

Development Of Digital-Inclusive Learning (Dil) Theory For Special Education As A Result Of Desktop Analysis Of Special Education Policies And Legislative Covers In Pakistan: A Qualitative Probe

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Abstract

The study is a qualitative probe to analyze special education policies and related legislative covers of Pakistan between 1972 and 2020 in order to jot down objectives of special education policies, identify lacunas in special education field, give recommendations for improving the status of special education, and finally develop a novel learning theory for special education. The study employed qualitative content analysis as a research tool. Participants of the study included human as well as non-human elements i.e. special education personnel and policy documents as well as legislative drafts related to special education. Sample of the study constituted 15 statutory drafts and 14 special education personnel from Sargodha division of Punjab. Researchers utilized Theoretical sampling technique. Triangulation was ensured for data collection using Focus Groups, Face-to-Face Unstructured Interviews and Document Reviews. Constant comparative method of analysis was employed to generate codes, categories and themes. The qualitative research at hand revealed education and rehabilitation of PWDs as key objectives, educational deficits, bad governance and conservatism as lacunas and increasing access and acceptance of PWDs as ways to improve status of special education in Pakistan. Researchers developed DIL-Theory (Digital Inclusion Learning Theory) for effective learning and teaching of CWDs using Grounded Theory as a result of desktop analysis of special education policies and legislative covers in Pakistan.

Key Words: Special education policies; Triangulation; Grounded Theory; Interviews; Focus Groups; Theoretical sampling ;Persons with Disabilities(PWDs);Children with Disabilities(CWDs); Digital Inclusive Learning Theory(DIL-Theory)

Introduction

International discourse, today, revolves around education of children. Pakistan is signatory to

both UNICEF and UNESCO for providing children with services including but not limited to education. UNESCO and UNICEF, as organs of UN, are actively mobilizing governmental

agencies of developing states to improve the educational access of students of all types. Global Annual Results Report 2021 stressed the theme: Every Child Learns.

According to UNICEF Annual report 2021, as many as 42.1 million children including 18.1 million in emergencies received learning materials, 48.6 million children, comprising 50 percent girls, accessed education out of which 31.7 million were children in emergencies. The said report declared that 43 percent countries worldwide have had equitable education systems in place. The total educational expenses incurred on education by UNICEF in 2021 accounted to 19 percent of its total expenditures. All the findings announced by UNICEF emphasize one point unanimously: All Children have a basic right to Education in all conditions. And all agencies, both public and private, are attempting to realize this fact.

As a basic right, access to education must be given to all children (Potamou,2021). Such access must be provided to all children with and without disability (Madani, 2019). Global communities recognize provision of quality education to all children including those suffering from disabilities (Singal, 2019). Education for all (EFA) was considered as a basic human right for all and stressed that this right can't be ensured without facilitating disable population of any state (Rayner,2007). Despite pronounced claims, this basic right has not been provided in true letter and spirit in countries like Pakistan.

The Constitution of Pakistan 1973 stipulates basic human rights of all people regardless of their caste,color,creed,age,sexual orientation, ethnic origin, language and disability through its article number 20(Pirzado,2022). Article 38(d) of the said constitution aims at provision of basic necessities for such citizens who are by one way or other unable to earn livelihood by dint of any impairment, infirmity or unemployment. Article

25(A) of the afore-mentioned constitution bounds State of Pakistan to provide all children of age five to sixteen with free and compulsory education in such a manner as might be determined by law.

Unluckily, not all children are getting equal education on account of many factors. Despite the fact that students are unique and different, they have a moral right to equal and equitable opportunities of education (Metsamuuronen&Lehikko,2022).

Pakistan has, according to recent estimates, more than 3.2 million people with one or other disability (PBS, 2019a). Having signed UN Convention on the Rights of Persons with Disabilities in 2008, Pakistan is attempting for provision of free, compulsory and quality education to students with disabilities. For this purpose special education centers, schools, colleges and In-service training institutes are working through the initiatives of government of Punjab to ensure inclusive education and rehabilitation of students with special needs and disabilities (Nawaz, Fazil, & Ahmed,2021).

