

Inclusive education: policies, teachers' attitudes and perspectives

John Longo Rombo

Abstract

Inclusive education is a worldwide phenomenon widely advocated in the recent past. It is a philosophy as well as a principle and/or practice that is based on human rights and social justice. It advocates that children with special needs have to be educated along their normal peers in the regular classrooms. In order to achieve this direction, teachers in inclusive classroom play a major part through their attitudes and actions both in Papua New Guinea and elsewhere. The review shows that depending on the kind of attitudes exhibited by teachers, children with special needs can be either included or excluded from the mainstream education system. Inclusive education policies also play a major part to influence the way teachers form their attitudes towards inclusion.

Introduction

Philosophies regarding the education of children with special needs have changed dramatically over the past two decades and several countries including the United States, United Kingdom and New Zealand have led in the effort in implementing policies which foster the integration and more recently inclusion of students with special needs into the mainstream education system (Neilson, 2005; O'Brian & Ryba, 2005). Papua New Guinea has also advocated the implementation of inclusive education supported by relevant policies, the work of non-government organizations and the National Department of Education (Department of Education, 2002, 2003, & 1993). Although the movement of inclusive education has gained momentum in recent years like for the case of Papua New Guinea, one of the key elements in the successful implementation of the policy is the attitudes of the personnel who have the major responsibility for implementing it; that is teachers (Mitchell, 2000). The purpose of this article is to review the existing literature on the teachers' attitudes towards children with special needs who are educated in the inclusive education environment. Through the current literature review, there is a possibility of elucidating some of the factors that might impact on the formation of teachers' attitudes towards children with special needs. However, the importance of inclusive education policy development and practices needs to be highlighted first as it is assumed to have direct impact on the formation of the teachers' attitudes towards the education of children with special needs in inclusive schools.

Method

The literature search was conducted through the following means: published journal articles, text books, special education resource books, web-search

through Google, and the University of Waikato database search, especially Erick via Pro-quest. Relevant information pertaining to the review topic was sought from the University of Waikato library. Major search themes were formulated which made it easier to search the related literature on the topic under review. The relevant literature pertaining to teachers' attitudes towards inclusive education was reviewed both in New Zealand and internationally. Due to non-existence of relevant literature on teachers' attitudes in Papua New Guinea, only general literature on policies and practices were reviewed to provide a broader picture. There was no timeframe used as it was felt that all literature should be reviewed to establish a pattern in teacher attitudinal change overtime.

Rationale

According to Rajecki (1982), attitudes are such an important area to study because they influence so much of our personal lives. He explains that attitudes include desires, convictions, feelings, views, opinions, beliefs, hopes, judgements and sentiments. Therefore, the study of attitudes is very important because there is a general believe that human behaviour and actions are influenced by attitudes, whereby attitudes are seen as the cause and behaviour is the consequence (Mushoriwa, 1998). Through the understanding of teachers' attitudes, the importance of teachers' attitudes and how such attitudes should be defined and framed so that teachers can be informed; for instance through relevant policy development initiatives which would positively foster inclusive education practices for all children.

Policies and practices pertaining to inclusive education

The development of appropriate inclusive education policies and practices is a step towards advocating the education of children with special needs in the mainstream education system, which would have impact on the teachers' attitudes towards the education of children with special needs (Mentis, Quinn, & Ryber, 2005). However, for the case of Papua New Guinea (PNG), special education was not included as part of the mainstream curriculum until 1993 when the 'National Special Education Plan and Policy and Guidelines for Special Education' was introduced and implemented (Department of Education, 1993). The special education policy for PNG was recently revised to include issues such as teacher preparation, identification and screening, and curriculum and instructional strategies among others (Department of Education, 2003). Though it appears to be limited in its scope and content, this policy recognises the vital contribution of teachers; both special needs and regular education teachers. Inclusive education is part of this policy direction and it is based on the 'Philosophy of Education' which recognises the education of all children based on the principle of integral human development in Papua New Guinea (Matane, 1986). The direction advocated by the PNG philosophy of education is for all children to be educated in the mainstream education based on the principles of rights, social justice and normalisation. That means inclusive education policies and practices have to advocate that all members, whether with special needs or not, are accepted and valued as people

with rights and potential to excel in the inclusive classroom in particular and eventually in the wider society, supported by teachers' positive attitudes and actions (Department of Education, 2003).

