CHAPTER 2

REVIEW OF RELATED LITERATURE
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CHAPTER 2

REVIEW OF RELATED LITERATURE

2.0 Introduction

Review of related literature involves the systematic identification, location and analysis of documents containing information related to the research problem. Review of related literature was helpful for researcher in assessing inclusive practices; it gave guidelines regarding the tools and techniques as well. Researcher reviewed theory, research articles and doctoral researches that helped her in avoiding repetitions of the work. It also gave a framework for the research.

Review regarding program development guided the researcher at every stage of program development, like setting up the objectives, scoping, planning for instructions, innovative methods of instruction etc. Review also gave idea about strong points and weaknesses of the previous studies. It highlighted the aspects where research is needed. Review helped to select the proper research design to test the effectiveness.

The following theoretical and research reviews were conducted by the Researcher.

Table 4- Review conducted

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2.1 Special, Integrated, and Inclusive Education

Research on special, integrated and inclusive education covers a wide range of topics exploring conceptual, theoretical, and methodological as well as policy and practice issues. Research on special education includes evidence-based and effective teaching practices for literacy and numeracy, behavior management and educational interventions for specific disabilities such as autism, blindness, physical disabilities, learning difficulties and intellectual disabilities. Research on inclusive education focuses on attitudinal research, teacher training and professional development, research with families, and development of inclusive practices and collaboration within and across schools and systems.

Robyn Bentley-Williams and Jenny Morgan, 2012, Dilemmas in inclusive education: What does it mean to be an inclusive educator?
The study showed that contextual influences facilitated deeper understanding of role identity and produced new ideas about the nature of reflexivity in guiding pre-
service teachers’ learning. Overall, the outcomes had benefits for pre-service teachers and teacher educators in finding innovative pathways for integrating biographical and ethical perspectives into inclusive teaching and learning approaches. Understandings of the roles of educators in the twenty-first century were constructed as shifting from directors of learning to facilitators of learning by creating open, inspiring and collaborative learning environments where all learners can achieve. The study enhanced understandings of potential ways forward for teacher educators in addressing the general capabilities in the new Australian curriculum. Moreover the current research advocates a stronger position is needed in going beyond raising awareness to taking action that will lead to improved outcomes for all learners.


The book is divided in four parts; Fundamentals of special education, Principles of instruction and assessment, Instructional approaches and teaching tactics for students who are Exceptional, Community and professional issues in Special Education. In part 2 authors have discussed about the core of teaching i.e. Components of effective instruction.

![Figure1: Model of Effective Instruction](image_url)
In part three of the book detailed information of Instructional approaches and tactics about teaching of students that are exceptional is given. Categories discussed are Gifted, Hearing Impaired, Visually Impaired, Learning disabilities, mentally challenged, emotionally disturbed, and physical and multiple disabilities.

**Tony Cline, Norah Frederickson, Special Educational Needs, Inclusion and Diversity, (2009)**

The book gives the complex and difficult nature of many special educational needs. Authors place a firm emphasis on inclusion and suggest practical strategies to enable professionals to maximize inclusion at the same time as recognizing and supporting diversity. Key features are; - SEN inclusion and diversity: an integrated approach, Stakeholders in SEN and inclusion, Assessment for learning, Autism, Sensory needs (covering both visual and hearing impairment), Physical needs, dyspraxia; the role of genetic factors in development, and the contribution of neuroscience to our understanding of SEN.

**Kumar Sanjeev Ph.D. Khagendra Kumar Ph.D. (2007), Inclusive Education in India.**

Inclusive education (IE) is a new approach towards educating the children with disability and learning difficulties with that of normal ones within the same roof. Of late, a consensus has emerged among Indian intellectuals and pedagogues for adopting inclusive education in mainstream schools. The term “Special Need Education” (SNE) has come into use as a replacement for the term “Special Education. The Statement affirms: “those with special educational needs must have access to regular schools which should accommodate them within child centered pedagogy capable of meeting these needs”. Book gives historical perspectives of Inclusion as well as various laws, as; Integrated Education for Disabled Children (IEDC) scheme December 1974. The Government launched the scheme. It was a Centrally Sponsored Scheme aimed to provide educational opportunities to children with special needs (CWSN) in regular schools and to facilitate their achievement and retention. All the schools in the area are expected to enroll children with disabilities. Training programs were also given to the teachers. Under PIED, there has been a significant increase in the
number of not only mildly disabled, but also severely disabled children, with the number of orthopedically handicapped children far outstripping other disabled children.

By 1998, many DPEP states had conducted surveys, assessment camps and evolved strategies to provide resource support to those children with special needs who were enrolled in DPEP schools. The thrust was on imparting quality education to all disabled children. The government is committed to provide education through mainstream schools for children with disabilities in accordance with PWD ACT, 1995 and all the schools in the country will be made disabled friendly by 2020.

At present 20 thousand 30 thousand CWSN (66.84 percent of those identified) are enrolled in schools. Further 88009 CWSN are being covered through EGS/ AIE in 15 states and 77083 CWSN are being provided homebound education in 19 states.

Making schools barrier free to access for CWSN is incorporated in the SSA framework. 4.44 thousand Schools have ramps for CWSN. The play equipment can be designed depending on the child’s abilities.

**Loreman Tim, Deppeler Joanne, and Harvey David, (2005), Inclusive Education: A Practical Guide to Supporting Diversity In The Classroom.**

This book gives valuable information about how in include differently abled students in general classrooms successfully. According to authors, Full inclusion of children with diverse abilities (i.e. Both giftedness & disabilities) in all aspects of schooling those other children are able to access. This book is based on research on inclusion. It gives knowledge essential for successful inclusion of differently abled students. It gives information regarding elements of inclusion, reasons for successful inclusion, barriers in inclusion and how to deal with differently abled children.

**Singal Nidhi (2005), mapping the field of inclusive education: a review of the Indian literature.**

This paper reviews the literature in the field of inclusive education in the Indian context with an aim to elucidate the different perspectives in its understandings and
various conflicts in its conceptualization, while identifying significant gaps. The paper begins by adopting a chronological approach, tracing the development of this concept. Further engagement with the literature attempts to seek answers to questions such as who is included, into what they are included and why they are included. Based on reflections gathered from the literature, it is noted that the field of inclusive education is driven by a rather narrow and limiting perspective. It is therefore argued that inclusive education must be regarded as an approach encompassing the broader education system. Only when understood as such, we can fulfill our goal of education for all.


The book is divided into three main sections;

Section1; It gives information regarding historical perspectives of Inclusion. It gives information about various laws made at national and International level regarding education of differently abled children. It focuses on policies and legal aspects.


Section 2: It describes various practices to implement for inclusion of wide range of differently abled children, such as;

Section3: Gives information about how inclusive practices should be.


This report contains an overview of the findings of the first phase of the Classroom and School Practice project focusing upon the secondary level of educational provision. Review reports were received from 12 countries and they are all presented in this document. This report forms a data source for the secondary school level Classroom and School Practice project. As previously stated, the aim
of this study is to provide information from the literature available in the participating countries and also at an international level. The aim here is not to try and summarize the findings in relation to the overall Classroom and School Practice project. This synthesis is presented in the final summary project report published in 2004, which also includes information from the case studies and the exchanges of experts organized in 2003.

Mithu Alur (2001), Some Cultural and Moral Implications of Inclusive Education in India—a personal view.

This article provides a personal viewpoint on and outline of the author's contribution to learning disability in India. It refers to her doctoral research on policy and the status of people with disability in India. It puts forth the view that although India addresses diversity in many ways it tends to exclude people with disability from national programs. It argues that inclusive education should be context- and culture-specific and that inclusive programs can develop, albeit incrementally, despite the fact that systemic change has not taken place. The article ends with the suggestion that moral and ethical considerations demand that people engaged with inclusion need to work towards inclusion of all children wherever necessary and that each individual first of all needs to internalize the change within them.

Subban Pearl, Sharma Umesh, Monash University, Understanding Educator Attitudes toward the Implementation of Inclusive Education.

This paper presents the findings of an empirical study to investigate the attitudes of regular education teachers toward the implementation of inclusive education. The cited study was part of a two-pronged research inquiry which investigated teachers’ attitudes toward, and their concerns about inclusive education. This discourse was based on semi-structured interviews, conducted with mainstream teachers in state schools in Victoria, Australia. The results imply that Victorian teachers are in the main positively inclined towards the philosophy of inclusive education, perceiving the process as beneficial to all participants within the inclusive setting. However, they remain cautious about the inclusion of students with more severe disabilities.
Moss, Julianne. (1999), Ph. D. Inclusive schooling: contexts, texts and politics

The thesis critically analyses the development of inclusive schooling in the small Australian Island state of Tasmania between 1996 and 1998. The ‘Inclusion of Students with Disabilities’ policy, introduced in 1995 by the Tasmanian Department of Education, Community and Cultural Development, provides an opportunity to understand the cultural context and politics of change in schooling over this period. The qualitative methodology deployed here is informed by post structuralism and captures the everyday experiences of university teaching as a research site. The teacher/researcher as the visible maker of the research use metaphors of fiber and textile practice, techniques of textual juxtaposition and her positioned subjectivity as a female academic to tell a 'big story'. The researcher develops a 'double method' as a possible model for Inclusive research practice and educational policy analysis. Using a critical ethnographic method, derived from the work of Carspecken (1996), 'data stories' (Lather & Smithies 1997, p.34) are produced from the narratives of five key informants – a parent, two teachers, a policy-maker and the researcher. Assembled as the data of the thesis the multi-voiced texts provide an account of the sociocultural, professional and systemic context of Inclusive schooling over a three-year period. In the analysis these data are interpreted from a feminist post structural standpoint the researcher theorizes inclusive schooling as an entangled, multiple and contradictory discourse, embedded in the social, cultural and material contexts, rather than a singular unitary Idea of the progress within the special education knowledge tradition. The study contributes a fine-grained analysis of the constructed knowledge of inclusive schooling in one locality.


The findings of this research showed that India did not have a cohesive policy for the education of children with disabilities and that only 2% of coverage has taken place in the last fifty years à 98% of people with disabilities got no service at all. Therefore it became critical to look at new methods of intervention and macro level policy change. All over the world there has been a shift towards inclusive education for children with disabilities. No longer is it correct to educate them in
segregated special schools. It is now believed that special schools are a kind of oppression and segregation is a matter of social injustice. Her research found massive exclusion of children and people with disabilities from services and even from Government programs targeted at the vulnerable and weaker sections of society to the extent of nutrition being denied to children with disabilities. Her finding that over 90% people with disabilities i.e. close to around 70 million people are excluded from services of any kind provided the seminal statistics for those working in the disability sector to push for better care of people with disabilities


This paper examines the knowledge and acceptance level of special and general education teachers and administrators regarding inclusive education within the rural and diverse state of New Mexico. While inclusive education of disabled students has gained widespread support, little attention has been paid to program implementation within a rural and poor state such as New Mexico. The evolution of the inclusive education movement began with the passage of the Individuals with Disabilities Education Act (IDEA). Passage of the IDEA led to the Regular Education Initiative movement, whose goal was to merge special and regular education into one system and provide instructional services to disabled children in regular classrooms. An outgrowth of the REI was the full inclusion movement, which focused on strengthening not only the academic performance of disabled students in regular classroom settings, but also socialization skills, attitudes, and positive peer relations. Thirty-nine of 60 special educators attending a 1993 New Mexico conference returned a survey following a presentation on inclusive education. While the majority of educators were supportive of inclusive education, a small percentage (7-15 percent) was consistently nonsupportive. Specifically, nonsupportive respondents desired the continuation of resource rooms and expressed uneasiness about therapists or consultants jointly teaching with them in general education classrooms. Survey results indicate areas of confusion concerning application of inclusive educational practices. However, at the time, none of the school districts represented at the conference had implemented inclusive education.
Contribution to the present research: This survey significantly focuses the importance of Inclusive Education today. It throws a light on journey of education from general-special, to mainstreaming, to integration and lastly to Inclusion. It helped the researcher to develop the background of the research.

2.2 Physical and Human resources for Inclusion of differently abled students.
Inclusion means adapting the entire education system which includes school structure, building, and furniture, teaching – learning process, and classroom management and also the curriculum to suit the needs of the children with disabilities. Review in this context therefore was essential component of the research.

This study explores how principals construct knowledge in support of students with disruptive behavior in NSW government primary schools. The study explores the contested terrain of both the field of disruptive student behavior and principal leadership in the context of ongoing debates over which forms of knowledge can inform effective practice. Mixed methods approach is used to examine current attitudes, beliefs and theoretical knowledge of a sample of 340 principals using quantitative survey design alongside qualitative case studies that seek to explore the actual practice of three principals nominated as effective in supporting student with disruptive behavior. Sequential and concurrent interpretation of both qualitative and quantitative data is proposed to elicit important insights concerning both what principals in general know and how they know it, alongside what effective principals actually do. Instead of positioning qualitative-quantitative methods as oppositional this enquiry is connected to explore how multiple knowledge construction is a feature of principals’ practice and will provide insight into future directions of educational practice for the principal ship and the field of disruptive student behavior.
Evans David, EdD,(2012). An ethnographic exploration of factors influencing learning and social outcomes for students with learning difficulties participating in a secondary school peer tutor reading support program.

This contemporary educational ethnographic research study, explored the daily life experiences of adolescents participating in an inclusive cross-age peer tutor reading support program to ascertain factors influencing learning and social outcomes. Set in a suburban Sydney public high school the study’s focus was upon junior secondary students with learning difficulties.

The peer tutor reading program supported international, national and local education objectives for developing proficient standards of adolescent literacy deemed important to securing an enriched, egalitarian and prosperous society. Without adequate learning support high school students with low literacy levels may never experience the elevating advantages of being fully literate, while further disadvantage results if they do not acquire the “new literacies”, those skills required to competently engaging with Information Communication Technology. Many adolescents with learning difficulties become disengaged from their high school education, develop negative attitudes or psychological problems, and are further disenfranchised from positive societal experiences. Throughout their lives these students may experience long term disadvantage due to extended periods of unemployment and social dislocation. Vygotsky’s work on social constructivism formed the epistemological basis of the research study’s theoretical framework while a subjective ethnographic methodological approach, with an interpretative perspective, engaged the qualitative research methods of participant observation, questionnaires, focus groups, interviews and document analysis.

Whilst adolescents considered reading important for their future: quality tutor-tutee relationships; trained skilled tutors; sensitivity to peer social status during support program implementation; learning resources with socio-cultural relevance; empowerment of learners through educational choices; and integration of new technologies into pedagogical methodology, were key factors influencing their learning and social outcomes. Furthermore, the study concluded that an ontologically secure learning environment and a positive learning support culture were central to enhancing student outcomes.
Seva in action is a voluntary organization working in the field of education of differently abled students. This study is the first attempt of Seva in Action to understand the micro level interventions and the realities of inclusion and documentary evidence of inclusive practices in selected schools.

This documentation is a compilation of eight examples of how schools have tried to become inclusive. This documentation tries to capture practices adopted in different places, both rural and urban and within different types of schools, both government and private. The selected schools are from Karnataka, Tamilnada, Kerala, Andhra Pradesh, Maharashtra and Chhattisgarh. Survey method was used. The findings are; there was increase in awareness regarding Inclusive Education at all levels. There is a need to create a national resource network/pool for the schools that are practicing inclusion and those that intend to. Schools are often unable to support holistic needs of students. The role of teacher is very important if the vision of inclusion is to be translated into reality. A number of case studies showed importance of cooperative learning approach as well as collaboration for successful inclusion.