All special education facilities in Pakistan are being governed by Ministry of Special Education at national level and by directorates of special education at provincial levels .These regulatory institutes not only provide resources, but also recruit different personnel and professionals including special education teachers to educate and rehabilitate students with disabilities through coordination of multiple arrangements, facilities and services. Majority of disable students of Pakistan don't find enough facilities for education and rehabilitation (Hafeez,2020).

Special education institutes require and are being governed by special education policies and legislative covers. Out of 3.2 million disable population of Pakistan, two thirds live in rural areas, neglected to great extent (Kaseem

,2019). Though, govt. of Pakistan reserved quotas of jobs for disable population but only 2 percent parents of disable population and disable students are satisfied with the way they are being taught in special education sector in Pakistan .People consider incentives for special students in Pakistan to be insufficient(Tassawar& Khurshid,2019).

A significant stock of literature related to special education in Pakistan affirms that disable population is not being motivated and empowered for their contribution to the society they belong to(Hammad,T.2021).Apart from dissatisfaction of disable students, special education teachers have reported that they been found facing challenges in pedagogy while teaching students with special needs and administrative issues impede equitable learning and teaching experiences in special education schools(Aftab, Farooq & Khan,2022).

Dissatisfaction of stakeholders regarding special education services call for a review of special education policies and related legislative covers. Furthermore, it underscores the need to listen to the voice of stakeholders of special education in a pursuit to unfold the potential lacunas and ways to improve the status of special education in Pakistan. It further urged the researchers of the study at hand to initiate the journey of desktop review of special education policies and legislative covers in Pakistan.

Objectives of the Study

The qualitative study at hand pursues following objectives to:

1. determine the objectives of special education policies and respective legislative covers in Pakistan.
2. identify the lacunas in special education field of Pakistan.
3. recommend the ways to uplift the status of special education services in Pakistan.

4. build a novel theory of learning for special students of Pakistan.

Research Questions

To answer following questions, researchers conducted the study.

1. What are the salient objectives behind the formulation of special education policies and related legislative covers in Pakistan?
2. What are the existing lacunas in special education field of Pakistan?
3. How special education field in Pakistan can be improved?
4. How do review of special education policies and qualitative research in this vein can help develop a novel learning theory specifically aimed for differently able students?

Research Methodology

Primarily, this is a qualitative study of descriptive nature .Qualitative Content Analysis Method was employed to examine special education policy drafts and related legislative covers .Special education staff and special education policy documents as well as related legislative drafts constituted the participants for the study. Sample of the study constituted 15 statutory drafts and 14 special education personnel from Sargodha division of Punjab, Pakistan. Triangulation was ensured in data collection methods. Focus group discussions and semi-structured interviews paved the way for cyclic, flexible, and self-correcting approach of grounded theory with no pre-conceived assumptions and hypotheses at the end of researchers.

Theoretical Sampling technique was employed in the study. Four focus groups (each containing 6 members) discussions helped to identify key areas of concern (codes) for special education staff members. To highlight further substantive

areas of concern for special education staff vis-à-vis special Education Policies and Legislations, fourteen semi-structured interviews were conducted with various personnel of special education (five special education teachers, one speech therapist, one psychologist, one vocational teacher, one music teacher, one audiologist, one clerk, two parents of special students and one class-4 employee).

Having identified numerous codes, similar codes were grouped together through manual mapping to identify core categories. Different patterns and themes emerged as a result of an on-going process of comparing and contrasting data with the help of manual informal clustering and mind mapping. Resulting themes were utilized to desk review as many as fifteen statutory documents (Policy Drafts, Acts and Ordinances) related to special education in Pakistan.

Using triangulation, member checking, representative quotations and peer debriefing helped to achieve credibility, dependability and conformability, ultimately lending this research study with validity and reliability. Themes identified by using grounded theory approach were finally utilized by researchers to develop a novel Learning Theory specially tailored for learning and teaching of special students in Pakistan.