According to Mitchell (1999), inclusive education policies enable everyone to be accorded equal status regardless of the level of functioning or other personal characteristics that are associated with human beings, such as disabilities or in other cases those children who are gifted and talented. For instance, the philosophical basis for the special education policy in Papua New Guinea is "... to develop the maximum potential of every child with special needs, enabling self-reliance and a full and happy life as far as possible in an integrated setting ... (Department of Education, 2003, p.2). However, O'Brian and Ryba (2005) argued that, from the historical perspective, the education of children with special needs went through several stages before other people, including the teachers could realise the vitality of how this category of children could be fully included into the mainstream education system. In New Zealand for instance, due to the ideas of educating children with special needs being derived from the principles and practices that were formulated and used mostly in the United States and teachers' non-proactive attitudes, full inclusion did not take effect that quickly (Mitchell, 1999). According to Neilson (2005), this was partly due to teachers' negative attitudes towards the education of children with special needs in the regular classrooms. Similar trend is being experienced in Papua New Guinea whereby children who were once confined and taught in segregated settings such as the Mt. Sion Blind Center in Goroka are integrated into a regular school like the Sacred Heart Faniufa Primary School in Goroka, Eastern Highlands Province. In support of this direction, the Department of Education (2002) states that all children do have an opportunity to be included in the mainstream education and this must be provided within the existing education system in Papua New Guinea. In so doing, it would ultimately lead to achieving the Universal Primary Education in PNG (Department of Education, 2003).

However, unlike the United States where the education of children with special needs was underpinned by legislation such as the Public Law 94-142, Education of All Handicapped Children Act 1975, New Zealand and Papua New Guinea are going through several stages of reform (Department of Education, 2002; Moltzen, 2005; O'Brian & Ryba, 2005). Initially teachers and other people viewed that children with special needs would be educated in segregated settings. Then there was a shift to integration through partial inclusion like the case in Sacred Heart Faniufa Primary School in Goroka, and finally resulted in full inclusion as advocated by Special Education 2000 in New Zealand and is the current practice in Papua New Guinea (Department of Education, 1993; Ministry of Education, 1999a&b; O'Brian & Ryba, 2005). O'Brian and Ryba (2005) further commented that progressive implementation was based on the idea of mainstreaming and/or integration in three successive stages. Firstly, the locational stage is where teachers placed children with special needs in a separate unit within mainstream schools. The second stage involved the social inclusion, where teachers brought together those children with and without special needs for social interaction, and, thirdly, the

functional stage where teachers gave the children of the same age full inclusion in schools, regardless of their special needs. According to Smith, Polloway, Patton, and Dowdy (2004), mainstreaming and/or integration was viewed as a vital step through which teachers could recognize the importance of educating those children with special needs together with their 'normal' peers in the regular education system. From New Zealand and Papua New Guinea perspectives, Mitchell (2000) and the Department of Education (2003) asserted that this process of inclusion was vital because teachers, other people and the government, as well as other non-government organizations such as the Callan National Unit in PNG to realize the importance of educating children with special needs in the regular education system. According to Mitchell (1999) and O'Brian et al. (2005), the move towards inclusive education in New Zealand was later supported by relevant legislation and regulatory requirements. However, whilst there is a policy framework that exists in PNG to support inclusive education, there is a lack of proper legislative and regulatory requirements to drive the policy forward.

