

## INCLUSIVE EDUCATION PRACTICE IN DEVELOPING COUNTRY: A CRITICAL REVIEW

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### Abstract:

Inclusive education for children with disabilities is well documented in practice guidelines and well mentioned in laws and legal rights. The recent researches looking for the actual practices are although limited but also have not reached a significant evidence on its effectiveness status. This critical review gives a special focus on Inclusive education practice & on the importance for developing countries.

In this review focus is on inclusive education. Several service delivery models are also suggested which are mentioned to give direction to future expected practices and which are already in the move in developed countries. Hereby, looking at the limitations seen in Inclusive education practices of developing countries, a corrective framework is mentioned. With this the barriers which give a negative feedback to inclusion approach can be counteracted. A slow obvious acceptance of Assistive technology aids would actually bring a wide belief on these practices and support learning of these children in regular classrooms with normal peers. Universal Design of Learning can bring wide difference in empowering education for every different disability. With 36 articles as reference for this review, concluding remarks also mention planning future researches to give positive real outlook to Inclusive practices worldwide.

**Keywords:** Service delivery models, Inclusive education, least restrictive environment, Assistive technology aids, Children with Special needs, Coteaching, Regular education initiative.

**Abbreviations:** Inclusive Education (IE), Regular education initiative (REI), children with special needs (CWSN), Inclusion in Education of Children and Youth with Disability (IECYD), National Council of Education Research and Training (NCERT), Rights of Persons with Disabilities Act RPWD, Children with disability (CWD), quality of life (QOL)

### Introduction

<sup>[1]</sup>Since 1960's inclusive education (IE) had started like a broader rights movement in society to bring normalization (Norah and Tony, 2002).<sup>[2]</sup>Concept of inclusive education is old, since 1948 when the Universal Declaration of Human Rights mentioned in Article 26, the need of Inclusive education in full development of the human personality and

strengthening of respect for human rights and fundamental freedoms. While in early 1970's, education practice in United Kingdom (UK) removed the legal distinction existing in treating any disability as non-educable in school.<sup>[3]</sup>Even in the United States (US) department of education, regular education initiative (REI) came, both towards general education and special education to educate all special and normal peers all together

(Friend, 2008, UNESCO, 1994). With this, US department of education made IE part of federal law named as the Individual's with Disabilities Act 1990.

<sup>[2]</sup>Until 2006, United Nation Convention on the Rights of Persons with Disabilities undertook inclusive education as a nationwide practice undersigned by its countries members. Inclusive education major purpose was decided to protect and facilitate the policy matters legislation, financial resources human and intellectual resources of the children with disabilities. Inclusive education emerged to bring least restrictive environment and made Children with disability (CWD) cope up with learning effectively by recognizing their various needs. In a way every student's strengths & weaknesses are differently identified & so the needs are addressed with a sense to help reduce the stigma towards all the children with disability. The special needs of every child with disability are understood better from the perspective of major types of disability- i.e. Physical, developmental, behavioral and sensory (Julka, 2014)<sup>[4]</sup>.

Inclusive education can show good outcomes only if the implementing authority can execute the key strategies of equality in educational opportunities. It is due to the disabilities that children find difficulty in achieving education. The educational & rehabilitation facilities whether direct or indirect must enable the Children with Special needs (CWSN) become independent in various ways, thus improving the Quality of living of CWSN become independent in various ways, thus improving the quality of life (QOL) of CWSN as well as their parents. It is a need for IE practices critical evaluation and recalibration as per the socio-personal need of the CWSN like in Salamanca's statement on principles, policy and practice in special needs education for nationwide practice (UNESCO 1994)<sup>[5]</sup>.

