

## Electronic Education in Disability Sector: A Preliminary Report based on Special Educators' Perspectives

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### Abstract

*Electronic education (e-education) has emerged as a novel teaching-learning pedagogy during COVID times. Researches that are going on and have been published, mostly cater to the general education. Perspectives of e-education in special education/ disability sector remains an unexplored area, especially in Indian context. This study has tried to bridge the gap by understanding special educators' perspectives regarding e-education in disability sector. Qualitative interview technique was adopted for data collection purpose. An in-depth analysis was conducted following thematic method for data analysis and report generation. The work observed a gap in the areas of awareness, practice, training, and resource accessibility on part of the special educators', while imparting e-education to disabled/ special need students. This report has made few suggestions and recommendations in spheres of further researches, training, technological support, and development on e-education that can benefit special need teaching-learning community of India in post-COVID era.*

**Key words:** E-education, Disability, Special education, Hybrid learning, Online learning

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### I. INTRODUCTION

Recent pandemic has marked a global shift in educational paradigm from offline/ on-campus learning to online/ electronic learning (e-learning) platform. However, this is to understand here, that when speaking in terms of e-learning it is not only confined to the online learning concept. Electronic education (e-education) is a concept that can serve a multipurpose notion, such as: a teaching-learning platform, a process, a pedagogy, a mode or medium, and at times a teaching-learning tool or material. In this context, e-learning can have a varied range of implications.

In this regard, while speaking about its scope we need to first evaluate the benefits and the limitations of this approach in learning. Here, it is important to note that though in our country it is relatively a new concept (boon/ curse of COVID pandemic, depends on individual experiential perspective), but it is otherwise not so new in global aspect of education system. Yet it was not so widely acceptable and accessible idea in every educational sphere in pre-COVID era, but the concept has existed mostly in hybrid mode [1-3] in many reputed educational institutes (outside India). Even in India also to some extent e-learning concept has been followed by very few institutes in terms of teaching-learning tools like smart boards, projectors, power-point presentations, Information and Communication Technology (ICT), etc. Only a handful of organizations have access to these e-learning facilities. But under COVID condition when the total educational system underwent this change and was forced to shift to e-learning approach as the only option, we mostly only considered it from the perspective of online

learning platform. The other flavors of e-education somehow remained subtle and not so relevant at the surface level. Further, while this global shift took place, it occurred in every single educational domain. But again, at the surface level, the works that have been mostly conducted or the focus that have been mostly observed were in the areas of education catering the general population [4-6]. Not much consideration has been rendered upon the disability/ special education sector. It is intriguing to note that the concept of e-learning in the special education forte is not a new concept. Much before the existence and advent of COVID pandemic, researches, and application of e-learning method has been observed globally, in the area of disability. Now, when speaking about disability, it signifies all the categories such as, Intellectual, Pervasive developmental, Physical and Locomotor. According to the Rights of Persons with Disabilities Act, 2016, a person is considered to be having any form of disability if he/ she is dealing with a long term physical, or mental, or intellectual, or sensory impairment that creates an interaction barrier for the person and hinders with his/ her effective societal functioning.

As already mentioned, e-learning is an all-encompassing concept, and not just about using online platform. While speaking of e-learning, or e-education, it means using electronic and associated technological mediums as a hybrid system to facilitate learning as per individual need of the special need learners. These learning are not only directed towards academic fulfilment, but also about facilitation of vocational training and life skill lessons. For example,

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use of speech devices, eye-tracking devices, text magnifying instruments, speech and text conversion technologies, etc. can be noted as some of the effective e-learning tools in special education field. With proper training and practice, a person with mild level of Cerebral Palsy with having co-morbidity of Learning disability can use these electronic-based materials for better teaching-learning outcomes. Many earlier researches (mostly outside India) have confirmed positive results of e-learning, in regard to learner's with disability/ special needs [7-12]. Now due to financial reasons only a few disabled/ special need learners can afford these facilities in India. While getting training to be a special educator, both in their curriculum of theory and practice, even the trainee educators does not receive much opportunity to use these technology-assisted techniques. Most special educators, in the country, still rely upon the hand-made teaching-learning materials (TLM) to teach students.