This article presents findings from an investigation of the work of 38 specialist itinerant teachers (ITs) supporting the educational inclusion of children with visual impairment in Kenya. The research was designed around a participatory action research framework involving in-country researchers and participants (teachers) working in collaboration with researchers in the United Kingdom. Following an introductory training workshop, participants kept research journals over a 2-month period in which they recorded details of their itinerant duties (including the
processes and content of their visits). Findings provide information about local practices of ITs support for children with visual impairment in mainstream schools and raise broader questions about the barriers to learning and development facing children with disabilities in mainstream schools in Kenya and other developing countries.

Introduction of record keeping systems (previously unused) proved useful for itinerant teachers (ITs) working with children with visually impairment in Kenya and can feed into the management and development of the service. ▶ ITs were found to engage in a range of tasks split between child-focused activities (e.g. assessing vision, tutoring children, counselling children and parents, advising teachers) and community-focused activities (e.g. screening and ‘sensitisation’ activities). ▶ Identified issues/barriers to effective working were: time taken travelling, inconsistent caseload management, difficulty getting released from teaching duties beyond IT work, importance of teacher training. ▶ Questions were raised about the support provided for children with more complex disabilities (e.g. those who are blind and require Braille tuition), in particular the amount and quality of support given within current education models. ▶ In contrast ITs are generally able to make use of local materials to support low vision children's learning in the classroom.

Anke de Boera*, Sip Jan Pijlb & Alexander Minnaerta , (2011) Regular primary schoolteachers’ attitudes towards inclusive education: a review of the literature. Teachers are seen as key persons to implement inclusive education. Positive attitudes are therefore argued as playing a considerable role in implementing this educational change successfully. The aim of this study is to examine what attitudes teachers hold towards inclusive education, which variables are related to their attitudes and if these affect the social participation of pupils with special needs in regular schools. A review of 26 studies revealed that the majority of teachers hold neutral or negative attitudes towards the inclusion of pupils with special needs in regular primary education. No studies reported clear positive results. Several variables are found which relate to teachers’ attitudes, such as training, experience with inclusive education and pupils’ type of disability.
No conclusion could be drawn regarding the effects of teachers’ attitudes on the social participation of pupils with special needs.

**KwaZulu-Natal, Faculty of Education, Ph.D. Thesis, The progress of inclusive education in South Africa: Teachers’ experiences in a selected district, KwaZulu-Natal.**

Education policies tend to evoke mixed feelings: excitement amongst advocates of change or uncertainty and stress among teachers expected to implement them. Reactions to the Education White Paper 6: Special Needs Education — Building an Inclusive Education and Training System has been no different. Emanating from a PhD study, this article documents how inclusive education is progressing in the province of KwaZulu-Natal. Informed by social constructivism and the systems theory, the study investigated teachers’ experiences and understandings of this policy statement in three primary schools in two districts. **Data collected showed that teachers had limited experiences of inclusive education and limited understandings of what it entails in South Africa.** As a result, most teachers felt inadequately prepared to implement it.

**Jasmeet Kaur, (2010), Ph.D. “A Study of Implementation of Inclusion of Children with Special Needs in Delhi Primary Schools”**

The objectives of the study were to identify schools with good practices of inclusion and to investigate the perception, attitude of the elementary school principals and teachers towards inclusion of students with disability in the schools, the implementation strategies and practices of inclusion in schools and the role of principals in introducing change in schools.

The case study of 20 MCD schools was part of the research work. The study analyzed data of case study of 20 MCD schools, 49 teachers dealing with CWSN in these schools, 72 observations of Children with special needs and 20 principals of these schools. The tools used for the study were attitude scale, survey, and interview schedule and classroom observations. **The findings of this study** emphasize the importance of implementing strategies and not ‘dumping’ students with disabilities into general education classes. Care must be taken in establishing
inclusion settings in resistant environments. Most of the principals showed favorable attitude towards inclusion. Pre service and in-service training programs for principals need to address inclusion as part of their curriculum. Professional development opportunities should include opportunities to observe and know more about the children. The principals threw light on non-availability of effective infrastructure facilities in schools. The teachers believed in inclusive education. The in-service training programs conducted for the teachers proved very beneficial. Curriculum requires a flexible, success-oriented means of assessment, examination and evaluation. The government policy focus should be on pedagogy, curriculum and attitudes. In nut shell this study shows that principal is a key change agent in school, leadership is reflected in perceptions and practices, implementing inclusion means introducing change into school and finally it is the leadership that promotes the introduction of change in the school. With more confident and skilled teachers the inclusive education program will be a success in the classrooms also.

Andrea Reupert, Monash University, Brian Hemmings and John Connors, Charles Sturt University,(2010), Do We Practice What We Preach? The Teaching Practices of Inclusive Educators in Tertiary Settings.

In this study, the practices and views of lecturers who teach inclusive education to trainee primary school teachers are examined in relation to their own inclusive teaching practices as they pertain to working with students with a disability. This examination draws on interview data gleaned from nine university lecturers. These data provide important information about inclusive education practices in higher education institutions generally and, in particular, education faculties. The results of the data analysis indicate that even though all the lecturers self-identify as inclusive educators and adopt various inclusive teaching and assessment practices, barriers exist that impede inclusive practice in tertiary settings. Recommendations for future research and training conclude the paper.

This study examined the reasons special education teachers leave the field of teaching in rural North Dakota. This mixed study collected information from teachers across North Dakota. Thirty seven special education teachers completed a quantitative survey. The reasons teachers gave for leaving their teaching positions were inadequate time for paperwork, inadequate preparation time, inadequate salary, and inadequate travel reimbursement, no input into curriculum decisions, lack of work space, and lack of resources.

Eight beginning special education teachers were interviewed for the qualitative phase of the study. Data was analyzed and the following themes were arrived at: Support from mentors is important for special education teachers in the beginning of their careers, teachers in rural schools have positive safe environments with strong support from the students' parents, lack of time to complete the excess of paperwork and lack of resources were stressors for special education teachers. All of the teachers interviewed had positive mentoring experiences. In the rural areas of North Dakota, there was not always an experienced teacher available in the building, so they creatively found alternative mentors. The teachers did not identify their schools as being rural (as defined in the literature), but rather, used the term 'small town' and saw this as a positive setting for a professional teaching experience. There was an overall description from the teachers being in a safe nurturing environment both at school and at home.

Beginning teachers described paperwork as overwhelming and excessive. An overall lack of resources was seen as a barrier to providing the students with needed supports. Many of the teachers taught all students with disabilities in their schools and were not always confident in all areas of instruction.

Pandey Yogendra, (2009) Ph. D. “A study of barriers in the implementation of inclusive education at the elementary level” Faculty of Education.

The study was designed and carried out to attain the following objectives.

(i) To review the existing special educational program. (ii) To study the perception of various persons related to special need education. (iii) To identify the barriers in the implementation of inclusive education policies. (iv) To develop relevant tools
to study the barriers in the implementations of inclusive educational program. (v) To suggest measure to promote inclusion.

**Methodology:**
For this study, descriptive research method was adopted. The design of the present study was descriptive survey type and mainly based on the data collection through Interview and Observation schedule. The **Population** of the present study consisted of Head/Principals and Regular teachers of all school that had children with special needs in Delhi. **Sample** strength was being confined to 40 Principals and Regular teachers from the Public (20 schools) and Govt. schools (20 schools) in Delhi. One principal was interviewed from every school and three regular teachers from every school.

The tools were developed by Investigator through literature analysis, discussion with experts, especially with the help of Guide. The interview schedule for Regular teacher and Head/Principals of the school consisted of 18 items and observation schedule was based on three types of facilities like Physical facilities (6 items), Teaching Learning Materials (11 items) and Educational aids and Appliances (6 items).

**Some major findings of this study were drawn as following:**
(i) The majority of the principals of both types of public and govt. schools did not understand or, were not aware of inclusive education. However, principals of public schools were better aware than the principals of Govt. Schools.
(ii) Majority of principals had partial awareness about the types of children with special educational needs (CWSEN). However, comparatively principals of public schools had somewhat better awareness than principals of Govt. Schools;
(iii) The majority of principals from both types of Public and Govt. schools faced problems while introducing inclusive education for CWSEN in their schools.
(iv) The majority of principals of both types of regular schools did not take initiatives to facilitate the education of CWSEN. The results showed that public schools were better than govt. schools in facilitating inclusion of CWSEN;
(v) The principals of Govt. school had better awareness level than the principals of public school regarding various facilities available to CWSEN from the state.
Overall majority of principals were not aware about the various schemes, concession facilities available to CWSEN from the states;

(vi) Most of the Principals of both types of schools did not accept that it was feasible to educate CWSEN in their regular schools;

(vii) A large majority of the principals of both public and govt. schools were not aware of the procedure for availing the facilities provided to CWSEN by the states;

(viii) A large majority of the principal of both types of public and Govt. school were unaware of the resources. They could make use for providing supportive services needed by CWSEN for their education in inclusive setup;

(ix) More than half of the principals of both public and Govt. school accepted that they do not have knowledge and awareness about legal provisions for education of CWSEN;

(xvi) More than half (73.5%) of the regular teachers of public and government schools had no concept and definition of Visual-Impairment and blindness.

(xviii) More than half (55%) of the regular teachers both types of school confirmed that they had problems in teaching of Visually Impaired children while teaching.

(xx) The result shows that participation of visually impaired children and support of seeing children were not better. They got partial support from sighted peers and also partially participated in activities;

(xxii) 80% of regular teachers of both types of schools were positive towards inclusive education.

(xxiii) The majority (80%) of both types of schools did not have essential physical infrastructure/facilities like Ramps, disabled friendly toilet, sitting and lighting arrangement etc.

(xxiv) The result shows that almost all schools (91.9%) did not have teaching learning materials like Braille papers, Braille books, tactile maps, embossed diagram, large print books etc. for use of V.I. Children.

Rorie Ross-Hill , (2009), Teacher attitude towards inclusion practices and special needs students .

This paper investigates the varying attitudes of regular (mainstream) education teachers towards the implementation of inclusion in elementary and secondary school classrooms. This paper tries to take into account the need for a better
understanding of teacher attitude towards inclusion and how the inclusive environment can be improved. The present paper concentrates on examining whether there is a difference in attitude between elementary regular education teachers and secondary regular education teachers. The participants of this study were 73 teachers from three public elementary and secondary schools in rural, southeastern USA who completed the Scale of Teachers' Attitudes towards Inclusive Classrooms (STATIC). The results indicated that most teachers support the practice of inclusion in regular education classrooms or possess a neutral consensus towards the practice of inclusion as it relates to teaching assignment. For example, grade level, subject area or type of inclusion practice (full or partial).


Attitudinal barriers prevent CWSN from coming to schools. Unless these barriers are effectively addressed, success in bringing significant number of CWSN to school may be difficult to achieve. Hence, it is important to undertake wide spread awareness on the need and importance of educating CWSN. In this regard, an attempt has been made by the IED program of the SSM. However, the program is observed to have little success in meeting its objectives because of the limited roles played by the DLROs and Special Educators. As a result, there is no perceptible difference between the condition of the CWSN in the areas with DLROs and in the areas without them. Consequently, even in the limited areas where the program is having additional manpower and institutional support, it is doing not as much for the children in need as desirable.

Main findings: Teachers of experimental group had initial reservations about the use of cooperative teaching strategies. Later they realized that this in fact reduced their work load with children in the class with peer group or older children sharing their task in the school. Parents and members of the community involved in the project also provided support in implementing cooperative teaching strategies. They found their children were learning better, got more involved in their work and worked cooperatively with their peers. Use of cooperative teaching strategies led to self-learning methods, made students responsible for their own learning as well as for the learning of their peers.

The skills for effective teaching were investigated among elementary teachers working in inclusive classrooms to determine whether the appearance of ‘constructivist’ skills are independent of, or follow from the mastery of teaching behaviors that are more transmissive in nature. The data were extracted from the Classroom Observation Scale (COS) (Stanovich, 1994; Stanovich & Jordan, 1998) based on half-day observations of 63 teachers. The sequence of instructional practices appears to be cumulative rather than differentiated. Patterns of teaching behaviors were consistent across the range of students in the classrooms, with some evidence that academically ‘at risk’ students received less teacher attention and differentiated instruction than students with and without disabilities.

The results of the analysis indicate that the highest scoring teachers in our observation used a skillful blend of instruction involving classroom management, modeling, scaffolding, as well as questioning routines. However, the elements that were common in the function which discriminated them from lower scoring groups were the provision of organizational frameworks for lesson delivery and the effective use of instructional time, resulting in high levels of student engagement.


The six key dimensions which a school must consider are as follows

1. **Inclusive of children;** Respects diversity, guarantees opportunities and meets the needs of children (based on vulnerabilities, social class, and ability level).

2. **Secure and protective;** Helps to defend children from abuse and aggression; promotes psychosocial- emotional wellbeing of teachers and learners.

3. **Healthy.** Assure proper hygienic conditions by: adequate water and sanitation facilities; implementation of healthy practices.
4. **Effective with children:** Uphold good teaching and learning processes; define quality learning outcomes; provides approved content, materials and resources; support teachers’ capacity, commitment, income and their recognition of child rights.

5. **Sensitive to gender:** Advocate gender equality in enrolment and success; guarantees girl-friendly facilities, environment and teaching; promote respect for other’s rights and dignity.

6. **Involved with communities.** Works to strengthen families; helps stakeholders establish collaborative relationships; works with other actors and duty-bearers to fulfill children’s rights.

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**Figure 2: Six key elements of child friendly schools**
Ahsan Tariq, Sharma Umesh, Deppeler J. M., Exploring Pre-Service Teachers’ Perceived Teaching-Efficacy, Attitudes and Concerns About Inclusive Education in Bangladesh.

This paper reports on pre-service teachers’ preparedness for inclusive education in Bangladesh through measuring their perceived teaching-efficacy, concerns and attitudes towards inclusive education and identifying predictor variables that contribute to those three variables. Using two standardized scales with 1,623 pre-service teachers from 16 teachers training institutions, it was found that variables such as length of training, gender, interaction with persons with disabilities, knowledge about local legislation, and level of training involved had significant relationship with participants’ perceived teaching-efficacy, attitudes and concerns. In addition, it was also found that pre-service teachers’ perceived teaching efficacy is correlated to their attitudes towards inclusive education. This study also revealed that pre-service teachers having higher perceived teaching-efficacy showed lower level of concerns towards inclusive education. Implications of this study for further improvement of pre-service teacher education program for inclusive education are briefly discussed.

Andile mdikana, sibusiso ntshangase and tokozile mayekiso, university of the witwatersrand,(2007), Pre-Service educators’ attitudes towards inclusive education.

In the present study, preservice educators’ attitudes towards inclusive education were investigated. The participants are full time students of the University of the Witwatersrand in Johannesburg. These students are registered for the Post Graduate Certificate in Education, B.Phys.ed) and B.A (Ed) and they are all in their final year of study. The students are mainly English-speaking. The sample comprises of 22 students seven males and fifteen females. Convenient sampling design was employed. A questionnaire developed by Choles (1997) was adapted and was used as a measuring instrument to record the responses of the research respondents. The adapted questionnaire comprised of the following sections: Biographical details, Attitudes towards inclusive education, Requirements for competency, Requirements for successful inclusion and Attitudes towards learners with Special Needs. Data were analyzed using descriptive statistics. The research
participants were generally found to have positive attitudes toward inclusive education.

Dedrick Robert F., Kofi Marfo, Deborah M. Harris (2007), Experimental Analysis of Question Wording in an Instrument Measuring Teachers’ Attitudes Toward Inclusive Education.