The IE practice falls into two categories depending on assistance provided, which is a) partial inclusion allowing services to children with special needs by giving resource room facility. Apart from this, their most of the educational need is fulfilled

through the regular classrooms. b) Full inclusion in which a Speech Language Pathologist's (SLP) purview is seemed to be long sighted aim. However, it is believed that partial inclusion is more effective & practical. Though conceptual need of IE has been strongly perceived and appreciated in making the educational policies as legal rights but its practice is not just established in its full spirit. Moreover, the IE practice falls short of resources, infrastructural limitations and manpower, therefore the negative feedback of the outcome of IE practice. The focus in this review is to study the IE service delivery model in various settings worldwide with keeping a special focus on the developing country and critically comparing factors that may impact outcome. The purpose writing this review is to highlight the positive outcomes of universally accepted best practices. The discussed corrective framework in this review can be used as an effective future plan to implement in developing countries also.

### **Review purpose**

The aim in this article was to highlight the practices of inclusion since its positive results can actually allow each child equal rights to participate in events together and thus school setup realizes its own responsibilities simultaneously as well.

Inclusion concept would be said effective only if school's efforts reach the full participation level of students with disabilities, students gain this respect socially along with full control on civil, and educational rights. Learning happens as a social activity and comes from practice like by keeping (relationship with others) and how itself our identities evolve (relationships with self). Like mentioned as a common belief by Wenger (1998) on education practices, it's a participation in communities to shape not only what we do, but also who we are and how we interpret what we do" & this could just be a strong aim enough to make practice IE successful worldwide<sup>[6]</sup>. Therefore, in this review focus is on practices of IE, the idea which is in existence since 1960's. Also further looking into 3 service delivery models of Inclusive Education already in practice in developing

countries like Saudi Arabia, Indonesia, and Africa gives us the present outlook as such needing a change. These practices need modifications for future implementation.<sup>[7]</sup> The effectiveness of these practices is considered in developing countries, those signed members of UNCRPD, who are abiding to the Article 24 on education guidelines. A corrective framework suggested can help overcome difficulties faced today or from so long and does need a specific consideration in developing countries like India. This review is written, because there are gaps in published literature and research evidences for concluding on effective practices of Inclusive Education. In this review study, the good practices which have shown positive results can be part of future plan, thus this corrective framework can be implemented in any developing country. The problems faced by the developing countries can be considered in common, therefore the barriers and limitations can be commonly faced as a challenge and overcome by taking necessary steps wisely.

#### **Review objective:**

In this present review, the aimed insights on practices of IE in developing countries, like best of the studies done in African countries. Still the problem situations realized are unfortunately mostly common and have been highlighted in Indonesian studies in present review. Efforts have strongly come in National Policies of Education in India but literature is lacks evidence based practices in India.

#### **Theoretical framework on inclusive education**

The key to make IE success depends on the quality of training of the teachers who deliver the necessary skills to address various needs of the CWSN<sup>[8]</sup>. Formal training of teachers at a minimum of graduation level working at an IE setup is recommended for effective content delivery for children with special needs. Depending on the education background of the teachers and the requirements of students with special needs the best practices for a specific IE setup shall be designed and in these school's role of special

educators shall be central and other health professional shall make the team complete. The group leader or the class teacher shall be equipped with several key attributes such as theoretical competency, clinical proficiency, positive attitude etc., to design the class activity which can ensure maximum use of the available resources to optimal learning. The positive attributes of a class teacher are extremely crucial as a special educator spends maximum time with the CWSN. Knowledge about the inner learning potential of each students along with their key likes and dislikes facilitates a class teacher to give them more opportunity to effectively execute a target skill and thus maximizing the outcome.<sup>[9]</sup>

Effective teaching methodology, use of training materials, instructions, knowledge, skills of teachers learnt eventually with experience are the key factors which may influence the outcome of IE.<sup>[10]</sup> A customized training program is recommended for the children with special needs which a teacher learns from their formal training and the real-life teaching experience. Effective use of available classroom resources or rearrangement of the classroom resources, optimal use of available class timings and exploration of the available professional group experience at a specific center can formulate substrate for the success of IE.