Teachers' attitudes towards inclusive education

Studies in the social-cognitive field have shown that teacher's beliefs about, and the attitudes towards student diversity and heterogeneity play a major part when including all children into the regular education system (Simmel, Abernathy, Butera & Lesar, 1991). In particular, empirical data shows that teachers possess low academic expectations in relation to children with special needs (Silva & Morgado, 2004). In a study by Aloia, Maxwell and Aloia (1981), teachers' impressions of the intellectual potential of a child who was labelled as 'mentally retarded' were lower than children with no special needs requirements. This was partly due to their personal experiences as well as their perceptions whereby such children were thought to be lacking to exhibit appropriate social and academic behavioural patterns. For instance, from the author's experiences, people with intellectual disabilities are often institutionalised in psychiatric wards in major hospitals in Papua New Guinea in fear of violent and temperamental behavioural traits exhibited by such people. For such children to be included in the education system in Papua New Guinea is quite minimal or non-existent at all due to teachers' negative attitudes. In another study, Mushoriwa (2001) assumed that teacher attitudes can affect the way they perceive, value, judge, interact with and teach children with visual impairment in regular classrooms. Others have also viewed that teachers' attitudes can shape the way inclusive education is promoted (Booth & Ainscow, 2002). They further observed that, generally speaking in many countries, the introduction of inclusive education precedes reality checking studies to establish what is actually happening in regards to including everyone into the regular education system. However, Mushoriwa (2001) proposed that there is a likely danger of being carried away by theoretical ideas rather than being practical which actually ensures that all children are accorded same social status for full inclusion.

On the other hand, Dev and Belfiore (1996), who examined the attitudes of ninety-five teachers involved in the implementation of inclusive education in

Delhi, found them to be favourably disposed towards the inclusion of students with special educational needs. In another study, Sharma (2001) explored the attitudes and concerns of 310 primary school principals and 484 teachers working in government schools in Delhi regarding the inclusion of students with special needs into the regular school programs. He found that the best predictors of teachers' attitudes towards inclusive education were their length of teaching experience, contact with a student with special needs, and perceived parental support for inclusive education were found to significantly influence the teachers' attitudes and actions. He also found that both principals and teachers were concerned about the lack of resources such as special education teachers and para-professional staff, non-availability of appropriate instructional materials, the lack of funding, and their lack of training to implement inclusive education policies (Mitchell & Desai, 2005). In a study on teacher judgement and/or attitudes to place students that needed specialist help in reading, Madelaine and Wheldall (2002) presented two studies in which teacher judgement was compared with a quick alternative deriving from curriculum-based measurement (CBM) that has been shown to be both highly reliable and valid. In the first study, they found that 32 teachers of year two to year six classes were required to categorise their students into the top 25%, middle 50% and bottom 25% for reading performance. Compared with categorisation based on the more objective CBM measure, the mean accuracy of teaching judgement was 67%, varying between 29% and 100%. In the second study they found that 24 teachers of year one to year five classes were required to categorise ten randomly selected students from their classes into the top three, middle four and bottom three for reading performance. Similar results were obtained with mean accuracy of teacher judgement at 65%, varying between 20% and 100%. Taken together, the findings of the two studies suggested that reliance on teacher judgement and/or attitudes for instructional decision-making in inclusive schools and classrooms may be misplaced and that a more objective, quick alternative based on CBM was recommended.

However, despite the general acceptance of the principle of inclusion and/or integration, some studies revealed that teachers do not seem to be ready for it (Semmel, Abernathy, Butera & Lesar, 1991). This scenario is also supported in Scruggs and Mastropieri's (1996) review of the studies conducted between 1956 and 1995, which concluded that about 70% of teachers supported the concept of mainstreaming, but only a third felt that they had sufficient time, skills, training or resources to support the practice of full inclusion (Silva & Morgado, 2004). A recent study done in Enga Province in Papua New Guinea also reveals that there was a lack of teacher knowledge about inclusive education practices (Mapsea, 2006). In this study, 77 teachers were selected in six primary schools in Enga Province. The study further reveals that teachers' attitudes need to be changed to promote inclusive education in the schools under study. Other factors that hindered inclusive education include: lack of government support through funding provisions, strict cultural belief systems about disabilities and geographical isolation of the students to attend regular schools. Tribal fighting was also identified to be one of the causes of disability and subsequent denial to attend regular schools in Enga Province. Nonetheless,

at the international level, researchers and educators who are interested in the education of children with special needs are working towards achieving an education system that is more inclusive and one that fosters the education of all children (Ainscow, 1999, Ainscow, Farrell, & Tweddle, 2000; Ballard, 2003; Slee, 2000). This is because teachers view that inclusion of all students teaches the student and his or her peers that all persons are equally valued members of the society and that it is worthwhile to do whatever it takes to include everyone (Silva & Morgado, 2004).