During this COVID situation, many facilitators, special need learners and their families from outskirts and rural areas, at present are feeling helpless; and may be are out of school/ education system (even for the life-skill lessons) totally. This report, hence, is based on an exploratory (pilot) work for understanding and evaluating the perspectives of e-education in the disability/ special education sector.

## II. REPORT FROM PILOT STUDY

### 2.1 Study Method

This was an exploratory study, which purported to understand the perspectives of special educators about e-learning system in their sphere of work. Participants were selected through Purposive technique. 12 Rehabilitation Council of India (RCI) registered special educators, who are having more than 5 years of work experience in the field, were contacted for collecting data. Participation interest were received from 8 of them, who were then finalized for data collection. The finalized participants were either employees from private organizations or practicing as private consultants. Data was obtained after receiving informed consent from each one them. Owing to the COVID pandemic situation, data was entirely collected in online (Google meet/ Zoom platforms) and/ or telephonic interview mode.

Semi-structured interview method was adopted for data collection. The interview questions revolved around these few concepts:

- How the special educators think that they can utilize electronic modes, not only during pandemic but in general situation and post pandemic condition, as effective way of teaching-learning practices with disabled/ special need learners?
- Have the special educators used e-learning modes pre-COVID situation?
- Have they received any training, or provided with any specific equipment (for those working in private organizations) to facilitate teaching-learning at this phase?
- Can they enumerate few electronic-based teaching-learning aids, and discuss how these aids can cater to any specific form of special need/ disabled learner?
- How much help/ support special educators are receiving from organizations, and society at large to continue with their work at present?
- How much scope and feasibility they think e-learning techniques have in respect to special education in future?

The data, thus, received as interview statements were then transcribed verbatim, and thematic analysis was done to generate the final report.

### 2.2 Results Observed from Pilot Study

Data analysis reported both benefits and disadvantages of 'Online learning' system for the special need learners. The benefits of online learning for special need/ disabled learners, as discussed by participant special educators are:

1. Possibility of distance learning- Not only for COVID reasons, but also there are some disabled students for whom and their family's regular commute to learning centers/ schools becomes difficult for various reasons. They may be are not intellectually challenged that much but have physical and locomotor difficulties. For them online learning has proven to be good, and now they can learn at their own pace from comfort of their home.
2. Online learning has reduced absenteeism, quitting and task disengagement.
3. It has made the family members, specially the parents, become actively involved and engaged with learning processes of the special need/ disabled learners.
4. Learners' feel more inquisitive and are interested in this new learning mode, as it has become a new learning for them.

Further, the data analysis also revealed few disadvantages of the online learning process. These disadvantages, as discussed by the special educators can be enumerated as follows:

1. Lack of proper socialization, making everything wired- It is evident that for many special need learners', socialization is an integral part of the life-skill training. Due to this online system this socialization skill training is getting thwarted.
2. It is creating a generic problem in imparting practical life skill sessions, and vocational training sessions. Continuous interventions and support must be provided by parents or other family members for this reason.
3. Online learning is not for every disability or special need- Special educators reported that this system is working fine with the slow learner, learning disabled, trainable category (mild to moderate level of disability), physical, sensory and locomotor impaired learners. But not suitable for learners with moderate, severe, and profound level of disability, especially those having intellectual disability, autism spectrum disorder, attention deficit hyperactivity disorder, etc.
4. Lack of resource availability, poor internet connectivity, lack of training/ infrastructure, etc. are also making it difficult for many to avail this system of learning. This difficulty is more among disabled/ special need group of learners from lower socio-economic strata, resident from outskirts and/ or rural areas.

