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Attitudes of South African teacher educators in relation to mainstreaming pupils with special needs

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1.3 Special educational needs *(SEN)* defined within the South African context

The conceptualisation and provision of Special Education was examined anew in the National Education Policy Investigation (NEPI,1992) instituted by the African National Congress in the years just preceding the election in April 1994 of a democratic government in South Africa. The NEPI Report identified a continuum of special education need in South Africa, ranging from intrinsic (severe and chronic) to extrinsic (temporary and remediable) needs, with the latter created by socioeducational disadvantage. The centre of the continuum represents an interaction of intrinsically and extrinsically generated special education needs.

Continuum

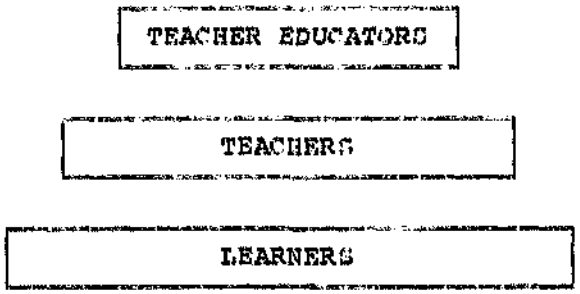
Intrinsic	Interactional	Extrinsic
Learning disability located in the child	Interaction between learning disability in the child and socioeducational disadvantage	Socioeducational disadvantage

The definition as provided here recognises that SEN is a joint responsibility of ordinary and special education.

1.3.1 Intrinsically generated Special Educational Needs

Categories of disability that comprise intrinsic SEN include

ingredient in achieving successful mainstreaming. The starting point in restructuring education then lies with the educators of teachers who are the catalysts for change as it will be their responsibility to ensure the paradigm shift wherein teachers are empowered with their own capacity to think and serve as mediators to learners. Within this paradigm, teacher educators become important change agents as they are required to model the changed paradigm for their learners, the training teachers (Skuy, 1995).



Teachers are then seen as both the targets and the agents of change. Teachers' attitudes towards a changed education system may serve as the impetus for, or the impediment of, the successful implementation of mainstream education in South Africa.

This study is predicated on the assertion that a restructured educational system needs to begin with the first-order change agents - the teacher educators, and that a cognitive education philosophy provides the means to implement this.

This represents a dramatic shift from the past where children with special needs received separate, specialised education. The general classroom teacher received little or no training in identifying and teaching the child with special educational needs (SEN). Traditionally, children with SEN have been stereotyped and teachers have held negative attitudes towards their inclusion in the mainstream (Wade and Moore,1992). The success of mainstreaming will be reliant on overcoming the current shortfalls in teacher training and addressing negative attitudes.

Skuy (1995) calls for a radical restructuring of education in relation to its goals, curriculum, instruction, and assessment according to the cognitive education philosophy and methodology. The rationale for this call is predicated on the need for an integrative approach to dealing with special educational needs in general education wherein all facets of education are addressed. These facets pertain to how the goals of education are conceptualised, teaching methodology and concomitant curriculum development. This call represents a radical paradigm shift away from a top-down, content based educational system to one in which the teacher is a co-learner and a mediator of knowledge. From this vantage point, teachers and the support structures surrounding teachers, are seen as the crucial agents in the implementation of this philosophy and methodology.

From the foregoing, teacher training can be regarded as a key

1 Literature Review

1.1 Scope of this Study

The first chapter of this investigation explores the available literature pertaining to the inclusion of learners with Special Educational Needs (SEN) in the regular class, the attitudes of teachers towards their inclusion and the rationale for a cognitive approach to educating learners with special needs. Chapter Two outlines the procedure adopted for surveying the attitudes of teacher educators at teacher training colleges in South Africa to (1) to examine their attitudes towards mainstreaming, (2) to determine their views on the requirements for teacher competence for mainstreaming, and (3) to determine their opinions regarding the most important goals of education. The results of the survey are presented in Chapter Three. These are discussed, together with their broader implications for education, in Chapter Four.

1.2 Introduction

The South African education system is at a crossroads where imbalances of the past need to be redressed. Vast numbers of children have been excluded from the education system by Apartheid policies. There is a pressing need to provide education for all the children in South Africa and Mainstreaming has been proposed as a means to accomplish this.

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DECLARATION

I hereby declare that this research report is my own work and it has not been submitted before for any degree or examination to this or any other university. It is being submitted for the degree of Master in Educational Psychology at the University of the Witwatersrand.



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ABSTRACT

The policy of mainstreaming and the provision for learners with Special Educational Needs (SEN) in the regular classroom is being promoted in many countries. The rationale for this study lies in the pivotal role of teacher educators in facilitating the success of mainstreaming. A survey was accordingly conducted of teacher educators at teacher training colleges in South Africa to (1) to examine their attitudes towards mainstreaming, (2) to determine their views on the requirements for teacher competence for mainstreaming, and (3) to determine their opinions regarding the most important goals of education.

The findings revealed that the majority of teacher educators sampled are ambivalent towards both mainstreaming and the requirements specified for teacher competency in this regard. Many teacher educators believe that it is feasible to train all teachers within the ordinary teacher training curriculum to work with SEN, and that mainstreaming will be successful with pre- and in-service training, support from professionals, and a low pupil-teacher ratio.

Stimulating pupils' desire to learn was considered to be the most important goal in education. This is consistent with a cognitive education philosophy which lends itself to teaching approaches which can cater to a diversity of pupils.

The implications of the findings are that effecting a changed education system needs to actively and centrally involve teacher educators and their concerns.

KEY WORDS

mainstreaming; attitudes; teacher educators

DISSERTATION

ATTITUDES OF SOUTH AFRICAN TEACHER EDUCATORS IN RELATION TO MAINSTREAMING PUPILS WITH SPECIAL NEEDS

A Dissertation
Presented to
The Division of Specialised Education
The University of the Witwatersrand

In Partial Fulfilment
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Master of Education (Educational
Psychology)

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by
Gwynneth May Choles

1.7.2.1 Teacher Training in SEN in Africa

Unesco (1996) reveals that teacher training in special education generally takes the form of an optional area of specialisation at post graduate level at teacher training colleges (Tanzania, Uganda, Zimbabwe). Tanzania has modified teacher training programmes to expose teachers to aspects of special education. Zambia offers in-service training for teachers interested in educating children with special needs. Planning is under way in Nigeria, Ghana, Uganda and Kenya (Kisanji, 1993). Namibia provides special education through the Committee for Assistance in Remedial Teaching System (CART System). Selected class teachers are trained in the rudiments of diagnosing learning problems. They discuss problems with parents and pupils, act as advisors to other teachers regarding learning problems and teaching approaches, and refer students with serious problems and conduct weekly meetings with other staff members and the principal. The CART System is designed to provide support for class teachers.

1.8 Teacher Attitudes Towards Children with Special Educational Needs

A literature search both in South Africa and internationally failed to reveal research into teacher educators' attitudes towards children with Special Educational Needs (SEN). This suggests that their vital role as agents of change has been neglected.

1.7.2 African Perspectives

During the 1950s and 1960s, throughout eastern and southern Africa (South Africa excluded) the provision of special education was initiated by private groups (churches and the private sector) with varying degrees of government support. During the 1970s Kenya, the United Republic of Tanzania and Zambia were beginning to plan for long term development of a coherent national education programme for children with special educational needs. Ross (1988) cites Kisanji (1984) who reports that Tanzania trebled its reported special education enrolments between 1971 and 1981. Integration policy is now legislated in Tanzania, Zambia and Zimbabwe. Namibia is in the process of finalising its Educational Act in accordance with the constitutional mandate that all persons have the right to education. Uganda and Zaïre have no legislation pertaining to the provision of special education. However, the Ugandan White Paper on Education Policy Review Commission Report acknowledges the right of disabled children to an education and Zaïre adopts a policy of non-discrimination (UNESCO, 1996). The implementation of integration follows a flexible approach in most African countries where a continuum of service is utilised ranging from special schools through special classes to full integration in the mainstream class. This is along the lines of the South African Progressive Mainstream Model.

This appears to be due to poor collaboration between regular and special teachers who receive different training. Additionally, they have differing role perceptions with regular teachers viewing themselves as teaching large groups which they believe special teachers are unable to do. Conversely, the special teacher regards the regular teacher as

> "... someone who is not capable of doing more than carrying out standard programmes and who has no response when confronted with slightly deviating educational needs" (Meijer, Pijl & Hegarty, 1994, p. 71).

These impediments to successful integration have been addressed through the Regular Education Initiative (REI) and the implementation of various projects aiming at changing regular education by integrating it with special education. An example of such a programme is the Adaptive Learning Environments Model (ALEM) which posits that all students learn in different ways and require varying amounts of instruction and time to learn. Instructional programmes are adapted to the learners' needs.

In the Australian State of Victoria, the Inclusive Schooling Integration Program (I.S.I.) was developed as a training workshop and curriculum approach. It provides the schools with a comprehensive and inclusive curriculum supporting the goal of integration. School support staff are offered further professional development in curriculum (UNESCO, 1996).

are that each district will appoint two members of personnel who will be responsible for SEN and will conduct in-service training for teachers (personal communication with GED officials).

1.7 International Perspectives on the Integration of Children with Special Educational Needs

The rights of learners with special education needs are recognised through varying forms of legislation in the United States of America (USA), the United Kingdom (UK), Australia and New Zealand. The Progressive Mainstream Model is largely adhered to and an essential requirement is that the necessary facilities be available in the schools to avoid placement of learners with special needs where the schools are inadequately equipped. The exact nature of integration practices are in varying stages of implementation.

1.7.1 International Teacher Training for SEN

The available literature failed to reveal formalised initiatives for teacher training in SEN in the United Kingdom and New Zealand. The USA however, has examined this aspect in some depth and Meijer (in Meijer, Pijl and Hegarty, 1994) states that while American education under Public Law 94:142 is generally seen as integrated, there is little curricular integration. Learners with special educational needs are taken out of the classroom and are supported by special teachers.

colleges for pre-service training lacked a department of specialised or remedial education. Conversely, a course in remedial education is stipulated as a requirement in white primary teaching qualifications. The GDE is currently involved in joint initiatives with UNESCO and the University of South Africa (UNISA) to include Special Educational Needs (SEN) in basic teacher training in colleges and universities (personal communication with GDE officials).

1.6.3.2 In-service Training

During the 1990's, prior to racially integrated education, the Department of Education and Training (DET) implemented its remedial system through a programme called the Panel for Identification, Diagnosis and Assistance (PIDA). Selected teaching personal received remedial training under the auspices of the College of Education for Further Training. They acted as remedial advisors to the school panel comprising of the Head of Department Guidance, school guidance teacher, standard guardian teacher, the guardian teacher of the child and the school principle. The political climate at the time resulted in the programme being abandoned as the remedial teachers were perceived to be DET employees and were unacceptable to those running the schools (Snell, 1993).

The current status of in-service teacher training in SEN is decentralised with school districts initiating in-service training in accordance with the GDE policy. Current proposals

flexibility, innovation and the ability to take risks. Within schools, the Discussion Document suggests that collaboration between teachers, co-operative learning and teaching teams, joint problem solving and internal consultancy will need to be developed. It is proposed that curriculum development should reflect a holistic approach in accordance with the National Curriculum Framework for General and Further Education Training with a uniform curriculum for all learners that is outcome centred. Specific outcomes can be reached at different rates and by different means.

1.6.2 Provision and resources for SEN in South Africa

The administration and control of special education has been relegated to that of an auxiliary service with unequal provision among the race groups. Historically White, Coloured and Asian pupils have had the most access to special education facilities. The lack of provision for Black pupils (including extrinsic SEN) represents a shortfall of 99.6%.

1.6.3 Teacher Training in SEN in South Africa

1.6.3.1 Pre-service Training

The dearth of provision for SEN in South Africa is reflected in the absence of such modules in the general teacher-training curriculum. Historically, at the time of NEPI report, the former Department of Education and Training (DET) teachers'

developmental notion of individual SEN children moving from more specialised care to accommodation within the mainstream as their capacity to cope increases. Time is then available for the resources necessary for total mainstreaming to be generated i.e. teacher training and training of teacher support.

1.6.1 Gauteng Department Of Education

The Gauteng Department of Education (GDE) has adopted a policy of Inclusive Education in The Gauteng School Education Act, 1995 (Act No. 6 of 1995) which stipulates that:

> "... admission requirements to public schools shall not unfairly discriminate on grounds of race, ethnic, or social origin, colour, gender, sex, disability, sexual orientation, religion, conscience, belief, culture or language" (p 13).

