

Technology and Inclusive Classroom: A Review of Related Literature

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Abstract

The present study is an attempt to study how technology can be helpful for inclusive classroom. Based on our small scale literature on technology for Inclusive Education where we targeted the desired keyword "Technology and Inclusive Education" on various sources like Google Scholar, Shodganga, ERIC, JStore and other publication house websites like Sage, Routledge, Emerald and Wiley Online. The literature review revealed that Student teachers are well aware of the fact that the field of ICT and inclusive education is the area where they feel weak and they need constant support from professional colleagues and experts. The students should be encouraged to make choices. There should not be any burden on the students rather the students with disabilities should be allowed to learn at their own pace. The use of multimedia and computer assisted instruction, team teaching and cooperative learning are some of the strategies of teaching which can be incorporated in inclusive education. Further it was revealed that the male teachers possess positive attitude towards ICT and male students make use of computers more because they believe that computers can improve their learning. The governments and various other non-profit agencies are making much effort for Inclusion but the current education system are not enough feasible to meet these programmes.

Keywords: Information and Communication Technology, Inclusive Education, Higher Education

Introduction

During 1980's and 1990's there was much investment towards new special so that they are able to meet the needs of children and young people with having learning and physical disabilities. As it was believed that the mainstream education wasn't able to provide the additional support and care that is required to young learners. But with the start of the 21st century, a shift in thinking process took place with many special schools were closing or were merging with their nearest primary or secondary school or college. (Ainscow 2005; CSIE,

2008) believe that the social aspect of education is considered as the crucial to all the learners. They further believe that a person's learning or physical difficulties are best met in an inclusive social environment, i.e. an inclusive educational institution.

Inclusion is considered an important part of providing equal opportunity in education. The need for inclusive education has enlarged and has promoted major changes to schooling and education (Starcic, 2010). In modern times, we are observing a gradual removal of borders. The students with disabilities are educated along with their peers which give special focus for schools to accommodate a diverse group of students with a variety of needs (O'Gorman, 2005). In today's times, almost any person despite their citizenship or physical state can get medical or educational services all around the world. The quality of education that is given to students of special education is gaining much importance day by day. Due to which, a lot of development is being done with respect to opening of new education centres for children with disabilities (Paul, 2016). The educational standards of our country too claim that the students with disabilities should be provided with opportunities so that they are able to realize their abilities and potential. The students with disabilities should be made capable of participating in education and training and there should not be any kind of discrimination. As we are progressing in the Information and Technology industry, the digital technologies are getting easily available and common which results in allowing us for providing new opportunities to students (Dikusar, 2018).

Inclusive Education

Inclusive Education is considered as a new approach for providing education to children with disability and learning difficulties along with their normal peer groups under a same roof. The approach has the ability to bring all students together in one classroom regardless of their strengths or weaknesses in any area. This is normally done to maximize the potential of all these student (Singh, 2016). Providing education to children who are of different abilities requires that they need to be grouped homogeneously so that the teacher is able to deploy special pedagogical approaches (Kaufman et. al., 2005).

Inclusive Classroom Practices

In classroom a Teacher plays an important role and taking a lot of responsibilities to promote a safe and welcoming classroom and school community. This will help in promoting a society where individual differences are being valued and embraced. The building of an

inclusive classroom community means that all the students irrespective of their cognitive level are being provided opportunities so that they are included in the general education classroom. Individuals with Disabilities Education Improvement Act (IDEA 2014) supports inclusive practices and believes that to a great extent, the children with disabilities whether they are in private or public educational institutions are being educated along with the non-disabled children.

The inclusive practices come along with some benefits for students. Inclusive practices help in developing a respect with regard to the unique characteristics and the abilities of each individual. It also helps in increasing the abilities in an individual so that they can help and support all classmates while being sensitive towards differences.