However, the most striking observation, which was noted during data analysis process, was that all the participant's interviewed for this study considered e-learning only as online learning. As it was already mentioned earlier that the process adopted for interview was semi-structured, hence while interviewing when it was noticed that the participants were only narrating about online learning system, subtle leads were given in form of example-based questions to elicit response on other forms of electronic-based teaching-learning facilities that can be used even on-campus (hybrid system) in special education/ disability areas. But the participants avoided answering those questions directly (even the special educators who works with Cerebral Palsy, and/ or other forms Locomotor disability). The participating special educators focused mostly on answering with examples of clients having Intellectual disability, Autism spectrum disorder, Attention deficit hyperactivity disorder, etc. Next observation that was note-worthy was that they reported receiving no training or equipment support from their workplaces (for those who were employed; not applicable for the private consultants). Nevertheless, everyone reported that now the family members, especially the parents of the special need/ disabled learners are becoming more and more involved in the teaching-learning process (which was not the case earlier when they use to visit centers on regular basis). This engagement was supporting the entire special education system a lot at present, as reported by the special educators. However, they also reported that at times psychoeducational counselling is needed on part of these family members/ parents for continuing with engagement, but somehow, they are managing with the situation as better as they could.

### **2.3 Observed Limitations that needed to be worked upon**

Now as this is a pilot work, and the study is still on progress, this report is not free from limitations. The main limitations that can be found in this report are:

- The present report is limited by its number of participants.
- The data has been collected only from Kolkata, West Bengal. Including other states and associated sub-urban and rural areas would have yielded enriched results.
- Data collection was limited to private consultants and private institute employees only, inclusion of special educators from Sarba Siksha Mission would have yielded varied results.
- Special educators and professionals from various National centers working for disability cause (National Institute of Locomotor Disability, National Institute for the Empowerment of Persons with Intellectual Disability, etc.) to be considered for data collection.
- Only qualitative method has been adopted for data collection and analysis. Using a mixed-method approach with some quantitative measure on e-teaching/ learning efficacy would strengthen this work.
- Only special educators (RCI professionals) have been considered for the work. But from observation of the pilot work result, collecting data from the parents/ family members of the disabled/ special need learners can be recommended for an enriching outcome.

## **III. DISCUSSION**

However, no matter how much this report is limited in terms of number of participants, geographical location, etc., but it creates a hope in form of showing a scope of work in disability/ special education. Therefore, it can be stated that the concept of e-learning in disability sector manifest a scope not only as an alternative process in COVID times, but an opportunity to create a hybrid learning platform in post-COVID era [13-14]. To make this scope feasible, a quick evaluation is needed here in terms of these percentages (%) as mentioned below:

- Out of 121 Cr. Population, 2.61 Cr. Persons (2.21 %) are having one or the other form of reported disability in India [15].
- In India population with computers in rural sector is 4.4 %; population with internet facility and smartphone devices in rural sector is 14.9 %; population in urban sectors with computers/ e-technology devices is 23.4 %; population in urban areas with internet and other ICT training devices is 42 % [16].

With such huge population and limited resources and finances educators are managing a robust responsibility at present. However, as there exist a scope, and to make it feasible and beneficial for the learners with disability/ special need, adequate researches and training are required. More and more researches in this area along with imparting proper training and distribution of required resources to the educators and learners may lead to the development of a hybrid system of learning in post-COVID era, which can positively impact the special education of the country.

## **IV. CONCLUSION**

The major implications of this work are in facilitating (i) awareness program, (ii) further researches and (iii) imparting training in electronic education system to the special educators. Identifying scopes in a particular field of work and making it feasible are two different things. As e-education concept seems to have a scope in terms of hybrid learning platform in special education/ disability sector, to make the same feasible it would require overcoming various challenges at present. However, few suggestions and recommendations are made here, through this pilot work report (further in-depth exploration needed in this area by following the suggestions to control the limitations of this work), that would pave the way towards advancement in this direction:

- Eradication of mental blockage that e-learning is only about online learning and coming out of the comfort zone of going ahead with traditional teaching-learning system for developing a flexible hybrid model of learning to benefit all categories of learners.
- More researches on training and development of e-education is needed, especially in context to disability/ special education sector.
- Administrative, governmental, and social support at a large to create a hybrid-flexi mode of smart teaching-learning method in benefit of entire teaching-learning community.

- Including and amalgamating the concepts of ICT (Information Communication Technology) and IEP (Individualized Education Program) as flexi-model for e-education with e-rehabilitation.

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