Data Collection and Analysis

Data collection and Data Analysis went hand-in-hand as does happen in grounded theory approach. Without preconceived assumptions and hypotheses, researchers, after seeking informed consent, recruited four focus groups for discussions. Each focus group contained 6 members: 4 special education teachers including one teacher of Hearing impaired children; one teacher of visually impaired children; one teacher of physically handicapped children; one teacher

of mentally challenging children; one psychologist; and one headmaster/headmistress. With open minds, focus group discussions helped to identify key concepts to explore data regarding special education policies. Researchers ensured directed discussions around research questions. As concepts/codes started to emerge around research questions, researchers started taking field notes. Further data around codes was obtained with the help of 14 semi-structured interviews. Memo writing by researchers continued throughout data collection and analysis. Co-grouping similar codes helped in generation of core categories. Key codes and categories helped to conduct desk-review of policy documents and legislative drafts for exploring further data around research questions. Glaser and Strauss method of Constant Comparative Analysis (1967) was employed for explicit coding and analytic procedures. Interviews were recorded to be transcribed later. Manifest as well as Latent Analysis methods were utilized to amass surface level data and for interpreting underlying meanings from sampled special education policies and legislative drafts. Data was compared and contrasted with data to generate codes, categories and themes. Writing memos, as an essential part of grounded theory approach, continued throughout data collection and data analysis. Writing memos helped in audit trail later in study. Taking field notes helped to keep track record of codes and categories of data. To avert coding process from becoming biased by personal preconceptions, inter-rater checking and member-checking were used during data collection and data analysis. Focus group discussions, interviews and desk-review of policy documents and related legislative covers continued till the point of saturation.

Findings and Discussion

Researchers of the study ensured recruitment of experts in Four Focus groups, after seeking informed consent from participants. It provided

researchers with insightful discussions in exploring key concepts for the generation of codes about 1) objectives of formulation of special education policies & related legislations in Pakistan; 2) existing shortcomings in special education field of Pakistan ; 3) how special education field in Pakistan can be improved ;4) how can review of special education policies and qualitative research in this regard help in the development of a new learning theory especially for special students?

Concepts or codes generated through four focus group discussions helped explore further codes in fourteen semi-structured interviews. To further explore data around research questions, desk-review of 15 special education policy drafts and legislative covers was conducted. Data collection through Triangulation helped creation of core categories to come up with themes answering research questions ultimately.

Objectives of formulation of Special Education Policies & Related Legislative Covers

Focus groups discussions, semi-structured interviews and review of special education policies and related legislative covers helped to identify key objectives of formulation of special education policies through creation of multiple codes, categories and themes.

Education for PWDs

Education of special students involve factors including but not limited to establishment of schools, provision of books and teaching material, pedagogy, instructional designs, induction of teachers, their trainings, early identification of special students ,their enrollment, assessments and evaluation .

A psychologist, during his interview response, expressed: If we are not putting efforts to identify PWDs at earlier stages, and assess them during

schooling, we are not doing justice with our jobs as psychologists. A teacher of hearing impaired students answered to the question what is the main challenge of your duty: We are supposed to educate CWDs, discourage dropping of already enrolled CWDs and identify new entrants in the community for special schools. Majority of members of focus group discussion held at a govt. special education center opined: Admission, assessment, keeping students enrolled and bringing every early identified CWD into special school are duties of special education staff members. Main purposes of special education as outlined in National Education Policy 1979 are education, treatment and rehabilitation of PWDs.

...Providing equal educational opportunities to all citizens in the light of Quran and Sunnah for socio-economic growth and scientific and technological advancement (National Education Policy,1979).

Going through legislative documents, it became clear that National Education Policy 1972 comprised of plans to open new institutions for PWDs. Apart from this, National Plan of Action for Persons with Disabilities, 2006 pointed out as many as 17 critical areas of intervention from assessment of the magnitude of problem to provide service delivery systems.

Short term objectives of NPA 2006 included but not limited to early detection, institutional interventions, escalating medical rehabilitation services and promoting inclusive education. Similarly, Act of 2018 in Pakistan exclusively aimed at education of PWDs:

The government shall provide free primary to higher education to PWDs (Rights of Persons with Disabilities, ICT Rights of Persons with Disability Act, 2018)

Furthermore, Section 3 of Punjab Special Education Policy 2020 was also found vocal in this regard: The objectives which will help Special education department in achieving its

vision, mission and core values include but not limited to improved access to education for children with special education needs and disabilities.

Rehabilitation

Rehabilitation of special students involves many factors like provision of facilities, rehabilitative measures, decent opportunities of employment and empowerment. Facilities for students with special needs include all those arrangements which facilitate them in one way or other. Parents, during their interviews, stressed the services for their children with disabilities. Father of a physically handicapped girl said: I wish my daughter could get basic know how of Islam, Quran. I say Alhamdulillah as I don't have to pay charges for pick and drop of my daughter. School pays Rs.800 to my daughter every month as a stipend. I wish, government would also provide my daughter with electric wheelchair through school.

