XIBA Business Review
5 (2) 2022, 35-43

A Study on the Effects of Information and Communication Technology among Special Educators in Tamil Nadu, South India

Amali Arockia Selvi J.*, Stella P.**

Abstract *Special education in India has gained traction in the twenty-first century with several innovations and curricular enrichments. The current research paper aims to link the usage of Information and Communication Technology proposed with special schools of South Tamil Nadu, India. Special-Needs Children's Participation Learning design is a challenge and a task to explore new avenues to help exceptional children develop their learning skills as a result of demands for ICT applications from youngsters. Researchers have used a mixed research methodology. An online survey was used to send a questionnaire, followed by interviews with the heads/senior executives of Special Educational Institutes. The interviews aimed to look into and analyse sixty different areas of ICT-based curriculum design and implementation among special educators. The sample respondent size was 102 teachers. It was computed and analyzed to interpret the outcomes. The use of correlation analysis revealed the strong and weak relationships between individual aspects; examining the aspects through factor analysis provided a new orientation to special teachers and unique educators grouped under cluster review, revealing their propinquities and similarities; and examining the aspects through factor analysis provided a new orientation to special teachers and unique educators grouped under cluster review, revealing their propinquities and similarities. The findings show that special educators' use of ICT applications has a two-fold impact on learning design: teachers with good ICT skills perform better, whereas instructors with inadequate ICT skills perform worse. One alternative suggested in the research is to develop greater ICT skills and experience to empower special-needs children through learning-teaching design systems.*

Keywords *Information, Communication, Technology, Special Education*

INTRODUCTION

The impacts of ICT may be seen across the board in technology. Recent research by Dawes (2001) shows that new technology, particularly in special education, significantly impacts how students learn and how they learn.

ICT technologies must be integrated into special education classrooms. Special educators' teaching abilities are improved through the teaching-learning process. Special Children with desired outcomes in the learning process.

Digital learning environments have been established using information and communication technology (ICT). The teaching-learning paradigm has been transformed by Digital Learning, making it easier for academically challenged students. The hallmark of the educational system in today's globalised world is when technology is leveraged to provide a digital learning platform. The usage of ICT-enabled programs in special education has been found to help students learn. Teachers in special education institutions are being energized in new ways to deal with the pedagogy of ICT-enabled instruction. The use of ICT in special education has boosted cognitive education for children with exceptional needs, according to Aksal and Gazi (2015). Using ICT methods and abilities to affect the special education system's course has been proposed. Drigas and Ioannidou (2013) recommend building ICT-enabled instructional programs for students with special educational requirements.

Research in Special Education

Justification for Current Work Special education and technology play an important role in Current Research's focus. The focus of the present research was to examine how technology and special education could be integrated into a new learning paradigm. For children with special needs, the process of teaching and learning must be altered because of their cognitive impairments and the slowness of their mental processes. When the entire system is implemented to accommodate all children's requirements, Coflan and Kaye (2020) show that children with disabilities learn effectively. New thinking and a new paradigm shift for the inclusion of Special Children have been made possible thanks to the adaption of technology in Special Education. ICT learning design for children with specific needs is the focus of this

* Research Scholar, Xavier Institute of Business Administration, St. Xavier's College (Autonomous) Affiliated to Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India. Email: amaliselvi@gmail.com
** Assistant Professor & Head, Xavier Institute of Business Administration, St. Xavier's College (Autonomous) Affiliated to Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India. Email: stellajenefa@gmail.com

study. Many new initiatives and curricular enhancements have propelled Indian special education into the twenty-first century. Newer teaching-learning frameworks, ICT capabilities, and a broader knowledge base are needed in India's special education institutions.

As a result, the twenty-first century is distinguished by the emergence of a knowledge-based society in which information and communication technologies play a critical role. Officials in India have declared the years 2010 to 2020 to be a decade of innovation. In education, critical thinking and reasoning skills are taught. Low-cost ICT methods and technologies should begin in the primary grades to acquire the necessary skills. Students with special needs must use ICT-enabled learning design to show their dedication. Because Special Children have many learning impairments and cognitive development faults, their special education learning technologies and tactics must be tailored to their unique needs.

REVIEW OF LITERATURE: ICT PARADIGM AND SPECIAL EDUCATION

The literature review gives an overview of ICT tools and techniques to address the issues of Engaging Special-Needs Children. The focus is to understand the role of Technology and its influences in special Education than Mainstream education.

Importance of Special Education

Chakma (2020) has emphasized, "Special education is a modified program which involves some unique tools, techniques and research efforts in improving instructional arrangements to meet the need of exceptional children. It is not a different program assigned for the normal children"[1]. Coflan and Kaye (2020) have specified the category of children with Special Needs as Physically challenged, Deaf and Dumb, Blind, and Mentally Retarded. These children are prone to respond to education unless there is a special instructional orientation method. The insights of Sæbønes et al. (2015) have given birth to a newer approach to understanding Special education and technological intervention. Sæbønes et al. (2015) have reported in their studies that there is an increasing relationship between schooling, disability, and poverty. They have further argued that many research scholars comprised of 80% have established a link between poverty and disability. To improve education and learning access, it is necessary to make low-cost assistive technologies widely available. A more good investment is required to provide quality education and improve learning outcomes for children with disabilities in offering accessible and effective teaching and learning materials.