Factors that influence teachers' attitudes towards inclusive education

Empirical evidence has suggested that teachers' attitudes might be influenced by a number of factors which are in many ways interrelated. For example, in the majority of the studies towards inclusion and/or integration, responses appeared to vary according to disabling conditions (Clough & Lindsay, 1991). In other words, the nature of the special needs and/or educational programs do influence teachers' attitudes. Following the typology developed by Salvia and Munson (1986), the first is categorised as child related factors. The demographic and other personality factors and their influence on teachers' attitudes have been examined and this group of variables could be classified under the heading teacher-related factors. Finally, the specific social context/environment has also been found to influence teachers' attitudes and these variables can be categorised under educational environment-related factors. This system of synthesizing the research findings has been adopted here for the purpose of presenting the existing literature on factors that have influenced teachers' attitudes towards children with special needs in inclusive settings.

Factors related to the child

Several inclusion studies have been concerned with determining teachers' attitudes towards different categories of children with special education needs and their perceived suitability for inclusion and/or integration (Forlin, 1995; Jamieson, 1984). Teachers' concepts of children with special education needs normally consists of the types of special needs, their prevalence and the educational needs they exhibit (Clough & Lindsay, 1991). They argued that teachers' perceptions could be differentiated on the basis of three dimensions: physical and sensory, cognitive, and behavioural-emotional. Teachers view children with special needs from these dimensions and their acceptance for inclusion can be depended on how they understand the special needs condition. For instance, Forlin (1995) found that educators were cautiously accepting a child with cognitive disability and were more accepting of children with physical disabilities. The degree of acceptance of part-time inclusion was high for children considered to have mild or moderate special education needs. The majority of educators (95 percent) believed that mild physically disabled children should be integrated part-time into regular classes and only a small number of educators (6 percent) considered full-time placement of children with severe physical disabilities as an acceptable approach. Similarly, the majority of educators (86 percent) believed that only children with mild

intellectual disability should be integrated part-time into mainstream classes. On the contrary, a very small number of educators (1 percent) considered full inclusion of children with intellectual disabilities was viable because of their believe that it would be more stressful to cope with children with severe special education needs full-time or part-time. Forlin's findings indicated that the degree of acceptance by educators of placement of children with special education needs in regular classes declined rapidly with a converse increase in the severity of the disability across both physical and cognitive categories, and placement should be part-time rather than advocating full inclusion in regular classrooms.

Ward, Center, and Bochner (1994) assessed teacher attitudes towards inclusion of children with special education needs whose disabling conditions or educational difficulties were related to behavioural problems. With the cooperation of senior staff from New South Wales Department of Education, Australia, they produced a list of thirty (3) disabling conditions which they then defined behaviourally (Ward et al., 1994). They felt that the establishment of an operational definition for children with special needs would have relevance for school practitioners, since traditional category grouping does not necessarily reflect the child's actual educational needs. In general, teachers in their study showed little disagreement about the inclusion of children with special education needs perceived as having mild difficulties, since they were not likely to require extra instructional or management skills from the teacher. Included in this group of children were those with mild physical and visual disabilities and mild hearing loss who were educated in the inclusive classroom setting.

Factors related to the teacher

A great deal of research regarding teacher characteristics has sought to determine the relationship between those characteristics and the teachers' attitudes towards children with special needs. Researchers have explored a host of specific teacher variables such as gender, age, years of teaching experience, grade level taught, contact with children with disabilities and other personality factors, which might have impact upon teacher acceptance of the principle of inclusion. A synthesis of these findings is worth presenting as the teacher characteristics are assumed to have impact on the attitudes exhibited by teachers in inclusive classroom contexts.