An experimental study (n = 288 general and special education teachers) examining the effects of altering the referent (“students with mild disabilities,” “students with severe disabilities,” or “students with disabilities”) on a four-item scale (Negative Effect of Inclusion) indicated that wording changes had little effect on the scale’s psychometric properties (e.g., factor pattern coefficients). Changes did result in a shift in the mean level of the attitude scale. Regression coefficients between the scale and type of teacher, total years of teaching experience, years of experience at current school, and training in inclusion were not significantly altered by changing the referent. Gender was the only predictor that exhibited a lack of invariance in its regression coefficients across questionnaire forms that differed in referent. For most of the bivariate relationships examined in this study, the same conclusions would be drawn no matter which of the three referents were used.

Wilczenski Felicia L., Development of a Scale to Measure Attitudes toward Inclusive Education, Rhode Island College

This study was conducted to scale the Attitudes toward Inclusive Education Scale (ATIES) with Rasch analysis. The ATIES records positive and negative attitudes toward integrating children with various disabilities into regular classes. Rasch analysis resolved the nonlinear relationship between the finite range of recorded ATIES scores and the conceptually infinite range of attitudes. Results showed that the 16-item scale defined a unidimensional attitudinal variable and yielded interval measures of attitudes toward inclusive education.
Infrastructure facilities:
School-wise information collected through DISE suggests that 3% of the primary schools and 2.4% upper primary schools did not have any building in 2005-06. The student-classroom ratio (SCR) that is an indicator of the adequacy or shortage of classrooms showed the following trend in the past few years.
In 2005-06, 44.6% of primary schools and 15.3% of upper primary schools did not have any toilet at all. Similar proportion of schools, both in primary and upper primary stages, did not have any boundary wall. Drinking water facilities were not available in 15.1% of primary and 4.8% of upper primary schools. These are very important issues and calls for adequate attention to ensure availability of the required physical infrastructure in the schooling system. Relevant details showing non-availability of the discussed infrastructure is in Table 10 below:

<table>
<thead>
<tr>
<th>% schools without facilities like</th>
<th>Primary 2004-05</th>
<th>Primary 2005-06</th>
<th>Upper Primary 2004-05</th>
<th>Upper Primary 2005-06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>3.5</td>
<td>3.0</td>
<td>2.8</td>
<td>2.4</td>
</tr>
<tr>
<td>Toilets</td>
<td>51.4</td>
<td>44.6</td>
<td>16.8</td>
<td>15.3</td>
</tr>
<tr>
<td>Boundary walls</td>
<td>50.4</td>
<td>50.8</td>
<td>15.7</td>
<td>16.5</td>
</tr>
<tr>
<td>Drinking water</td>
<td>16.3</td>
<td>15.1</td>
<td>4.7</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Source: DISE data

Kala Parasurama*, 2006, Variables that affect teachers’ attitudes towards disability and inclusive education in Mumbai, India.

Teacher attitude is one of the most important variables in the education of children with disabilities. Attitudes of general educators in the city of Mumbai, India,
toward disabilities and inclusion of students with disabilities into regular schools were studied through the usage of two attitude scales. The study investigated whether variable background characteristics such as age, gender, income level, education levels, years of teaching experience, acquaintance with a person with a disability, having a family member with a disability, frequency of contact and closeness to a person with disability affect the attitudes of teachers towards people with disabilities and towards inclusion of students with disabilities into regular schools. The analyses revealed that while some of the variables of interest did affect teachers’ attitudes towards disabilities, the only variable that affected teachers’ attitudes towards inclusion was prior acquaintance with a person with a disability.

Kagler, Fiesta T., Factors Influencing the Recruitment and Retention of Special Education Teachers: An Evaluation of Teacher Retention in a Southeastern Metropolitan School District

The national shortage of certified special education teachers has reached crisis proportions. This shortage has been exacerbated by increases in special education populations and high attrition rates of special education teachers. This study examined the factors influencing the recruitment and retention of special education teachers. Several factors explored were teacher induction programs, administrative support, and teacher mentors. The study was comprised of a mixed method approach using 3 methods of inquiry: survey, open-ended questions, and semi structured interviews. The selected participants were 15 certified special education teachers serving students with severe behavior disorders at a special education center in metro Atlanta. The findings revealed that most special education teachers believe a formal teacher induction program is a significant factor in the retention of special education teachers. Additionally, supports from administrators and colleagues are a major factor in the recruitment and retention of special education teachers.

This research is based on three case studies, each of which involved a critical examination of how early childhood centres responded to children with disabilities. The first case study involved gathering information at seven full-day workshops undertaken at seven locations in the North and South Islands of New Zealand. The early childhood teachers, other professionals and parents who attended these workshops provided information on centre policies with regard to children with disabilities and on their own views about issues in this area. The second case study involved participant observation and interviews in a kindergarten across ten months. In this setting, I was actively involved in the daily programme, looking at how the kindergarten responded to Craig, a child with severe disabilities, and his family. The third case study involved participant observation and interviews in a childcare Centre across ten months. In this setting, I looked at how the centre and its community included Peter, a child with Down syndrome, and his family. In each of the case studies I was interested in understanding how children with disabilities may be included in early childhood settings and how some children with disabilities may experience exclusion from such centres.. The data from the three studies were theorised from a social constructionist position that suggests that our understandings of the world are made evident in the way in which we name and talk about issues. Within this theoretical position, it is through discourse that knowledge and meaning about a phenomenon are formed and produced. Discourses function as a system of rules giving authority to what may be said and thought in relation to a particular subject. In the present case, the focal subject was disability. From the case studies it was evident that two particular discourses had significant and contrasting implications for policy and practice in early childhood education. A medical-model discourse that saw disability as a condition of an individual child in need of "special" education and treatment was related to children with disabilities experiencing discrimination and exclusion.
The Roeher Institute, April 2004, Inclusive Policy and Practice in Education: Best Practices for Students with Disabilities

This review of best practices focuses on both policies and practices that are considered, or have been proven, to advance the true inclusion of all students.

Areas of focus include:

- Philosophy of inclusion at all levels of governance and administration
- Inclusive education policies and budgets supported by effective provincial legislation, standards and guidelines
- Needs-based versus categorical assessment and placement
- Inclusive classroom practices and design
- Modification of curriculum
- Parent participation in decision making
- Provision of supports to students, teachers, administrators
- Teacher training and professional development
- Transition planning
- Physical accessibility/universal design

This report will draw on a variety of sources to discuss best practices in each of these areas. It will also provide examples of best practices in inclusive policy as practiced by various Canadian provinces and territories.


The purpose of this study is to explore pre-service teachers' attitudes towards individuals with disabilities as a predictor for including them in the regular classroom. Before the implementation of any special education programs for students with disabilities within the public schools, it is important to determine the attitudes of educators and administrators towards individuals with disabilities; the study uses a demographic survey and the Attitudes Towards Disabled Persons (ATDP) scale to assess the attitudes of Arab pre service educators towards persons with disabilities. Participants. Five hundred ninety seven pre-service education
students from three universities in Jordan (Mutah University, University of Jordan, and Al-Hussain University) and one university from UAE (United Arab Emirates University) participated in the present study. All students were enrolled in a Bachelor degree (four year course).

Two survey questionnaires were devised to measure attitudes towards persons with disabilities. The demographic instrument is a researcher-designed questionnaire. The background and demographic variables that were examined are: gender, number of times of contacts with persons with disabilities, educational background and culture.

The purpose of this study was to examine attitudes of pre-service Arab educators towards persons with disabilities. The results of this study reveal that pre-service teachers in general have negative attitudes towards persons with disabilities.


Main findings: There was no significant difference between the perceptions of male and female respondents in all three groups. District wise variations were also not evident. Special facilities for disabled children were nonexistent in schools of both the districts. Village Education Committees in both the districts had not taken any step for the education of disabled children. All three groups (parents, teachers, and disabled students) were not aware of the provisions of facilities for disabled children under SSA. Organization of awareness programs for the community to promote education of disabled children is needed.

Jackson, Lewis1; Ryndak, Diane Lea2; Billingsley, Felix3, (2000), Useful Practices in Inclusive Education: A Preliminary View of What Experts in Moderate to Severe Disabilities are Saying

Researchers examined the opinions of experts in the field of moderate to severe disabilities on useful practices for inclusive education across nine categories of practices: promoting inclusive values in the school; collaboration between general and special educators; collaboration between educators and related service providers; family involvement; choosing and planning what to teach; scheduling, coordinating, and delivering inclusive services within the school; assessing and
reporting student progress on an ongoing basis; instructional strategies; and supporting students with challenging behavior. An examination of emergent themes within each category yielded a rich description of the depth and breadth of practices that are perceived by these experts as useful in promoting and sustaining successful school inclusion. Importantly, many of the identified practices require some level of educational service restructuring, including redefining the roles and functions of special education teachers, related services personnel, and classroom teachers. We also found that our sample of experts relied on sources of information other than empirical research in the development of their stores of wisdom on useful practices. Although preliminary in nature, our study contributes to the growing body of literature on inclusive education. It describes a range of practices perceived by a sample of experts to be associated with successful school inclusion. It also identifies a number of important themes that can inform future research in this area.


This review explores the role of school administrators in responding to the needs of diverse students. Three administrative tasks are highlighted: fostering new meanings about diversity, promoting inclusive school cultures and instructional programs, and building relationships between schools and communities. Administrative work that accomplishes these tasks can be thought of as a form of practice, with moral, epistemological, constitutive, and discursive dimensions. Inclusive administrative practice is rooted in values of equity and social justice; it requires administrators to bring their full subjectivities to bear on their practice, and it implicates language as a key mechanism for both oppression and transformation.


Researchers surveyed sample of 166 high school students who had been involved in inclusive classrooms in rural, suburban and urban areas of Washington state.
Seven categories of perceived positive outcomes of integration outcomes resulted such as increased responsiveness to needs of others, increased appreciation of human diversity, and development of personal values.

The authors reported that positive outcomes were associated with more contact, receiving credit for the experience, and more substantive interaction. These students did not believe that their participation in inclusive classrooms had caused them miss out on other valuable educational experiences.


Methodology - The main topic of this research was the adaptation of teaching in ordinary primary and lower secondary school, according to pupils' abilities and skills (adaptation of education). This issue was examined, both in terms of adaptation of general teaching and special needs teaching, and analyses on both the level of intention and practice. The variation in practical adaptation of teaching was further examined in relation to attitude factors in teachers and their perceptions of different context and framework conditions.

Sample - Class teachers were chosen as the informant group because they were best able to provide information about both the class and individual students 'teaching, so that it was possible to link the information.

Method of Research - A source-analytical and descriptive-analytical study. The data in the descriptive-analytical study was collected using two surveys of class head teachers:

- Survey on adaptation of teaching in the class - survey on special education for individual pupils, with extra classes.

Main Findings - The results of the study showed a main pattern in the teachers' attitude profile and that the degree of adaptation of general teaching is associated with it. The main pattern had the following characteristics: - high support for the intention of adapted education - high confidence in the implementation and feasibility of the intention - positive attitude towards care - positive attitude towards integration/inclusion. The results showed that a large majority of teachers agreed with the intentions that have been drawn up. The teachers feel that they are under an obligation to follow them up in their teaching. At the same time they
believe that it is only possible to implement them to a certain extent, and these results in no changes being made to their form of teaching. Disagreeing with the intention of inclusion may be an obstacle to changing practice.

Kuyini Ahmed Bawa and Desai Ishwar, Principals' and teachers' attitudes and knowledge of inclusive education as predictors of effective teaching practices in Ghana

Surveys and observations were undertaken in selected primary schools in Ghana to determine whether principals' and teachers' attitudes towards and knowledge of inclusive education, as well as principals' expectations of teachers in implementing inclusion, were predictors of effective teaching practices in their classrooms. The sample of 128 educators (20 principals and 108 teachers) drawn from 20 primary schools in two districts, were required to respond to questionnaire measures of Attitude Towards Inclusive Education Scale (ATIES), Knowledge of Inclusive Education Scale (KIES) and Principals' Expectations Scale (PES). Of the total number of teachers \((N = 108)\), 37 were observed during instructional delivery in their classrooms. The data were analysed by a variety of statistical procedures including Regression Analysis and Discriminant Function Analysis. In the context of the Theory of Planned Behaviour (Ajzen, 1985), the results showed that whilst attitudes towards inclusion (attitude element) and knowledge of inclusion (perceived behavioural control element) predicted effective teaching practices, principals' expectations (subjective norm) did not. Implications for the implementation of effective inclusive practices in Ghanaian schools and the need for future research are discussed.


631 teachers of hearing-impaired students were surveyed about their attitude toward consultation; they indicated positive attitudes about working as consultants and reported that the greatest barrier to consultation was time restraints on both them and general education teachers. They also identified 30 competencies as essential skills for consultants.
Contribution to the present research:

Review carried out regarding physical and human resources about inclusion of differently abled students gave clear-cut idea about the necessities and requirements that should be checked while assessing inclusive practices.

2.3: Inclusive practices in urban and rural schools:

While studying any practices it is always important to study the same in all the types of communities. Many researchers studied the background in detail, as well as compared the situation. In the present scenario, it is seen that the previous system of education-general schools and special schools is now changing as inclusive schools. In this respect it becomes essential to assess the existing inclusive practices in the schools. Assessing the knowledge and acceptance level of teachers in the schools is needed.

Pajankar Vishal, (2010), Rural Urban Disparity in India: An Index Based Study on School Education.

The present study has thrown up new information of gap between rural schools and urban schools that can be useful to planners and policy makers. The author has made effort to study the disparity between rural schools and urban schools on eight different very important key indicators of school education and computed the disparity index by giving rank to the states/UTs in the scale of the school education development. The policies may be framed on the basis of variations across states for improvement, which has important bearing in achieving the said endeavor. In view of its importance, it was considered a worthwhile attempt to depict disparity between rural and urban schools on some selected important key indicators relating to school education, through disparity index. The present Disparity Index, therefore, on status of school education is expected to accomplish the said purpose. It is hope that this exercise would be useful to policy makers in focusing the disparity between rural and urban schools in regards to school education and also in monitoring the impact of such efforts.
One of the objectives of this study is to assess the nature and magnitude of Rural Urban disparity in education sector in Assam, Vis-à-vis India. Following factors are taken into consideration. Percentage distribution of schools by building type, average number of classrooms, pupil-teacher ratio, trained teachers, boundary wall of schools, schools not having building, drinking water, Toilets, electricity, playground, medical check-up etc. While all the resources are less in rural schools than urban, it is significant that the percentage distribution of teachers having in-service training (STR) is more in rural areas than in urban areas in Assam.

Reema, (2010), Ph.D. “A Study of Relationship between Self-Concept and adjustment of Visually Impaired Adolescents Studying in Inclusive and Special Schools”

The important objectives of the present study were to study the self-concept and the level of adjustment of visually impaired adolescents studying in inclusive and special schools, to study the relationship between self-concept and the level of adjustment of visually impaired adolescents studying in two settings, to compare the relationship between self-concept and the level of adjustment of visually impaired adolescents studying in inclusive and special schools and to adapt/develop self-concept scale and adjustment scale for use with the visually impaired adolescents.

Considering the nature of the present problem descriptive study was considered to be the appropriate method. Two hundred visually impaired adolescents studying in special and inclusive settings have constituted the sample of the present study. The Visually Impaired adolescents studying in inclusive and special school setting were selected on the basis of stratified and random sampling procedure. Student to student or one to one matching method was adopted for this purpose. Tools used in the study were preliminary data blank (self-developed), self-concept questionnaire developed by R.K. Sarasvat and Adjustment inventory (self-developed). Statistical techniques used to analyze the data were mean, standard deviation, T-test and correlation.
The findings of the present study revealed that the development of self-concept was better in inclusive schools. But, it was even better in the case of male adolescent than the female ones. Similarly, in the case of level of adjustment also the male adolescents have shown better level of adjustment. Contrary, to this the relationship between self-concept and level of adjustment in the case of female adolescents was better in inclusive school settings than their male counterparts. This trend was reversed in the case of relationship between those aspects in special schools. Towards the overall results showed better relationship in the case of male visually impaired adolescents than the female visually impaired adolescents.