Additionally, every public school shall accommodate as far is reasonably possible, the special educational needs of any learner who attends the school (GDE, 1996).

The Discussion Document acknowledges the need for examining the implementation of an inclusion policy with respect to physical planning, human resource development, curriculum development, communication, research, networking and collaboration. It is acknowledged that in-service training of teachers will be required to assist them in identifying and addressing the needs of learners with special educational needs. Necessary changes for teachers would include

1.5.1 Mainstreaming: A General Definition

Kirk and Gallagher (1989) define mainstreaming as: the exceptional child (1) is placed with his or her normal peers, (2) will receive special services while enrolled in the regular classes (not special classes), and (3) will interact as much as possible with his or her normal peers in a least restrictive environment.

Where confusion about the definitions of mainstreaming and inclusion arises, Williams (GDE, 1996) seeks clarification by making the distinction that some misinterpretations of mainstreaming regard it as the learner who has to adapt to the mainstream classroom whereas inclusion entails the accommodation of learners in a variety of ways as well as adaptations to the curriculum. The significant aspect here is the adaptation of the curriculum to accommodate the learners' needs. The latter interpretation is applied to both mainstreaming and inclusion throughout this study and the terms are used interchangeably.

1.6 Mainstreaming in the South African context

The Progressive Mainstreaming Model adopted for the South African educational system proposes that in the short-term, students with severe and chronic intrinsic disabilities will need specialised attention, while those with less severe SEN should be accommodated in the mainstream. This includes the

pupils, 153 000 for White children, 138 000 among Coloured children and, 38 000 among Asian children which provides a total of in excess of 4 000 000 children. These figures would, in all likelihood, have increased over the last five years which represents a significant proportion of South African students, highlighting the fact that the need for special education is substantial.

1.5 Inclusion, Integration and Mainstreaming : Definitions

Inclusion and integration are terms used in the literature pertaining to mainstreaming (Gauteng Department of Education(GDE),1996; United Nations Educational, Scientific and Cultural Organisation (UNESCO), 1996). The GED Discussion Document defines inclusive education as follows:

> "... the provision of effective and adequate education for ALL learners on a continuum of needs, services and support." (1996, p. 14)

The UNESCO (1996) Report on legislation pertaining to special needs education among its member countries uses the term "integration". Two forms are distinguished - pedagogic integration referring to

> "... integrating the learning experience of exceptional children into a mainstream framework" (p. 28)

and socio-economic integration which includes the right of the disabled to health, labour and leisure.

needs for special educational support. Skuy (1993) asserts that the majority of children in South Africa can be said to have special educational needs. This arises from the reciprocal interaction of socio-economic and educational deprivation arising out of apartheid policies. Consequently, these factors within the South African context renders all education as special.

Other categories of learners with special needs are those of learners with emotional and/or behavioural problems and gifted learners. The foregoing discussion of special educational need had focused on areas of deficit either within the learner and/or the educational mileau. There is a category of learner having special educational needs that do not entail deficit. Kirk and Gallagher (1989) cite Marlands' (1972) definition of gifted learners as those who by virtue of outstanding abilities, are capable of high performance, and thus require special education. Areas of giftedness include general intellectual ability, specific academic ability, creative or productive thinking, leadership ability, and the visual and performing arts.

1.4 The incidence of Special Educational Need (SEN) in South Africa

The NEPI report (1992) quotes figures compiled by Donald (1992) of estimates in real terms of pupils with special educational needs in the region of 3,9 million among black

1.3.2 Extrinsically generated Special Educational Needs

At the other end of the spectrum are those learners with clearly extrinsically created socio-educational disadvantage whose need is for special education support of a relatively temporary nature within a restructured mainstream education. This category of need does not imply a deficit within the learner. Socio-educational disadvantage results in learners not acquiring basic educational skills, particularly literacy and numeracy - at a time in their development when this should have occurred. Thus, the deficits arise out of structural and systemically created conditions. These structural educational factors include a shortage of schools, poor classroom conditions of overcrowding and inadequate equipment, high pupil-teacher ratios, teacher underqualification, and lack of essential teaching materials and resources (Donald, 1993; Skuy, 1993). Learners at the extrinsically generated special educational need end of the continuum are described as learners with learning and milieu problems and marginalised learners.

1.3.3 Interactionally generated Special Educational Needs

Towards the middle of the spectrum there is an overlap and interaction of both intrinsically and extrinsically generated SEN. Within the South African context, Donald (1993) posits that there is a reciprocal interaction of intrinsic and extrinsic factors which places learners at risk for developing

those learners who are either mildly or severely sensory, physically, and/or neurally impaired, and mentally disabled learners. Included here are those who are partially or completely blind, deaf, physically disabled, cerebral palsied, epileptic or multiply handicapped learners. Mentally disabled learners are those with Intelligence Quotients below 80. Further intrinsically generated SEN are those learners with "learning disabilities" which is a generic term referring to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities not resulting from mental retardation, sensory impairment, cultural differences, or insufficient/ inappropriate instruction (Hammill, Leigh, McNutt, & Larsen in Kirk & Gallagher, 1989).

The etiology of the foregoing disabilities is often complex and may include hereditary/genetic factors. However, within the South African context, of particular importance is the role of socio-economic conditions of poverty, lack of primary health care and inadequate nutrition. These factors may greatly contribute to the incidence of intrinsic special educational need. Donald (1993) states:

> "...Many of those health risks associated with poverty commonly result in cognitive or sensory impairments that are likely to create special educational need" (p. 144).

2.2 Aims

The study had the following aims:

2.2.1 To examine the attitudes of teacher educators in South Africa towards mainstreaming and whether their support is contingent upon certain conditions, for example, that only children with mild SEN can be accommodated in the mainstream classroom.

2.2.2 To determine the teacher educators' views on teachers competence for mainstreaming, and the requirements for ensuring competency, specifically, whether the competencies needed for teaching children with SEN were perceived to be conditional upon class size, pre- and in-service training, and support services.

2.2.3 To determine which biodemographic characteristics of teacher educators are related to their perceptions of mainstream'ng and the requirements for teacher competency. The variables were gender, age, home language, language of instruction and professional experience.

2.2.4 To determine teacher educators' ratings of the

may be attributable to the following factors:

-the absence of an encompassing educational philosophy with specific strategies for the implementation of integration policies in terms of its management and in practice, in the classroom;

-this oversight may well result in failure to adequately meet teachers' needs for pre- and in-service training and support. This sense of inadequacy to meet the challenges posed by mainstream education can result in negative attitudes by teachers towards mainstreaming and inclusion with concomitant reluctance to implement appropriate teaching strategies;

-neglect of the development of a universal curriculum that accommodates learners of varying ability and learning styles.

South Africa can benefit by the experiences of other countries in their efforts to implement inclusionary practices. This study surveys the attitudes and opinions of the agents who ultimately will be responsible for directing change in education practices - teacher educators who educate the change agents - teachers. Determining the current status of teacher educators' attitudes and opinions may provide guidelines that will facilitate attaining equitable education for all learners.

teachers influences its successful implementation. A positive attitude towards mainstream education positively influences the number of courses taken which in turn, enhances teachers' sense of competence. The teacher's sense of competence induces a positive attitude towards mainstream education. These findings reveal a reciprocal relationship between a positive attitude towards inclusion and mainstreaming and the teachers' perception of competence in meeting the needs of children with special educational requirements.

This study is predicated on the following assertions:

a) Teacher educators represent the first order change agents and their role will be pivotal in the successful implementation of mainstreaming in South African schools.

b) Determining teacher educators' attitudes towards mainstreaming, and their perceived competency in training teachers to educate children with SEN, will assist in determining the nature of the intervention required to ensure the success of inclusion and mainstreaming in South Africa.

c) The implementation of a cognitive education philosophy and approach to education will fulfil the teachers' needed sense of competency and thus will enable the needs of all the children in the classroom to be met.

The varying degrees of success in integration internationally

2 The Study

2. 1 Rationale

The integration of learners with special educational needs into ordinary schools is being recognised world-wide as a guiding principle in education. The precise form that this policy takes differs from country to country and even among states and local authorities. The implementation of integration varies particularly in countries where decentralisation is adopted and local school authorities carry the responsibility of catering for learners with special educational needs.

The literature reveals varying degrees of success in mainstreaming among countries. Of particular note, are the comments by Meijer (1994) regarding the situation in schools in the USA where there is little curricular integration and learners with special educational needs are removed from the mainstream classroom and supported by special teachers. Meijer notes that this appears to be due to poor collaboration between regular and special teachers who receive different training and who have differing role perceptions (Meijer, Pijl, and Hegarty,1994). Under these circumstances mainstreaming cannot be regarded as effective.

Recent international studies demonstrate that a positive attitude towards inclusion and main stream education by

re-training of teachers. The literature has revealed that inadequate preparation of teachers correlates with their negative attitudes towards the inclusion of children with SEN in the classroom. Consequently fewer appropriate strategies are used in the classroom. Conversely, increasing teachers' se of competence results in more positive attitudes towards lusion and the more frequent use of appropriate teaching strategies. The success of inclusion policy will be reliant on four factors: changing teachers' attitudes, increasing their sense of competence, providing support services and developing appropriate curricula. Addressing the first two factors lies within the domain of teacher training institutions and consequently with teacher educators. They represent the first order change agents and hence their role is crucial in influencing the attitudes of their learners and increasing teachers' sense of competency. A coherent, integrated manner of implementing change is provided within the framework of a cognitive education philosophy where the centrality of the role of the teacher as mediator is acknowledged. Additionally, this philosophy provides the means for the development of flexible curricula accommodating of learners with special needs.

immutable and that intelligence and ability are synonymous. Rather it is posited that ability is multifaceted, multidetermined and individual differences are not explained solely by intelligence. Intrinsic motivation is crucial to the development of ability and thinking processes can be learned. These assertions render cognitive remediation as often necessary hence human ability is modifiable (Haywood and Switsky,1992). Feuerstein's construct of the Mediated Learning Experience (MLE) proposes that learning takes place through the mediation of the teacher between the pupil and the curriculum. Thus the role of the teacher is that of mediator and facilitator of learning (Presseisen,Smey-Richman & Beyer, 1994). The emphasis from this perspective lies in the process of learning rather than the assimilation of content. The ultimate goal of education becomes the development of autonomous thinkers with critical appraisal skills and multiple thinking abilities (Skuy,1995).

1.10 Summary

The foregoing discussion has revealed that the South African educational system is at a cross-roads. Inclusion of learners with SEN in the mainstream classroom is inevitable but the format this takes will be crucial to its success. The majority of learners in South Africa experience learning impediments due to intrinsic and/or extrinsic causes. Remedial education has until recently been a segregated, specialised field. Mainstreaming and outcome based education will necessitate the

the school environment where schools are regarded as:

> "... places in which teachers strive to be cognitively creative in their instruction, where, as lifelong learners themselves, they seek to refine their professional ability to enhance every student's autonomy and ability to think, and where they constantly seek to create conditions for optimal student achievement..." (Presseisen, Smey-Richman, and Beyer, 1994, p 198).

An example of a cognitive approach is that of Reuven Feuerstein.

1.9.2 Feuerstein 's Theory Of Structural Cognitive Modifiability

Feuerstein's Theory of Structural Cognitive Modifiability (SCM) is based in Vygotskian theory which emphasises two main components of learning:

a. The Zone of Proximal Development which represents the area of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Sternberg, 1990).

b. The social context of learning as embedded in experiences bound by communication and exchange and therefore its interactional nature.

Implicit in these components is a challenge of current approaches where intelligence is regarded as fixed and

teachers.

The implications of the foregoing discussion are that there are four key factors which will need to be addressed if inclusion is to be successful :

changing teacher attitudes;
increasing teacher competence;
providing support services; and
developing appropriate curricula.

These four factors can be addressed within the framework of a cognitive education philosoph .

1.9 A Cognitive Education Philosophy as a Means for Successful Mainstreaming in South Africa

1.9.1 Introduction

The roots of a cognitive approach to education lie in renewed interest in examining mental processes in humans e.g. perception, reasoning, language, and learning, together with the influence of purpose and emotion. The focus lies in the developing learner, the explicit instruction of thinking and metacognition, and the critical importance of learner's dispositions and attitudes, as well as the social context of intellectual change. A cognitive approach to learning maintains that thinking and comprehension can be taught to all children. This has far reaching implications for the nature of

development and can be implemented at higher education institutions as well as within the schools. Teachers need to be helped to identify their training needs and opportunities created for those needs to be met.