Gender is the first teacher related variable that can influence teachers' attitudes towards inclusion. The evidence from the literature appears inconsistent as some researchers noted that female teachers had a greater tolerance level for inclusive education than did the male teachers (Aksamit, Morris and Leunberger, 1987; Eichinger, Rizzo and Sirotnik, 1991; Thomas, 1985). Harvey (1985), for example found that there was a marginal tendency for female teachers to express more positive attitudes towards the idea of including children with behavioural problems than male teachers. Others (e.g. Beh-Pajoooh, 1992; Berryman, 1989; Leyser, Kapperman & Keller, 1994), however, did not report that gender was related to attitudes. Instead they argued that

teacher attitudes change to a lesser or greater extent when considering the types of special needs that teachers are faced with in real classroom contexts. Nevertheless, they commented that different people may view various disability conditions differently which can change their perceptions towards inclusion or for the provision for other appropriate educational programs.

Teaching experience is the second teacher-related variable cited by several studies as having an influence on teachers' attitudes (Berryman, 1989; Cough & Lindsay, 1991). They established that younger teachers and those with fewer years of teaching experience were found to be more supportive towards inclusive education. Forlin's (1995) study, for example, showed that acceptance of a child with physical disability was highest among teachers with less than six years of teaching and declined with experience for those with six to ten years of teaching. The most experienced teachers with greater than eleven years of teaching were the least accepting for children with special needs to be included in the regular classrooms. Forlin also obtained a similar result for the inclusion of a child with intellectual disability. His study seemed to indicate that as teachers gained more experience in teaching, they became less accepting of inclusive educational practices. Leyser, Kapperman and Keller (1994) also found that in general, teachers with 14 years or less teaching experience had a significantly higher positive score in their attitudes to inclusion compared to those with more than fourteen (14) years. They found no significant differences in attitudes to inclusion among teachers whose teaching experience was between one and four years, five and nine years and ten and 14 years. However, although the above study indicated that young teachers and those with fewer years of experience are more supportive of inclusive education programs, other investigators have reported that teaching experience was not significantly related to teachers' attitudes (Avramidis, Bayliss, & Burden, 2000; Leyser, Volkan and Ilan, 1989; Stephens & Braun, 1980). According to Avramidis et al. (2000), this difference may be due to the fact that people's attitudes change when encountered by different programs, challenges and problems associated with educational innovations and practices.

Grade level taught is the third teacher associated variable and its influence on teachers' attitudes towards inclusion has been the focus of several studies (Hannah, 1988; Rogers, 1987). Leyser, Kapperman and Keller's (1994) international study found that senior high school teachers displayed significantly more positive attitudes towards the idea of inclusion than did junior high school and elementary school teachers. The study further found that junior high school teachers were significantly more positive than elementary school teachers. Other American studies revealed that elementary and secondary school teachers differed in their views of inclusion and the classroom accommodation they make for students who are included into the regular classrooms (Chalmers, 1991). Another study revealed that elementary teachers reported more positive views towards inclusion and its possibilities than did their secondary counterparts (Savage & Wienke, 1989). Salvia and Munson (1986), in their study concluded that as children's age increased, teacher attitudes became less positive towards full inclusion, and attributed that to the fact that teachers of older children tend to be more concerned about

subject-matter and less about individual children differences. This was also supported by Cough and Lindsay (1991) who claimed that, for teachers who were more concerned with subject-matter, the presence of children with special education needs in their class is a problem from the practical point of view of managing class activity and is not given much consideration. Therefore, they argued that primary school ethos is more holistic/inclusive, while secondary is subject-based, and that might impinge on the teachers' attitudes.