Saravanabhavan Sheila, rc. Saravanabhavan, (2010), knowledge of learning disability among pre- and in-service teachers in India.

The purpose of this study was to determine the knowledge level of learning disabilities (LD) among teachers in India. A survey was distributed among 144 teachers in two regular high schools, 38 teachers in two special schools, and 165 pre-service teachers in a teacher education college in a metropolitan city in a southern state in India. One-way analysis of variance (ANOVA) showed that the knowledge level of learning disabilities among teachers working in regular schools was statistically different. Among the three groups, the pre-service teacher group scored the lowest (M = 60.76, SD = 13.36, N = 165) which was below the mean score for the entire group (M = 66.32, SD =13.37, N=347). Teaching experience and familiarity with persons with LD did not affect the knowledge level of the three groups of participants. The study makes recommendations on how to improve the knowledge level of learning disabilities among pre-service teachers in India, and the need to assess knowledge of LD among physicians, parents, paraprofessionals, educational administrators and other stakeholders.


Special educational services for children with dyslexia in three different settings: special schools, reading units and mainstream resource provision. The emphasis in this paper is on the parental perspectives. Participants were the parents of dyslexic children, aged eight to thirteen, who had been accessing special educational
services for two academic years. Data involved individual postal questionnaires, returned by 113 parents. Results suggested that parents were generally very positive about special educational services across all three settings, although parents of children attending specialist services (in special schools and units) tended to be more satisfied and more positive about services than parents whose children attended mainstream resource provision. It was noted that, while parents expressed a preference for inclusive services in theory, in reality, once provided with services, parents were actually more satisfied with specialist segregated services. The discussion considers the implications of these findings in the context of the inclusion debate in special education.

Canadian Council on Learning | Lessons in Learning the rural-urban gap in education 2006. What accounts for rural-urban differences in educational outcomes?

The available evidence suggests that two different factors—school conditions and economic conditions—combine to discourage rural students from educational achievement.

School Conditions

Rural schools tend to be smaller than urban schools and this carries a number of benefits for rural students. Class sizes tend to be smaller, students enjoy more individual attention from their teachers, and teachers often know most, if not all, of the students. There is also some evidence that small rural schools can be more effective in helping their students learn better, behave better, and participate more in civic life. Rural students express a clear awareness of and strong attachment to the benefits of attending small schools.

Despite these advantages, small rural schools face challenges that can lead to unfavorable educational outcomes for their students.

1- Problem is that it is difficult for small rural schools to attract and retain qualified teaching staff. Staffing issues, in turn, often result in related problems revolving around high turnover rates. Small rural schools have to compete with larger urban schools in recruiting and hiring teachers.
2- Given the widespread shortage of and demand for specialty teachers, rural schools often have to fill their vacancies with younger, less experienced teachers. These teachers are unlikely to remain in the positions for more than a year or two, contributing to high staff turnover rates.

3- Beyond their lack of experience, these young teachers face a number of obstacles to effective teaching. They are often burdened with heavy workloads, routinely teaching courses in four or five different subject areas—some of which fall outside of their teaching specialties.

4- New teachers in rural settings have little or no access to mentoring and may not receive adequate administrative and classroom support. Further, new teachers may struggle to build productive relationships with students who are wary of strangers who drop into their communities only to leave again within a year or two.11 Rural schools that are unable to attract and retain specialty teachers are unable to regularly offer the same range of courses found in larger urban schools.

5- Rural students consequently have fewer opportunities to take certain kinds of courses, particularly the senior science courses often required for admission to Post-secondary institutions.

6- Rural schools are also at a disadvantage relative to urban schools with respect to access to and use of information and communication technology (ICT). According to the available data, over 97% of Canadian schools have computers and are connected to the Internet;

7- Urban schools may be better able to make use of this connectivity. Rural schools are still hampered by slower internet connections: more than 20% of rural schools still use dial-up connections, while less than 5% of urban schools do so.

8- In addition, fewer rural schools have strategies for helping teachers learn how to use ICT and fewer rural schools include ICT learning in teacher development. These facts are particularly problematic given that ICT can provide effective tools for counteracting the difficulties small schools encounter in trying to support their teachers and offer a full range of courses.
Foote Chandra J., Catherine P., Cook Cottone, (2004), Field experiences in High Need Urban settings: Analysis of current practice And Insight for change.

This study evaluates and compares High-need urban districts face many challenges in their efforts to overcome the large gaps in achievement demonstrated by their students. This study focuses on a strategy to overcome these challenges by better preparing future teachers for service in urban schools through quality field experiences at these sites. Teacher educators and urban school teachers who host teacher candidates during field experiences completed a questionnaire regarding their views about placements in high-need urban districts. A thematic analysis of their responses summarizes their beliefs about the most and least beneficial forms of field experiences, the most prevalent challenges in establishing quality field experiences, and the most successful strategies that facilitate the development of quality field experiences. The discussion compares the views of teacher educators with practicing teachers and recommends strategies to enhance field experiences in high-need, urban schools.

Joseph Sunday Owoeye PhD, Philias Olatunde Yara, School Facilities and Academic Achievement of Secondary School Agricultural Science in Ekiti State, Nigeria

The study looked at the provision of facilities as it relates to academic performance of students in agricultural science in Ekiti state of Nigeria between 1990 and 1997. The study population was results of the West African School Certificate Examinations (WASCE) conducted between 1990 and 1997 in 50 secondary schools in both rural and urban areas of the state. One validated instrument (STQF) was used for data collection. One hypothesis was formulated and answered. Data were analysed using mean and t – test. The results showed that there were no significant differences in the performance of students between rural and urban secondary schools in term of availability of library facilities (t = 1.79, p<0.05), availability of textbooks (t= 1.20; p <0.05) and availability of laboratory facilities (t= 1.83, p<0.05). It has been established that facilities are potent to high academic achievement of students; therefore, Ekiti State Government should provide
adequate material resources to rural/urban locations to enhance teaching and learning processes.

**Bryan G. Cook, Melvyn I. Semmel, Michael M. Gerber, (1999), Attitudes of Principals and Special Education Teachers toward the Inclusion of Students with Mild Disabilities Critical Differences of Opinion.**

Attitudes of 49 principals and 64 special education teachers regarding the inclusion of students with mild disabilities were investigated. Results of a discriminant analysis indicated that principals and special educators were separated into groups with 76% accuracy according to their responses to items drawn from the Regular Education Initiative Teacher Survey (Semmel, Abernathy, Butera, & Lesar, 1991). items measuring attitudes toward the efficacy of included placements with consultative services, the academic outcomes associated with included placements, and the protection of resources devoted to students with mild disabilities correlated most highly with the discriminant function. Findings are discussed in relation to their implications for the implementation of inclusion reforms and the educational opportunities of students with mild disabilities.

**Peterson Michael , Beloin Kim , Point Stevens, ( 1998), for better or worse: building inclusive schools in poor urban and rural communities.**

In this article, researchers have attempted to raise awareness regarding several essential elements: (1) articulating a vision of whole inclusive schooling for poor schools, (2) providing examples of several poor schools who are in the process of implementing these strategies, (3) identifying the multiple barriers that often impede that vision, (4) developing strategies for overcoming the barriers and achieving the vision, (5) articulating the commonalities and differences between poor rural and urban schools, and (6) providing strategies for embracing the challenge to create more whole inclusive school communities in rural and urban areas.

**Khattri Nidhi, Kevin W. Riley, and Kane Michael B. (1997), Students At Risk in Poor, Rural Areas:A Review of the Research.**

Purposes in this paper were to: (a) review extant literature to determine the degree to which rural location plays a role in educational failure in poor, rural areas; and
(b) describe the processes and structures in poor, rural schools that place students at risk of failure. To this end, researchers first compared the outcomes for students in poor, rural schools with those for students in poor, urban schools in order to determine the contribution of location to outcomes for students in poor areas. Next, they examined the characteristics of rural communities and their students in an effort to identify the prevalence in these communities of the factors that place students at risk for educational failure. Research suggests that rural students tend to benefit, from the small size of rural schools and from the nature of school-community connections. However, it also indicates that these students are at risk of educational failure due to the lower levels of educational resources in rural schools, such as fewer course offerings. Nonetheless, from the studies reviewed, it is not possible to determine the degree to which the education system characteristics discussed typify schools and school systems in poor, rural areas.

**Downing June E, Eichinger Joanne, Lilly J Williams, (1997). Inclusive Education for Students with Severe Disabilities, Comparative Views of Principals and Educators at Different Levels of Implementation.**

Structured interviews were conducted with elementary school principals, general educators (k-6), and special educators at different levels of inclusive educational programming to determine perceptions toward inclusive education for learners with severe disabilities. Comments from the 27 participants were categorized according to the main questions asked during the interviews, with similar comments aggregated per category. Comparisons made by professional role and level of implementation regarding inclusive education revealed several concurring statements as well as some discrepancies. Differences in perception of inclusive education for students with severe disabilities across professional role and level of implementation of respondents are described. Implications for future research and inclusive educational practices are discussed.

**Yong Fung L., McIntyre John D., (1992), A Comparative Study of the Learning Style Preferences of Students with Learning Disabilities and Students Who Are Gifted.**

The purpose of this study was to investigate whether significant group, gender, and grade differences existed in the learning style preferences of students with learning
disabilities and students who are gifted, using the Learning Style Inventory (LSI) (Dunn, Dunn, & Price, 1987). Subjects consisted of 53 students with learning disabilities and 64 gifted students randomly selected from two large public high schools. They were 10th-, 11th-, and 12th-grade students, aged 15 to 17. A three-way analysis of variance on the LSI raw scores revealed significant group differences in preferences for light, design, and kinesthetic modality, and in motivation, persistence, responsibility, parent motivation, and teacher motivation. Significant gender and grade differences were found in preferences for mobility and learning in the afternoon, respectively. A stepwise discriminant analysis revealed six variables that significantly discriminated between the two groups. Findings imply that incorporating the learning styles of students with learning disabilities and students who are gifted is important for individualizing educational programming.

**Contribution to the present research:**
The above review helped the researcher in finding out the main aspects of differences. It also helped to analyze the data collected using various tools and techniques.

**2.4: Education of differently abled students:**
In India concern for the inclusion of children with special needs in the mainstream education system has been widely expressed by various commissions, committees, working groups and seminars. A number of steps for promoting inclusive education are being taken in India The Sarva Shiksha Abhiyan (SSA) is an effort to universalize elementary education by community ownership of the school system. (Hand Book of MSCERT on In-service teachers training program)

**Peggy Dettmer, Ann Knackendoffel, Linda P. Thurston(2012), Collaboration, Consultation and Teamwork for Students With Special Needs,**
The book "focuses on collaboration in a variety of environments and emphasizes constructive ways to use educator differences to serve students with special needs. This text's broad perspective ensures coverage of the history of collaboration, ways to structure and implement collaborative teams, important processes and practices
that ensure effective co-educator partnerships, and the external support that makes collaborative school consultation successful. It consists the chapters devoted to professional perspectives, personal preferences, Para educators and evaluation techniques. With expanded "Technology Tools" sections, coverage of the latest educational reforms, and updated activities, this book prepares educators, school personnel, families, and community leaders with a strong knowledge base that celebrates the strengths in personal differences. It emphasizes educators’ different professional perspectives and how to use these differences to better serve students with special needs. It also focuses on variability in personal preferences and how to acknowledge, address and use these educator differences to maximize problem solving. It gives detailed information about paraprofessionals and the collaborative relationships between teachers and paraprofessionals. It gives idea about how to evaluate collaborative and co-teaching environments. Technology Tools sections highlight new collaboration tools such as web meetings, social networking media, resource-sharing tools, blogging and web tools, and personal productivity tools. A broader perspective explores collaborative relationships beyond the classroom such as with co-teachers, early childhood education teachers, school counseling personnel, administrators, families, school boards, community leaders and community agencies.

Sithabile Ntombela, KwaZulu-Natal, Faculty of Education (Nov. 2012), The progress of inclusive education in South Africa: Teachers’ experiences in a selected district, KwaZulu-Natal.

Emanating from a PhD study, this article documents how inclusive education is progressing in the province of KwaZulu-Natal. Informed by social constructivism and the systems theory, the study investigated teachers’ experiences and understandings of this policy statement in three primary schools in two districts. Data collected showed that teachers had limited experiences of inclusive education and limited understandings of what it entails in South Africa. As a result, most teachers felt inadequately prepared to implement it. The article concludes that the limited experiences and understandings result from, among other things, the inadequate and inappropriate professional development strategy used to disseminate information within the Department of Education.
Sharma Bharti (2010) Ph. D. A Study of Need Based Curricular Input In Elementary Teacher Education for Promoting Inclusion Of Children With Sensorial Impairment In Mainstream Education. (JML)

The study attempted to identify issues of Teacher Training and Research on Inclusive Education. Lack of training input to Teachers in disability is a challenge for Inclusion. The study aimed an attempt that proceeds from understanding the needs of Sensorially Impaired children to identify curricular inputs in Elementary Teacher Education in context. In accordance with the nature of study, descriptive research method was used. Keeping in mind the enrolment of Sensorial Impaired children in elementary classes, Sensorial Impaired Students and Teachers were selected as sample for the study. Special Teacher Educators were also selected, purposively keeping in mind the Specialization concerned. To achieve the Objectives - a Case study format, a Questionnaire, an Attitude scale and a Rating scale were prepared and used. Qualitative and Quantitative Analysis of the data was undertaken, and Mean, SD and Percentages were calculated. Major findings of the study showed that schools have lack of maintenance and use of basic amenities, no appointment / visit of Special Educator, no separate Resource room, no Equipment and material and students had difficulty in Teaching – Learning discourse except those who had been associated with NAB. It is concluded that Teachers had less Knowledge about Inclusion and were found to have Neutral Attitude towards the Inclusion of the Sensorially Impaired children in Mainstream Education. Almost all the Teachers agreed that the Existing Pre-service ETE course in Delhi are of no benefit for entrants to deal with the Sensorially Impaired children in Inclusive setting, so there is an urgent need of overhauling of the Elementary Teacher Education courses viz. Pre-service and In-service in context of the Needs of the Teachers. The Special Teacher Educators suggested the Need based Curricular Input in different components of Teacher Education curriculum viz. Foundation, Pedagogy, Practicum, Co-curricular activities, School Experience programs and other Enrichment activities. For example, understanding the Needs of children, Identification and Functional assessment, Learning styles, Classroom management, Content based TLM, use of ICT, Skill based Practical activities, visits, Teaching Sensorially Impaired children, Community work etc.
Agarwal Ashwini K., Ph.D. A Comparative Study of Academic Skills of Visually Impaired Students Studying In Various Educational Settings

The researcher conducted the study with the objective to assess and compare the five areas of academic skills of visually impaired students, who were studying in three settings (special school setting, semi-integrated setting and integrated setting). The objective of the study was also to compare the academic skills of visually impaired boys with visually impaired girls in the three educational settings.

The study utilized ex-post facto method of research. The visually impaired students were identified in the State of Delhi and were subjected to WISC-R (NIVH adapted Verbal Hindi) to ascertain I.Q. and the results were tabulated. Five girls and five boys each from the classes VI, VII & VIII in three settings were chosen such that there I.Q. score was between 95 and 110 so as to get the uniform sample of 30 to represent the population in each of three settings. The assessment of academic skills was carried on the sample of 90 students.