Methodology

In the present study the researcher made an attempt to study how technology can be helpful for inclusive classroom. To select the past literature regarding Technology in Inclusive Classroom, we targeted the keyword on various sources like Google Scholar, Shodganga, ERIC, JStore and other publication house websites like Sage, Routledge, Emerald and Wiley Online. We identified the studies by surfing the ‘current issue’ and ‘archives’ option available on these journal websites. We were able to find only five studies matching with the criteria of our study. All these studies are presented in table 1.1:

Table 1.1: Studies used for Small Scale Literature Review

S. No.	Authors	Title
1	Andreja Istenic Starcic	Educational technology for the inclusive classroom
2	Sumana Paul	Educational Technology For Inclusive Classroom
3	Jose Maria Fernandez-Batanero, Maria Jesus Colmenero-Ruiz	ICT and inclusive education: Attitudes of the teachers in secondary education
4	Špela Bagon, Mateja Gačnik, Andreja Istenic Starcic	Information Communication Technology Use among Students in Inclusive Classrooms
5	Ileana Hamburg & Sascha Bucksch	Inclusive Education and Digital Social innovation

Technology for Inclusive Classroom

Starcic, 2010 focused on incorporating the Information Communication and Technology in Inclusive Education. The study worked as a base for introduction of SEVERI e-learning in Slovenian schools. The researcher developed the SEVERI e-learning programme for use of ICT in teaching and learning of children with special needs. The researcher evaluated the curriculum of Educational Technology of 1995 and 2009 as well as is presented in below figure.

Table 1: Comparing the Educational Technology curriculum of 1995 and 2009

Didactics and Educational Technology - 1995	Educational Technology - 2009
Focus on study of literature with observation in practice, and theoretical seminar work on the computer use in education.	“Living practice” with focus on planning, development and testing, with project work, and studying cases of ICT use in education.
Study methods do not facilitate empirical experience of technologies within one’s own learning.	Study methods facilitate gaining experiences to students so as to integrate them into their own pedagogical work.
Fragmentation of study contents.	Process- and product-oriented integral approach to dealing with study contents.
Summative evaluation and assessment.	Process evaluation; project work is a composite part of final course assessment.
Direction to technical competences in using technologies.	Technical competences in ICT use are obtained indirectly by students through developing the pedagogically didactic generic and subject-specific professional teaching competences.
Special educational needs are excluded.	Preparing student teachers to use ICT in the process of dealing with diversity in classroom accommodating a diverse group of students with variety of needs and integration of special educational needs students.

The SEVERI system developed by the researcher was mainly developed for students having special learning needs in vocational education. The framework SEVERI provides that type of working environment where tools are created according to students’ abilities. The study found that the course work promoted development of student’s and helped them in understanding the importance of autonomy. It was also found that the Student teachers are well aware of the fact that the field of ICT and inclusive education is the area where they feel weak and they need constant support from professional colleagues and experts.

Paul (2016) elaborated the responsibilities of teachers and their duties towards educational technology in Inclusive classroom. For a successful Inclusive Classroom, the students in the class need to be active not passive learners. The students should be encouraged to make choices. There should not be any burden on the students rather the students with disabilities should be allowed to learn at their own pace. The researcher believes that the teacher should be one who can accommodate students of diverse backgrounds and should modify the tasks, tests and the assignments according to the needs of the students. The researcher further says that with the help of the technology, the students are able to absorb the material. The use of

multimedia and computer assisted instruction, team teaching and cooperative learning are some of the strategies of teaching which can be incorporated in inclusive education.

Batanero & Ruiz (2016) studied the integration of ICT in inclusive classroom by teachers. The study also tried to find out the factors which can give a boost to the educational practices as supported by ICT. Keeping this thing in mind, the researchers prepared case studies of multiple cases. The researchers employed questionnaire and group discussion as the techniques to collect the data. The study revealed that the male teachers possess positive attitude towards ICT. The researchers believe that this will help in promoting inclusive and cultures policies between networks of schools.

Bagon et. al. (2018) in their study compared the computer use of students in inclusive education with regard to school and leisure time. This study discussed the ICT integration in inclusive classrooms with respect to all domains of learning, the cognitive, affective, and psychomotor domains. The researchers further examined the various types of activities supported ICT, frequency of computer use and the attitude toward the computer use. The study revealed that the frequency of computer use of student with special needs (SN) and their peers is more for leisure activities rather than the school activities. The researchers compared the computer use of males and females and found that the males use computers more because they believe that computers can improve their learning. This study discusses ICT integration in inclusive classrooms for personalized learning in all domains of learning, the cognitive, affective–social, and psychomotor domains.