A father of student with hearing impairment expressed during his interview: I prefer to send my HIC to special education school as he gets discipline and suitable atmosphere to grow, learn and acquire moral lessons from teachers. The same reflected in National Education Policy of 1972, presented by Zulfiqar Ali Bhutto. The said policy revolved around taking initiatives for education of Special Communities, plans to open new institutes for PWDs. There was focus on Strengthening Existing Institutes for PWDs. In nutshell, the policy was aimed at making PWDs independent and productive citizens of Pakistan.

Equalizing Access to education through provision of special facilities for women, under-privileged groups and intellectually disabled and physically-handicapped children and adults in all areas in general and backward areas in particular (Pakistan Education Policy 1972).

Special Citizens Act 2008 included many provisions to provide PWDs with facilities of access of wheelchairs in all buildings, allocation of seats for special citizens in public transport vehicles and facilities on footpaths. The said act also necessitated providing PWDs with assistive devices.

Reviewing National Plan of Action 2006, it became crystal clear that its long-term objectives focused on creation of barrier free physical environment in all public, private and commercial buildings and public places for PWDs.

A teacher of visually impaired students complained during a focus group discussion: If government is not aimed at empowering VICs through vocational trainings, it is, I am afraid, only providing books to hungry blind persons who are asking for breads. A teacher of hearing impaired expressed his experience in focus group discussion: Hearing impaired students, if will not be provided with sports, will resort to showing anger, boredom and sluggish behavior. I think sports, if arranged regularly, help in rehabilitation of CWDs.

A mother of blind son opined: Vocational trainings, if properly ensured, will help PWDs in getting jobs. A vocational teacher opined: There is the dire need to focus on physical activities of CWDs like sports, knitting work, stitching, beautician work and handicrafts to make these students independent as these activities will help them getting jobs in market after and during study. Review of policy documents revealed that Rehabilitation of PWDs was aimed for in National Educational Policy of 1979.

Providing equal educational opportunities to all citizens in the light of Quran and Sunnah, for socio-economic growth and scientific and technological advancement (National Education Policy, 1979)

As a first constitutional effort, Disabled Persons Ordinance, 1981 also aimed at provision of services like employment, rehabilitation and welfare of disabled population after conducting a detailed survey.

.....to formulate policy for employment, rehabilitation and welfare of disabled persons was a function of National Council (Disabled Persons' Ordinance, 1981).

Areas of focus for PWDs in National Special Education Policy 2002 were sports, recreation and vocational trainings.

Provide access to facilities which may lead to their integration and mainstreaming in all spheres of life (Aims of National Education Policy 2002).

Ensure that they have equal opportunities and access to medical, education, social, psychological, vocational training, employment and rehabilitation, without any discrimination (Objectives of National Education Policy, 2002).

Pakistan also enacted Accessibility Code of 2006, proposed to provide PWDs with convenience and safety at all public areas. Furthermore, infirm and elderly were the very subjects the said code proposed to make independent in all possible walk of life.

Chapter 4 of Accessibility Code, 2006 outlined:....mandatory requirements and design guidelines to provide an accessible physical environment meeting the needs of PWDs for their independence, convenience and safety in all public buildings and areas (Accessibility Code of Pakistan, 2006)

Existing Lacunas in Special Education field of Pakistan

Focus groups discussions, semi-structured interviews and review of special education policies and related legislative covers helped identify existing shortcomings in special

education field of Pakistan through creation of multiple codes, categories and themes.

Educational Deficits

Educational deficits of PWDs include concepts like admission constraints, barriers in the way of education, insufficient professionals, access issues, non-acceptance of disabilities and missing priority areas during the implementation of special education policies in Pakistan.

Members of one focus group discussion held in a public special education center pointed out:

Special educations institutes are few in number, cannot identify and enroll all CWDs, witness frequent drop-outs, don't assess children with special needs sufficiently and appropriately, have few free-of-cost buses and don't conduct disability surveys, resulting into educational deficits for persons with disabilities.