Special Education and ICT Integration

Katsarou (2020) has indicated that Special Educators' perceptions towards ICT integration in special education are positive. ICT needs to be implemented in the context of special education. Batanero (2019) has indicated that Special education teachers cannot use digital platforms for their instructional purposes. Special Teachers are less prone to use Digital skills. Thomas (2020) explained that using ICT tools could bridge the learning gaps among Children with Special Needs. He furthered, saying the implementation of ICT tools in Special Education has to be the agenda of Special Schools. Moreno (2020) insisted that Special educators adopt new Technology to instruct special children. Silva and Novo (2019) have indicated that Teachers in special education must evaluate ICT intervention options to help children with disabilities. Self-autonomy, self-esteem, and interaction give significant benefits for the cognitive, physical, social, and emotional development of kids with SEN, according to the research. Florian and Hegarty (2004) described that the application of ICT in special education becomes educational inclusion of special children. In the Case of Universities In North Central Nigeria, Yusuf (2015) has revealed that instruction through Information and communication technology helps the students. Sivasankar (2014) has indicated that ICT awareness among higher secondary teachers is increasing and capturing attention. Anderson and Putman (2020) have indicated that facilitating growth-oriented valuation and fostering life skills among special children enhances learning outcomes.

Lombard et al. (1998) have indicated that special educators must follow the ICT pedagogy guidelines. The ICT skill integration in special education makes the learning process more relevant. According to Dragana et al. (2014), school teachers must establish attitudinal changes in pre-school, primary, secondary, and inclusive education with impaired pupils. Siyam (2019) has indicated that the Technology Acceptance Model (TAM) could instruct special children. Amhag, Hellström and Stigmar (2019) have emphasized the aspects of digital skills that are supposed to be developed.

Thus, the literature review has given the pathway to clarify the concepts, applications, and practicality of their nature. It has helped the researcher to gain a better understanding of the many theoretical, conceptual, and empirical views on the various components of ICT Skill Integration in Curriculum Development and Learning Design in Special Education

[1] https://onlinenotebank.wordpress.com/2020/03/17/special-education, by Devasis Chakma (Accessed on 20/04/2021)

Schools. The literature study shows that ICT in special education is problematic, with an emphasis on learning design in special schools in India, particularly in South Tamil Nadu. The current research has identified several research gaps to further inquiry.

METHODOLOGICAL CONSIDERATION

Research Gap

The literature review has paved the way to understand the relationship between Special Education and ICT Integration. It has been observed that there is a scarcity of literature review support to identify the role of ICT integration in Special Education in the Context of India and particularly the place of current research carried out. The research gap is that fewer studies have been conducted in Southern Tamil Nadu.

Thus, the current research is new and unique in identifying Special Education Teachers and how they shape their understanding and the role of ICT integration in their instructional model.

Research Objectives

- The research objectives serve as a guiding foundation for the current research.
- To examine the relationship between variables in the context of ICT among special educators.
- To associate two components like years of operation of Special Schools, Teaching experience in special education.
- To examine factors relating to ICT learning design in special education.
- To run the cluster analysis to group Special Schools based on the nature of the relationship.

Research Design

Based on the research gaps and objectives, the research approach was used. The current study paper is a success because of its hybrid research approach. It has been suggested that quantitative Analysis is the most significant part of data analysis and presentation by Scruggs, Mastropieri and Casto (1987). The use of both quantitative and qualitative techniques has improved the validity and results of this study. There are statistical tools available to quantitative researchers to examine how various ICT features are linked in the current study. According to Ovino and Tsitsianis (2020), a researcher's research method serves as a guide for analysing the data and drawing conclusions. Qualitative research takes data from Special Educators in small groups.

Many statistical methods have been used in this study to examine the relationship between variables. Analyzing data according to predetermined goals was the strategy employed by the researcher. Pearson Correlation analysis is used to study the correlation between ICT components to expand the research findings and establish the worth of adopting ICT in special education. An element's strength and weakness are determined by correlation analysis on each element. Our total understanding of changeable interrelationships is aided by this visual representation method. As a second example, Pearson Correlation is frequently used to examine the statistical significance between two variables. Correlation can be used when examining factors in control settings, such as the number of years the school has been in operation, the experience level of the teachers in the Special Education department, and their age. Thirdly, a Paired T-Test was used to examine the relationship and influence between two variables. K-Means Cluster Analysis is employed when looking at the relationship between schools and the t. Correlation can be used when examining factors in control settings, such as the number of years the school has been in operation, the experience level of the teachers in the Special Education department, and their age. Teachers have varying levels of experience with ICT tools and practices. When special educators are clustered together, their similarities and distinctions can be seen. One of the strengths of special educators is their ability to create flexible, packaged, and high-performing lessons using ICT. Special schools assist their personnel in establishing and cultivating curriculum design in order to empower Special-Needs students.Finally, Pearson's Correlation values were utilised to order the variables using the Mean Ranking approach. Factor analysis is used to examine variables that have been categorised as factors in this study.