1.8.3 Support Services

The availability of appropriate support ranks high in the list of teachers' abilities to educate pupils with special educational needs in ordinary schools. This support can be provided from within the school (internal support) and by external agencies which provide a wider range of support. Internal support can be provided by designated staff members who have received additional training and can provide the class teacher with advice regarding curriculum materials and teaching approaches, information regarding individual students learning difficulties/approaches and ongoing changes in the pupils progress. They can provide supplementary teaching for individual pupils, support for the teacher during the lesson and liaise with external agencies.

1.8.4 Curriculum Development

Effective integration is facilitated by the implementation of a common curriculum where learners work alongside one another, albeit at different paces. This assists teachers to communicate with their colleagues about programmes for pupils with learning difficulties and facilitates collaboration among

dependent on two main variables:

-teachers willingness to take on this task, and
-their ability to do this.

Larivee's (1980) study demonstrates the interconnectedness of these factors, which is confirmed by Hegarty (1994) who states that teachers are more willing to carry out tasks for which they have the requisite skills and resources. Having the skills, in turn, engenders the desire to use them. Having willing teachers with positive attitudes is not enough. Teacher competence, support and the curriculum are three additional factors discussed by Hegarty (1994) which may have a reciprocal influence on teachers' attitudes. He proposes the following comprehensive approach:

1.8.1 Initial Teacher Training

Initial teacher training needs to include the fundamentals of special educational needs as a core component if teachers are to accept the responsibility for such learners in the classroom. It becomes an essential component in teacher training and cannot be relegated to an optional add-on for some teachers.

1.8.2 In-service Teacher Training

In-service training needs to be part of teachers' professional

instructional principles. This correlation has implications for teacher training methodology since a correlation is found between a positive attitude towards mainstreaming and the number of courses taken on teaching children with disabilities.

A study be Larrivee (1980) cited by Wade & Moore (1992) demonstrates how teacher attitudes may be altered through the implementation of strategies and skills needed to provide appropriate education, and, which concomitantly gives the teacher confidence as well as a positive attitude towards children with special needs. This study involved prospective teachers who were divided into three groups. The first group received intensive training in behaviour management, diagnostic/prescriptive teaching and individual programmes of instruction. The second group received less intensive training and the third none at all. The results revealed that the first group had a significantly more positive attitude towards the inclusion of children with special educational needs into the regular classroom than the other two groups. The implications of these findings suggest that inadequate preparation may result in a lack of support by teachers for mainstreaming which may impede its successful implementation.

Hegarty's study (Meijer, Pijl and Hegarty, 1994) of the current status of six countries integration practices reveals that whether learners with special educational needs receive high quality education in ordinary/regular schools is

Research by Wade and Moore (92) into teachers attitudes reveals that mainstream teachers frequently hold stereotyped views about what particular pupils can achieve and that these limiting prejudices derive from class, race or gender preconceptions. This tendency extends to teachers' attitudes towards children with special educational needs as is demonstrated by a study conducted by Bender, Vail, and Scott (1995) in America who conclude that teachers who express negative reactions to mainstreaming, concurrently are apprehensive about the quality of the academic work that children with learning disabilities can produce. Teachers express fears about their own levels of preparation for mainstreaming and the amount of individualised time that children with learning disabilities may require. Negative attitudes towards mainstreaming have been directly linked to less frequent use of effective instructional strategies to facilitate mainstreaming. A negative interaction cycle is hypothesised in which

> "... teachers with less than positive attitudes toward mainstreaming use effective strategies less frequently... (Consequently they) may become less successful in mainstreaming efforts, and this decrease in instructional effectiveness could result in attitudes becoming increasingly negative." (Bender, Vail, and Scott, 1995, p 93.)

A related aspect of Bender, Vail and Scott's (1995) study finds that teachers with a more positive attitude towards mainstreaming make more frequent use of effective instructional mainstreaming strategies e.g. peer tutoring, cooperative instruction, and metacognitive and/or strategic

3.2 Descriptive Analysis of Teacher Educators' responses to the questions in *Section Two*

a) Do you consider yourself to be equipped to train teachers to deal with Special Educational Needs (SEN) in the mainstream class?

YES	NO	IN SOME RESPECTS	TOTAL
19.2%	27.4%	53.4%	100%

b) Do you consider your institution to have the expertise to train teachers to deal with SEN in the mainstream class?

YES	NO	TO SOME EXTENT	TOTAL
40.3%	18.1%	41.7%	100%

3.3 Results in the *Attitude Towards Mainstreaming Subscale*

3.3.1 Factor Analysis of the *Attitude Towards Mainstreaming Subscale*

The factor analysis of the eleven items in the scale revealed that items 05 and 10 correlated poorly with the remaining items. Cronbach's Standardised Alpha computed from the correlations yielded a score of 0.7559 across the eleven items. To improve the reliability of the scale, items 05 and 10 were omitted from the statistical analysis which then

3 Results

3.1 Biodemographic Data

The survey yielded the following biodemographic data in respect of the subjects:

Table 3.1 Biodemographic Information of Subjects in Sample

	PERCENTAGE	CUMULATIVE PERCENTAGE
GENDER		
Male	61%	
Female	39%	
AGE		
25-29 yrs	1.4%	1.4%
30-39 yrs	16.4%	17.8%
40-49 yrs	37.0%	54.8%
50-59 yrs	43.8%	98.6%
60+	1.4%	100.0%
HOME LANGUAGE		
Afrikaans	54.1%	54.1%
English	28.4%	82.4%
Xhosa	8.1%	90.5%
Sotho	1.4%	91.9%
Sepedi	2.7%	94.6%
Seswati	1.4%	95.9%
Setswana	1.4%	97.3%
Setsonga	2.7%	100.0%
ACADEMIC QUALIFICATION		
Diploma	4.1%	4.1%
Degree	95.9%	100.0%
PROVINCE		
Northwest	1.4%	1.4%
Eastern Cape	16.4%	17.8%
Northern Cape	6.8%	24.7%
Free Sate	9.6%	34.2%
Northern Province	8.2%	42.5%
Gauteng	27.4%	69.9%
Western Cape	15.1%	84.9%
Kwa-Zulu Natal	12.3%	97.3%
Cape	2.7%	100.0%

Towards Mainstreaming Subscale and *Requirements for Teacher Competency Subscale*) in respect of the following demographic variables:

gender, age, home language, experience, language of instruction.

2.4.4 Aim Number Four:

To determine teacher educators' ratings of the goals of education and whether these results are consistent with a cognitive education philosophy.

Descriptive data were yielded in the form of modes and percentages for each item from which the statements were ordered from the most important to the least important goals in education as perceived by the respondents.

The open-ended items were subjected to a qualitative analysis.

items. The factor analysis revealed that Items 07, 17 and 18 correlated poorly with the remaining items and they were omitted from the statistical analyses. They were, however, retained for a qualitative analysis.

The responses on the subscale were calculated for the total sample, yielding means and percentages.

Each item in the subscale yielded data in the form of means and percentages, providing descriptive information.

The open-ended items were subjected to a qualitative analysis.

2.4.3 Aim Number Three:

> To determine which biodemographic characteristics of teacher educators are related to their perceptions of mainstreaming and the requirements for teacher competency. The variables were gender, age, home language, language of instruction and professional experience.

Descriptive data were yielded in the form of means and percentages for the biodemographic data.

The means and percentages obtained were subjected to one and two-way Analysis of Variance (ANOVA) to determine differences in attitudes to the two variables in *Section Three / Attitudes*

Cronbach's Alpha Coefficient was computed on the subscale to determine the internal reliability and consistency of the items. The factor analysis of the items in the subscale revealed that Items 05 and 10 yielded negative correlations with the remaining items. They were omitted from the subscale for the statistical analyses but were retained for a qualitative analysis.

The responses on the subscale were calculated for the total sample, yielding means and percentages.

Each item in the subscale yielded data in the form of means and percentages, providing descriptive information.

The open-ended items were subjected to a qualitative analysis.

2.4.2 Aim Number Two: *The Requirements for Teacher Competency Subscale*

To determine the teacher educators' views on teachers competence for mainstreaming, and the requirements for ensuring competency, specifically, whether the competencies needed for teaching children with SEN were perceived to be conditional upon class size, pre- and in-service training, and support services.

Cronbach's Alpha Coefficient was conducted on the subscale to determine the internal reliability and consistency of the

the Departments of Education and Methodology. An addressed envelope was enclosed for ease of return by mail.

2.4 Experimental Design

The experimental design of the measuring instrument was formulated in order to statistically fulfil the general aims of the study as follows:

The items in *Section Three* of the scale were assigned to the two subscales- the *Attitudes towards Mainstreaming Subscale* and the *Requirements for Teacher Competency Subscale*. The Pearsons Product Moment Correlation coefficients were computed to ascertain whether the items were assigned to the most appropriate subscales. These results revealed that:

-Items 11 and 21 yielded improved correlations with the items in the *Attitude Towards Mainstreaming Subscale* and were thus included in this subscale.

2.4.1 Aim Number One: *Attitude Towards Mainstreaming Subscale*

To examine the attitudes of teacher educators in South Africa towards mainstreaming and whether their support is contingent upon certain conditions, for example, that only children with mild SEN can be accommodated in the mainstream classroom.

classroom and to ascertain whether differentiation of categories of SEN is necessary. These data were analysed qualitatively.

The structure of *Section Four* constituted a rank ordered scale comparing ten educational objectives, where "1" is indicative of the most important objective, and "10" the least important objective of educati n. The statements covered a range of goals of education. These included teaching content, factual information and skill mastery, encouraging problem solving, critical appraisal of information, stimulating the desire to learn, co-operative learning and evaluation against group norms.

An open-ended question for qualitative analysis was included in *Section Four* for the subjects to comment generally on the subject matter of the questionnaire.

2.3.3 Procedure

The Questionnaire was assessed by a statistician and alterations were made to improve its reliability and validity. As a result of the pilot study further alterations were required to reduce ambiguous language. Thereafter, five copies of the instrument were posted to every teacher training college in South Africa. A covering letter (see Appendix 1) addressed to the Rector in the study, was attached, requesting the participation of the Rector and two lecturers from both

randomised order.

Key Areas in the *Attitude to Mainstreaming Subscale* (Items 1-6, 8-11 and 21. Total Items = 11)

These items related to:

- the ability to meet the needs of children with SEN in the mainstream classroom;
- lowering of standards in the mainstream classroom;
- placement in mainstream according to the severity of disability.

Key Areas in the *Requirements for Teacher Competency Subscale* (Items 7, 12-20. Total Items = 10)

These items related to:

- pre-service training;
- in-service training;
- a low pupil-teacher ratio;
- teacher support services;
- teaching children with SEN as a separate specialised field.

Two open ended questions were included in *Section Three* to determine teacher educators' opinions regarding the requirements for teachers to meet SEN in the mainstream

B) Structure and Content of the Questionnaire (Refer to Appendix 2)

Section One was designed to provide demographic information about the subjects for further statistical analysis. This was gathered by means of open and closed questions. Closed questions were used where a limited number of responses were possible (e.g. gender, age group, time employed at institution). Open questions were used where a range of responses were anticipated (e.g. academic qualifications, professional experience, teaching subjects, hours in supervision).

Section Two was designed to provide information about the subjects' training institution using open and closed questions in accordance with the principles determined in *Section One*.

The statements in *Section Three* were measured by means of a summated rating scale (Likert-type) where "Strongly Disagree" was rated "1"; "Disagree" - "2"; "Undecided" - "3"; "Agree" - 4, and "Strongly Agree - "5". This was to elicit either a positive or negative response to (1) key issues regarding successful mainstreaming and (2) the requirements for teachers to be competent in implementing inclusion policies in the mainstreamed classroom. The scale included two subscales, namely the *Attitude Towards Mainstreaming Subscale* and the *Requirements for Teacher Competency Subscale*. The items in the two subscales were not separated and were presented in a

Sections One and *Two* sought demographic data from the subjects.

> Variables in *Section One* included age, gender, home language, academic qualifications, professional experience, and present position occupied.
>
> *Section Two* sought to determine data pertaining to the institution where the subject is employed - province, media of instruction, admission requirements, present provision of special educational needs tuition for teachers in training, teacher educators' perceptions of competence in training teachers in SEN, together with their views on the expertise of their institution to implement this.