A psychologist reported during interview: How can a single psychologist assess 150 plus special students with multiple disabilities while he/she is getting inappropriate and insufficient In-Service trainings? This is the main problem which results into under-identification, lack of psychometric assessments, poor admission criteria, few enrollments and resultantly academic losses in educational landscape of special education.

Although National Education Policy of 2017 was aimed at providing special education staff with In-service Training, above-shared views of psychologist lamented the insufficiency of in-service trainings resulting into educational deficits.

A music teacher ironically said during his interview: Our job is to unlock yet unexplored potential of visually impaired students through teaching music to them, but department is facing the music on account of having recruited few

music teachers for thousand students. After all, students are at loss educationally.

A junior special education teacher lamented during her interview: Policies of special education appear good only in drafts. Reality suggests otherwise. Directorate does not bother to provide required books timely despite our repeated requests. Student-teacher ratio is nerve-breaking for special education teachers. Curriculum Adaptations are scarce. Special students are not being provided with assistive devices. Monthly stipends for children with disabilities are too low to be incentive tokens for parents of special students. All these factors compound educational losses of differently-able students

Special Citizens Act 2008, although necessitated the provision of assistive devices, above-shared views of junior special education teacher are indicative of non-implementation of Special Citizens Act 2008, resulting into educational losses for special students.

A visually-impaired teacher of VI students criticized referencing National Policy of Special Education 1999: Though, the policy highlighted the need for variation in public attitudes towards persons with disabilities, I am still humiliated by people around me while they call me Andha (Blind) despite the fact that I enable my special students to read in-between-the-lines. I am not called at parties by fellows. I face discriminatory attitude of public against persons with disabilities. I don't find real legislative supports and actual financial concessions which were envisaged in special education policy of 1999. Such sorry state of affairs is indicative of why do special students face educational deficits as PWDs are not accepted in societies we live in Pakistan ,resulting into educational losses for PWDs.

The National Policy for Special Education 1999 highlighted the need for variation in public attitudes towards PWDs and financial concessions for PWDs. But, reality suggests otherwise on account of poor translation of policies into implementation.

Bad Governance and Conservatism

Bad governance and conservatism reflect through multiple inefficiencies in special education field of Pakistan. Budget constraints, age-old transportation, lack of sufficient professionals, lack of provision of rehabilitative services, conservative pedagogical techniques, unsatisfied teachers, lack of culture of accountability and meritocracy, loopholes in administration and management and lack of coordination amongst stakeholders of special education compound the inefficiencies resulting into problems of bad governance and conservatism.

A teacher of physically disabled students complained about scarcity of professionals, teachers and supporting staff in special education centers, pointing out few signs of bad governance pronounced in special education field of Pakistan. She narrated: Insufficient number of speech therapists, psychologists, vocational teachers, drivers, conductors and other supporting staff cause few enrollments, poor educational outcomes, no rehabilitation, least to no empowerment and lack of employability of children with disability.

Physically handicapped by disability, a special education teacher of hearing impaired students expressed many reservations about special education system of Pakistan as is evident in her words: Low budget impedes in the way of educating special students. Transportation issues are unresolved. Poor special students of far-flung areas can't reach special education schools. In special education, there is no focus on sports, financial inclusion, skills-up gradation, extra-

curricular activities, entertainment and rehabilitation to ensure job placements despite objectives and provisions set in various Acts, Ordinances and policies of special education in Pakistan. All these factors are due to inefficient management in Special Education in Pakistan.

National Educational Policy of 2017 stressed the need to allocate 5 percent budget for education of special students, this budget seems insufficient to overcome inefficiencies of the system.

A teacher of intellectually disabled students stressed on unmotivated teachers of special students. He opined: How can we expect special students' empowerment when their teachers are not yet empowered? Teachers have to travel hundreds of kilometers daily to reach to special schools. Special schools don't provide free of cost residential quarters for out-station teachers. Teachers have not voices in policy making circles. Teachers are not being sufficiently trained. Teachers' service structure affords slow promotions. All these factors make special education teachers less-empowered, non-motivated and dissatisfied. Such lack of motivation on the part of teachers reflects in conservative teaching practices of teachers of students with special needs.