The investigator concluded that visually impaired children should be admitted to mainstream schools in large numbers. Integrated setting should be promoted and strengthened. Special schools should be utilized to provide resource services as a supplement to integrated setting.


Methodology - The purposes of the study were to describe how a mainstream compulsory school reacts to a diversity of pupil needs and attempt to explain why it reacts as it does. Diversity in this context refers to diversity in educational needs. Theoretical framework included social constructionism, symbolic interactionism and organization theory. Data collection spanned over 3 years.

Sample - One compulsory mainstream school was selected as a case.

Method of Research - Interviews, observations, document analysis.

Main Findings - The findings show that although the school works according to a national policy of inclusive education, it implements it only to a limited extent due
to a number of institutional influences that produce a variety of special educational needs. These influences are based on often contradictory value systems including market, bureaucratic and pedagogic values, notions of knowledge and professional group interests. These influences at the macro level are counteracted by Christian, humanitarian values and notions of equity and equality at the micro level. The resultant dilemma is a reflection of the school’s hybrid role as a bureaucratic, pedagogic and professional institution. The author concludes that these institutional influences need to be recognized for the present psycho-medical categorization of special needs to be deconstructed to give room for a pedagogic construction of pupil diversity.

Herold Frank, Dandolo Jack, (2009), Including visually impaired students in physical education lessons: a case study of teacher and pupil experiences. Following recent education policy and curriculum changes in England, the notion of inclusion of children with special educational needs in physical education has increasingly become a topic of research interest and concern. It was the aim of this study to explore personal experiences and perspectives of inclusion in physical education. To this end this study used a series of interviews and observations with a visually impaired (blind) pupil, a physical education teacher and a learning support assistant at a school for children with moderate learning difficulties. The findings highlighted four significant areas of impact: the role of teacher training and development; the role of learning support assistants; resources; and the limitations of the National Curriculum in Physical Education as a framework for inclusion. Recommendations on how to address these issues in order to improve the standards of inclusion for visually impaired pupils in physical education are made.


The attitudes of teachers as main stakeholders in the inclusive education process remain to be a burning issue which has received unprecedented interests in different countries. Limits to and possibilities for this educational reform are much debated (Slee, 2006).
In China, as special education has been a low priority in its education system regardless of the fact that there are about 83 million people with disabilities alone in this country, there are still challenges for teachers to accept it either as a concept or in practice. By empowering Chinese teachers to articulate their perspectives on inclusive education to join the world forum, this paper discusses some research findings in terms of teachers’ attitudes towards inclusive education from a PhD study on ‘Teacher career motivation and professional development in special and inclusive education in China’. The research was conducted within the social constructivist framework aiming to seek Chinese teachers’ perspectives and attitudes towards inclusive education in the Chinese context. Qualitative data from questionnaire survey and semi-structured in-depth interviews were collected from the purposive and selective sample of teachers in 7 mainstream schools and two special schools in a city in the Eastern part of China.

Bryan G. Cooka & Melvyn I. Semmelb, (2008), inclusion and Students with Mental Retardation, Theoretical Perspectives and Implications.

The present article examines the implications of inclusion for students with mental retardation. An overview of inclusion terminology and recent changes in the definition and classification of individuals with mental retardation are presented. The academic and social outcomes of students with mental retardation in inclusive settings are examined by employing tolerance theory, a joint model of outcome production, and a model of differentiated expectations. The analyses examine how inclusion interacts with the unique learning needs and characteristics of students with mild and severe mental retardation. The authors recommend implementing partial, not full, inclusion for most students with mental retardation; to consider the interaction of severity of disability and student variance in making inclusive placements to maximize social outcomes; and to continue to conduct theory-based research in an effort to provide the most appropriate education to students with mental retardation.

Rieser Richard – 2008, Implementing Inclusive Education: Commonwealth Guide to ... - Page 68

The book discusses on adoption of United Nations convention on the rights of people with disabilities, and in particular article 24, which requires the
development of an inclusive education system for all children. It gives the picture of challenges before the commonwealth countries and suggests solutions.


![Figure 3: Components of ADHD](image)

The book gives clear idea about education of students with ADHD. Causes, symptoms and remedy are discussed.

ADHD is 4 to 8 times more common in boys than in girls.

- There is evidence that ADHD runs in families which suggests genetic factors
- 30-50 % of ADHD patients display aggressive and anti-social behavior.
- A large proportion of ADHD children will also have learning disabilities.
- Medication is only one part of dealing with ADHD.

ADHD in India: Study conducted by the author in 12 schools in Delhi in 2001, shows that prevalence of ADHD is 6.38%. Ration of boys to girls is 3.6: 1. Practically no special services exist in India for education of ADHD children. As a result their educational potential is not drawn out in school, many of them therefore drop out because appropriate interventions are not provided.

Kvilvang, Heather Trish. Ph.D. North Dakota State University, 2006, “Preparing preservice elementary teachers for diverse classrooms”

This dissertation substantiates the theory that the National Council for Accreditation of Teacher Education (NCATE) process based on NCATE Standard
Diversity and its four elements can be generalized in the targeted, regional state universities in North Dakota. Useful ways were identified to prepare students enrolled in predominately white elementary teacher education programs similar to Valley City State University to teach in varied diverse environments. Field experiences should include communication and supervision from university supervisors, using reflection papers, class discussions, in-class activities, and assignments that require students to adapt lesson plans. Students need opportunities to interact with diverse faculty and to enroll in courses taught by instructors who have had experience teaching diverse populations, and options to attend authentic multicultural activities to prepare students to teach in diverse classrooms were also agreed upon. Programs need to utilize authentic performance assessments, databases that house advisees' past field experience information, partnerships with diverse universities and elementary schools, multicultural scholarships, student disposition forms, and data sheets collected by students containing demographic information from field experiences. Program practitioners agree that the use of performance assessment models and field experiences helps teacher education candidates demonstrate knowledge, skills, and dispositions related to diversity. Reflection papers, class discussions, and in-class activities allow candidates to draw upon their own experiences with diversity. Field experiences and assignments of adapting lesson plans assess the candidates' ability to work with diverse students to develop plans for improving their practice. Authentic performance assessments and partnerships with other universities and elementary schools enhance preparedness of candidates working with diverse elementary students. It was found that having students collect data from cooperating schools during field experiences, requiring special needs courses with field experience opportunities, and requiring social foundation courses with service learning opportunities encourage students to interact with diverse elementary students. Partnerships with diverse universities and elementary schools, seminar courses with reflection opportunities, and student disposition forms were found to help candidates confront issues of diversity.

Dash M. – 2005, Education Of Exceptional Children - Page 25, Now disabled children are regarded as "Children with Special Needs" and as "Differently Abled
During the short period of 1950 to the end of the 20th century, special education has developed so much that it deserves to be...

**Teri Wallace, Amy R. Anderson & Tom Bartholomay**, (2002), *Collaboration: An Element Associated With the Success of Four Inclusive High Schools*. Collaboration between general education teachers and special education teachers is often mentioned in the literature as a means of accomplishing the inclusion of students with disabilities in general education. The purpose of this study was to describe, using both qualitative and quantitative data, the communication and collaboration practices in four high schools with demonstrated success at including students with disabilities in general education and achieving exemplary outcomes for all students. Schoolwide approaches and classroom-level factors associated with collaboration characterize the themes that emerged as important to the success of these high schools. A discussion of these results and implications for practice are presented.


The Individuals with Disabilities Education Act (IDEA) (1997) mandates that students with disabilities have access to the general education curriculum. School districts have developed a variety of service delivery models to provide challenging educational experiences for all students. Co-teaching or collaborative teaching is the most widely used of the different service delivery models. While the philosophy of inclusion is widely accepted, the efficacy of the various inclusion models has recently been the focus of educational research. Researchers have questioned whether the presence of a special educator in the general education classroom has resulted in students with high incidence disabilities receiving specialized instruction. A qualitative study was designed to examine the instructional behaviors and practices exhibited and used by a dyad of educators in self-contained learning disabilities and inclusive co-taught secondary Biology classrooms during a nine-week science instruction grading period. In addition to utilizing interviews, observations, and classroom observation scales to answer the
research questions, supporting student data (time-sampling measurement/opportunity to learn and student grades) were collected. The study concluded that the presence of a special educator in a co-taught classroom: (1) did contribute to the creation of a new learning environment, and notable changes in the instructional behaviors and practices of a general educator; (2) did contribute to limited specialized instruction for students with disabilities in the co-taught classrooms and embedded (not overt) special education practices related to the planning and decision-making of the educators; (3) did contribute to the creation of a successful co-teaching partnership including the use of effective teaching behaviors; and (4) did impact success for some of the students with disabilities in the co-taught classrooms.

Cawthon Stephanie W.,(2001),  Teaching Strategies in Inclusive Classrooms with Deaf Students.

The purpose of this study was to investigate teacher speech and educational philosophies in inclusive classrooms with deaf and hearing students. Data were collected from language transcripts, classroom observations, and teacher interviews. Total speech output, Mean Length Utterance, proportion of questions to statements, and proportion of open to closed questions were calculated for each teacher. Teachers directed fewer utterances, on average, to deaf than to hearing students but showed different language patterns on the remaining measures. Inclusive philosophies focused on an individualized approach to teaching, attention to deaf culture, advocacy, smaller class sizes, and openness to diversity in the classroom. The interpreters' role in the classroom included translating teacher speech, voicing student sign language, mediating communication between deaf students and their peers, and monitoring overall classroom behavior.

Lauren J. Lieberman and Cathy Houston-Wilson,(1999), Overcoming the Barriers to Including Students With Visual Impairments and Deaf-Blindness in Physical Education. In this article, we plan to highlight major barriers that impede the inclusion of students with visual impairments in physical education and to provide strategies for overcoming those barriers. We primarily address students with visual impairments, but the barriers and solutions presented are also
applicable to students who are deaf-blind. We collected data about the barriers from surveys completed by more than 170 physical education teachers throughout New York State, who attended workshops on how to include children who are blind in physical education. The New York Commission for the Blind held the workshops in five cities throughout the state. On the basis of the results of the surveys, we have identified attitudes held by teachers, by students with visual impairments, and by school administrators that raise barriers to including visually impaired students in physical education programs.

Teachers' Barriers are Lack of Professional Preparation, Curriculum and Activities, Pace of the Lessons, Fear Overprotection, and Limited Expectations.

**Contribution to the present research:**
Review of literature regarding education of differently abled students provided comprehensive picture of the efforts made by various government policies, projects and research in and outside India. It highlighted the need of lot of efforts in areas such as education of differently abled students, teachers, training regarding inclusion students, developing feeling of oneness in students, developing empathetic attitudes regarding inclusion.

### 2.5: Development of a program (KBPIE).

Special attention must be paid to ensure that classroom teachers have the skills and support needed to provide quality education to children with diverse learning needs. In this respect it becomes essential to study the existing programs that are used to train the teachers in Education of differently abled students. Review of literature and research thus becomes essential.

**Uplane Megha M.(2011), Ph.D., Development of Text-book based Computer Multimedia Software Package for School Children to their academic achievement in Physics.**

Researcher developed the program for low achievers in physics. The experimental design used to test the effectiveness of the program was single group interrupted time series design. Researcher used a content test to collect the necessary data regarding achievement of the students at initial stage. After statistical analysis group of low achievers in physics has been identified. Pretest
was conducted. Program was implemented and immediately posttest was given correlation between two test scores was calculated. After a month’s gap retention test was conducted on the same group.

Findings were, Use of Text-book based Computer Multimedia Software Package for School Children enhances their academic achievement in Physics.

**Dinh Thi Nguyet and Le Thu Ha, Preparing Teachers for Inclusive Education. CRS Vietnam. 2010.**

Preparing teachers with essential knowledge and skills for inclusive education...requires the commitment of all actors. The success of inclusive education in any context depends upon many factors. Teachers themselves are an essential component to ensure the quality of students’ inclusion in the school environment. Teachers have direct interaction with students and play a critical role in determining students’ experiences in the classroom on a daily basis. This requires the collaboration of classroom teachers, key teachers, school principals, education officers and policy makers.

Preparing teachers does not simply mean providing prospective teachers with inclusive education skills; it is important to provide training and support for existing teachers as well. Building the capacity for inclusive education must include awareness raising activities as well as integrated pre-service and in-service teacher training programs to ensure that teachers are aware, ready and willing to bring inclusive education into action. CRS Vietnam has had over ten years’ experience working with inclusive education and has improved access to education for many children and families. Throughout this process, CRS Vietnam has learned valuable lessons that can be helpful when supporting inclusion in other country contexts.
According to the study---- For thematic training, expected outcomes include:

**Table 6: Expected outcomes of Thematic Training**

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needs and abilities of students with specific disabilities</td>
<td>Assess abilities and identify needs of children with disabilities</td>
</tr>
<tr>
<td>Different teaching methods to support students with specific disabilities</td>
<td>Develop lesson plans with specific objectives for children with disabilities.</td>
</tr>
<tr>
<td>How to plan a lesson for children with disabilities</td>
<td>Choose and deliver appropriate teaching methods to help children with disabilities achieve learning objectives.</td>
</tr>
<tr>
<td>How to create individual education plan</td>
<td>Write individual education plans</td>
</tr>
<tr>
<td>Strategies to assess progress of children with disabilities.</td>
<td></td>
</tr>
</tbody>
</table>

**Deshpande Madhuri (2010), Case Study On Ankur Vidya mandir, Pune - An Inclusive School**

**Ankur balmandir** was founded in the year 1988 with the primary purpose of providing facilities of **Inclusive Education** (IE) for the children between the ages of three and six, i.e. to promote equal opportunities to all children irrespective of their individual differences in abilities.

Inclusive education at Ankur Vidyamandir and its supporting units operates from the assumption that almost all students should start in a general classroom, and then, depending on their needs, move into more restrictive and specialised environments, whenever required. Research shows that IE helps the development of all children in different ways. Students with specific challenges make gains in cognitive and social development and physical motor skills. They do well when the general environment is adjusted to meet their needs. Children with more typical development gain higher levels of tolerance for people with differences. They learn to make the most of whomever they’re playing with. When we exclude people, it ultimately costs more than the original effort to include them.
Table 7: WHAT MAKES IE ACHIEVABLE

<table>
<thead>
<tr>
<th>A Zero rejection policy</th>
<th>Placement and Grouping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need based programs</td>
<td>Functional Academics</td>
</tr>
<tr>
<td>Vocational Training</td>
<td>Rehabilitation Centre</td>
</tr>
<tr>
<td>Enrichment and enhancement Program</td>
<td>Therapeutic inputs</td>
</tr>
<tr>
<td>Assessment/Observation</td>
<td>Teamwork</td>
</tr>
<tr>
<td>Small classroom size</td>
<td>Attitude towards inclusion</td>
</tr>
<tr>
<td>Teachers’ understanding of IE</td>
<td>Multi-level instruction</td>
</tr>
</tbody>
</table>


Within the framework of International Classifications of Functioning, Disability and Health- ICF, the present study was to develop a functional assessment scale (ICF-FAS) based on the indicators and qualifiers of ICF for children with hearing impairment attending regular schools. The ICF FAS was developed with 82 items covering all domains of ‘Activity’ and ‘Participation’ at second level classification system of ICF. The ICF-FAS was administered on 105 samples of 6-14yrs age selected on stratified random sampling technique representing equally the gender, age group, and various socio-economic background including two third of samples having severe and profound degree of hearing loss. The ICF-FAS was found to be highly sensitive to the changes in the samples’ independent variables such as age, gender and degree of hearing loss on their functioning scores in various domains. Out of 82 items of the ICF-FAS, 60 items were found to be in good fit with the measuring system. For ICF-FAS full scale a measure reliability of .72 (Based on Rasch Analysis), a test retest reliability of 0.71 and an inter-rater reliability of 0.78 were calculated. In comparing the use of teacher’s report against parent as proxy to the administration of ICF-FAS, a high degree of correlation was observed in
majority of items under domains “Learning and Applying Knowledge”, ‘Communication’ and ‘Self-Care’. A moderate to low degree of correlation was found with rest of the domains of the scale.