Section Three addressed attitudes towards mainstreaming and the requirements for teachers to be competent in addressing SEN in the classroom.

Section Four was composed of ten statements pertaining to the goals of education.

The questionnaire was piloted on lecturers in the Department of Education at the University of the Witwatersrand. These subjects did not form part of the identified sample. The purpose of the piloting was to substantiate the face validity of the measure and to eliminate ambiguous language.

was compiled. The rationale for this survey was that the large sample size and the vast geographic distances between respondents rendered the questionnaire the most feasible tool for gathering the data.

A) Construction

The questionnaire was constructed with the aim of gathering demographic data on teacher educators in South Africa, together with data pertaining to their perceptions of:

a) mainstreaming

b) their competency in training teachers to educate children with SEN

c) the requirements for teachers to be competent in addressing SEN in the classroom

d) a cognitive approach to the goals of education

e) the requirements for successful inclusion in South Africa.

The items were derived from key issues gleaned from the available literature, which ensured the face validity of the measure. The questionnaire was composed of four sections.

goals of education and whether these results are consistent with a cognitive education philosophy.

2.3 Methodology

2.3.1 The sample

The sample was comprised of college Rectors, and lecturers in the Departments of Education and Methodology, from Teacher Training Colleges throughout South Africa. A total of seventy-five colleges were targeted throughout the nine provinces, with five questionnaires being sent to each college. This resulted in a total number of 375 potential subjects. Seventy four questionnaires were returned, of which two were spoilt. The returned questionnaires were from the Department of Education in the colleges with no returns from the Department of Methodology. The returned questionnaires represents a response rate of 19.73%.

Detailed demographic data of the subjects was obtained through the questionnaire. The results are tabulated in Chapter Three.

2.3.2 Measure

The information was obtained by means of the survey method. To obtain the data the "Questionnaire: The Attitudes of Teacher Educators Towards Mainstreaming in South Africa" (Appendix 2)

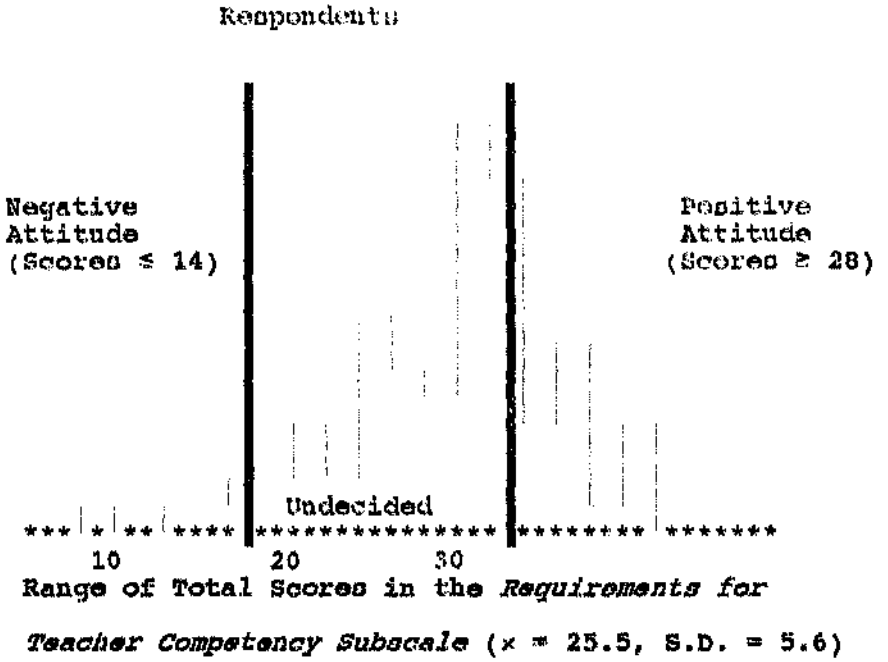
3.4.3 Frequency Distribution for the Items in the *Requirements for Teacher Competency Subscale*

These results are as follows:

Table 3.6 Frequency Distribution for the Items in the *Requirements for Teacher Competency Subscale*

Item No.	Item	Agreement	Disagreement	Undecided	Total
12	Teacher training institutions will have to train all teachers to teach pupils with various SEN.	74.3%	21.7%	4.0%	100%
13	In order for mainstreaming to succeed, teachers must receive in-service training in educating the child with SEN	93.2%	4.1%	2.7%	100%
14	It is feasible to include training for SEN in the ordinary teacher training curriculum.	74.1%	19.1%	6.8%	100%
15*	Teaching children with SEN should remain a separate, specialized field of education.	50.0%	39.2%	10.8%	100%

Figure 3.2 Schematic Representation of the Total Scores in the *Requirements for Teacher Competency Subscale*



The results of the total scores in the *Requirements for Teacher Competency Subscale* reveal that 31.1% of the teacher educators sampled have a positive attitude towards the requirements for teacher competency to deal with Special Educational Needs (SEN). Sixty five percent experience uncertainty and ambivalence towards the requirements for teacher competency while four percent reveal a negative attitude.

3.4.2 Total Scores in the *Requirements for Teacher Competency Subscale*

The *Requirements for Teacher Competency Subscale* across seven items yielded total scores with a mean of 25.49, standard deviation of 5.6 and a range of scores between 9 and 35 out of a possible 7 to 35 range. A total of seventy four values were included in the total scores. Low scores (≤ 14) denote a negative attitude towards the requirements for teacher competency while high scores (≥ 28) denote a positive attitude.

Table 3.5 Percentages of Total Scores in the *Requirements for Teacher Competency Subscale*

Positive Attitude	Negative Attitude	Undecided
31.1%	4.1%	64.8%

surveyed disagreed with the item while 11% were undecided.

Item 10: This item revealed that sixty nine percent of the sample agreed that children with severe SEN should be accommodated in separate, special classes in mainstream schools revealing a negative attitude towards their inclusion in the mainstream class. Sixteen percent disagreed with the item revealing a positive attitude towards inclusion while 16% were undecided.

3.4 Results in the *Requir ments for Teacher Competency Subscale*

3.4.1 Factor Analysis of the *Requirements for Teacher Competency Subscale*

The factor analysis across the ten items in the subscale revealed that Items 07, 17 and 18 correlated poorly with the remaining items in the subscale. Cronbach's standardised alpha computed from correlations yielded a score of 0.7998. By omitting the three items from the statistical analysis, Cronbach's Standardised Alpha was computed at 0.8544 thus increasing the reliability of the subscale. The omitted items will be discussed qualitatively as they yield valuable information.

Learning Disability or Mental Retardation) displaying a negative attitude towards inclusion. Seventeen percent of the subjects were in agreement with the item revealing a positive attitude and 16% were undecided.

3.3.4 Qualitative Results of the Items Omitted in the *Attitude Towards Mainstreaming Subscale*

Table 3.4 Results of items omitted from the statistical analysis

Item No.	Item	Agreement	Disagreement	Undecided	Total
05	Only children with mild SEN (e.g. learning disability) should be included in the mainstream classroom	62.1%	27.1%	10.8%	100%
10	Children with severe SEN should be accommodated in separate, special classes in mainstream schools	68.9%	15.9%	16.2%	100%

Item 05: This item revealed that 62% of the subjects agreed that only children with mild SEN should be included in the mainstream classroom revealing a negative attitude towards the inclusion of children with severe SEN. Twenty seven percent of the subjects

negative attitude towards mainstreaming while 12% were undecided.

Item 08: Eighty percent of the sample agreed that children with severe SEN (e.g. blind or deaf) cannot be accommodated in the mainstream classroom revealing a negative attitude in this regard. Fifteen percent disagreed with the statement and therefore were more positive towards their inclusion. Five percent were undecided.

Item 09: Eighteen percent of the subjects agreed that most parents will support their child's school being opened to pupils with SEN. Forty five percent disagreed reflecting a negative attitude while 37% were undecided.

Item 11: Forty seven percent of the respondents were in agreement with teaching a diversity of abilities in the mainstream classroom being more satisfying than teaching children who have similar abilities. Thirty five percent of the subjects displayed a negative attitude towards the item by disagreeing. Eighteen percent were undecided.

Item 21: Sixty eight percent of the subjects disagreed that mainstreaming can succeed irrespective of the category of SEN included in the classroom (e.g.

in the mainstream classroom. Thirty two percent of the sample disagreed with the statement which suggests a positive attitude towards mainstreaming and 11% were undecided.

Item 03: Forty three percent of the respondents were in agreement that children with SEN could have their needs met in the mainstream classroom which reflects a positive attitude towards mainstreaming. Forty five percent of the subjects disagreed with the statement suggesting a negative attitude towards the inclusion of pupils with SEN. Twelve percent of the respondents were undecided.

Item 04: Sixty eight percent of the subjects agreed with the statement that the presence of children with SEN could enrich the life of the school. This result revealed a positive attitude towards their inclusion. Twenty two percent of respondents displayed a negative attitude by disagreeing with the item and 10% were undecided.

Item 06: Forty five percent of the subjects disagreed that the integration of pupils with serious SEN will inevitably lead to the lowering of the present standards of education thus revealing a positive attitude towards mainstreaming. Forty three percents of the sample agreed with the statement suggesting a

Item No.	Item	Agreement	Disagreement	Undecided	Total
21	Mainstreaming can succeed irrespective of the category of SEN included in the classroom (e.g. Learning Disability or Mental retardation).	16.9%	67.6%	15.5%	100%

* Items reversed for scoring purposes. Agreement with the item denotes a negative attitude towards mainstreaming and is therefore scored "1" or "2". Conversely, in the items not requiring reversal, agreement scores a "3" or "4" where high scores denote a positive attitude.

Item 01 : Sixty nine percent of the subjects were in agreement with the statement revealing a positive attitude towards mainstream education preparing a pupil for life in South Africa. Twenty six percent disagreed with the statement suggesting a negative attitude to the item and 5% were undecided.

Item 02: Fifty eight percent of the subjects were in agreement with the statement that it is usually necessary to place children with SEN in separate, specialised schools. This represents a negative attitude towards the inclusion of children with SEN

Item No.	Item	Agreement	Disagreement	Undecided	Total
06*	The integration of pupils with serious SEN in the classroom will inevitably lead to a lowering of present standards of education	43.2%	44.6%	12.2%	100%
08*	Children with severe SEN (e.g. blind or deaf) cannot be accommodated in the mainstream class	79.7%	14.9%	5.4%	100%
09	Most parents will support their child's school being opened to pupils with SEN	17.8%	45.2%	37.0%	100%
11	Teaching a diversity of abilities in the mainstream class could be more satisfying than teaching a class with children who have similar abilities.	47.3%	35.1%	17.6%	100%

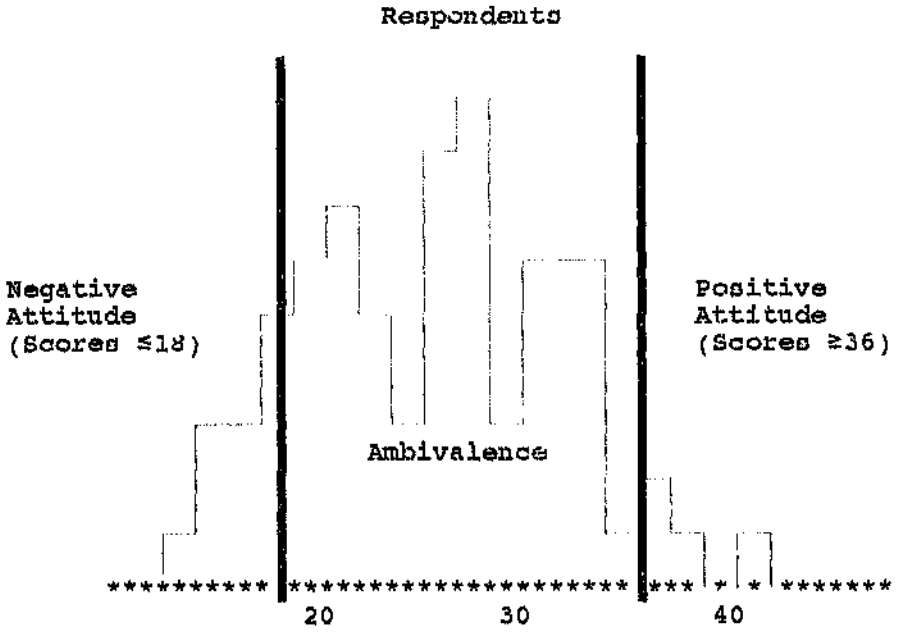
3.3.3 Frequency Distribution for the Items in the *Attitude Towards Mainstreaming Subscale*

These results are as follows:

Table 3.3 Frequency Distribution for the Items in the *Attitude Towards Mainstreaming Subscale*

Item No.	Item	Agreement	Disagreement	Undecided	Total
01	Mainstream education would prepare a pupil for life in South African Society	69%	25.6%	5.4%	100%
02*	It is usually necessary to place children with SEN in separate, specialised schools	57.5%	31.5%	11.0%	100%
03	Pupils with SEN could have their needs met in the mainstream classroom	43.3%	44.5%	12.2%	100%
04	The presence in a school of children with SEN could enrich the life of the school	67.6%	21.6%	10 8%	100%

Figure 3.1 Schematic Representation of the Total Scores in the *Attitude Towards Mainstreaming Subscale*



Range of Total Scores in the *Attitude Towards Mainstreaming Subscale* ($\bar{x}$=25.7 S.D. = 6.3)

The results of the total scores in the *Attitude Towards Mainstreaming Subscale* reveal that a minority of the teacher educators sampled (4.3%) have a favourable attitude towards the inclusion of children with Special Educational Needs (SEN) in the mainstream classroom. The majority of the respondents (84.3%) experience uncertainty and ambivalence towards inclusion practices. Eleven percent are not in favour of mainstreaming.

yielded a Cronbach's Standardized Alpha of 0.7912. The omitted items were of qualitative value and will be discussed separately.