Teacher training experiences is another factor which has attracted considerable attention as it does influence the way teachers include children with special needs in the mainstream education system. This is referring to the teachers' knowledge about children with special education needs, and is gained through formal studies during pre-service and in-service training (Mentis, et al., 2005). It was shown that training is considered to be an important factor in improving teachers' attitudes towards the implementation of inclusive education policies. According to O'Brian & Ryba (2005), without a coherent plan for teacher training in the educational needs of children with special needs, attempts to include these children in mainstream schools would be difficult. The importance of teacher training in the formation of positive attitudes towards inclusion was supported by the findings of Beh-Pajoo (1992) and Shimman (1990) based on teachers in the colleges. Both studied the attitudes of college teachers in the United Kingdom (UK) towards students with special education needs and their inclusion into ordinary college courses. Their findings showed that college lecturers who had been trained to teach children with learning difficulties expressed more favourable attitudes and emotional reactions to students with special education needs and their inclusion than did those who had no such training. A recent Papua New Guinea study on teachers' views about the provision of inclusive education also shows that there was a lack of teacher preparation on how to include children with special needs in the mainstream education system (Mapsea, 2006). The study further found that school inspectors were also not aware of the inclusive education principle and how to implement it. This led to the non-existence of in-service education, teacher training and preparation on inclusive education in Enga Province in PNG. That means teacher training and preparation plays a major role in fostering positive attitudes for the inclusion of children with special education needs in regular classrooms.

Factors related to the educational environment

A number of studies have examined environmental factors and their influence in the formation of teachers' attitudes towards inclusion of children with special education needs (Centre & Ward, 1987; Myles & Simpson, 1989). These authors respectively stated that one factor that has consistently been found to be associated with more positive attitudes is the availability of support services at the classroom and the school levels. Here, support could be seen as both physical in the form of resources, teaching materials, and restructured physical environment and human, which among others include learning support assistants, special education teachers, and speech therapists. In another study, Janney, Snell, Beers, Raynes (1995) found that the majority of teachers in their

study were hesitant initially to accept children with special education needs in their classes. This was because they anticipated a worst case scenario where both themselves as educators and the children with special education needs would be left to fend for themselves. However, they found that later the teachers under study were receptive towards the children with special needs after having received necessary and sufficient support. The respondents further acknowledged that the support received from the relevant authorities was instrumental in allaying their apprehension that inclusive educational practices would result in extraordinary workloads. It was also revealed that a significant restructuring of the physical environment, which includes making the buildings accessible to students with physical disabilities and the provision of an adequate and appropriate equipment and materials were also instrumental in the development of those positive attitudes. Besides those mentioned by Janney et al. (1995), other forms of physical support such as the availability of adopted teaching materials (LeRoy & Simpson, 1996) and smaller classes (Bowman, 1986; Clough & Lindsay, 1991), have also found to generate positive teacher attitudes towards inclusive educational practices.

Another type of support, that of the continuous encouragement from the head teachers and school authorities, has also been mentioned in several studies as being instrumental in the creation of positive teacher attitudes towards inclusion. For instance, according to the study by Janney et al. (1995), the enthusiasm from head teachers was an attributing factor for the success of the part-time integration program in the schools they studied. Chazan (1994), in his review of relevant literature, concluded that teachers in regular schools have a greater tolerance of inclusion and/or integration if head teachers are supportive. Similarly, Center and Ward's (1987) study reported that regular education teachers whose head teachers had provided some form of support for the inclusive education programs, exhibited more positive attitudes towards its implementation than those who had not received any. Furthermore, support for specialist resource teachers was also identified as an important factor in shaping positive teacher attitudes to inclusion (Kauffman, Lloyd & McGee, 1989). Janney, Snell, Beers and Raynes (1995) found that one of the factors cited by their respondents that had contributed to the success of the inclusive education programs they were implementing was the existence of effective support, both interpersonal and task-related, provided by the school's special education teachers. Clough and Lindsay (1991) argued that special education specialist teachers are important co-workers in providing advice to subject specialist teachers on how to make a particular subject accessible to children with special education needs. Center and Ward (1987) found that children with a mild sensory disability included in regular classes did not cause anxiety to the regular education teachers because of the confidence generated by the presence of itinerant teachers for these children. Their study showed that experience of working with itinerant teachers positively affected teachers' attitudes.