In IE literature there are various guidelines which recommends the procedural details about the implementation of IE practice.<sup>[11]</sup> Tirisano white paper on building an IE and training system (1999) described criteria for the revision of existing policies and legislations. A training framework for the organizational set-up and governance recommended an effective IE practice. The focus basically on district-based education support service, expansion of access and provision, support for curriculum development and revision, national level advocacy and mobilization campaign and revised funding strategy can sustain such program sufficiently.<sup>[12]</sup> More recently, in the discussion paper of UNESCO (2019) on IE, a basic framework like for guiding Inclusion is suggested. The

primary focus is to review the development of national policies related to IE considering feedback obtained from the grassroots facilitators of IE such as teachers and principals, and realizing the need for a suitable and adequate classroom set-up development to educate CWSN within regular classrooms.

### **Inclusive education service delivery**

IE review suggests that there are various IE delivery models proposed based on their IE training experience. Center for Interreligious Understanding (2011) offered guidelines regarding the working principles of an IE setup. The ideal set-up for IE should bring the belief that teaching facility offered will be provided to all students without any prejudice. The selection of required resources and the appropriate materials and teaching/training should be sensitively delivered considering that the culture and socio-personal perspective of the local community is well-realized. The scope of adaptation and integration of the training pedagogy needs planning to ensure the desired outcome.

Abdalleh, Alharbi and Abdullah proposed the revised model on IE in 2017 based on the experience in Saudi Arabia and commented on the effectiveness and IE policy implementation<sup>[13]</sup>. The individual initiatives were supported and promoted through the government policy to offer quality IE delivery for the children with disability.<sup>[14]</sup> And as a result the need for IE got comprehended at the government level and then various facilitation aids were provided by the government in Saudi Arabia. Although, IE ensures desired outcomes in majority settings if the recommended globally accepted guidelines are followed in its true spirit. However, there are several examples where restricted outcomes were observed.<sup>[15]</sup> Untimely dropout from the IE set-up is the real challenge. Secondly, generalization of the learnt skills is another herculean task for the CWSN. Especially for the adolescents, those with primary educational demands, coping of the children with disability in regular classrooms was faced with great

difficulties. Socializing with the peers under natural settings are the limitations with some CWSN who face this issue if the IE is intermittently used. The best model to quote for restricted gain from IE is the Indonesian model where it was a lack of resources, limited training experience of the teachers and limited environmental supports.<sup>[16]</sup>

The models of IE based on the duration of service offered are of three types; (full, partial or special class. At regular schools, while offering the IE facility several considerations need to be carefully addressed so as to ensure the desired outcomes. For instance, a) the number of children with disabilities to be served, b) the type of abnormality of each child, c) variation and gradation of children with special needs based on current skills, d) availability and readiness of human resources who can deliver training facility, and e) availability of other infrastructural facilities. Thus, these five considerations can help regulate the development of an effective IE model and help meet the challenges of CWSN. Besides academic enrichment, the socio-cultural and personal growth of the child are the final goal of IE. Vaughn et al. (2000) recommended another model of IE for the CWSN considering inclusion in practice<sup>[17]</sup>. This model focused on a) full inclusion, b) regular classes in special groups of specific clusters, c) regular classes along with individual session, d) regular classes with specific clusters and individual sessions, e) special classes with different integration, and (g) full special classes. Children with disabilities of graded severe abnormalities, may need varying time to be in a special classroom besides specific session is also recommended.

