contribute to behaviour. It was expected that implicit and explicit positive and negative thoughts about children with special needs relate to teachers' behavioural intentions towards children. Behavioural intentions included positive and negative actions, and intention to learn more about children with special needs. Given that pre-service and in-service teachers are generally familiar with making self-evaluations about working with children who have special educational needs, we expected that their thoughts and feelings are not necessarily congruent (see also Bornholt, 2002; Forgas, 2000). It was expected that the cognitive and affective components of teachers' attitudes towards children with special needs would relate to their intentions for positive and negative actions, as well as intentions to gain experience.

2. Method

2.1. DESIGN

This study was designed to compare attitudes between groups (pre-service and in-service teachers, with and without personal experience) and comparisons among cognitive components of attitudes (positive and negative implicit and explicit aspects), affective aspects (feeling OK, guilt, worry, and anger) and behavioural intentions (positive actions, negative actions, and intentions to gain experience).

2.2. PARTICIPANTS

The participants were in two groups: third year undergraduate pre-service teachers enrolled in a unit of study on children with special educational needs ($N = 45$); and experienced teachers at the start of a year long university in-service program to retrain as special education teachers ($N = 32$). The pre-service teachers were younger than the in-service teachers. Pre-service teachers were mainly 20–25 years old (91%) with a few mature age students (27, 38, and 49 years). In-service teachers were mainly in the range of 26–48 years (87%) with a few younger students aged 24 or 25 years (13%). There were 27% male and 73% females in the pre-service group and 16% males and 84% females in the in-service group. The in-service group had a median of 5 years teaching experience ranging from 2 years to 15 years. Some participants in both groups (17%) had personal experience with family members or friends with special needs. These included visual or intellectual impairment, AD/HD, Downs Syndrome, learning disability or autism (pre-service 9%, in-service 28%). English was the most common language

spoken at home. Nineteen percent of the in-service group had attended in-service courses on AD/HD.

2.3. MATERIALS

2.3.1. *Implicit Attitudes*

Implicit attitudes were examined by presenting a 'memory test' with four similar brief stories about a child about to go on to high school. Each participant received at random one of the stories that were identical except for the trigger about the child with AD/HD, moderate intellectual disability, a physical disability or no disability. Indicators of implicit attitudes are the number of items recalled accurately from the 11 positive, 12 neutral and 11 negative items of information about the child. For ease of comparison, all indicators were scaled to range from (1) low to (7) high.

2.3.2. *Explicit Cognitive Component*

What teachers think about children with special learning needs was elicited by a 26-item inventory. Responses used seven-point rating scales from (1) low to (7) high. The content included attitudes towards four groups of children: AD/HD (8 items e.g., 'I think children with AD/HD can concentrate on the things they enjoy'), a physical disability (6 items e.g., 'I think children with a physical disability should receive special treatment at school'), learning disability (6 items e.g., 'I think students with a mild intellectual disability have talents like everyone else'), or general items on special needs (6 items e.g., 'I think students with special needs can't learn in a regular classroom').

2.3.3. *Affective Components*

Each of the participants read one of the four short stories. Each story was about a situation involving a child with AD/HD, a physical disability, learning disability, or special educational needs, followed by the prompt 'How do you feel right now about what's happening in the story?' A list of 13 items was presented for each story to describe positive feelings, worry, anger and guilt. The responses used seven-point rating scales from (1) low to (7) high.

2.3.4. *Behavioural Intentions*

Behavioural Intentions were for positive actions (7 items e.g., 'include the person in sport at lunchtime'), negative actions (7 items e.g., 'avoid the person in the car park') and intentions to gain experience in special education (8 items e.g., 'I would like some visitors with disabilities to talk to the group about their special educational issues'). For ease of comparison, scores were scaled from (1) low to (7) high.

2.3.5. *Demographic Information*

Demographic information included family background, age, gender, years of teaching, personal experience with friends or family with special educational needs, and prior in-service training for AD/HD.

2.4. PROCEDURE

The study was approved by the University Human Ethics Committee, and was conducted with permission of course co-ordinators. The research was conducted at the beginning of consecutive courses in special education, for pre-service and in-service teachers. The participants were informed that their responses would be kept anonymous and their participation was entirely voluntary.