**Gooch Debbie, (2009), Ph.D.: Time perception and cognitive skills in Attention Deficit/Hyperactivity Disorder and Reading Disorder; Understanding comorbidity**

The aim of the thesis was to investigate the cognitive profiles associated with the comorbidity of Attention Deficit/Hyperactivity Disorder (ADHD) and Reading Disorder (RD). Specifically, this research aimed to determine whether deficits in time perception are associated with ADHD and/or RD or whether they are specific to children with comorbid ADHD+RD. In Study 1, the relationships between time perception, executive functions and reading skills were examined in the context of typical development (TD). Categorical and dimensional analyses were used in Study 2. First, a 2 (ADHD yes/no) x 2 (RD yes/no) factorial design was used to investigate time perception, executive function and phonological skills in children with ADHD and RD. Second, the cognitive and behavioral correlates of time perception in the clinical groups were examined.

Time perception was found to be related to TD-children’s working memory skills. Duration discrimination was associated with TD-children’s reading skills, although this relationship was mediated by working memory. A double dissociation between the cognitive profiles of ADHD and RD was found. Children with ADHD performed more poorly than children without ADHD on all the measures of time perception and measures of executive function, whereas RD was associated with deficits on measures of phonological skills and the duration discrimination task. However, dimensional analyses suggested that poor performance on this task was primarily associated with symptoms of ADHD and not symptoms of RD. The results are considered in relation to theories of ADHD and time perception. The findings are discussed in light of current explanations of the comorbidity between ADHD and RD and directions for future research are presented.

This thesis considers the role of lexical phonological representations in new word learning in adults (typical adults and adults with dyslexia) and typically developing children.

Firstly, this thesis extends the work of Gaskell and Dumay (2003) by examining the time course of lexical learning in adults with dyslexia and typical adults. Utilizing a pause detection task (Mattys & Clarke, 2002) Gaskell and Dumay found that a measure that a new word (e.g., cathedruke) has been integrated in lexical memory is the extent to which it engages in lexical competition with existing lexical representations (e.g., cathedral). Findings suggest that lexical learning in adults with dyslexia is significantly slower in comparison to typical adults, and is attributed to poorly specify lexical phonological representations in long-term memory storage.

Secondly, this thesis examines the influence of neighborhood density (i.e., long-term representations) on new word learning utilizing the paired-associate learning paradigm (i.e., a novel word paired with novel visual and auditory referents). Behavioral accounts of language processing (e.g., Vitevitch & Sommers, 2003) and memory (e.g., Roodenrys & Hinton, 2002) show that lexical representations influence processing. Words from dense neighbourhoods tend to be produced more quickly and are recalled better than words from sparse neighborhoods, as words that have many phonological neighbors tend to receive greater activation than words that have fewer phonological neighbors. Taken together, these findings suggest that to some extent neighborhood density influences the initial stages of word learning in adults. The findings also suggest that performance on language processing and memory tasks are dependent on well-specified representations, and that under-specificity of these representations may account for difficulties experienced by people with dyslexia on tasks dependent on phonological knowledge (e.g., language learning).

Finally, this thesis investigates the role of neighborhood density in word learning in typically developing children and examines the relationship between word
learning, reading, phoneme awareness and naming speed in these children. This thesis proposes that the word learning deficit reported in dyslexia is attributed to an underlying impairment in their lexical phonological representations.


Effective teaching skills consist of high levels of student engagement based on good classroom and time management skills; the ability to scaffold learning that is adapted to students’ current levels of understanding; cognitively engaging students in higher-order thinking; and encouraging and supporting success. The research reported here suggests that in elementary classrooms, effective teaching skills are effective for all students, both with and without special education needs.

Drawing on a research program extending over nearly two decades, researchers make the case that effective inclusionary practices, and therefore overall effective teaching, depend in part on the beliefs of teachers about the nature of disability, and about their roles and responsibilities in working with students with special education needs. Elementary classroom teachers who believe students with special needs are their responsibility tend to be more effective overall with all of their students.

The implications for these findings are considerable for teacher training and development. Little is known about how skills for effective inclusion are developed, or about how changes in teachers’ beliefs about disability, ability and their epistemological beliefs may be reflected in changes in their practices. The literature on these topics is examined and implications drawn for teacher preparation for inclusive classrooms.
Sharma Vijay Shankar (2008), Ph.D. “A Study to Develop a Program for Improving Braille Reading Behavior of Visually Impaired Children—Testing its Efficacy”

Braille is the script used by visually impaired persons to read the text material through touch. There were many scripts and modes of reading for visually impaired persons before dawn of Braille. But this script was found the best suitable to perceive by visually impaired persons. The script was developed by a French citizen named Louis Braille in 18th century by getting the idea of dot system of Charles Barbier. Till February 1951 there were many scripts in use depending on the regional difference and their developer in India. Braille created its own stand as prime reading medium not only in India but also in the world. Realizing Braille’s classical, literal and educational values, many researches were drawn to study different aspects of this reading system in detail. In spite of different studies, reading speed of Braille in this country as well as in the world was coming down drastically. Unfortunately there were no studies conducted in this country to suggest the measures of enhancing the reading speed of Braille.

One common fallacy was found that Braille training should be given to only poor Braille readers. But on the contrary such type of training should be given at a beginning level of Braille readers so that the Braille readers perform better in their Braille reading and desired outcome can be obtained through proper training of Braille reading at elementary level. In the present study some measures were suggested to prepare Braille learning material for young visually impaired children. These methods and techniques suggested in the study can provide help in preparing Braille learning material and thus Braille reading speed can be improved.

Mel Ainscow, October, 2004, Developing inclusive education systems: what are the levers for change?

This paper argues that inclusion is the major challenge facing educational systems around the world. Reflecting on evidence from a program of research carried out over the last ten years, it provides a framework for determining levers that can help to ease systems in a more inclusive direction. The focus is on factors within schools that influence the development of thinking and practice, as well as wider
contextual factors that may constrain such developments. It is argued that many of the barriers experienced by learners arise from existing ways of thinking. Consequently, strategies for developing inclusive practices have to involve interruptions to thinking, in order to encourage an exploration of overlooked possibilities for moving practice forward.

Four key elements have tended to feature strongly.

**Inclusion is a process:**

That is to say, inclusion has to be seen as a never-ending search to find better ways of responding to diversity. It is about learning how to live with difference, and, learning how to learn from difference. In this way differences come to be seen more positively as a stimulus for fostering learning, amongst children and adults.

**Inclusion is concerned with the identification and removal of barriers:**

Consequently, it involves collecting, collating and evaluating information from a wide variety of sources in order to plan for improvements in policy and practice. It is about using evidence of various kinds to stimulate creativity and problem-solving.

**Inclusion is about the presence, participation and achievement of all students:**

Here ‘presence’ is concerned with where children are educated, and how reliably and punctually they attend; ‘participation ‘relates to the quality of their experiences whilst they are there and, therefore, must incorporate the views of the learners themselves; and ‘Achievement’ is about the outcomes of learning across the curriculum, not merely test or examination results.

**Inclusion involves a particular emphasis on those groups of learners who may be at risk of marginalization, exclusion or underachievement:**

This indicates the moral responsibility to ensure that those groups that are statistically most at risk are carefully monitored, and that, where necessary, steps are taken to ensure their presence, participation and achievement in the education system.
Alyson Adams, Elizabeth Bondy, & Karen Kuhel, Preservice Teacher Learning

In an Unfamiliar Setting In this study researchers approached pre service teacher learning in an early field experience from a social constructivist perspective, recognizing that learning is shaped by a variety of factors and forces that come before and that exist in and around the activities in which people engage This study was based on the Bright Futures Mentoring Project (BF), the first field experience in a unified elementary and special education teacher education program at a large university.

The mentoring project is a collaborative effort between the university and a local housing authority and has been supported by grants from the U.S. Department of Housing and Urban Development since 1991. Mentor-child pairs meet twice a week for an hour each at a local school or a community center within each of six public-housing neighborhoods. The program aims to help bolster children’s school performance while giving PSTs the opportunity to develop intercultural competence, commitment to teaching low-income and minority children, and awareness of teaching skills During the semester that students participate in BF, they are enrolled in four core courses: (1) Teachers and Learners in Inclusive Classrooms; (2) Family and Community Involvement in Education; (3) Child Development for Inclusive Education; and (4) Children’s Literature in Childhood Education.

The teacher education program is designed to prepare teachers with a dual emphasis in elementary education and mild disabilities as well as expertise with students who are English Speakers of Other Languages (ESOL).

Findings

Pre service teachers (PSTs) responded to the BF experience in a variety of ways that we characterized as follows: Resistance, Heightened Awareness, Conscious Openness, Knowing Children as Learners, Cultural Responsivity, Insights into Oppression, and Passion and Commitment. Names for the second and third responses are borrowed from Brown and Kysilka (2002), who described a process that teachers
must go through to apply multicultural and global concepts in classroom teaching. Researchers present them in an order that aligns with the teacher education program goals of helping teachers (a) create supportive and productive environments for diverse students and (b) work with school personnel, families, and communities to educate all children. That is, while the first kind of response, Resistance, represents considerable distance from the aims of the teacher education program, the seventh kind of response, Passion and Commitment, is closer to those aims.

**Myung-Sook Koh, Janna Siegel Robertson, Janna Siegel Robertson,(2003), School Reform Models and Special Education.**

In an investigation of three comprehensive school reform models, Accelerated Schools, Roots and Wings, and Voices of Love and Freedom, teacher surveys were collected and analyzed to determine their impact on special education. There were no differences found in the special education teachers' perceptions of the models in the areas of professional development, resources, pedagogical changes, or outcomes. Teachers reported that there was increased inclusion and social interaction for special education students as well as some accommodations for students' learning needs. Weaknesses identified in implementation included a fast-paced curriculum and lack of modifications for special education students. Although the literature on these school reform models promises to improve the learning of all students at the school, especially at-risk students, the special education teachers in the urban school district gave mixed views on whether implementation of their school's model was of great benefit to their students.

**Munde Rajashree, (2003). Ph.D., Developing a self-study package in computer education for slow learners.**

Main objectives of the research are; 1- To develop a self-learning package in computer education for slow learners. 2- To study the effectiveness of this package on slow learners.

Method used is experimental design with purposive sampling. statistical tools –t-test and f-test.
Conclusions- There was a significant difference in achievement of slow learners of controlled group and experimental group.

Sir Shapurji Billimoria Foundation, Mumbai, Maharashtra,

The Sir Shapurji Billimoria Foundation in Mumbai is an example of an innovative teacher development initiative. Sir Shapurji Billimoria Foundation was registered in 1998 with the aim of training general teachers to meet the needs of children with disabilities. The objectives of the organization are as follows:

- To humanize education by promoting awareness, acceptance and feasible techniques for inclusive education.
- To conduct professional training courses in inclusive education for teachers and allied professionals as well as needs-based workshops for parents.
- To conduct research and documentation in inclusive education and related educational issues.
- To promote inclusive education by networking with educationists and organizations in India and abroad.
- To influence educational and social policy on inclusive education at local, national and international levels.

Training course: The organization has conducted three three-week training courses for in-service teachers in Mumbai. Teachers felt that there was a need for more such courses as it helped them in their classroom practice. Since teachers could not be away from school for long, it was suggested that weekend training modules could be implemented. The organization also conducts research in education, learning styles and allied educational issues that include documentation.

The innovative features and thrust areas of the course include the following:

- Knowledge of diverse needs, disabilities and giftedness.
- Skills to develop appropriate programs for diverse needs.
- Adoption of an eclectic approach to ideologies and teaching methodologies.
- Ability to teach at elementary level in multiple settings.
- Integration of different disciplines—medical, paramedical, therapeutic, social sciences, psychology, human development and related professions.
- Development of resource centres in each school (for course material, project material, reference material, books, journals, etc.).
• Emphasis on individual learning, group assignments, self-study and discovery learning.
• Inculcation of humanism, sensitivity, inquiry and creativity.

The teacher training program, which follows the above curriculum, ensures that teachers are able to facilitate the learning of all the children in the classroom. The principles of inclusion are followed, and practical experience as well as exposure to various methodologies is emphasized along with participatory learning. The course is evaluated, reviewed and revised periodically.

**Joyful Inclusion Pack, CBR Network, Bangalore, Karnataka**

CBR Network is an example of a community-based initiative that undertook to train general teachers in 30 rural government schools in Karnataka in inclusive education. Materials were developed for this training at a 10-day workshop attended by NGOs, special educators, general teachers, education experts, and education department officials. The concepts of the NCERT curriculum were broken down into sub-concepts and learning outcomes to devise a curriculum based criterion-referenced checklist. The learning outcomes were simplified to ensure that any child could achieve them. Multi-sensory materials and child self-learning activity cards were also prepared. An evaluation format that could be understood by all, including parents with limited education, and that only took into cognizance the individual development of the child compared to his/her previous learning was designed. These materials together formed the Joyful Inclusion Pack.

Thirty teachers were then trained in the use of the Joyful Inclusion Pack over five days.

**The course consisted of the following:**

• Familiarizing teachers with the Joyful Inclusion Pack and particularly the curriculum-based criterion-referenced checklist.
• Skills training in developing activity cards for children.
• Training in evaluating the baseline learning level of children.
• Training in generating and maintaining individual files consisting of the baseline, the individual education plan—annual, half-yearly, monthly, weekly and daily—and the evaluation format.

• Training in classroom methodology adaptations to make the learning experience joyful.

• Training in physical adaptations to classrooms to make them ideal for all children.

• Training in ensuring community participation.

• Training in collection, labeling and use of teaching-learning materials.

The curriculum was again developed on the NCERT curriculum, including its concepts, sub-concepts and learning outcomes.

**Achievements**

The materials developed for teachers in both English and Kannada are a major achievement. The training manuals, developed for training master trainers as well as general teachers, have proved useful. Teachers have been trained in the use of the methodology developed in the Joyful Inclusion Package. Feedback from teachers based on the criterion-referenced checklist indicates that the learning levels of all children have increased as a result of this methodology being adopted.

**Limitations**

The Plus Curriculum Pack has still to be field-tested for its effectiveness. Teachers have not been given training in the plus curriculum concepts. The Education Department had to implement various other projects such as Chaitanya, Janshaala, and Kali Nali. Teachers underwent many training programs, and the time to implement learning from training was limited. The Joyful Inclusion Pack requires motivated teachers who are interested in teaching children, including children with disabilities.

**Sri Ramakrishna Mission Vidyalaya and IHRDC, Coimbatore, Tamil Nadu**

Sri Ramakrishna Mission Vidyalaya in collaboration with Action Aid in Karamadai Block of Coimbatore District. Resource teachers and general teachers implement the program. About 245 children with special needs have been identified, and 127 of them are attending regular schools; an additional 43 have been integrated. About 41 children are undertaking a home-based program, and 34 are yet to be admitted. Aids and appliances have been given to 42 children.
The program has been mostly effective. Classmates of children with special needs enjoyed their company, and helped them in many ways. More learning aids would help children with special needs. Teachers are happy that children with special needs learn well. The curriculum could be more child-friendly. General teachers would like more training on handling children with special needs. The supply of resource teachers is limited.