The secret of a successful IE program is giving quality training to the teachers, the preparing for a conducive learning environment in schools, the empowerment of parents, and educating the community members and professionals. It is important also, to keep the policy makers well informed by running workshops or publishing progress reports on regular basis. The outcome

reports on the IE can facilitate improved understanding for the trainers as well for the policy makers. When policy makers understand these issues of different disabilities, their causes, their rights and inclusiveness, issues of inclusive policy are then better handled. Best practices on IE advocates a quality and a comprehensive training needs, robust and experienced team members, training through learning and sharing experience, multi-modality based training and behavioral modification. Documenting the progress of the clusters and of specific individual can be of help in measuring the true effectiveness of IE<sup>[18]</sup>

<sup>[19]</sup>Inclusive education service delivery is based on following themes as suggested can become an effective plan especially in developing countries:

Theme 1: Including everyone – Child’s age should be given higher priority and enrollment must be at an early age. Children are isolated because of their behavioral issues but rather should be acknowledged and accepted by the normal peers so there is an acceptance of disabled peers in the class. There are students using assistive aids or hearing aids, of which the instructors and peers need to have special training for assisting each student having different types of disabilities. Normal peers if trained can help the students with special needs to assist them in the activities of daily living e.g. using toilets, eating lunch etc. Other than this peer tutoring, team teaching and group classroom activities like singing, dancing etc. can be of greater help in upbringing of students with special needs.

Theme 2: Layout of classrooms- This must include prioritizing student’s accessibility to learning abilities considering per se, a well-lit classroom, sitting in front, having free space for those using visual and mobility aids, keeping away the dangerous materials, seating arrangements of similar students with similar abilities as closer, keeping away the distraction, keeping books closer and near to students reach, use of display charts and posters, natural materials for teaching.

Theme 3: Lesson planning- this may require simplifying the materials for teaching, hence same lesson may be set to different levels of abilities which is called the differentiation of the curriculum. Students can be involved in group activities which are planned according to the lesson, and visual aids, real objects and key words may be of a great help in teaching- learning process. On the other hand group activities or alternative activities, simplified worksheets and adjusting to the pace of the each student might be some other coping strategies for students with special learning needs.

### **IE effectiveness status in developing country with special thrust in India**

In 1968, India came up with the National Policy on Education, even integrated education ambivalently was the accepted concept and kept at bay from the broader idea of inclusion. Inclusion in education practices falls under two Acts i.e, the Persons with Disabilities Act and the Right to Education Act<sup>[20]</sup>. The ongoing activity on inclusive education in India can be critically reviewed in the following inclusive education elements as per the UNICEF:

**Inclusion** - The Comprehensive Action Plan on Inclusion in Education of Children and Youth with Disability (IECYD) proposed by the Ministry of Human Resource Development in March 2005, failed to translate into Act. India is still trying to build inclusion like mentioned in the current Act. According to RPWD, 2016 chapter 1 preliminary (m) “inclusive education” defined as a system of education for all students with and without disability given education together and for this the system of teaching - learning is to suit the learning needs of different types of students with disabilities;

**Accessibility**- The educational reform acts, and its ever-increasing pressure on schools to segregate children with disability and the rise of strong parent advocacy groups brought about policy and legislative changes in urban societies in India. It is

especially in countries with poorer economies like India, the situation aggravates because of the overcrowding and lack of facilities in general. National Curriculum Framework, 2005 given by the National Council of Education Research and Training (NCERT), and its statements on inclusion makes important remark on the needs and assistance required over time for children with disability. According to RPWD 2016 Chapter 1 Preliminary (c) “barrier” is defined in terms of communicational, cultural, economic, environmental, institutional, political, social, attitudinal or structural factors affecting full participation of persons with disabilities which also includes children in the society and those need to be educated in Schools with equal opportunity and non-discrimination. Thus schooling environment need to be restructured for both the physical and learning suitability and therefore the cost for the same need to be estimated in individual school development plans nationwide. Thus trained teachers, instructors, special educators, speech therapists, Prosthetics and orthotics etc., other specialists need to enroll in team approach in school staffing requirements to address the long term needs of students with disabilities along with normal peers and regular teachers.<sup>[21]</sup>

**Non-discrimination-** according to the chapter 1 as preliminary of Rights of Persons with Disabilities Act RPWD 2016, (h) “discrimination” is to be handled in all relations to disability, nation aims for no distinction, exclusion, restriction environment which can impair or nullify the recognition, enjoyment or exercise of human rights and fundamental freedoms in the political, economic, social, cultural, civil etc., fields and against the denial of reasonable accommodation for persons with disabilities.