2.5. ANALYSIS

Descriptive statistics (mean, standard deviation, and range) and inferential statistics (internal consistency, analysis of variance, and correlations) used SPSS for Windows. Structural equation modelling used AMOS software. The design has sufficient power for comparison of means for pre-service and in-service groups (power 99%, $N = 77$, $p < 0.05$, effect size of 0.5 SD) and for correlations (power 90%, $N = 77$ for non-zero correlations of $r = 0.35$, $p < 0.05$).

3. Results

The results are presented in three parts. The first section describes the internal consistency of the attitude scales, and profiles of means for each component in the model. Section 2 explores the role of experience on attitudes and variations in attitudes by teachers towards children with cognitive, physical and social needs. This section relates teachers' thoughts and feelings to behavioural intentions.

3.1. DESCRIPTION OF ATTITUDES BY TEACHERS TO CHILDREN WITH SPECIAL NEEDS

3.1.1. *Reliability of Attitude scales*

Table I shows the internal consistency as alpha coefficients, means and standard deviations for each scale. Results show that the scales were reliable in terms of alpha coefficients. This means teachers' responses to items were satisfactory indicators of cognitive and affective aspects of teachers' positive and negative attitudes.

3.1.2. *Profiles of Teachers' Attitudes*

Table I shows profiles of attitudes for positive and negative thoughts, feelings and intentions towards children with special educational needs. The cognitive component of teachers' attitudes includes implicit and explicit

Table I. Descriptive statistics for cognitive and affective components and behavioural intentions by teachers towards children with special needs (scales 1 low to 7 high)

Components of teacher attitudes			Alpha	Mean	SD
Thoughts	Implicit	Positive	–	2.6	1.1
		Neutral	–	4.2	1.4
		Negative	–	3.0	1.1
	Explicit	Positive	0.81	6.2	0.6
		Negative	0.83	2.8	0.8
Feelings		Feel OK	0.61	3.5	0.6
		Guilt	0.61	3.7	0.7
		Worry	0.80	3.5	1.1
		Anger	0.74	2.6	0.9
Intentions		Positive actions	0.86	5.5	1.0
		Negative actions	0.69	1.4	0.7
		Gain experience	0.90	5.4	1.3

thoughts about children with special needs. Teachers' implicit attitudes varied widely in terms of the information recalled about children with special needs. Substantially more neutral information was recalled, moderate amounts of negative information and limited positive information was recalled from the script. On average, implicit attitudes were more negative than positive ($t = 6.9$, $p < 0.001$). Explicit attitudes also varied widely among the participants, and on average, explicit attitudes were more positive than negative ($t = 21.9$, $p < 0.001$).

The affective component of attitudes to children with special needs in Table I shows that teachers expressed moderate positive feelings ($t = 7.6$, $p < 0.001$), feelings of guilt ($t = 10.7$, $p < 0.001$) and worry ($t = 8.6$, $p < 0.001$) when compared in turn to low feelings of anger in situations involving children with special needs.

Teachers' behavioural intentions include low to moderate range of intentions for positive and negative actions, and a wide range of intentions to gain experience with children who have special needs. On average, their intentions were to gain experience ($t = 10.8$, $p < 0.001$) and towards positive rather than negative actions ($t = 24.9$, $p < 0.001$).

3.2. THE ROLE OF EXPERIENCE IN ATTITUDES TO CHILDREN WITH SPECIAL NEEDS

Profiles were compared for groups of teachers to explore the effects of experience on attitudes and intentions. Responses were compared for groups of teachers, over and above age and gender as covariates.

3.2.1. *Personal Experience*

Table III shows that attitudes were substantially similar for teachers with personal experience (or not) of children with special needs in the family. There was one exception for a tendency for more neutral information to be recalled by teachers with personal experience of children with special educational needs ($F(1, 71) = 7.5$, $p < 0.01$ with predicted means for experience 5.0 and no experience 3.9, effect size 0.7 SD). Responses were therefore combined across personal experiences.

3.2.2. *Professional Experience*

Profiles in Table II show substantially similar attitudes and intentions by pre-service and in-service teachers. There was one exception with a tendency for pre-service compared to in-service teachers to express more neutral implicit thoughts ($F(1, 71) = 6.7$, $p < 0.05$ with predicted means for pre-service 5.1 and in-service teachers 3.8, effect size 0.8 SD). Responses were therefore combined in further analyses.