Giangreco Michael F., Backus Linda, Eileen CichoskiKelly, Paraeducator Training Materials to Facilitate Inclusive Education: Initial Field-Test Data

This study presents initial field-test evaluation feedback on training materials designed to help prepare Para educators to assist in the provision of special education in inclusive schools. Feedback was collected from 213 Para educators who participated in the course, Para educator Entry-Level Training for Supporting Students with Disabilities, 105 who participated in the course, Supporting Students with Challenging Behaviors: A Para educator Curriculum, and the 23 instructors who taught a combined total of 20 sections of these courses in a variety of formats (e.g., face-to-face, interactive TV, intensive summer institute). Findings indicated that Para educators gained new knowledge, perspectives, and skills that had direct application in their work. Both Para educators and course instructors rated the materials favorably and provided feedback to improve them. Implications are offered for infusing Para educator content into school-based staff development as well as training programs for prospective special and general education teachers.
Whitworth Jerry W. Ed. D. (1999), A Model for Inclusive Teacher Preparation

Electronic Journal for Inclusive Education.

Figure 4: Inclusive Teacher Preparation Model

This model provides a framework for developing and implementing a teacher education program that will prepare teachers to teach in inclusive educational settings. There are two major dimensions of the model. One deals with the outcomes of the model and the other focuses on specific program components. Both of these dimensions will be discussed and then some ideas will be presented on the process for implementing this model within the context of the college/university environment.

Program Outcomes - To be effective an inclusive teacher preparation program must instill in the preservice teacher an understanding and appreciation of diversity. In general, most educators, and that includes teacher educators, have not had a great deal of experience in teaching students with diverse needs and abilities. That is because when we went to school, and when many of us taught in the public schools, these students were segregated from the general education setting. Many individuals coming into preservice training programs have had limited experiences with special needs children. Exposing preservice teacher candidates early and often
to situations involving individuals who are uniquely abled and who have different learning styles and needs, can assist with this. Teacher trainers also need to mirror inclusive practices and accommodate for diversity in their classrooms. Most teachers have a narrow range of diversity with which they feel comfortable. Expanding that comfort level is essential if teachers are to be successful in teaching to the wide range of diverse abilities present in today's classrooms. Preservice teachers must also become comfortable with change and they must learn early in their preparation to be flexible and creative.

Preparing teachers at the preservice level to teach in inclusive settings is essential if our schools are to truly teach all students in inclusive, collaborative, and diverse settings. To accomplish that we must start designing and building an atmosphere of collaboration and inclusiveness at the preservice level, as well as practices that demonstrate to prospective teachers the possibilities and promise of an inclusive world.

**Michaels Peterson, Kim S. Beloin, (1998), Teaching the Inclusive Teacher: Restructuring the Mainstreaming Course in Teacher Education.** Inclusive education for students with disabilities, as a component of school reform, is increasingly connecting to efforts to integrate diverse students in general education classes. These include students who are gifted and talented, who have limited English speaking abilities, and who are from various racial and ethnic groups. Teacher education programs must respond more effectively to these changes in schools by providing more effective preparation related to teaching truly diverse students in general education classes. Many complex issues are involved in this process. However, faculty members can make an important step towards responding to these needs through a simple mechanism—the restructuring of the typical "mainstreaming course." This article describes the experience of two faculty members, one at a teaching university in central Wisconsin and the other at a research university in Detroit, Michigan, regarding their experiments in restructuring this course and their responses from university students. Their experiences may provide a model upon which individual faculty can lay the foundation for change in their own departments while meaningfully enhancing the preparation of teachers in training.
2.6- Inclusive Education and social constructivism:

Social constructivist approach will help the teachers to create an inclusive classroom environment for students with different abilities. Important concepts in social constructivism such as collaborative social interaction, building supportive communities, capacity building and experience based learning, zone of proximal development, etc. can be successfully used in planning, developing and practicing inclusive Education Program for teachers.

Innovations in teacher education; Chapter -1, Toward Social Constructivism in Pre-service Education; 2006 State University of New York press State Albany.)

Social constructivism can provide crucial direction for pre and in service education for teachers. When we look for the education of teachers regarding inclusive education, social constructivism can be one of the important theories used for teacher education. A central reason for fostering social constructivism in pre-service education is to help make teaching a most attractive and respected profession.

Jane M. Leatherman ,(2007), I Just See All Children as Children”: Teachers’ Perceptions About Inclusion, The Qualitative Report

This study investigated early childhood inclusion teachers’ perceptions of their classrooms and the factors that influence that success. Views of teachers are supported by Vygotsky’s social constructivist theory that states that we construct our world as a result of the social experiences we have had and shapes our reality as we see it. So, each person has a unique perception of his or her world based on the interactions. These participants were chosen based on their self-proclaimed positive view of inclusion. The words presented in this paper are the teachers’ views of their classrooms; they all feel the inclusive classroom is a great place for children and teachers. When it comes to factors that have influenced their perceptions, one area is the lack of appropriate training for working with children with special needs.
The teachers feel they are successful with the inclusive classroom, but still need more training. The participants feel there are multiple avenues for support from administrators, peers, therapists, and agencies. Additionally, they feel that as a result of the previous positive experiences in the inclusive classroom, they are more likely to encourage or even seek out an inclusive classroom because they see many benefits for themselves as teachers and the children. These teachers believe they make a major contribution to the children in their inclusive classrooms and their narratives ring true to their beliefs. These teachers echo the sentiment, “inclusion means we all belong”.

Carlsona Helen L., From Practice to Theory: a social constructivist approach to teacher education

In contrast to a theory-to-practice teacher education program path is a social constructivist approach to teacher education, in which grounded theories are: (1) developed (individually and in small and large groups) based on information gathered from the world of practice, (2) compared and contrasted with already published theories and research, and (3) integrated with personal philosophies and values. Based on the grounded theories, ‘models’ of early childhood programs are then developed in groups. This article will present the effects of the social constructivist/grounded theory framework used in a beginning early childhood teacher education class. From inductive analyses of the data sources (on-site observation and interview data, initial theories developed in small/large-group discussion, critical reading information summaries, individual reflection papers, model program creations), six themes emerged: respectful interactions and environments, parent partnerships, diversity, connections between early childhood and elementary education, seeing issues from multiple perspectives, and early childhood education as a force for change. These themes were then connected to already publish literature on constructivism and grounded theory, raising further questions for study about teacher education and teacher thinking.
Zozakiewicz Cathy and Rodriguez Alberto J. (2006), Using Socio
transformative Constructivism to Create Multicultural and Gender Inclusive
Classrooms: An Intervention Project for Teacher Professional Development.

Maxima was an intervention project that focused on assisting teachers to establish
more inquiry-based, gender inclusive, and culturally relevant learning
environments. It grounded the project by using socio transformative constructivism
as a theoretical framework to steer the implementation of three guiding concepts
for professional development. These guiding concepts were: (1) Being Responsive
and Theoretically Explicit; (2) Providing On-going and On-site Support; and (3)
Reflexive Approaches to Collaboration. Analysis of multiple data sets gathered
during the first year of the project indicated that most of the teachers responded
positively to the proposed guiding concepts and significantly changed their
teaching practice.

for students with mild mental retardation.

This study investigated the effects of a constructivist mathematics intervention for
students with mild mental retardation. The findings reveal that students improved
significantly during the training period. However, students who received directed
instruction showed greater improvement than students who had received guided
instruction. These results show that students with MMR can profit from
constructivist instruction, although direct instruction seems more effective.
Wink and Putney, 2002 gives social constructionist perspectives across various elements of classroom actions as,

**Table 8: Social constructivism**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Vygotsky social constructionism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Changing body of knowledge mutually constructed with others</td>
</tr>
<tr>
<td>Learning</td>
<td>Collaborative construction of socially/culturally defined knowledge and values</td>
</tr>
<tr>
<td>Teaching</td>
<td>Co-construct knowledge with student expertise and understanding.</td>
</tr>
<tr>
<td>Motivation</td>
<td>Collective and individual development through collaboration.</td>
</tr>
<tr>
<td>Role of teacher</td>
<td>Mediator, mentor</td>
</tr>
<tr>
<td>Actions</td>
<td>Construct with students’ opportunities for interacting with meaningful ideas, materials and others.</td>
</tr>
<tr>
<td>Role of peers</td>
<td>Assume part of knowledge construction, contribute to definition of knowledge, and help define opportunities for learning.</td>
</tr>
<tr>
<td>Role of student</td>
<td>Active thinker, explainer, inquirer, interpreter, active social participator.</td>
</tr>
<tr>
<td>Evidence of learning</td>
<td>Process of inquiry, socially competent participation in the collective performance,</td>
</tr>
</tbody>
</table>

(Adapted from Wink and Putney, 2002, p.33),

**Lev Vygotsky (1896 - 1934), Social Constructivism Theory**

In a Vygotskian classroom, four principles always apply:

1. Learning and development is a social, collaborative activity
2. The Zone of Proximal Development can serve as a guide for curricular and lesson planning
3. Classroom activity should be reality-based and applicable to the real world
4. Learning extends to the home and other out-of-school environments and activities and all learning situations should be related.

2.7: Instructional systems Design:
Many models of instructional design have been developed suitable for various instructional purposes and by differing levels of expertise of instructional designers. Review has been done in this respect and the most suitable model was selected.

One of the objectives of her research was to develop an ICT based model of curriculum transaction integrating the theory of constructivism, active; student centered, collaborative learning, self-learning justified use of ICT.
Researcher has used ADDIE (Analysis, Design, Develop, Implementation, and Evaluation.) instructional design model to develop to design the instructions.
Findings The ICT based model of curriculum transaction based on ADDIE model is more effective on teacher trainee achievement than traditional method.

The skills for effective teaching were investigated among elementary teachers working in inclusive classrooms to determine whether the appearance of ‘constructivist’ skills are independent of, or follow from the mastery of teaching behaviors that are more transmissive in nature. The data were extracted from the Classroom Observation Scale (COS) (Stanovich, 1994; Stanovich & Jordan, 1998) based on half-day observations of 63 teachers. Using a canonical discriminant functions analysis, a set of COS items distinguishing effective from less effective teachers was identified. The sequence of instructional practices appears to be cumulative rather than differentiated. Patterns of teaching behaviors were consistent across the range of students in the classrooms, with some evidence that academically ‘at risk’ students received less teacher attention and differentiated instruction than students with and without disabilities.
ONO, Tomonori, Graduate School of Education, International Christian University

The following scores were obtained for the 6 models reviewed: the ADDIE Model (0.83), Gerlach and Ely’s (1980) Model of Instructional Design (0.67), Keller’s (1984) ARCS Model of Motivation (0.83), Dick and Carey’s (1996) Systems Approach Model for Designing Instruction (0.67), Smith and Ragan’s (1999) Instructional Design Process Model (0.67) and Morrison, Ross, Kalman and Kemp’s (2011) Instructional Design Plan (0.83). The results indicated that 1) simple structural designs with a functionality score of 0.83 were more likely to offer better support to experienced practitioners, and 2) complex structural designs with a functionality score of 0.67 were more likely to offer better support to inexperienced practitioners. Based on these findings, a new ID model was developed for usage in medical English education settings in Japan.

Conclusion

Overall, the model provides an initial ID framework to base the instruction of medical English as encountered in Japanese medical schools. It offers inexperienced practitioners potential support when designing and developing instruction for EMP, through its prescriptive orientation and procedural structure. Its design was based on components derived from an analysis of six different ID models.

Patrick Chadd & Sandi McGuire - 2010 – INSDSG 619

The Jerold Kemp instructional design method and model defines nine different components of an instructional design and at the same time adopts a continuous implementation/evaluation model.

Kemp adopts a wide view; the oval shape of his model conveys that the design and development process is a continuous cycle that requires constant planning, design, development and assessment to insure effective instruction. The model is systemic and nonlinear and seems to encourage designers to work in all areas as appropriate (Steven McGriff).

The model is particularly useful for developing instructional programs that blend technology, pedagogy and content to deliver effective, inclusive (reliable) and efficient learning.
There are nine basic steps in "comprehensive instructional design plan“.

1- Identify instructional problems, and specify goals for designing an instructional program.
   - Needs Assessment
   - Goal Analysis
   - Performance Assessment

The instructional design process is based on heuristics. Heuristics are general rules or guidelines that we follow to solve a problem. They are flexible, and we can modify them with experience. This step will identify the direction and/or scope of the project.

2- Examine learner characteristics that should receive attention during planning.
   - Learner/Audience analysis
   - Contextual analysis

Having the proper information on your audience and facilities can help you design a more effective lesson. This step identifies the constraints and concerns that need to be addressed.

3- Identify subject content, and analyze task components related to stated goals and purposes.

Task analysis is the process instructional designers use to determine the content to include in the instruction. It is a way of limiting the information needed to just the information our learner needs to achieve the goals and alleviate the instructional problem.

4- State instructional objectives for the learner.

   This step identifies the objectives for the course and the learner and also how to teach the content of the course.

5- Sequence content within each instructional unit for logical learning.

   Appropriate sequencing can make the difference between an easy to comprehend lesson and difficult to comprehend lesson. Careful consideration of your content and your learners will help you identify appropriate sequencing strategies that can enhance learning and motivation.

6- Design instructional strategies so that each learner can master the objectives.
Good instruction involves more than presenting content to our learners. As instructional designers we must determine ways to present the information in an understandable form and then methods to engage the learner so that they process the content and relate it to other information that they have learned.

7- Plan the instructional message and delivery.
Effectively enhance the information that goes into your instructional unit by finding the best fit between the goals, the content, and the learner.
Judicious use of signal words, pictures, and typography to highlight important points for the learner

8- Develop evaluation instruments to assess objectives.
Evaluation is an important part of the instructional design process and is used to determine if it works and if it continues to work.
Evaluation not only tells us if the students have mastered the objectives, but can also help us identify problem areas.

9- Select resources to support instruction and learning activities.

Figure 5: Kemp’s Instructional Design

Results from the research showed that the instructional materials employing ID theories, models and learning theories are more effective in acquiring correct understanding of concepts. These results also showed that the emphasis on the ID theories, models and learning theories in designing instructional materials is important as it gives more meaningful learning to the students. Hence, educators and instructors have to take into consideration ID principles when they are designing material for the purpose of instruction.

**Table 9: Differences between ID Models Based On Their Characteristics of Content**

<table>
<thead>
<tr>
<th>ID MODELS</th>
<th>CHARACTERISTICS OF CONTENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADDIE</td>
<td>A general purpose model, most useful for creating instructional products, also applicable for program design</td>
</tr>
<tr>
<td>Dick &amp; Carey</td>
<td>Applicable across as range of context areas and users</td>
</tr>
<tr>
<td>Hannafin &amp; Peck</td>
<td>Simple but elegant in the way in which all three phases are connected to evaluation and revise</td>
</tr>
<tr>
<td>ASSURE</td>
<td>It assumes that instruction will not be delivered using lecture/ text book only. It allows for possibility of out of class resources and technology</td>
</tr>
<tr>
<td>Knirk &amp; Gustafson</td>
<td>A small scale model that can be used for individual lessons or units</td>
</tr>
<tr>
<td>Jerold Kemp</td>
<td>Most useful for large scale programs involving groups of people and multiple resources; focus on content analysis</td>
</tr>
<tr>
<td>Gerlaxh-Ely</td>
<td>Well suited to K-2 and higher education.</td>
</tr>
</tbody>
</table>

Dr. Thotsapon Sortrakul and Nida Denphaisarn, The Evolution of Instructional System Design Model.