**Reasonable accommodation:** according to chapter 1 as preliminary of RPWD 2016, (y) “reasonable accommodation” defined necessary and appropriate modification and adjustments and that no disproportionate or undue burden is the case and that persons with disabilities reach quality

enjoyment of their individual rights equally with others.

**Physical accessibility-**Chapter VIII in RPWD,2016 on duties and responsibilities of appropriate governments 45 (2) the appropriate Government and the local authorities have to formulate and publish an action plan according to which accessibility in all their buildings and spaces should include all essential services in different centers including schools. Education for all is made free and compulsory and encompass modern technology into learning like distance education programs.

**Availability-** RPWD, 2016 has neither promised nor mentioned the availability of course programs and educational institutions in sufficient number within the jurisdiction of state as per requirements of inclusion criteria.

**Acceptability-**Inclusion in India has yet to reach an acceptance level in every rural and urban society, though initiatives like buildings in public transports have been made disability friendly to give them equal rights and give them opportunities to work and live with freedom. Hearing aids for the hearing impairment and braille for visual impairment are very common in special schools and needs of the disabled should also be addressed in every school nationwide.

**Adaptability:** Chapter I as preliminary of RPWD 2016, 2. (ze) “universal design” is provided to design products, environments, programs and services such that each person with disability can use it maximally without the need for itself adaptation, like a specialized design and should apply to assistive devices with recent advancement in technologies.<sup>[22]</sup>

In India’s socio-economic structure, the resources remain insufficient if even in a mainstream school for common children, to live and learn as a result becomes difficult indeed.<sup>[23]</sup>The lack of human resources is another felt barrier to addressing needs of Inclusion. There seems to be need for adequate

provision of assistive technology involving multidisciplinary approach. Simultaneously courses related to rehabilitation have been in effect at diploma, graduate, master and higher qualification levels affiliated to Rehabilitation council of India. Yet awareness to the rehabilitation field for persons with disabilities and courses are like a slowly spread awareness, and the outcomes from such initiatives are expected to happen in recent upcoming future.

One of the major shortcomings to the nation is lack of resources by funding agencies. Also there is ever increasing cost of everyday updated technology, and assistive devices are costlier thus it is a matter of great concern in public and private schools trying to become disability friendly. For learning purpose and in making general curriculum accessible to the students with disabilities, it is important that quality services be offered at low cost and at the same time education should remain mandatory and free for all.

### **Proposed Corrective frameworks**

The goal of inclusive education aims to provide equal opportunities and equal participation and should run consistently & constantly. So, in practice, the focus on strategies to remove barriers to learning and participation for all children will only make a difference in society.<sup>[24]</sup> In practice the curriculum, the sum of all activities, experience and learning opportunities responsibility is either deliberately taken or to be taken as default. Total development as expected from general curriculum is for imparting knowledge, develop skills and to develop proper interest attitudes and values<sup>[11]</sup>.

<sup>[25]</sup>World Declaration to support Education for All, adopted in Jomtien, Thailand (1990), gave the overall vision: universal design for education. Planning the school infrastructure with prior identification of the barriers and identifying the suitable resources which can overcome these barriers could be an important proactive step. New laws, funding, and training should establish to support inclusive education. Unfortunately, a much higher demand sits here, than in current what being provided. Solving the issues of disability on

student's communication, socialization and emotional front should be the very first task of School's education system. Like handling students with Autism spectrum disorder (ASD) with affected brain development with featured varying degrees of difficulties in social interaction, verbal and nonverbal communication and repetitive behaviors, also children with disabilities may begin school later than their non-disabled peers and thus require additional time for completion of a basic education.