3.3. TEACHERS' ATTITUDES TO CHILDREN WITH COGNITIVE, SOCIAL OR PHYSICAL NEEDS

Teachers' attitudes were then explored in terms of children's cognitive, social or physical needs. Detailed profiles are in Figure 2 of positive and

Table II. Common and diverse attitudes by teachers towards children with special needs in terms of professional experience (1 low to 7 high)

Components of teacher attitudes	Pre-service teachers		In-service teachers	
	Mean	SD	Mean	SD
Thoughts Implicit Positive	2.5	0.9	2.8	1.4
Neutral	4.7	1.3	3.3	1.2
Negative	2.9	1.0	3.0	1.2
Explicit Positive	6.1	0.6	6.5	0.4
Negative	3.1	0.9	2.5	0.6
Feelings Feel OK	3.6	0.5	3.4	0.7
Guilt	3.7	0.6	3.7	0.7
Worry	3.6	1.1	3.6	1.0
Anger	2.4	0.8	2.8	0.9
Intentions Positive actions	5.2	0.9	6.0	1.0
Negative actions	1.5	0.6	1.3	0.7
Gain experience	4.9	1.3	6.2	1.0

Table III. Attitudes towards children with special needs in terms of teacher's family experience

Components of teacher attitudes	Family experience		No family experience	
	Mean	SD	Mean	SD
Thoughts Implicit Positive	2.8	1.1	2.5	1.1
Neutral	4.7	1.3	4.1	1.5
Negative	3.0	1.4	3.0	1.0
Explicit Positive	6.7	0.3	6.1	0.6
Negative	2.4	0.6	2.9	0.8
Feelings Feel OK	3.7	0.7	3.4	0.6
Guilt	3.7	0.8	3.7	0.7
Worry	3.5	1.1	3.6	1.0
Anger	2.9	0.9	2.5	0.8
Intentions Positive actions	5.7	0.9	5.4	1.1
Negative actions	1.3	0.5	1.5	0.7
Gain experience	6.3	0.6	5.2	1.4

negative implicit and explicit attitudes by teachers to children with particular cognitive, social and physical needs.

Implicit positive and negative thoughts were quite similar between groups of teachers about children with cognitive, social and physical needs (ns effects).

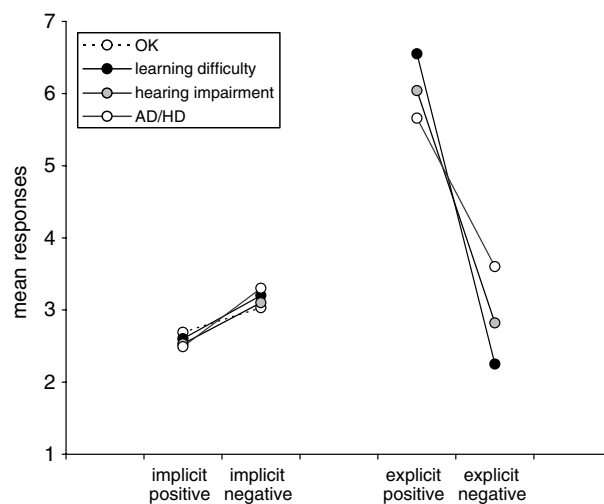


Figure 2. Positive and negative implicit and explicit attitudes by teachers to children with a cognitive, physical or social learning problem.

In contrast, there was an interaction effect of positive and negative explicit thoughts about children's cognitive, social and physical needs ($F = 56.6$, $p < 0.001$), with main effects of more positive than negative thoughts ($F = 429$, 6 , $p < 0.001$) that were not significant for types of educational needs ($F = 4.0$ ns). Compared to children with physical needs, attitudes to children with cognitive needs were more positive (effect size 1.0 SD) and less negative (effect size 0.6 SD), and attitudes to children with social needs (AD/HD) were less positive (effect size 0.6 SD) and more negative (1.0 SD).