A senior clerk declared loopholes in administration liable for poor educational outcomes of special students. He voiced: Loose accountability, poor monitoring system, no checks on attendance of teachers, and corruption in spending of educational budgets are shortcomings which hamper the service delivery and efficient administration and management of human as well as technical resources of special education departments in Pakistan, Members of a focus group extended their observations in following words:

Special students are not reaping fruits on account of absence of collaboration between stakeholders

in the field of special education in Pakistan. There is lack of intergovernmental coordination in special education; no MOUs with TEVTA, no contracts with local, regional and national industrial units, insignificant parental involvement in educational decision making; least collaboration with NGOs and INGOs and lack of cultural exchange program scholarships with the rest of the world for special students in Pakistan. Intergovernmental coordination was envisaged in National Policy for Persons with Disabilities, 2002. Lack of coordination and collaboration between stakeholders is causing bad governance and inefficient implementation of policies in special education in Pakistan.

Section 2 of Punjab Special Education Policy 2020 outlined mission, vision and core values to develop special education department:

Innovation backed by research and development to provide a high-quality educational experience for children with special education needs and disabilities (Section 2, Punjab Special Education Policy, 2020)

However, this mission is yet to be achieved on account of inefficient management, bad governance and poor implementation of policies in Special Education of Pakistan. An audiologist, during his interview response, endorsed this stance: Lack of technological interventions in special education schools, absence of online mode of schooling and lack of e-learning applications for special students manifest conservatism, lack of innovation and research initiatives. This is resulting into bad governance and lowering of efficiency in special education field of Pakistan.

Ways to improve Special Education Policies and Legislations

Focus groups discussions, semi-structured interviews and review of special education policies and related legislative covers helped to

suggest ways to improve status of special education in Pakistan through creation of multiple codes, categories and themes.

Increasing Access

Increasing Access for students with special needs is of utmost significance to improve special education field in Pakistan. Increasing Access, in this qualitative probe, includes concepts like inputs from multi-stakeholders, incentivizing special education staff and special students, basic interventions, expansion of education, checks and balances.

In National Educational Policy of 2009, stress was laid at gender equity, inclusive education and equal access to education for marginalized groups.

Section 3 of Punjab Special Education Policy 2020 contains Policy Objectives, Commitments and Scope. 1st Policy objective stipulates: Improved Access to Education for Children with Special education needs and disabilities.

Focus group discussion held in a public school concluded with the inputs: Media in Pakistan must play a productive role in creating awareness about rights of special persons. Public sector of special education in Pakistan must establish its own media cell for advertising its services and achievements of students with special needs. Parents must be included by special education set-ups for improving schooling of special students. Special education must sign memorandum of understanding with NGOs and INGOs for placement of learned special students. There is a dire need of public private partnerships in special education field to enrich the services for students with special needs. All these factors, as per focus group members' opinions, will help to increase enrollments of special students in special education set-ups for education, allowing them more access. This will improve the status of special education in Pakistan, in long run.

Scope of the Punjab Special Education Policy 2020 endorses that multi-stakeholders take part in special education service Delivery. The policy will apply to Development Partners, Community Based Organizations, Non-Governmental Organizations and Civil Society Organizations.

During her interview, a junior special education teacher stressed on incentivizing special education staff and special students as a tool of increasing access of special education services to special persons. She opined: Increasing emoluments matters. Incentivizing will increase the morale and motivation of special education staff that will put more concerted efforts to widen the access of special education services for persons with special needs. Incentivizing special education staff might include providing them with free public transport facilities; free residential quarters close to special education facilities and increasing their emoluments. Special students can be provided with free accommodation facilities and increasing their monthly stipends. This will increase their educational access to special education facilities.

Another focus group held at a public special education centre pointed out: Increasing number of special education centers, introducing more free of cost transportation facilities, enhancing budget for special education centre's, discouraging dropouts and introducing zero-tolerance policy in admission of special students ,all will help in increasing enrollments of special students in special education service facilities.

Presented by Zulfiqar Ali Bhutto, National Education Policy of 1972 made plans to open new institutes for PWDs. There was focus on Strengthening Existing Institutes for PWDs. The said policy was aimed at increasing access of children with special needs to special education services and thus making PWDs independent and productive citizens.