Overall, there's always remain a serious challenge to common quality of teaching, learning, retention and success through school education. Mostly individuals learn life skills from family and social groups. Individuals with sensory or physical disorders need to learn, use of specialized materials and equipment for access to general basic education. School should work on making students independent living, therefore vocational training is of importance along with regular teaching. In fact, the realized inclusive curriculum importance is to child's cognitive, emotional, social and creative development. Indeed the 4 pillars of education for the twenty-first century – learning to know, to do, to be and to live together hold its value. Even by using mother tongue instruction in the initial years of school can bring good learning outcomes. In inclusive approach, there is required flexibility to adjust to different needs, like varying the time that students devote on particular subjects, giving teachers more freedom in teaching methods, and more time for instructions-based activities.<sup>[26]</sup> EFA Global Monitoring Report 2005, analyzed the curriculum from inclusion perspective and that the learner has a multiple needs – more if there is an existing disability. Learners are taught according to flexible methods and accessible curricula, the textbooks and learning materials serve the key importance in creating schools for all. Students must learn the same things, at the same time and by the same means and methods, but students have different abilities and needs. Curriculum which is flexible can provide possibilities for adjustment to individual needs and to aware teachers seek

solutions on matching it to the student's needs, abilities and learning styles.

<sup>[27]</sup>Inclusive education cultivates the knowledge, skills and attitudes that students need to achieve for independence and success after they leave school. Therefore, like in special schools, existence of special classes or resource rooms may become part of regular classes with co-teaching facilities handled by the main teacher and special educator in the same class.<sup>[28]</sup>

Each inclusive process step depends on skills like the school's organizational, professional and material structures; the educators planning on methodologies to aid the intellectual and social development; the assistants and families being good examples of inclusion; and the students who accept the differences as an enriching aspect of diversity.

### **Scope of technology-based innovation in IE**

As per ICF framework, the contextual factors which include the environment related ones have an important role as facilitators thus creating an overall positive impact on the growing youth with some type/s of disabilities and should therefore be a bright scope of technology based innovation towards intervention and "education" successfully made possible in inclusion.<sup>[29]</sup> However, at some places inclusion includes the education of all individuals who may be marginalized.<sup>[30]</sup> The Salamanca Statement and Framework included all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. This were the disabled or the gifted children, street and working children, children from remote or nomadic populations, children from linguistic, ethnic or cultural minorities children, (UN Educational, Scientific and Cultural Organization [UNESCO], 1994).<sup>[12]</sup> Students with the mild or moderate disabilities with no or limited effect on academic achievement, but those on wheelchair, should be fully included.<sup>[31]</sup> However, students with all types of disabilities could be successfully educated in general education classes to achieve their individual educational goals in regular school environments through apt assistive technology aids

usage and learning of targeted skills. As observed, segregated special education classes would allow the CWSN fall further behind. Through Assistive technology aids, learning in inclusive education becomes a better way to help all students succeed<sup>[32]</sup>.

Research has shown that students perform better if they learn general education curriculum, with appropriate strategies and accommodations.<sup>[33]</sup> The Individuals with Disabilities Act (IDEA), in 1997 made Assistive Technology (AT) mandatory requirement for Individualized Education Plan (IEP). Thus AT became an important platform for educators to accommodate students with disabilities. Monitoring of device and its appropriate timely use by students with disabilities should be ensured by the class teachers.<sup>[34]</sup> Training of Teachers is required through various instructional courses so they can enrich expertise in handling AT aids and support a disability friendly environment in a justified manner. Thus, Educators are expected to deliver appropriate services of AT aids for a particular disability, yet no specific training for the same exists.

Students with disabilities need to access these assistive technologies at appropriate times, so that they are academically productive. Students with disabilities must realize the effectiveness of their assistive technology aids while being taught strategies to use them timely in their classroom settings. Thus, students with disabilities become self-determined. Merbler, Hadadian. & Ulman (1999) mentioned for every school to give free AT services and equipment to ensure appropriate public education<sup>[31]</sup>. IE should ensure conducive environment to allow students with disabilities learn social skills as the final goal, thus working along with their peers as equals, is possible with the help of assistive technology.