3.4. A MODEL OF TEACHERS' THOUGHTS AND FEELINGS IN RELATION TO BEHAVIOURAL INTENTIONS

Figure 3 is a model of the teachers' thoughts and feelings in relation to behavioural intentions. It shows the statistically significant links that were stronger than 0.3 in the standardised solution. Results relate implicit positive and negative attitudes ($r = 0.46$). Explicit positive thoughts were the opposite of negative thoughts ($r = -0.82$). Positive feelings were not necessarily associated with the related negative feelings (guilt with anger $r = 0.38$, guilt with worry $r = 0.68$ and anger with worry $r = 0.53$).

Results show that implicit thoughts were not necessarily linked with intentions to act toward children with special educational needs. In contrast, positive thoughts were linked with intentions to act positively ($\beta = 0.51$), negative thoughts were linked with intentions to act negatively ($\beta = 0.46$) and less negative thoughts were linked with intentions to gain experience ($\beta = -0.39$). In addition, feelings of guilt were linked with intentions to act negatively ($\beta = 0.35$).

4. Discussion

The conceptual model of teachers' attitudes towards children with special educational needs entailed components of thoughts, feelings and intentions to act. The project examined the effects of personal and professional experience, explored variations in attitudes for types of children's disabilities, and then examined links among components in the proposed model of teachers' attitudes to the children.

4.1. THE ROLE OF PERSONAL AND PROFESSIONAL EXPERIENCE

The first part of the project showed substantially similar profiles of attitudes to children with special educational needs across indicators of experience. The results did not support the expected findings. In particular, attitude profiles were similar for teachers who have personal experience in

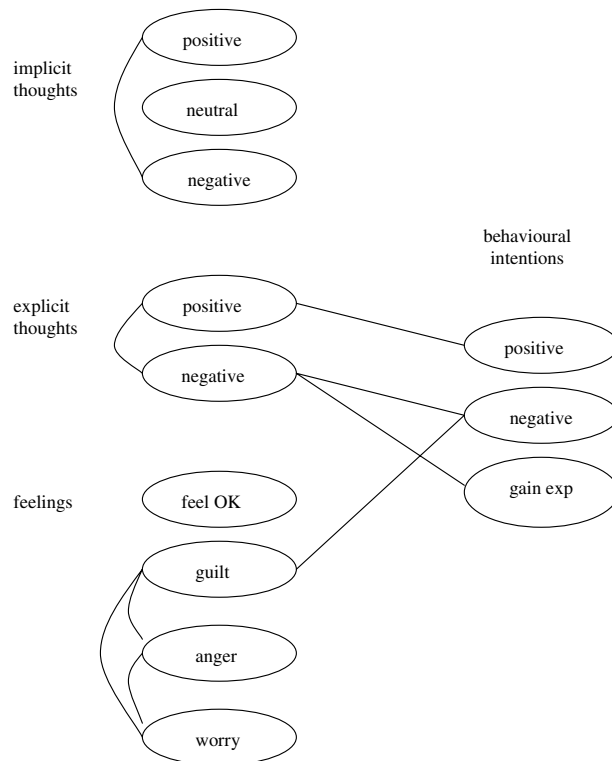


Figure 3. Model of teachers' attitudes towards children with special educational needs, with implicit and explicit thoughts and feelings in relation to behavioural intentions.

Notes

^aThe model was a good fit to teachers' responses (ratio of ChiSq to df 1.2, GFI .87, TLI .93, RMSEA .06 based on AMOS structural equation modelling.).

^bThere were similar links across personal and professional experience, with few exceptions (for teachers who have personal experience of children with disabilities, links were weak from positive thoughts to positive action, and also from negative thoughts to gaining experience).

their families of children with special educational needs, and profiles were similar for pre-service and in-service teachers. In addition, the model of thoughts and feelings in relation to behavioural intentions about children with special needs were similar across teachers' personal and professional experience.

It appears that professional and personal experiences do not provide differential influences on teachers' implicit thoughts towards children with special needs. These findings reinforce and integrate work by Avramidis et al. (2000), Piccolo-Torsky et al. (1998). Hepperlen et al. (2002), Jerome et al. (1994), and Kasten et al. (1992) highlighting the importance of pre-service as well as in-service training for teachers about their attitudes to children with special educational needs.