The intention of this paper is to present the evolution of Instructional System Design Model which has been developed in different period of time. And also present the development of a NIDA – New Instructional Design for Advance
Learning is the framework which was developed in accordance with the ADDIE model and DISC Behavior model. Its goal is to provide the educator with framework that can help them develop more effective e-learning system. The simulation of NIDA implementation is given and the prototype that simulate how to improve the system design by using NIDA also present in this report.

The model discussed here is Jerold Kemp Model. This model takes an holistic approach to instructional design which focuses on analogies and discovery type learning. Kemp utilizes all factors in the learning environment including subject analysis, the learners characteristics earning objective teaching activities, recourses which will be utilized, support services requires as well as evaluation. This model allows for constant revision to occur.


In the above research, researcher selected 82 L.D.children using random sampling technique. Researcher used equivalent group design (41+41). The experimental group who studied according to the video assisted instruction. The controlled group studied with a regular convention method. The pretest was conducted for both the groups. After the, treatment posttest was conducted immediately. The retention test was conducted for both the groups after a month. The investigator applied differential analysis technique. He found that VAI facilitated for the LD children in learning science concepts than their counter parts in conventional teaching method. His research findings summarized that VAI can greatly enhance the learning of science concepts for LD children.

Contribution to the present research: Review about instructional system design helped researcher in selecting the most suitable design. As, Kemps design is useful for planning and designing instructions on a large scale, involving group and including multiple resources.

2.8: ICT and Inclusion of differently abled students:

The way students learn is fundamentally changing. A flexible blended classroom model is replacing the one-size-fits-all classroom approach that was confined to set hours and locations. Teachers are using digital technologies to engage students
with more personalized learning experiences. Differently abled Students can use a variety of assistive technologies in order to be an active member of an inclusive class.

Andreja Istenic STARCIC, (2010), Educational Technology for the Inclusive Classroom. TOJET:

This paper presents and evaluates the development of an educational technology curriculum aimed at pre-service, primary education and undergraduates; the focus is on the incorporation of ICT competences for inclusive education. The framework was the introduction of SEVERI e-learning environment in Slovenian schools. Students were able to monitor the development and implementation of SEVERI tools for special needs pupils in Slovenian schools, and plan teaching and learning in SEVERI within their course project work. Within an educational technology curriculum, a competence framework was developed for fostering the use of ICT in the teaching of, and learning by, special needs pupils. In pre-service teacher education in educational technology, the focus is on inquiry based learning, and on planning and incorporating the innovative use of ICT into teaching; the emphasis is also on enhancing the student teachers’ competences for his/her own professional development. In focusing more specifically on the use of ICT for special needs pupils, the aim is to carry into effect the principles of equality, diversity and inclusive education.
Table 10: ICT for Inclusive classroom Project work structure

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Authentic cases</td>
<td>Integral treatment of processes was based on the authentic cases from practice. Teacher-educator included and treated topics, presenting cases from practice. Students linked the topics to their own experiences during presentation and discussion.</td>
</tr>
<tr>
<td>2</td>
<td>Idea development</td>
<td>The students developed an idea for ICT use for inclusive classroom, aiming at autonomy, inquiry, creativity, and innovation.</td>
</tr>
<tr>
<td>3</td>
<td>Idea communication</td>
<td>Students presented and discussed the idea with the other students in the group and with colleagues in their school environment.</td>
</tr>
<tr>
<td>4</td>
<td>Lesson planning</td>
<td>Students designed lesson plan including learning objectives, teaching and learning methods, cross-curriculum application, participatory production of learning materials with pupils.</td>
</tr>
<tr>
<td>5</td>
<td>Learning material design</td>
<td>Students designed the learning materials required for dealing with the topic and incorporated them into the SEVERI learning environment. They involved their pupils into the preparation of materials</td>
</tr>
<tr>
<td>6</td>
<td>Lesson performance</td>
<td>Lesson performance took place during the regular lessons in classes taught by part-time students – teachers.</td>
</tr>
<tr>
<td>7</td>
<td>Project exchange</td>
<td>Lesson plans and learning materials were opened in SEVERI system for teacher exchange.</td>
</tr>
</tbody>
</table>
Benigno Vincenza, Bocconi Stefania and Michela Ott CNR, Inclusive education: helping teachers to choose ICT resources and to use them effectively

This paper looks at the issue of school inclusion by referring to the concept of Universal Access to Education. It focuses on the strong potential Information and Communication Technologies (ICT) provides to avoid any kind of discrimination among students. The paper also argues that teachers play a fundamental role in capitalizing the opportunities offered by new technologies to support the full inclusion of all students in mainstream education systems. In this perspective, to view the Universal Access to Education as a concrete and reachable goal, teachers need to be aware of the ICT potential and they must be able to acquire the suitable knowledge and operational skills to choose and use appropriately this type of resources. Findings of the Teachers’ View about new Technologies and Inclusion Questionnaire proposed by ITD-CNR to approximately 300 Italian teachers show that the majority of them (75%) acknowledge that ICT tools and resources may have a great potential to foster and actualize inclusive practices in schools. Notwithstanding this, almost all of them declare that they still need specific information and guidance on how to choose and use the appropriate ICT products to these ends.

Two pilot research projects addressing these needs are presented in this paper. One is designed to provide teachers with full and effective information about the accessibility features of educational software. The other is oriented towards the dissemination of know-how and good practices to support the construction, sharing and reuse of “inclusive” pedagogical plans. Such projects have given birth to two specific online services respectively providing information on the accessibility features of educational multimedia products and bringing to light best practices in school inclusion.

The basic idea is, in fact, that the process of inclusion can be fostered by means of new technological tools, but in turn it requires changes and modifications in educational contents, approaches, structures and strategies.
The Ministry of Human Resource Development has come up with a draft National Policy on Information and Communication Technology in Education which also includes needs of children with disability.

The policy states I.C.T. will help enable schools to achieve inclusive education. Software like screen readers, Braille printers will be part of the I.C.T. infrastructure of all schools. In case of non-availability of resources, web based repositories will bridge this gap. Digital content and resources for students with disabilities, talking books, etc. will be developed and used. Teachers would also be trained to understand the needs of students with disabilities.

Lee lay wah, Development of multimedia learning resources for children With learning disabilities in an undergraduate special Education technology course.

The objective of the course was achieved as the preservice teachers had demonstrated knowledge and skills in developing and evaluating multimedia learning resources for children with learning disabilities. In addition to that, the skills were demonstrated in an authentic technology-supported constructivist learning environment in their teacher education program. The multimedia learning resources developed by the preservice teachers showed promise that those resources can be effective in teaching children with learning disabilities especially in the area of functional academics. The multimedia learning resources were able to allow children to cognitively engage in learning via multiple senses and they were also able to increase motivation for learning. It also showed promise as a reusable tool for individualizing instruction. More research on the effectiveness of using multimedia to teach children with learning disabilities is required. Having gone through the process of developing multimedia learning resources, it is hoped that generalization of learning will occur with the preservice special educators using multimedia learning learning resources as part of their future teaching repertoire.

This article gives a new approach of implementing inclusive practices in secondary schools. According to authors, the mechanisms by which these supports and services are formulated are referred to as inclusive practices. Based on the structure of elementary and secondary schools, inclusive practices must be developed and implemented differently. Secondary schools present a unique challenge for a teacher, which means that service delivery must vary in response to the differing school structure. In this paper Inclusive design is discussed in detail.
### Table 11: Step-by-step Inclusive Design

<table>
<thead>
<tr>
<th>Identify the problem or need</th>
</tr>
</thead>
<tbody>
<tr>
<td>• What are my goals for inclusion?</td>
</tr>
<tr>
<td>• What barriers might hinder my inclusive design?</td>
</tr>
<tr>
<td>• Who or what may help facilitate my inclusive design?</td>
</tr>
<tr>
<td>• Where is this design supposed to happen (in which classroom)?</td>
</tr>
<tr>
<td>• Who is this design supposed to help?</td>
</tr>
<tr>
<td>• When is this design taking place (scheduling)?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Identify the purpose or the function of the system</th>
</tr>
</thead>
<tbody>
<tr>
<td>• How will my inclusive design help my students?</td>
</tr>
<tr>
<td>• How will my inclusive design help other teachers?</td>
</tr>
<tr>
<td>• How will I help my students achieve academically?</td>
</tr>
<tr>
<td>• How will I help teachers develop the skills necessary to facilitate inclusion?</td>
</tr>
<tr>
<td>• How will I address resistance from teachers, administration, or students?</td>
</tr>
<tr>
<td>• How will I ensure that I meet my goals?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Develop design concepts and specifications:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• What things must I have in place for this design to be a success?</td>
</tr>
<tr>
<td>• Who must be on board with this plan?</td>
</tr>
<tr>
<td>• What assistance is needed (person, technology, or materials)?</td>
</tr>
<tr>
<td>• What professional development is required?</td>
</tr>
<tr>
<td>• Will students need to be trained to utilize service delivery?</td>
</tr>
<tr>
<td>• How can I minimize the stigma attached to service delivery?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Build, test, and evaluate the system:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• How is my design working?</td>
</tr>
<tr>
<td>• Are students learning intended concepts?</td>
</tr>
<tr>
<td>• Are teachers able to effectively teach all students?</td>
</tr>
<tr>
<td>• Are we reaching the goals set for our inclusive design?</td>
</tr>
<tr>
<td>• Are there unexpected aspects that may need adjusting?</td>
</tr>
</tbody>
</table>
Contribution to research-

Review regarding ICT and inclusion gives clear idea about the importance of ICT in teaching- learning process of differently abled students. It also focuses on need of more research in development of more ICT tools and techniques that will help all the differently abled students.

2.9: ICT and Teacher Education:

ICT in schools facilitate the application of senses, memory, and cognition, enhance teaching practices, and improve learning outcomes. Research has shown that there is a great deal of apprehension associated with assessing the effectiveness of technology in the classroom and its development of information-age skills.

Bernadette Robinson (2008), Using distance education and ICT to improve access, equity and the quality in rural teachers’ professional development in western China

This paper describes how distance education and ICT improved access, equity, and quality in professional development for rural teachers in one province in western China, viewed through the lens of a ‘rights-based’ framework. The use of distance education and ICT has the potential to distribute opportunities for learning more widely and equitably across the teaching force. It can also improve the quality and variety of the resources and support available to teachers, opening up new avenues to professional development. If social justice is to be achieved however, in terms of equity of educational opportunity and services, the provision needs to be planned in ways that make it available, accessible, acceptable, and adaptable to all teachers and head-teachers, empowering them to make choices in what and how they learn. It also needs enabling policies in support of these aims.


Based on findings from two quite distinct research projects, this paper proposes that the reluctance of some teachers to make ICT an integral part of classroom teaching and learning is, at least partly, a consequence of several factors beyond their control. This reluctance occurs even though most teachers use one more forms of social networking as part of their out of classroom lifestyle. Two
particular examples of teacher reluctance to consider and use ICT as an integral part of teaching are presented and discussed. Both examples arose from recent research projects conducted in Australian schools, and it is argued that the teacher behavior observed could be largely overcome with appropriate professional development.

Cox Margaret, Christina Preston, Miranda Net Project, Kate Cox, (1999), *What Motivates Teachers to Use ICT?*

The authors of the present study have utilized their previous research evidence of motivation and the results of other previous projects to investigate the factors which motivate teachers to use ICT. The findings on teacher motivation presented in this paper are part of the more extensive results of a Miranda Net project, funded by the Teacher Training Agency and Oracle. This project was set up to investigate the factors which have contributed to the continuing use of ICT by teachers experienced in using it for teaching. The evidence discussed in this paper was collected through a literature search, teacher questionnaires, teachers' reports and interviews. The paper attempts to identify common factors that have motivated a range of teachers to sustain their use of ICT in their lessons. Weiner's analysis of motivation research and Ajzen's theories of reasoned action and planned behavior have been used as a basis for the analysis of the results.

Findings show that the motivational factors which correlated most positively with ICT use were: perceived ability to use IT; level of resources available and their satisfaction with IT; and whether using IT in teaching is considered to be interesting and enjoyable. The most significant negative factor was difficulties experienced in using IT. We also found that a whole range of other motivational factors attributed by the teachers to using ICT, such as: making the lessons more interesting for the teacher, increasing pupils' motivation, improving presentation of materials, making the teaching more enjoyable, improving the content of the lesson, and making the lessons more fun for the pupils were considered by the teacher respondents to contribute to pupils' learning.
Wright Pam, Macrow Athena Vongalis, (2001), Integrating ICT in Pre-service Teacher Education Reframing teacher education

An identified aim of the Victorian Essential Learning Standards (VELS) which is currently being implemented within Victorian schools is the integration of ICT learning across the curriculum through interdisciplinary learning. This study examines how lecturing staff in the key learning areas of SOSE, English, Science, Maths and Technology are using ICT in their methodology classes that prepare teachers for their specialised teaching and trials a new method of ICT teaching that aims to equip prospective secondary teachers with the skills and knowledge to effectively integrate ICT in their future practice. Preliminary discussion with method lecturers revealed an uneven use and knowledge of ICT across the key learning areas. Through observation, pre and post-test questionnaires given to students and informal interviewing of the lecturing staff, the study examines the reasons why this may be the case. It raises issues about ICT in relation to key learning areas, prompts discussion on team learning and teaching in relation to ICT, identifies facilitators and barriers to the integration of ICT in pre-service education and proposes recommendations on the design of initial teacher education.


The planning for ICT should be part of and not separate from general education and school planning. The biggest mistake is to think of ICT and its use as an ‘add on’ an extra aspect of the curriculum. The people involved in planning for ICT must be fully integrated into broader education and school reform efforts. Ultimately, the managers of education systems and schools must ask themselves how ICTs support and enable school activities, particularly the teaching and learning process.
Akir, Zaid I., (2006), Ph.D., Impact of Information and Communication Technology on Teaching and Training: A Qualitative Systematic Review.

The thesis investigates Information and Communication Technology systems and their applications and use in teaching and training in Universities and corporations. The aim is to identify and map studies that might shade light on the impact of ICT systems on teaching and training, and to undertake an in depth analysis of the identified literature. The context of the study is growing prevalence of ICT use in academic and corporate training. Managing technological change in organizations is a challenging issue that requires further research in academic as well as corporate settings. A qualitative systematic review has been conducted to develop a framework of integration of ICT into teaching and training into universities and corporations.


Objectives of the research were study of relative effectiveness among peer based learning (PBL) Individualized learning by multimedia presentation (ILMMP), Interactive Individualized learning by multimedia presentation (IILMMP) in terms of development of cognitive skills at different levels of knowledge, understanding, and application among the students of class IX as measured by posttest and retention test. Quasi experimental method was adopted. Sample was 104 girls.

Findings: Interactive Individualized learning supported by multimedia presentation (IILMMP) was found to be the most effective strategy in terms of cognitive skills mentioned. The results of the study indicated that the enhancement in learning chemistry was only due to media effectiveness.

Contribution to research

Similar to learning a new task or trade, special training for teachers is vital to ensuring the effective integration of classroom technology. Changes in instruction and use of technology can also promote a higher level of learning among students with different types of intelligence. Therefore since technology is not the end goal
of education, but rather a means by which it can be accomplished, educators must have a good grasp of the technology being used and its advantages over more traditional methods.

2.10 Conclusion

Review of related literature helped in various ways such as, historical perspectives of the topic, legal issues regarding education of differently abled students, previous researches done regarding inclusive practices in the schools and their views. It also gives idea about the theories involved and research in this area. It gives information regarding various programs developed for inclusion of differently abled students and their scope and limitations. It also gave information about the status of teacher training with respect to inclusion of differently abled students. It gave the plus and minuses of the research done previously. It gave opportunity to fill the gaps in research in this area. The review of literature gave information regarding the suitable content and methodology for the research.