With the help of AT aids, all the activities that are planned in IE setup should bring overall improvements in specific areas like : (i) academic skills- reading and writing ability, strength and resilience, entrepreneurialism; (ii) social skills- effective communication, equal respect, agility and

adaptability; (iii) cognitive skills-critical thinking and problem solving, curiosity and imagination; (iv) Adaptive skills- confidence, responsibility, collaboration, cooperation.<sup>[35]</sup> Cullen, Richards, and Frank (2008) study findings revealed that a computer software can help students with disabilities in improving their performance in writing. Intervention using this, involved a word prediction software use along with a talking word processor. Students used Write:Outloud, a talking word processor for all writing samples. Students also used Co:Writer, a word prediction software, in conjunction with Write:Outloud for all writing samples. Their results showed five out of seven students finding improved number of words produced and better writing skills for the number of misspelled words. There was another study conducted by Bouck, Doughty, Flanagan, Szwed, and Bassette (2010) to know if the effectiveness of a pentop computer (a FLYPen) and the writing software (specifically designed for the FLYPen) can assist in writing. This tool is just like a typical pen, larger in size with a slot at the top where a software cartridge gets inserted. A special paper created for the FLYPen is used, and the pentop computer can produce voice output to provide directions, prompts, reinforcement, and hints to students for different tasks. All students in this study experienced initial gains with the quality of written expression. Thus, the technology-enhanced procedural facilitators benefitted the quality and quantity of written expression of those with mild disabilities and enhance student's ability to plan their writing and complete it independently.<sup>[36]</sup> Overall, making sure assistive technology is just the part of everyday inclusive classroom but can make a significant impact on academics, but doesn't work alone. Students need to be taught the strategies and need to know when to use it. With AT, students with disabilities would feel like part of the big social group and IE is one step to bring them right alongside their regular peers.

## CONCLUSION

Managing changes as per international researches on education can bring reform in basic

assumptions i.e. stating the clarity of purpose and noting the progress, monitoring a policy made at all levels of a national education system can do the change in making realize the stakeholder's role. With the research evidences, should acknowledge that the important catalyst in bringing successful change is to carry forward this information for future planning processes.

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## References

1. Coleman JS. Equality of educational opportunity. *Integrated Education*. 1968 Sep 1;6(5):19-28.
2. Dreyer, L. (2017). Inclusive education. *Education studies for initial teacher development*. Cape Town: Juta, 383-399.
3. Manandu, M. T. (2011). Effectiveness of the implementation of inclusive education in primary schools in Mwingi District, Kenya.
4. Julka, A., & Vyas, S. (2014). Including Children with Special Needs: Primary Stage.
5. United Nations Educational, Scientific and Cultural Organization. (1994). The Salamanca statement and framework for action on special needs education..
6. Wenger, E. (1998). Communities of practice: Learning as a social system. *Systems thinker*, 9(5), 2-3.
7. Timothy, S., & Agbenyega, J. S. (2018). Inclusive School Leaders' Perceptions on the Implementation of Individual Education Plans. *International Journal of Whole Schooling*, 14(1), 1-30.
8. Meijer, C. J. (Ed.). (2001). *Inclusive education and effective classroom practices*..
9. Gerber, P. J., & Popp, P. A. (2000). Making collaborative teaching more effective for academically able students: Recommendations for implementation and