4.2. PROFILES OF ATTITUDES ACROSS COGNITIVE, SOCIAL AND PHYSICAL NEEDS

The project also explored attitudes about children with particular educational needs. The results show substantially similar implicit thoughts across particular educational needs. In contrast, explicit thoughts varied for children with cognitive, social or physical needs. Profiles were more positive than negative on thoughts about children with physical needs, in this case about their hearing. Explicit thoughts were more stereotypically positive and less negative about children with learning difficulties. In addition, teachers' explicit thoughts were less stereotypically positive and more negative about children with AD/HD in terms of their social needs. The findings may explain recent research by Sciutto et al. (2000) who found that previous experience of AD/HD in the classroom affected teachers' knowledge of the disorder.

4.3. A MODEL OF THOUGHTS AND FEELINGS IN RELATION TO BEHAVIOURAL INTENTIONS

The results confirmed that explicit thoughts relate to teachers' behavioural intentions to children with special needs. In particular, positive explicit thoughts tend to support teachers' intentions to act positively, and explicit negative thoughts would support intentions to act negatively and constrain their intentions to gain further experience about children with special needs. However, it seems that implicit thoughts do not influence teachers' behavioural intentions. In addition, teachers' feelings of guilt also constrain their intentions to act negatively towards children with special needs. The findings confirm the effectiveness of component models of attitudes in previous research on attitudes of teachers to people in other social groups and attitudes of students to children in other social groups (Bornholt, 2002; van de Ven et al., 1996). The findings suggest where intervention and training would be most effective.

4.4. LIMITATIONS OF THE PROJECT AND FURTHER RESEARCH

The reliable indicators and the robust model of thoughts, feelings and behavioural intentions suggest that further research in this field would be worthwhile. In particular, further work needs to address the extent to which in-service teachers had prior professional experience with children with each of the social, physical or cognitive needs, and the extent to which pre-service and in-service teachers would attend courses and gain classroom experience with children who have special needs. This would require access to records of hours of in-service courses and classroom experience, and long-term co-operation of teachers and school boards.

4.4.1. *In Summary*

The overall findings suggest that the explicit attitudes expressed by teachers towards these children, and particular feelings, make strategic contributions to the teachers' intentions for positive rather than negative actions, and to their intentions to gain more experience with children who have special educational needs.

4.5. IMPLICATIONS FOR EDUCATORS

There are some clear implications for the education of teachers, over and above their experience of children with special needs and their teaching experience. It was found that teachers' explicit thoughts about children with special needs and their feelings of guilt, support and constrain their behavioural intentions towards these children. Consequently it is important to optimise teachers' explicit thoughts and to alleviate their feelings of guilt. Several targeted strategies would provide teachers with resources and information about children with special needs, within salient personal and social frames of reference. This would provide teachers with information in the context of attitudes that tend to vary with situations and over time, and in relation to other teaching professionals. This strategy would promote more balanced and effective inclusion practices, and support effective teaching and learning in the classroom for children with diverse educational needs.

There is clearly a particular need to focus on attitudes of teachers to children with high social needs, in this case, children with AD/HD. It seems that personal and teaching experience plays a limited role in the expression of attitudes towards children with special educational needs. The findings suggest that we need to focus first on undergraduate as well as in-service programs to optimise teachers' attitudes towards children with high social needs.

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Biographical notes

Laurel Bornholt is a research psychologist and academic at the University of Sydney. She trained in Psychology at the University of Melbourne, with a PhD from Macquarie University. Her research focuses on understanding attitudes and self-stereotyping in social and developmental psychology.

Current projects develop spiral models of motivation to participate in cognitive, physical and social activities, and examine the diversity of individuality, belonging and identity of place for young adults in regional and urban locations.

Brook Lennon is a graduate in Psychology from the University of Sydney. Her honours thesis was on changing attitudes of educators and health professionals to children of divorce. Brook worked in the local community and in non-government sector as an advocate and carer for children with disabilities. Following her training as a teacher at the University of Western Sydney, Brook works in Special Education in schools.

Therese Levins is a graduate in Education from Macquarie University. Her studies focused on children with special needs. Therese has taught in a number of primary schools across Sydney and is currently working in a Catholic systemic school. As a result of her teaching experience in primary schools, Therese's research focuses on children with Attention Deficit/Hyperactivity Disorder (AD/HD) and the attitude of primary school teachers towards these children.