3.3.2 Total Scores in the *Attitude Towards Mainstreaming Subscale*

The total scores in the *Attitude Towards Mainstreaming Subscale* across nine items yielded a mean of 25.74 with a standard deviation of 6.31. Seventy values were counted and four were spoilt. The potential range of values assigned to the items was from 9 to 45. Low scores (≤18) are indicative of a negative attitude while high scores (≥36) denote a positive attitude.

Table 3.2 Percentages in Total Scores in the *Attitude Towards Mainstreaming Subscale*

Negative Attitude	Positive Attitude	Undecided/Ambivalent
11.4%	4.3%	84.3%

6. The results of Item 03 (emphasising groupwork, sharing and co-operation) yielded a mode of 6 with 50% of the subjects rating this item "6" or higher. Fifty percent of the sample rated this item "5" or less yielding mixed attitudes towards groupwork, sharing and co-operation in the classroom.

7. Item 09 (highlighting the relevance of the subject matter to other subjects) yielded a mode of 5. Scores of "6" or less were assigned by 75% of the subjects suggesting that this item was not regarded as a particularly important goal in education.

8. Item 01 (accurately teaching pupils the lesson content) yielded a mode of 2. It was rated "1" by 11% of the sample, "2" by 32%, "3" by 17%, "4" by 17%, "5" by 4% which accounts for 81% of the sample rating this item as one of the least important goals of education.

9. Item 08 (evaluating pupils against group norms) yielded a mode of 3. A score of "3" or less was assigned by 72% of the subjects. The results reveal that this item was viewed as one of the least important goals in education.

10. Item 04 (training pupils to reproduce factual information accurately) yielded a mode of 1 with 57% of the subjects rating it "1", 26% rated this item "2", 4% rated it "3" and 4% gave it a "4" resulting in 91% of the sample

1. Item 02 (stimulating the pupil's desire to learn) yielded a mode of "10" with 54.2% of the subjects rating it "10". A score of "9" was assigned by 5.6% of the sample, "8" by 8.3%, "7" by 11.1%, and "6" by 8.3%. Sixty eight percent of the sample rate this item as the most important goal of education.

2. Encouraging pupils to find their own problem solving methods (Item 05) yielded a mode of 10. Twenty eight percent of the sample rated this item "10", 26% rated it "9", 15% rated it "8" and 14% - "7". The results reveal that 70% of the subjects rated this item as one of the most important goals of education.

3. Item 10 (Developing the ability to critically appraise information) yielded a mode of 9. A score of "6" and higher was assigned by 84% of the subjects.

4. Item 06 (encouraging pupils to set their own goals for learning) yielded a mode of 9. A score of "7" was assigned by 15% of the subjects, "8" by 21%, "9" by 22% and "10" by 11% resulting in 69% of the sample regarding this item as an important goal in education.

5. Item 07 (ensuring that pupils master the skills being taught) yielded a mode of 5. The scores ranged from "4" to "7" by 58% of the sample. Fourteen percent assigned this item a "10".

Table 3.11 Number of times Statements were First, Second or Third Choice and Ordering based on this with different weights

Statement Number	Times Choice 1	Times Choice 2	Times Choice 3	Weight 1 10,2 9,3 8	Weight All 1	Weight 1 6,2 5,3 4	Order
1	1	3	1	4.5	5	4.2	8
2	35	4	6	43.4	45	42.3	1
3	0	4	8	10.0	12	8.7	6
4	0	1	0	0.9	1	0.8	10
5	14	19	11	39.9	44	37.2	2
6	3	14	15	27.6	32	24.7	4
7	5	6	7	16.0	18	14.7	5
8	1	0	3	3.4	4	3.0	9
9	1	3	4	6.9	8	6.2	7
10	7	13	12	28.3	32	25.8	3

The weighted results of the items in the *Goals of Education Scale* (Table 3.11) reveal the following positions accorded to the statements:

Table 3.12 Position of Statements from Most Important to Least Important Goals in Education

Position	Item No.	Item
1	02	Stimulating the desire to learn
2	05	Encouraging problem solving methods
3	10	Ability to critically appraise information
4	06	Setting own goals for learning
5	07	Ensuring skills mastery
6	03	Encouraging groupwork, sharing and co-operation
7	09	Highlight how subject matter relates to other subjects
8	01	Accurately teaching lesson content
9	08	Evaluation against group norms
10	04	Training to reproduce factual information accurately

Figure 3.3 **Histogram of the Modes in the *Goals of Education Scale***

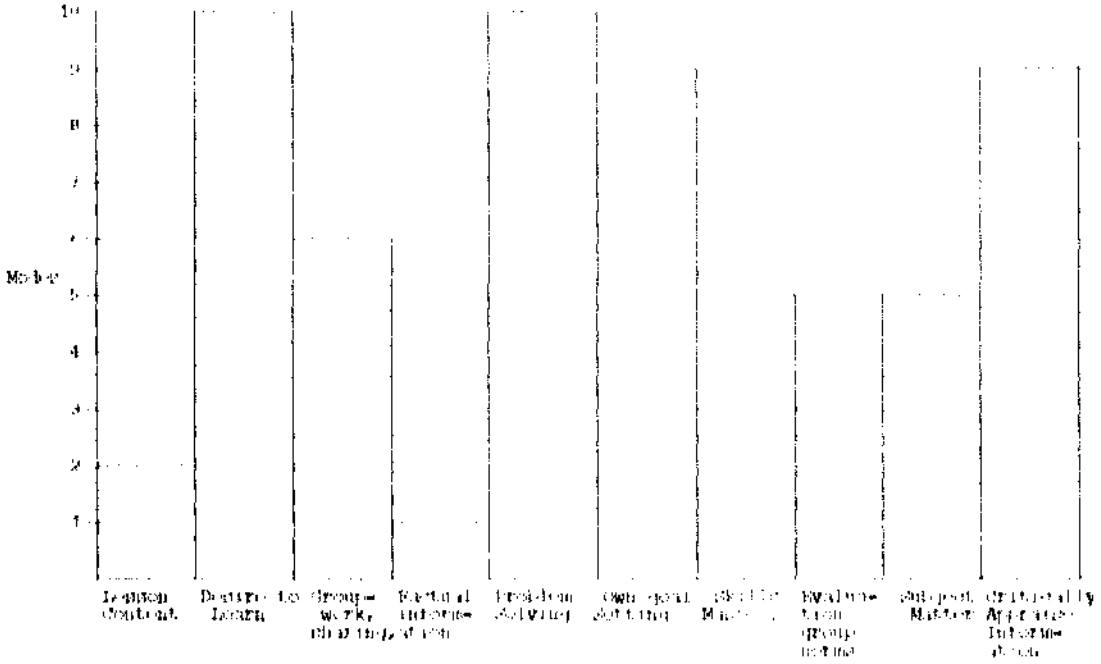


Table 3.10 **Percentages of Responses per Item in the *Goals of Education Scale***

Item No.	Rating "1"	Rating "2"	Rating "3"	Rating "4"	Rating "5"	Rating "6"	Rating "7"	Rating "8"	Rating "9"	Rating "10"
01	11.1%	31.9%	16.7%	16.7%	4.2%	8.3%	1.4%	1.4%	6.9%	1.4%
02	2.8%	0.0%	1.4%	0.0%	8.3%	0.3%	11.1%	8.3%	5.6%	54.2%
03	1.4%	4.2%	15.3%	15.3%	13.9%	20.8%	8.3%	11.1%	5.6%	4.2%
04	56.9%	26.4%	4.2%	4.2%	1.4%	2.8%	0.0%	0.0%	1.4%	2.8%
05	4.2%	1.4%	0.0%	0.0%	5.6%	5.6%	13.9%	15.3%	26.4%	27.8%
06	2.8%	0.0%	1.4%	4.2%	5.6%	16.7%	19.3%	20.8%	22.2%	11.1%
07	1.4%	2.8%	4.2%	18.1%	20.8%	6.9%	12.5%	9.7%	9.7%	13.9%
08	18.1%	23.6%	30.6%	8.3%	6.9%	1.4%	2.8%	5.6%	0.0%	2.8%
09	4.2%	2.8%	13.9%	16.7%	23.6%	13.9%	8.3%	5.6%	5.6%	5.6%
10	2.8%	0.0%	4.2%	5.6%	2.8%	12.5%	18.1%	16.7%	19.4%	18.1%

N =48	Response	Percentage
No	10	21%

Examples of the nature of responses received to this statement were:

> "... I believe that some kinds of learning disabilities may cause problems in mainstreaming (e.g. severe physical impairments and severe behaviour disorders."

> "Children with hearing, visual and physical impairment might be accommodated in mainstream classes if their disabilities are not too severe and the necessary technological and professional support is available. Mild mental retardation could also be dealt with in an ordinary class, provided it is a small class. Communication impairments and behaviour disorders would need intensive therapy before such children could function satisfactorily in a mainstream class."

> "It is good to mainstream but do it in a differentiated manner. Classroom management and differentiated teaching makes better teaching conditions for the L.S.E.N."

3.6 The *Goals of Education Scale*

The items in this section were ranked from 1 to 10 with "1 being the most important goal and "10" the least. For statistical purposes these ratings were reversed in order to yield high scores reflecting the most important goals while low scores are indicative of less important goals in education.

professional time and a not high p/t ratio"

"Specialised training and small classes"

"Have physical resources available. Teachers must be adequately trained for SEN"

"Teachers need to be inservived regularly in order to be helped to cope with their identified special educational needs by specialists and educational psychologists. New and relevant methods need to be introduced for teachers to (s/c) can use"

b) A summary follows of the teacher educators replies to the statement:

"In deciding whether mainstreaming is the most desirable alternative it is necessary to differentiate among the categories (e.g. Learning Disability, Hearing Impairment) of Special Educational Need. Please comment".

Table 3.9 Differentiation among categories of SEN

N =48	Response	Percentage
Yes	38	79%
Reasons cited for "Yes" responses:		
Severe SEN (e.g. sight and hearing impaired) requiring specialised attention	6	13%
Severe SEN should be grouped in classes e.g. physically disabled together	2	4%
To identify needs	1	2%
Classroom management and differentiated teaching	1	2%
Cost of resources necessitate grouping SEN in separate classes	1	2%

"What, in your opinion, are the requirements that will enable the teacher to meet Special Educational Needs (SEN) in the mainstream classroom?".

Table 3.8 Results of Open-ended Question

REQUIREMENTS N=74	NUMBER	PERCENTAGE
Training: Pre-service	48	64.9%
In-service	46	62.2%
Support from professionals	16	21.6%
Low pupil/teacher ratio	11	14.9%
Financial and physical resources	7	9.5%
SEN as an area of specialization e.g. a remedial diploma	11	14.9%
Understanding of SEN	4	5.4%
Other: Paradigm shift	4	5.4%
Flexible curriculum	2	2.7%
Special admission requirements for teacher training	1	1.4%
Mild SEN	2	2.7%
Dedication	2	2.7%

The following are examples of the responses to the question:

"Adequate training, in-service training, support from other

Item 07: This item yielded results indicating that 95% of the subjects agreed that teaching a class in which the pupils have a variety of needs is significantly more difficult than teaching a class in which the pupils are of approximately equal ability. Four percent disagreed with the item while 1% were undecided.