- training. *Learning Disability Quarterly*, 23(3), 229-236.
10. South Africa. Department of Education. (2001). *Education white paper 6: Special needs education: building an inclusive education and training system*. Pretoria: Department of Education.
  11. Unesco. (1994). *The Salamanca Statement and Framework for action on special needs education: Adopted by the World Conference on Special Needs Education; Access and Quality. Salamanca, Spain, 7-10 June 1994*. Unesco.
  12. Alharbi, A., &Madhesh, A. (2018). Inclusive education and policy in Saudi Arabia. *International Journal of Education Research and Reviews*, 6(1), 946-956.
  13. Oyaid, A. (2009). Education policy in Saudi Arabia and its relation to secondary school teachers' ICT use, perceptions, and views of the future of ICT in education.
  14. Bhattacharya, T. (2010). Re-examining issue of inclusion in education. *Economic and Political Weekly*, 18-25.
  15. Efendi, M. (2018). The implementation of inclusive education in Indonesia for children with special needs: expectation and reality. *Journal of ICSAR*, 2(2), 142-147.
  16. McConkey, R. (2014). *Inclusive Education in Low-Income Countries: A resource book for teacher educators, parent trainers and community development*. Disability Innovations Africa.
  17. Alanazi, A. Critical Analysis of the Challenges Faced in Implementing Inclusive Education Practices for Students with Intellectual Disabilities in Saudi Arabia.
  18. United Nations Educational, Scientific, and Cultural Organization, Paris (France). (2005). *Guidelines for inclusion: Ensuring access to education for all*. ERIC Clearinghouse.
  19. Soni, A., Lynch, P., McLinden, M., Mbukwa-Ngwira, J., Mankhwazi, M., Jolley, E., ...&Gercama, I. (2020). Facilitating the participation of children with disabilities in early childhood development centres in Malawi: Developing a sustainable staff training programme. *Sustainability*, 12(5), 2104.
  20. Rao, P. S. RIGHTS OF PERSON WITH DISABILITY IN INDIA--A STUDY.
  21. Hasan, M., Halder, U. K., &Debnath, D. (2018). Inclusive education and Education for all. *International Journal of Research and Analytical*, 5(3), 605-608.
  22. Gathoo, V. (Ed.). (2006). *Curricular Strategies and Adaptations for Children with Hearing Impairment*. Rehabilitation Council of India.
  23. Shanthi, R. (2013). Curriculum Adaptation for Children with Hearing Impairment in Inclusive Education. *Current Perspectives on Education*, 172.
  24. Declaration, J. (1990). World Declaration on Education for All: meeting basic learning needs.
  25. Education for All. (2007). *Education for All Global Monitoring Report 2008: Education for All by 2015. Will We Make It?*. Oxford University Press.
  26. Warnes, E., Done, E. J., &Knowler, H. (2021). Mainstream teachers' concerns about inclusive education for children with special educational needs and disability in England under pre-pandemic conditions. *Journal of Research in Special Educational Needs*.
  27. Schwab, S. (2020). Inclusive and special education in Europe. In *Oxford Research Encyclopedia of Education*.
  28. World Health Organization. (2007). *International Classification of Functioning, Disability, and Health: Children & Youth Version: ICF-CY*. World Health Organization.
  29. Hayes, A. M., &Bulat, J. (2020). Disabilities inclusive education systems and policies guide for low-and middle-income countries.
  30. Bruzee, N. E. (2004). Benefits of Assistive Technology within the Inclusive Classroom for Students with Disabilities.

- 31.** Alnahdi, G. (2014). Assistive Technology in Special Education and the Universal Design for Learning. *Turkish Online Journal of Educational Technology-TOJET*, 13(2), 18-23.
- 32.** Edyburn, D. L. (2002). 2001 in review: A synthesis of the special education technology literature. *Journal of Special Education Technology*, 17(2), 5-24.
- 33.** Florian, L. (2008). Inclusion: special or inclusive education: future trends. *British Journal of Special Education*, 35(4), 202-208.
- 34.** Cullen, J., Richards, S. B., & Frank, C. L. (2008). Using software to enhance the writing skills of students with special needs. *Journal of Special Education Technology*, 23(2), 33-44.
- 35.** World Health Organization. (2015). *WHO global disability action plan 2014-2021: Better health for all people with disability*. World Health Organization.