The importance of support from specialist resource teachers was also highlighted in another study conducted in the USA (Minke, Bear, Deemer, & Griffin, 1996). This particular study compared the attitudes towards inclusion and the perceptions of self-efficacy, competence, teaching satisfaction and

judgements of the appropriateness of teaching adaptations of regular education teachers who co-taught with resource teachers in inclusive classrooms and their counterparts in traditional classrooms. Regular teachers in inclusive classrooms reported positive attitudes towards inclusion and high perception of self-efficacy, competence and satisfaction. The study further established that regular education teachers in traditional classrooms had less positive perceptions and viewed classroom adaptations as less feasible, and less frequently used, than did teachers in classrooms that had more than one teacher, both acting as resource personnel. Other aspects of the inclusive school environment have also been identified in other studies as being obstacles that have to be dealt with efficiently in order for inclusive programs to be successfully implemented. For instance, Avramidis et al. (2000) reported overcrowded classrooms, insufficiently pre-prepared materials and/or differentiated packages, insufficient time to plan with learning support team, lack of modified and flexible timetables, inadequate available support from external specialists and lack of regular in-service training opportunities as some of the obstacles that contributed to teachers forming various mindsets towards inclusive educational practices. Moreover, the need for more non-contact time so that teachers can plan collaboratively has been stressed in a number of American studies (Diebold & von Eschenbach, 1991). In the Myles and Simpson (1989) investigation, for example, 48 out of 55 teachers (87.2 percent) reported their perceived need for one hour or more of daily planning time for inclusion. It could be said that regular education teachers feel that implementing an inclusive education program would involve a considerable workload on their part, as a result of increased planning for meeting the needs of a very diverse population. In this respect, human and physical support can be seen as important factors in generating positive attitudes among inclusive education teachers towards the inclusion of children with special education needs.

Commonalities and conclusions emerging from the literature review

Teachers have been assumed to play a vital role, whereby their attitudes are seen as a major element that can either include or exclude children with special education needs in inclusive schools. Teachers in Papua New Guinea who have been recently introduced to inclusive education philosophies and practices are no exception. First, it has been revealed that the policies that underpin inclusive education practices have to be done in ways that will direct teachers towards the education of children with special needs in the regular classrooms. In PNG for instance, the special education policy that was formulated more than a decade ago has to be meticulously implemented in the pursuit of giving equal educational opportunities to all children. Secondly, teacher attitudes do affect the way children learn, particularly in inclusive settings. The literature reveals that special education teachers generally exhibited more positive attitudes towards inclusive practices than their counterparts in regular classrooms. Other researchers have reported that the inclusive education practices are working but there are challenges and problems that have to be considered such as curriculum differentiation. Thirdly, according to the factors that have influenced inclusive education practices, training does correlate with positive

attitudes, and teachers with less teaching experience displayed more positive attitudes whilst teachers with more teaching experience were negative about inclusion. At the same time teachers' attitudes are influenced by a number of factors such as the child related factors, and factors associated with the teacher, and the educational context. It is also viewed that positive teacher attitudes are developed through the availability of appropriate support provisions in inclusive settings. The physical environment has been assumed to have contributed to the development of positive teacher attitudes. That means the inclusive educational environment must be conducive to learning for the children with special needs. Only then children with special education needs can be rest assured for their place of education in inclusive schools in Papua New Guinea and elsewhere in the world.

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Author

John Longo Rombo hails from Southern Highlands Province and is an MEd student at the University of Waikato in New Zealand. He holds a Master of Special Education (First Class Hons) from the University of Waikato, a BEd (Hons) from the University of Goroka, a PGDipEdn (Special Education) and a BEd from Massey University, NZ. He also has a Diploma in Teaching from Dauli Teachers College. He taught in primary schools, a Primary Teachers' College as a lecturer and taught at St. Fidelis Seminary in Madang Province where he was also appointed the Deputy Rector. At the end of 2004, he was one of the tutors for the pioneer Bachelor of Special Education degree offered by the Divine Word University in association with Callan National Unit, Wewak. Currently he is doing a research towards his Master of Education degree entitled: *School cultural factors and practices that influence inclusive education in Papua New Guinea: A consideration of schools in Southern Highlands Province*. This study employs a case study research methodology where four schools in Southern Highlands Province are being studied as separate cases and then for cross-case analysis.