Item 17: This item yielded results indicating that 83% of the subjects disagreed that present teacher training adequately equips teachers to deal with diverse educational needs in the class which suggests a negative attitude towards present teacher training. Twelve percent of teacher educators agreed with the item while 5% were undecided.

Item 18: This item yielded results indicating that 84% of the subjects agreed that a low pupil-teacher ratio (about 15:1 or less) is required for the teacher to be able to address a diversity of learning abilities in the classroom. Six percent disagreed with the item and 11% were undecided.

3.5. Qualitative results of the open-ended questions in *Section Three*

a) A summary follows of the teacher educators' replies to the qualitative question:

Table 3.7 Results of Items Omitted from the Statistical Analysis

Item No.	Item	Agreement	Disagreement	Undecided	Total
07*	Teaching a class in which the pupils have a variety of needs is significantly more difficult than teaching a class in which the pupils are of approximately equal ability.	94.6%	4.0%	1.4%	100%
17*	Present teacher training adequately equips teachers to deal with diverse educational needs in the class.(Reversed item)	12.1%	82.5%	5.4%	100%
18*	A low pupil-teacher ratio (about 15:1 or less) is required for the teacher to be able to address a diversity of learning abilities in the class.(Reversed item)	5.5%	83.5%	11.0%	100%

teachers should be trained to deal with SEN in the class. Eighteen percent revealed a negative attitude by disagreeing with the item and 7% were undecided.

Item 19: Sixty two percent of the subjects agreed that mainstreaming is likely to succeed if teachers receive pre-service training in educating children with SEN thus displaying a positive attitude towards the requirements for teacher competency. Twenty three percent disagreed with the item and 15% were undecided.

Item 20: Seventy seven percent of the respondents agreed that teachers will cope with a variety of SEN in the class if they receive adequate support from other professionals (e.g. educational psychologists and educational specialists) to assist them. Sixteen percent disagreed with the item while 7% were undecided.

3.4.4 Qualitative Results of the Items Omitted in the *Requirements for Teacher Competency Subscale*

Educational Needs (SEN). This reveals a positive attitude. Twenty two percent of the subjects disagreed with the item and 4% were undecided.

Item 13: The results indicate that 93% of the teacher educators surveyed agreed that in order for mainstreaming to succeed, teachers must receive in-service training in educating the child with SEN. Four percent displayed a negative attitude by disagreeing with the item and 3% were undecided.

Item 14: The results indicate that 74% of the subjects agreed that it is feasible to include training for SEN in the ordinary teacher training curricula which indicates a positive attitude towards the requirements for teacher competency. Nineteen percent of the respondents disagreed with the item displaying a negative attitude and 7% were undecided.

Item 15: The results reveal that 50% of the subjects agreed that teaching children with SEN should remain a separate, specialized field of education which suggests a negative attitude. Thirty nine percent disagreed with the item suggesting a positive attitude and 11% were undecided.

Item 16: Seventy five percent of the subjects agreed that all

Item No.	Item	Agreement	Disagree-ment	Undecided	Total
16	All teachers should be trained to deal with SEN in the class.	75.3%	17.8%	6.9%	100%
19	Mainstreaming is likely to succeed if teachers receive pre-service training in educating children with SEN.	62.1%	23.0%	14.0%	100%
20	Teachers will cope with a variety of SEN in the class if they receive adequate support from other professionals (e.g. educational psychologists and educational specialists) to assist them.	70.7%	21.7%	7.6%	100%

* Item reversed for scoring purposes. Agreement with the item denotes a negative attitude towards mainstreaming and is therefore scored "1" or "2". Conversely, in the items not requiring reversal, agreement scores a "3" or "4" and a high total score denotes a positive attitude.

Item : Seventy four percent of the subjects agreed that teacher training institutions will have to train all teachers to teach pupils with various Special

does not adequately equip teachers to deal with a diversity of learner needs.

4.2 Broader Implications of the Findings in the *Attitude Towards Mainstreaming* and *Requirements for Teacher Competency Subscales*

A minority of the teacher educators surveyed in the *Attitude Towards Mainstreaming Subscale* appeared to be in favour of mainstreaming (4%). The majority revealed uncertainty and ambivalence towards mainstreaming and inclusionary practices while a minority (11%) are against inclusion. Those with either a negative attitude, or undecided, account for 96% of the sample. These results concur with those of Bender, Vail and Scott (1995) who found that teachers express fears about their own levels of preparation for mainstreaming and the amount of individualised time that children with learning disabilities may require.

The total scores in the *Requirements for Teacher Competency Subscale* when compared with the *Attitude Towards Mainstreaming Subscale*, revealed an increase in the number of teacher educators in favour of equipping teachers to deal with SEN in the mainstream classroom (31% versus 4%). The difference in positive attitudes reflected in the total scores in the two subscales represents an increase of 27% in the latter. This may be viewed within the context of Larivee's (1980) study. Larrivee demonstrated that teacher attitudes may be altered

institution, are in some respects. Those of the opinion that they are not equipped was revealed by 27%, while 18 % of the teacher educators believe their institution does not have the expertise required. Those of the opinion that they, and their institution have the necessary expertise accounted for 19% and 40%, respectively. This suggests a degree of optimism for teacher training institutions to accommodate training teachers in Special Educational Needs.

The results of the open-ended question, "What, in your opinion, are the requirements that will enable the teacher to meet special educational needs in the mainstream classroom?" support those yielded in the *Requirements for Teacher Competency Subscale* where the majority of respondents cited pre-and in-service training. Fewer teacher educators required support from professionals and a low pupil-teacher ratio. Financial and physical resources, and Special Educational Needs as an area of specialization e.g. a remedial diploma, were regarded as important by a minority of the sample.

These results reveal that many teacher educators believe that it is feasible to train all teachers within the ordinary teacher training curriculum to deal with SEN and that mainstreaming will be successful given pre- and in-service training, support from professionals, and a low pupil-teacher ratio. The subjects acknowledged that teaching a class with diverse educational needs is difficult while many teacher educators were of the opinion that present teacher training

with SEN;

- teachers will cope with a variety of SEN in the class if they receive adequate support from other professionals (e.g. educational psychologists and educational specialists).

- the difficulty of teaching a heterogeneous group versus a homogeneous group where children have similar learning needs;

- the need for a low pupil-teacher ratio when teaching a class with a diversity of learning abilities.

Disagreement with the statement that the present status of teacher training is able to adequately equip teachers to deal with diverse educational needs in the class, was expressed by the majority of the sample.

The ambivalence revealed in the results of the total scores yielded in the *Attitude Towards Mainstreaming* and *Requirements for Teacher Competency Subscales* is supported by the responses given to the two questions included in *Section Two* whereby teacher educators were asked to what extent they (1) consider themselves equipped to train teachers to deal with SEN in the mainstream class, and (2) whether their institution has the expertise necessary to train teachers in SEN. The responses demonstrated that 53% and 42% believe they, and their

4.1.2 Attitude Towards *Requirements for Teacher Competency Subscale*

The major finding in the *Requirements for Teacher Competency Subscale* was the ambivalence experienced by the majority of the teacher educators towards the requirements specified for teacher competency for mainstreaming. Almost a third of the respondents were more optimistic regarding teacher competency given the requirements specified. A minority were negative towards teacher competency irrespective of the requirements specified.

The majority of teacher educators were in agreement with the following requirements for teacher competency:

- teacher training institutions will have to train all teachers to teach pupils with various SEN;
- teachers must receive in-service training in educating children with SEN;
- it is feasible to include training for SEN within the ordinary teacher training curriculum;
- all teachers should be trained to deal with SEN;
- mainstreaming is likely to succeed if teachers receive pre-service training in educating children

respondents to the open-ended question:

> "In deciding whether mainstreaming is the most desirable alternative it is necessary to differentiate among the categories (e.g. Learning Disability, Hearing Impairment) of Special Educational Need. Please comment."

A minority of the teacher educators felt that differentiation is not necessary. The categories suggested were according to severity (e.g. sight and hearing impaired) with severe SEN grouped in classes (e.g. physically disabled together). The rationale for such categorisation were cited as to identify needs, for classroom management and differentiated teaching, and the cost of resources. These qualitative responses lend support to the results of the *Attitude towards Mainstreaming Subscale*.

The foregoing results give credence to the teacher educators' disagreement with the item stating that mainstreaming can succeed irrespective of the category of SEN included in the classroom.

No significant differences in attitudes towards mainstreaming and biodemographic variables were found. Home language showed a tendency ($P<0.1$) to influence with the English speaking language group tending to be more positive towards mainstreaming than the Afrikaans speaking language group.

4 Discussion

4.1. Interpretation of the findings

4.1.1 *Attitude to Mainstreaming Subscale*

The major finding in the *Attitude Towards Mainstreaming Subscale* was the ambivalence towards mainstreaming and inclusion practices by the majori of the respondents. A minority of the teacher educators sampled feel negatively towards mainstreaming while an even smaller number have a favourable attitude towards the inclusion of children with Special Educational Needs (SEN) in the mainstream classroom.

The descriptive analysis revealed that teacher educators had stronger opinions regarding specific statements with respect to mainstreaming. More positive opinions were elicited from the items pertaining to mainstream education preparing children for life in South African society and that their presence would enrich the life of the school.

The results indicated that most teacher educators were of the opinion that only children with mild SEN can be accommodated in mainstream classes while those with severe SEN require separate, specialised education either in separate schools or in separate classes. A call for differentiation among categories of SEN was revealed by the majority of the

Eighty three percent of the sample disagreed that the present status of teacher training adequately equips teachers to deal with diverse educational needs in the classroom.

Nineteen percent of the sample consider themselves to be equipped to train teachers to deal with Special Educational Needs (SEN), 53% believe themselves capable in some respects, while 27% do not feel capable. Forty percent of the respondents believe their institution has the expertise to train teachers in SEN, 42% believe their institutions are equipped in some respects while 18% believe their institutions do not have the necessary expertise.

The *Goals of Education Scale* revealed that teacher educators rate stimulating the pupils' desire to learn as the most important goal of education. This was followed by encouraging pupils to find their own problem solving methods, developing in pupils the ability to critically appraise information, encouraging own goal setting for learning and skills mastery. The least important goal was that of training pupils to reproduce factual information accurately.

according to severity of SEN is necessary as children with severe SEN cannot be accommodated in mainstream classrooms.

The *Requirements for Teacher Competency Subscale* revealed that 31.1% of the teacher educators sampled felt that the requirements specified would have to be met in order to ensure the effectiveness of mainstreaming. Four percent of the teacher educators sampled disagreed that these requirements would enhance the efficacy of mainstreaming while the remaining 65% of the sample were ambivalent.

Statements with which 58% or more of the teacher educators were in agreement included:

-teacher training institutions will have to train all teachers to teach pupils with various SEN;

-teachers must receive in-service training in educating children with SEN;

-it is feasible to include training for SEN within the ordinary teacher training curricula;

-mainstreaming is likely to succeed if teachers receive pre-service training in SEN;

-teachers will cope with a variety of SEN in the mainstream classroom if they receive adequate support from other professionals;

-the difficulty of teaching a heterogeneous group where the pupils have different learning needs;

-the need for a low pupil-teacher ratio when teaching a class with diverse abilities.

of the sample fell in the 40-59 year age group. Fifty four percent were Afrikaans speaking, 28% were English speaking and 18% have an African language as their first language. Ninety six percent of the sample have one or more degrees and four percent have a diploma. All nine provinces in South Africa were represented in the sample with Gauteng Province representing 27.4% of the sample, followed by Eastern Cape with 16.4%.

The *Attitude Towards Mainstreaming Subscale* revealed that 4.3% of the sample have a positive attitude towards mainstreaming, 84.3% are undecided while 11.4% have a negative attitude towards mainstreaming. The statements (Items 1 and 4) pertaining to mainstream education preparing a pupil for life in South Africa and their presence enriching the life of the school, elicited positive responses by 69% and 67% of the respondents, respectively. The teacher educators revealed a negative attitude towards mainstreaming by agreeing with the following:

-it is usually necessary to place children with SEN in separate, specialised schools, or, in separate, special classes in mainstream schools;

-only children with mild SEN should be included in the mainstream classroom;

-children with severe SEN cannot be accommodated in the mainstream classroom.