Equalizing Access to education through provision of special facilities for women, under-privileged groups and mentally-retarded and physically-handicapped children and adults in all areas in general and backward areas in particular (Pakistan Education Policy 1972)

Another senior clerk, during his interview came up with inputs about the way we can increase the access of special students in special education facilities. He expressed: Introducing stringent measures of accountability, ensuring monitoring and inspection, putting in place audit and evaluation of teaching and non-teaching staff will go a long way in ensuring more admissions, discouraging drop-outs and increasing enrollments of special students.

A senior headmaster of high special education school came up with another input to reach yet unreached special students. He opined: Existing facilities of special education centers, schools and colleges are lacking in treatments, assessments and early identification. Resultantly, parents of special students are reluctant to send their students to special education facility points. Hence, ensuring basic interventions at special education centers will help to attract more special students towards special education service points.

Rehabilitation of Persons with Special Needs

Rehabilitation of persons with special needs and disabilities is the ultimate aim of special education services in Pakistan. Focusing on rehabilitative measures, incorporating curriculum adaptations, digitizing special education schooling, restructuring learning spaces and introduction of disability-friendly interventions are the ways to improve the status of special education services in Pakistan which will ultimately help in ensuring education-cum-rehabilitation of persons with disabilities.

Disabled Persons (Employment and Rehabilitation) Ordinance 1981 revolves around survey, employment, welfare and rehabilitation of Persons with Disabilities.

...to formulate policy for employment, rehabilitation and welfare of disabled persons was a function of National Council (Disabled Persons' Ordinance, 1981. ICT Bill 2018 is also a continuation of the same threads of services.

Part 2 of ICT Rights of Persons with Disability, Bill 2018 outlined Rights of Persons with disabilities. The rights included: Equity in Education, Equity in Employment, Equity in Health and Medical Rehabilitation Services, Participation in Sports, Cultural and Recreational Activities.

Special Citizens Act 2009 emphasized on fare concessions for PWDs in railways and airways. Import duty on cars for PWDs has been reduced considerably to provide them with better accessibility. Majority of interviewees considered reduction in import duty tariffs as a positive initiative to help PWDs in accessing public spaces.

The Act seeks half fare charges for disabled people in railway and other public transport in Pakistan (Special Citizens Act, 2009).

Majority of members of focus groups were of the view that such policies are instrumental for ensuring an easy life for PWDs, turning them independent through rehabilitation.

Focus Group discussions held in a public school reached at a unanimous agenda for improving the status of special education in Pakistan.

The members of the focus group were of the views: The need of hour is to upgrade skills of persons with disabilities, providing them with assistive devices, working on their vocational training, focusing on mainstreaming them through including them in extra-curricular activities, working on their financial inclusion

and increasing their job quotas. All these initiatives will help to rehabilitate persons with disabilities. The similar themes emerged in Act of 2018.

The government shall provide free primary to higher education to PWDs....No person, institution, organization or entity, whether public or private, shall discriminate against a person on ground of disability in the matter of employment, promotion, career development and enjoying fruits of his employment (Rights of Persons with Disabilities: ICT Rights of Persons with Disability Act, 2018)

A senior special education teacher of deaf students, stressed on providing special students with quality education along with curriculum adaptations and vocational training. He opined: Curriculum adaptations along with multi-media based education through technological integration in special education schooling and vocational trainings are necessary for quality special education and long term rehabilitation of persons with disabilities. This will ensure ease in educating students with special needs aimed at their rehabilitation.

It is an irrefutable fact that National Policy for Persons with Disabilities 2002 stressed on curriculum adaptations and providing vocational Training to special students. But poor implementation of the said policy is not getting desired results. National Education Policy and Implementation Program 1979 also placed considerable emphasis on rehabilitation of PWDs as a moral obligation of the state.

A psychologist, during his interview, stressed on disability-friendly interventions as fundamental ways to improve the status of special education in Pakistan. He opined: There is a dire need to increase ease for special students through introducing disability-friendly transportation and disability-friendly buildings of special education

schools. It will help in their rehabilitation in long run.

Special Citizens Act 2008 also revolved around accessibility of PWDs in Transportation Systems and Access of PWDs at public points. Special Citizens Bill, 2015 also placed emphasis on accessibility to disabled persons at public spaces and allocation of seats for PWDs in public transportations.