Hamburg & Bucksch (2017) studied the Digital Social innovation in Inclusive Education. The researchers developed the digital Training Platform which was based on Universal Design criteria that included awareness, training contents and tailored and adapted training materials.



Hamburg & Bucksch (2017)

Furthermore, the researchers talked about Erasmus+ project that is beneficial for Person with Cerebral Palsy. The programme has the ability to increase the attitudes, skills and knowledge of the Person with Cerebral Palsy. The researchers believe that governments and various other non-profit agencies are making much effort for Inclusion but the current education system are not enough feasible to meet these programmes.

Conclusion

Based on our small scale literature on technology for Inclusive Education where we targeted the desired keyword “Technology and Inclusive Education” on various sources like Google Scholar, Shodganga, ERIC, JStore and other publication house websites like Sage, Routledge, Emerald and Wiley Online. We identified the studies by surfing the ‘current issue’ and ‘archives’ option available on these journal websites. The literature review revealed that Student teachers are well aware of the fact that the field of ICT and inclusive education is the area where they feel weak and they need constant support from professional colleagues and experts. The students should be encouraged to make choices. There should not be any burden on the students rather the students with disabilities should be allowed to learn at their own pace. The use of multimedia and computer assisted instruction, team teaching and cooperative learning are some of the strategies of teaching which can be incorporated in inclusive education. Further it was revealed that the male teachers possess positive attitude towards ICT and male students make use of computers more because they believe that computers can improve their learning. The governments and various other non-profit agencies are making much effort for Inclusion but the current education system are not enough feasible to meet these programmes.

References

- Ainscow, M (2005). Developing inclusive education systems: what are the levers for change? *Journal of Educational Change* (6), 109–124. Retrieved from <https://doi.org/10.1007/s10833-005-1298-4>
- Bagon, S., Ga"nik, M. & Star, A. I. (2018). Information Communication Technology Use among Students in Inclusive Classrooms. *Information Communication Technology Use among Students in Inclusive Classrooms*. 13(06), 56-72. Retrieved from <https://doi.org/10.3991/ijet.v13i06.8051>

- Batanero, J. M. F., Ruiz, M. J. C. (2016). ICT and Inclusive Education: Attitudes of the Teachers in Secondary Education. *Journal of Technology and Science Education*, 6(1), 19. Retrieved from <http://dx.doi.org/10.3926/jotse.208>
- Centre for Studies on Inclusive Education (CSIE). Retrieved from <http://www.csie.org.uk/inclusion/>
- Dikusar, A. (2018). The Use of Technology in Special Education. Retrieved from <https://elearningindustry.com/use-of-technology-in-special-education>
- Hamburg, I. & Bucksch, S. (2017). Inclusive Education and Digital Social Innovation. *Advances in Social Sciences Research Journal*, 4(5), 162-169. Retrieved from https://www.cpwel.eu/media/hamb_buck.pdf
- Kauffman, J. M., Landrum, T.J., Mock, D., Sayeski, B. & Sayeski, K.S. (2005). Diverse knowledge and skills require a diversity of instructional groups: A position statement. *Remedial and Special Education*, 26 (1), 2-6. Retrieved from <https://tinyurl.com/vq5bnqk>
- O’Gorman, E. (2005). Setting Standards for Teacher Education in Special Educational Needs in Ireland. *30th Annual Conference ATEE*. 377-381. Retrieved from http://www.atee2005.nl/download/papers/06_bb.pdf
- Paul, S. (2016). Educational Technology for Inclusive Classroom. *Scholarly Research Journal for Interdisciplinary Studies*, 3(22), 1494-1503. Retrieved from <https://tinyurl.com/qrp4a3f>
- Singh, J. D. (2016). Inclusive Education in India – Concept, Need and Challenges. *Scholarly Research Journal for Interdisciplinary Studies*, 3(13), 3222-3232. Retrieved from <https://tinyurl.com/tvw6t4b>
- Starcic, A. I. (2010). Educational technology for the inclusive classroom. *Turkish Online Journal of Educational Technology-TOJET*, 9(3), 26-37. Retrieved from <https://tinyurl.com/uv7x7hz>