Teacher educators were of the opinion that categorisation

3.8.2 ANOVA for the *Requirements for Teacher Competency* and the biodemographic variables

Table 3.14 Analysis of Variance Table for Means for the *Requirements for Teacher Competency Subscale* and *biodemographic variables*

Source	DF	Mean Square	Probability
Gender	1	1.3570	0.8368
Age	2	14.4522	0.6409
Home Language	2	11.8949	0.6901
Years previous experience	2	46.4276	0.2362
Language of Instruction:			
Afrikaans and English	1	73.3562	0.1269
Afrikaans, English + African language	1	42.3546	0.3518

There were no significant differences in attitudes towards requirements needed for teacher competency and the biodemographic variables of age, gender, home language, years of previous experience and language of instruction, whether English and Afrikaans or with the addition of an African language.

3.9 Summary of Results

The results of the survey reveal that of the teacher educators sampled, 39% were female and 61% were male. Eighty one percent

Table 3.13 Analysis of Variance Table for Means for the *Attitude Towards Mainstreaming Subscale* and the biodemographic variables

Source	DF	Mean Square	Probability
Home Language	2	93.0805	*0.0957
Years Previous Experience	2	47.8513	0.3054
Language of Instruction:			
English and Afrikaans	1	50.4919	0.2635
English, Afrikaans + African Language	1	70.4128	0.2127
Gender	1	5.0381	0.7250
Age	2	12.4197	0.7349

*P < 0.10

There were no significant differences in attitudes to mainstreaming as a function of the biographical variables of age, gender, years of previous experience and language of instruction, whether English and Afrikaans, or with the addition of an African language. Home language showed a tendency to influence with the English speaking language gr ($\bar{x}$ = 28.0) tending to be more positive than the Afrikaans speaking language group ($\bar{x}$= 24.3; F=2.43; p < 0.1).

regarding this item as the least important goal in education

3.7 Relationship Between *Attitude Towards Mainstreaming* and *Requirements for Teacher Competency*

Pearsons Correlation Coefficient was computed for the *Attitude Towards Mainstreaming Subscale* and the *Requirements for Teacher Competency Subscale* yielding a coefficient of 0.6887, which is significant at the 0.005 level, indicating that the subscales are strongly related.

3.8 One and Two-Way Analysis of Variance

ANOVAS were conducted on the biographical data and the *Attitude Towards Mainstreaming Subscale* and the *Requirements for Teacher Competency Subscale.*

3.8.1 ANOVA for the *Attitude Towards Mainstreaming Subscale* and the biodemographic variables.

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training teachers. A great deal of responsibility will be placed on the teacher educators to bring about the changes necessary. In light of this, it becomes vitally important to educate and support the first-order agents of change - the teacher educators, so they are empowered to bring about the paradigm shift required for mainstreaming to succeed. The goals of education, as identified by the teacher educators, are consistent with a cognitive education philosophy which is promising in relation to the viability of mainstreaming. This approach can provide the means to adapt the education system at both the teacher training and curricula level, and thus meet the diverse needs of all South Africa's learners.

In the words of Carl Haywood (1992), care needs to be taken to ensure that learners with special educational needs don't become the victims of the education system (or "maindumping") where:

> "...Their failed learning often correlates with low native intelligence, chaotic and deprived learning environments, insufficient mediated learning experiences, and motivational expectations of lack of control, of failure, and of helplessness. ... (This) leads to cumulative deficiencies in task-intrinsic motivation, and in further development of cognitive processes. Thus, the experience of being retarded or learning disabled initially functions in such a way as to make one more so" (50-51).

The success of mainstreaming will depend on the adaptation of the system to the learner's needs. This adaptation will begin with its first order change agents - the teacher educa[illegible].

4.6 Conclusion

Within the South African context, Special Educational Need (SEN) is a complex phenomenon arising from both intrinsic and extrinsic aetiology through the interplay of socio-economic deprivation producing poverty and malnutrition together with inequitable education opportunities. Consequently, vast numbers of the South African school going population are faced with educational disadvantages which need to be redressed. Mainstreaming, in theory, provides a means of attaining parity for the disadvantaged majority thus enabling them to participate in the future economy of South Africa. However, without careful planning and the implementation of strategies to ensure its success, the disadvantages of the past may well be perpetuated into the future, most affecting the very students it aims to help. This study has found that the majority of teacher educators sampled experience ambivalence towards mainstreaming. This trend is also present in their perceptions of the requirements that will enhance teachers' competency, but to a lesser extent. Fifty eight percent of the teacher educators sampled are of the opinion that mainstreaming can succeed given extensive pre- and in-service teacher training, support from professionals and small class size. The findings in this study have demonstrated support, by teacher educators, for empowering teachers through training, which is essential for mainstreaming to succeed. The results have further shown that many teacher educators do not feel themselves to be adequately equipped for tackling the task of

responses to the qualitative questions tended to support the high incidence of uncertainty obtained in the five- point scale.

The inclusion of *Section Four (The Goals of Education)* where the data was ranked rendered this data incomparable with the data from the other sections. The statistical technique which would have made this possible is presently being devised and is was not yet available for this study. The details are discussed below.

4.5 Implications for Further Research

With reference to the difficulty comparing the data from *Section Four* with that in *Section Three*, an unfolding technique could be used to obtain a score for each individual which could then be correlated with the *Attitude Towards Mainstreaming* and *Requirements for Teacher Competency Subscales*. This technique would allow for the quantification of the relationship between the individuals' ranking of the goals in education and the attitude towards mainstreaming and requirements for teacher competency. Data of this nature would significantly contribute towards the complexity of the data yielded in this study.

than a conclusive study. The postal survey nature of the data collection carries inherent disadvantages:

> The sample selection targeted all the teacher training colleges in South Africa. However, being a postal survey, the Questionnaires returned may not have represented a random sample of colleges and teacher educators and therefore the results cannot be generalised to teacher educators at teacher training colleges in South Africa.
>
> No questionnaires were returned by teacher educators in the Department of Methodology, as requested. Consequently, the results cannot be generalised to teacher educators in the Department of Methodology at teacher training colleges in South Africa.
>
> The low return rate and small sample size prevents generalization of the findings and may not be a true reflection of the views of teacher educators.

The survey was available only in English which may have further limited the return rate.

The five-point Likert-type scale used in *Section Three* provided the option for an undecided response which may have contributed towards the failure to obtain strongly positive or negative attitudes in the *Attitude Towards Mainstreaming* and *Requirements for Teacher Competency Subscales*. However, the

increase their repertoire of skills through specific techniques. Examples of these include Feuerstein's Instrumental Enrichment, Mediated Learning Experience, and Haywood's Bright Start Programme which provide teacher educators with the practical means to diversify and broaden their range of abilities. These programmes focus on teaching thinking skills for different age groups within the parameters of the mediated learning experience.

From this perspective, the ultimate goal of education is to develop *autonomous thinkers*, and to empower people to recognise and accommodate rapid societal and technological change. The results in this study would suggest that the teacher educators sampled would concur with this view of education. The findings with regard to the *Goals of Education* are promising and positive in relation to the viability of mainstreaming. It paves the way for an individualised approach in which children with a variety of needs can reach individualised goals. An individualised approach is reliant upon a flexible curriculum where learners proceed at their own pace achieving their own goals and evaluation is in accordance with the achievement of these goals. Within such a framework, children with a variety of learning needs can be accommodated within the mainstream classroom.

4.4. Limitations of the Study

The study should be viewed as an exploratory survey rather

modelling and practice and interactions with others. The teacher is the critical link between the student and the curriculum where good teachers serve as both interpretors and questioners who assist students' construction of knowledge and finely tune classroom exchange for maximum meaning and student benefit. The teacher provides the "bridge" to student transfer and the actual subject learning (Presseisen, Smey-Richman, & Beyer, 1994).

The mainstreaming paradigm has implications for teaching styles and teacher training as it represents a radical departure from the prevalent view of learning as linear and sequential where students are required to master surface level information (content) and discrete decontextualised skills (often using drill and practice) before moving on to more advanced and complex tasks (Gagne 1970; Popham, 1987 in Presseisen, Smey-Richman, and Beyer, 1994). The emphasis moves away from content-based teaching and learning and focuses on the *process* of learning - skills acquisition and outcomes based teaching and learning. This approach forms the basis of the Gauteng Education Departments' (GED) Curriculum 2005 due to be implemented in 1998. Teachers will need to be flexible and capable of diversification to meet the goals of Curriculum 2005 in the mainstream classroom. The cognitive education philosophy provides a framework within which the goals of education as expressed by the teacher educators in this study, can be accomplished. A cognitive education approach provides the practical tools for teacher educators, and teachers, to

the pupil's ability to reproduce the material learned. The lack of emphasis placed on these aspects in education signifies a move away from old style teaching goals, suggesting that teacher educators have made the shift to the new educational paradigm and would not be averse to a cognitive philosophy in education. This approach encompasses a more flexible learning environment and curricula which can accommodate the learner with special educational needs.

4.3.1 The broader implications of the findings in the *Goals of Education Scale*

The results in the *Goals of Education Scale* show support for Skuy's (1995) contention that the focus in education should lie in a process-based approach to education through promoting a social constructivist approach to teaching with the development of thinking skills, as opposed to a conventional transmissive approach. Furthermore, a cognitive approach to education focuses on encouraging learner participation and co-operative learning while enabling learners to challenge, question and transcend the status quo. Within this approach, is the crucial role of the teacher as mediator where the teacher's instructional role is changed from that of an *information provider* to *assistor or facilitator of student performance*. Presseisen, Smey-Richman & Beyer (1994) quote Haywood (1990) where the teacher acts as a coach or co-learner who selects and develops meaningful learning activities, is a mediator who provides additional guidance, supportive

most important goal in education, followed by encouraging pupils to find their own problem solving methods, developing in pupils the ability to critically appraise information, encouraging pupils to set their own goals for learning and ensuring skills mastery.

Rated of lesser importance, are encouraging groupwork, sharing and co-operation, highlighting how the subject matter relates to other subjects, accurately teaching lesson content and evaluation against group norms.

The least important goal of education as rated by the sample of teacher educators was that of training pupils to reproduce factual information accurately.

These results suggest that teacher educators are theoretically in favour of an education system that is outcomes based rather than one that places emphasis on content. Stimulating the desire to learn, problem solving, critical appraisal of material and own goal setting are goals that are consistent with a cognitive education philosophy as proposed by contemporary psychologists, such as Feuerstein.

Of note, is the lack of emphasis teacher educators placed on evaluation against group norms and training pupils to reproduce factual information accurately. These are current practices in which learners are evaluated against the group norm or "average" pupil in the grade, and examinations rely on

teachers wi.l be vital. It is hypothesised that should teacher educators attitudes not undergo significant change in a positive direction, their ambivalence may negatively influence training teachers similarly and, simultaneously impede their efficacy in equipping teachers in training. Thus, the success of mainstreaming will hinge on the training provided for teacher educators. Larivee's (1980) study demonstrated that teacher's attitudes improved with skills acquisition and this may be extrapolated to teacher educators. The manner in which they are equipped could be achieved through a cognitive educational approach in which techniques are provided which broaden the teacher educators' range of skills. They will then be in a position to impart to teachers the methods required for the diversification of teaching skills necessary in educating children with a variety of needs. An example of a cognitive approach is Feuerstein's Mediated Learning Experience (MLE) which focuses on teaching thinking skills within the parameters of the mediated learning experience.

Neglect of these issues would result not only in the failure of mainstreaming but ultimately in failure of redressing the imbalances of the past. It will be the majority of South Africa's school going population who will be deprived of opportunities to contribute towards the country's future.

4.3 The *Goals of Education Scale*

The subjects rated stimulating pupils' desire to learn as the

use them. In Hegarty's view successful mainstreaming is dependent on a multifaceted approach which includes:

* initial teacher training in the fundamentals of special educational needs as a core component and not as an optional add-on for some teachers

*in service training as part of teachers professional development which can be implemented at higher education institutions as well as in schools

*support services provided from within the school (internal support) and by external agencies which provide a wider range of support

*curriculum development where a common curriculum enables learners to work alongside one another, albeit at different paces.