Facilitating special education process hinges on technological interventions, opined a headmaster of special education centre in district Bhakkar. He expressed: Educating students online, assessing them through online modes. Improving special education centers through technological up gradation like installing projectors and providing special education teachers and their students with latest technological gadgets like laptops are concrete measures through which we can digitize special education field in Pakistan for improving service delivery. It will, in long run, help to rehabilitate students with special needs.

Technological Interventions in teaching and learning of special students were also stressed in National Educational Policy of 2017.

Digital-Inclusive Learning Theory

There are multiple learning theories in vogue including, but not limited to, Behaviorism, Cognitivism, Humanism, Connectivism and Constructivism to name a few. Academicians, educationists, researchers, policy makers and school administrators take insights from these learning theories in multiple ways i.e. for knowing the way learners learn, the way teachers cater to the needs of students, the way curriculum developers develop the curriculum, the way assessments are undertaken keeping in view the level of learning expected from learners and the educational policy makers unfolding the educational outcomes as a result of implementation of educational policies. Famous

educational policies in place in Pakistan work only for normal category students in general.

Special education is a different field from general education in terms of complicated and demanding roles of teachers of students with disabilities, needs of curriculum adaptations, needs of variation in instructional designs, necessities of modified pedagogical techniques, differentiated learning needs of learners, unique infrastructural adjustments and diversified ways of assessments and evaluations to ascertain the performance appraisal and feedback seeking.

On the basis of qualitative study conducted through Grounded Theory, researchers of the study have developed a novel Learning Theory for facilitating learning and teaching of students with special needs and disabilities.

The assumptions of the Theory

The assumptions of proposed DIL-Theory (Digital-Inclusive Learning Theory) are as under:

Needs of special students are unique and subject to variations with respect to time and place; no single learning and teaching strategy works for all special students alike; different disabilities require different curriculum; Differentiated curriculum instead of universal curriculum is preferred in the realm of special education; modifications and adjustments in infrastructures work like catalysts in learning and teaching process; there is always need of different modes of assessments and evaluations for different students with different disabilities; all students are unique in terms of language acquisition; learning difficulties impact the learning process and academic performance of special students; performance of special students is sum total of their academic and non-academic performance indicators; innovation serves as a value-addition input; education is mainly aimed at rehabilitation; Inclusivity adds meanings to education, increases morale, progress and confidence of students with

special needs; Segregation results into stigmatization and exclusion of CWDs; Inclusion enhances morale, productivity and confidence of students with special needs; technology integration in learning and teaching enhances engagement, boosts attention span and improves academic and non-academic performance of students with special needs.

Digital Learning

On the basis of qualitative study at hand, researchers have proposed that:

1. Use of Technology in special education is a necessary teaching and learning aid.
2. Technology integration facilitates learning and teaching process.
3. Technological adoption in teaching methodology adds visuals, symbols and stimulations for learners with special needs which expedite learning process.
4. Technological integration helps teachers of special students in captivating attention of their students.
5. Technology serves as a facilitator of education process.
6. Use of required technological interventions is different for students with different disabilities.

Inclusive Learning

Based on qualitative study at hand, researchers have proposed that:

1. Special students' motivation improves in inclusive educational settings.
2. In exclusive educational settings, special students have less learning opportunities than inclusive educational settings.
3. Inclusiveness promotes morale of special students.
4. Inclusivity encourages confidence of students with special needs.

5. Inclusiveness promotes socialization of students with special needs.
6. Students with special needs fall in need of inclusive schools as a necessary classroom arrangement to ensure equity education.

Hence, to promote learning of students with special needs and disabilities, learning modules must have both digitization and inclusivity as necessary ingredients. Absence or weakness in one or both components is bound to make learning and teaching of students with special needs deficient, ineffective, incomplete, inconclusive, purposeless, faulty and weak.

Conclusion

In the light of findings of qualitative research conducted, it is concluded that special education policies and legislative covers in Pakistan are aimed at educating and rehabilitating individuals with special needs and disabilities. Educational deficits on account of multiple factors, bad governance and conservative practices being exercised in teaching, administration, audit, monitoring, management, policymaking and their implementation constitute lacunas in special education era of Pakistan. Focusing on increasing access and rehabilitation of PWDs are the ways to improve the status of special education in Pakistan. Lastly, there is a dire need to incorporate Digital-Inclusive learning in learning and teaching landscape of special education in Pakistan to achieve the objectives of special education in Pakistan.

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