The results in the *...rements for Teacher Competency Subscale* reveal that ...her educators concur with Hegarty's multi-faceted approach and consider it viable. Equipping teachers through pre- and in-service training, and providing adequate support from professionals becomes a matter of paramount importance to the success of mainstreaming. It is here that the role of teacher educators is pivotal since providing pre-service training in Special Educational Needs (SEN) will be their responsibility. Their role as educators of

through the implementation of strategies and skills needed to provide appropriate education. This concomitantly gives the teacher confidence as well as a positive attitude towards children with special needs. The implications of their study are that attitudes can be changed before teachers enter the profession which would imply a more positive prognosis for the successful implementation of the Mainstreaming model. Larivee's study (1980) demonstrated that teachers who received training in Special Educational Needs (SEN) had a significantly more positive attitude towards the inclusion of children with special educational needs into the regular classroom than the groups of teachers who did not receive training. In the present study, sixty two percent of the teacher educators sampled agreed that mainstreaming is likely to succeed if teachers receive pre-service training in educating children with SEN. It is speculated in this study that the uncertainty revealed by 65% of the teacher educators in the *Requirements for Teacher Competency Subscale* with regard to mainstreaming practices may be related to their perceived lack of preparation for mainstreaming.

The results yielded in the *Requirements for Teacher Competency Subscale* demonstrate that there could be a more positive attitude towards mainstreaming under conditions of teacher training and support. These results are further supported by Hegarty's (1994) contention that teachers are more willing to carry out tasks for which they have the requisite skills and resources. Having the skills, in turn, engenders the desire to

2.5. Does your institution offer components within your diploma/degree courses that deal with Special Educational Needs (SEN)? If so please indicate:

Course (Degree/diploma)	Component

2.6. Indicate which of the following phases your institution trains teachers in.

PHASE	QUALIFICATION	NUMBER OF YEARS OF STUDY
Nursery school		
Junior primary		
Senior primary		
Secondary school		
Tertiary education		
Specialised Education (Please specify)		

2.7. Does your institution offer undergraduate and post-graduate courses?

	Undergraduate	Postgraduate
Full-time courses		
Part-time courses		
Correspondence courses		
Other (Please specify)		

ALL RESPONDENTS ARE TO ANSWER THE FOLLOWING SECTIONS

SECTION 2

(Where applicable, mark the box with an "X".)

2.1. In which province is your institution located?

2.2. Which language(s) is/are used as the medium/media of instruction at your institution?

2.3. What are the admission requirements at your institution?

Matriculation	
Other (Please specify)	

2.4. Does your institution offer courses to train teachers to deal with any of the following educational needs?

	Yes	No	Please specify
Remedial education			
Teaching the gifted child			
Other (Please specify)			

1.13. Are you a

Part-time staff member?	
Full-time staff member?	

1.14. How many hours per week, on average, do you spend teaching groups of students?

1.15. How many hours per week, on average, do you spend giving individual tuition?

1.16. Approximately how many hours, per annum, do you spend at schools supervising students?

0-10	
11-20	
21-30	
31-40	
41-50	
51-60	
61-70	
71+	

THE FOLLOWING QUESTIONS ON PAGES 6 AND 7 ARE TO BE ANSWERED BY TEACHING STAFF

1.9. To which department do you belong?

_____

1.10. If you are a HOD, which subject(s) / areas of study are you responsible for?

_____

_____

_____

1.11. List the department(s) you teach in:

_____

_____

_____

1.12. List your teaching subjects:

SUBJECT	COURSE FOR WHICH THIS SUBJECT IS GIVEN (E.G. PSYCHOLOGY 1 FOR B. PRIM. ED.)

1.5. List your professional experience and current position:

Position	Number of Years

1.6. Total number of years of professional experience:

1.7. Length of time as a member of the staff of this institution?

Less than 1 year	
1-3 years	
4-6 years	
7-9 years	
10+ years	

1.8. For how long did you teach at a school?

1-3 years	
4-6 years	
7-9 years	
10+ years	

18-24	
25-29	
30-34	
40-49	
50-59	
60+	

1.3. Home language:

AFRIKAANS	
ENGLISH	
ISI NDEBELE	
ISI XHOSA	
ISI ZULU	
SESOTHO	
SESOTHO SA LEBOWA(SEPEDI)	
SESWATI	
SETSWANA	
TSHIVENDA	
XITSONGA	
OTHER (PLEASE SPECIFY)	

1.4 List your academic qualifications:

Diploma/Degree	Institution	Date

6. GIFTED PUPILS are those pupils, identified by professionally qualified persons, who by virtue of outstanding abilities are capable of high performance in any of the following areas (singly or in combination): general intellectual ability; specific academic aptitude; creative or productive thinking; leadership ability; visual and performing arts; psychomotor ability.

7. PHYSICAL IMPAIRMENTS are disorders that interfere with an individual's mobility, motor coordination, general muscular ability, ability to maintain posture and balance, or communication skills, to the extent that they inhibit learning or social development.

8. BEHAVIOUR DISORDERS refer to behaviour within the educational setting that reveals that the child is discordant in his relationships with others and/or whose academic achievement may be impaired due to an inability to learn, utilizing the presented teaching techniques. The child's current behaviour manifests either as an extreme or a persistent failure to adapt and function intellectually, emotionally, or socially at a level commensurate with his or her chronological age.

SECTION 1

In the following questions please mark the appropriate box with an X.

1.1. Gender:

MALE	
FEMALE	

1.2. Age in years at present:

The following major points along the continuum include:

a) Learning disabilities that are presumed to be due to central nervous system dysfunction

This refers to a heterogeneous group of disorders that manifest in significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are INTRINSIC to the individual and are presumed to be due to central nervous system dysfunction, and may occur across the life span.

b) Learning disabilities that are related to socio-cultural deprivation

This refers to EXTRINSICALLY caused difficulties in learning which are related to socio-cultural deprivation or other environmental conditions which result in general academic difficulties.

c) Learning disabilities that are INTERACTIVE

This refers to difficulties in learning caused by a combination of intrinsic and extrinsic factors

2. **HEARING IMPAIRMENTS** are hearing disabilities which, even with correction, negatively affects a child's educational performance. This term includes deafness.

3. **VISUAL IMPAIRMENTS** are visual disabilities which, even with correction, [illegible] partially seeing and blind children.

4. **COMMUNICATION IMPAIRMENTS** refer to speech that is unintelligible or interferes with the message the speaker is attempting to deliver.

5. **MILD MENTAL RETARDATION** refers to pupils with significantly impaired intellectual functioning and adaptive behaviour, who, with appropriate educational [illegible]

APPENDIX 2

1

QUESTIONNAIRE: THE ATTITUDES OF TEACHER EDUCATORS TOWARDS MAINSTREAMING IN SOUTH AFRICA

This questionnaire asks for your opinion on a number of issues relating to teacher training methodology and the special educational needs of the child in mainstream education. Please read the definitions below prior to completing the questionnaire.

N.B. THIS QUESTIONNAIRE IS ANONYMOUS.

DEFINITIONS

MAINSTREAMING refers to the optimal provision for pupils with special educational needs (including disabled learners) within the regular classroom where possible and at least within the regular school.

SPECIAL EDUCATIONAL NEEDS (SEN) arise out of children having difficulties, for a range of reasons, in coping with a regular curriculum. This encompasses

1. **LEARNING DISABILITIES** within the South African context, may be placed upon a continuum according to their causation.

INTRINSIC INTERACTIVE EXTRINSIC

APPENDIX 1

Division of Specialised Education

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Private Bag 3 WITS 2050 South Africa • Telegrams Univits • Telex 4 27125SA • Telephone (011) 716-1111

The Rector

Fax: (011) 339 3844
Tel: (011) 716 5286
Date: 16 April 1996

Dear Colleague

This Division is currently engaged in research pertaining to teacher training in South Africa. Our basic concern is how teachers may be most effectively trained to educate students with special educational needs. We wish to determine current practices and attitudes towards training teachers to cope with a diversity of educational needs in their regular classrooms.

I would greatly appreciate your assistance by participating in the project through completing one of the five enclosed copies of our Questionnaire. The remaining four copies are for completion by the following individuals: the Head of Department and a lecturer in your Senior Primary Methodology Department, as well as Head of Department and a lecturer in your Department of Education.

I would appreciate it if you could kindly return the five completed questionnaires in the enclosed self-addressed envelope by 15 May 1996. It is anticipated that the results of the study will be analysed by the middle of 1996. The results will be made available to you soon thereafter.

If you need any clarification, or wish to discuss this further, please don't hesitate to contact me.

Your participation and co-operation are greatly appreciated.

Yours faithfully,

Mervyn Skuy

MERVYN SKUY PhD
Clinical and Educational Psychologist
Professor of Specialised Education and
Head of the Division.

Cambridge.

United Nations Educational, Scientific and Cultural Organisation (UNESCO) (1996) *Legislation Pertaining to Special Needs Education*. UNESCO: 1996

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4.6.	To encourage pupils to set their own goals for learning.	
4.7.	To ensure that the pupils master the skills that are being taught.	
4.8.	To evaluate pupils against group norms.	
4.9.	To highlight how the subject matter that is being taught relates to other subjects.	
4.10.	To develop in pupils their ability to critically appraise information.	

General comments, if any:

Thank you for the time you have spent completing this questionnaire.

Professor Mervyn Skuy
Head of Division of Specialised Education
University of the Witwatersrand

3.21.	Mainstreaming can succeed irrespective of the category of SEN included in the classroom e.g. Learning Disability or Mentally Retarded.					

3.22. What, in your opinion, are the requirements that will enable the teacher to meet special educational needs in the mainstream classroom?

3.23. In deciding whether mainstreaming is the most desirable alternative it is necessary to differentiate among the categories (e.g. Learning Disability, Hearing Impairment) o Special Educational Need. Please comment.

SECTION 4

This section seeks to determine what, in your opinion, are the most and least important goals of education.

[illegible] AND 10 THE LEAST IMPORTANT GOAL IN EDUCATION. ASSIGN A DIFFERENT VALUE FOR EACH OF THE STATEMENTS.

		Rank
4.1.	To accurately teach pupils the lesson content.	
4.2.	To stimulate the pupils' desire to learn.	
4.3.	To emphasise groupwork, sharing and co-operation in the classroom.	
4.4.	To train pupils to reproduce factual information accurately.	
4.5.	To encourage pupils to find their own problem solving methods.	

Mark the appropriate column with an X		Strongly Disagree	Dis-agree	Un-decided	Agree	Strongly Agree
3.8.	Children with severe SEN (e.g. blind or deaf) cannot be accommodated in the mainstream class.					
3.9.	Most parents will support their child's school being opened to pupils with SEN.					
3.10.	Children with severe SEN should be accommodated in separate, special classes in mainstream schools.					
3.11.	Teaching a diversity of abilities in the mainstream class could be more satisfying than teaching a class with children who have similar abilities.					
3.12.	Teacher training institutions will have to train all teachers to teach pupils with various SEN.					
3.13.	In order for mainstreaming to succeed, teachers must receive in-service training in educating the child with SEN.					
3.14.	It is feasible to include training for SEN in the ordinary teacher training curriculum.					
3.15.	Teaching children with SEN should remain a separate, specialised field of education.					
3.16.	All teachers should be trained to deal with SEN in the class.					
3.17.	Present teacher training adequately equips teachers to deal with diverse educational needs in the class.					
3.18.	A low pupil-teacher ratio (about 15 to 1 or [illegible] address a diversity of learning abilities in the class.					
3.19.	Mainstreaming is likely to succeed if teachers receive pre-service training in educating children with SEN.					
3.20.	Teachers will cope with a variety of SEN in the class if they receive adequate support from other professionals (e.g. educational psychologists, remedial, and educational specialists) to assist them.					

2.8. Do you consider yourself to be equipped to train teachers to deal with SEN in the mainstream class.

Yes	No	In some respects

2.9. Do you consider your institution to have the expertise to train teachers to deal with SEN in the mainstream class.

Yes	No	To some extent

SECTION 3

Some statements regarding education are given below. Please indicate whether you: strongly disagree, disagree, are undecided, agree, or strongly agree.

Mark the appropriate column with an X		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
3.1.	Mainstream education would prepare a pupil for life in South African society.					
3.2.	It is usually necessary to place children with SEN in separate, specialised schools.					
3.3.	Pupils with SEN could have their needs met in the mainstream classroom.					
3.4.	The presence in a school of children with [illegible]					
3.5.	Only children with mild SEN (e.g. learning disability) should be included in the mainstream classroom.					
3.6.	The integration of pupils with various SEN in the classroom will inevitably lead to a lowering of present standards of education.					
3.7.	Teaching a class in which the pupils have a variety of needs is significantly more difficult than teaching a class in which the pupils are of approximately equal ability.					

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