Our goal is to compare the contributions of 60 variables to Special Education in the context of Special Education Research by establishing a framework for applying research techniques. Cronbach's Alpha (0.922) indicated that the construct of variables used in the current study had a strong overall reliability grade.

The researcher used two approaches to perform the study: an ICT-enabled questionnaire and a survey with follow-up interviews with heads of special education facilities. Researchers used surveys and in-depth interviews to understand better the value of integrating ICT skills into Special Education. Predetermined sample size was used to conduct the inquiry. ICT-based classroom design and special educators' use of sixty various components were examined.

Only 162 out of 300 teachers who were surveyed gave their opinions, making this a statistical outlier.

RESULT AND DISCUSSION

The first objective was to look at the interactions between the variables in the context of ICT applications in Special Education. As a result, the first perspective is concerned with examining the relationships between various components of ICT orientation in order to engage Special Teachers.

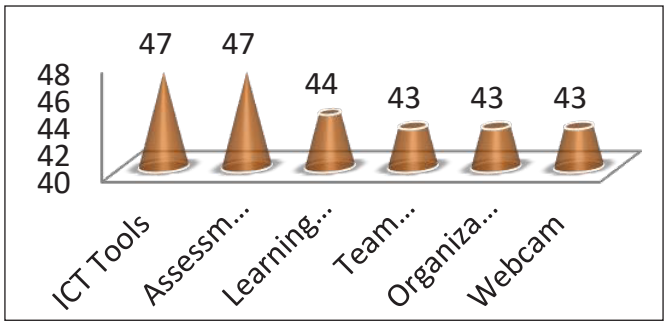

Fig. 1: Overall Perspectives

With light of this, we discovered that ICT tools, assessment, Webcam, learning design, team planning, and organisational motivation all have significant links with other variables and have a positive association in ICT integration in special education learning and teaching. In this light, we have discovered that ICT tools, assessment, Webcam, learning design, team planning, and organisational motivation have substantial relationships with other variables and establish a positive association in ICT integration in special education learning and teaching.

Firstly, ICT tools have 47 elements, with the most statistically significant interactions between them. Fig. 1 shows that the second element, Assessment of Learning Design among Special Teachers, has a substantial relationship with the other aspects of the study. Teachers in Special Education employ a learning design assessment method to improve their teaching, as shown in Fig. 1. It's an indication that the use of ICT tools in the classroom management of children with special needs is becoming more sophisticated.

Learning Design is the third component, with 44 statistically significant correlations among variables. The computed variables' positive and negative orientations suggested that the variables are traveling in two separate directions. There are 44 components in the Learning Design feature, 31 of which have a negative relationship and weak statistically significant correlations, indicating that these variables are trending in the wrong direction. The weak negative correlation shows that special educators in South Tamil Nadu special schools must be familiar with ICT-based approaches to teaching and learning, and the weak relation characteristics also suggest that the ICT-based curriculum has a poor structure. Organizational motivation, which has 43 statistically significant interactions with other elements, is the fourth aspect of the overall perspective.The organisation has been discovered to play an essential role in influencing Special Educators to use ICT resources for teaching instruction and to develop a digital technology-based classroom teaching-learning design culture.

In Objective 2, we divided educators and special education schools based on two control scenarios: years of experience (Teachers) and years of school establishment (Organization) in special education.

Control Situation 1 teachers with more than 5 years of experience in Special Schools have an impact on their teaching. Assessment of Learning Design is thought to have 41 components with a good association among special educators. They are on the same page when it comes to using technology.

Assessment of Learning Design has been demonstrated to benefit Teachers by providing them with more experiences. It has allowed them to create their curriculum and track students' progress with special needs. Figure 1 shows that Assessment of Learning Design has strong statistically significant associations with 41 features, with positive correlation analysis. In Control Situation 1, they are educating their students.

Table 1: Years of Experience More than 5 Years

Sr. No	More than 5 Years of Experience	The Number of ICT Factors with Strategicties
1	Learning design evaluation	41
2	Internet	40
3	Interactive resources	39
4	Tools for ICT	38
5	Photo lexicon	38

It was also confirmed that special educators in the current study apply learning design assessment in their curriculum development, making the teaching-learning process of special needs children more accessible and helpful. The control status of schools that have been open for more than five years is linked to several other criteria. The Internet is the second aspect, which encompasses 40 highly interconnected aspects. It is compatible with many Special Schools that structure classroom learning utilising digital technology. It was discovered that the maximum positively associated characteristics are 28. Interactive tools, which cover 39 different aspects, are the third component. It moves positively and demonstrates the strength of statistically significant cor-

relations with other factors.

Years of experience in a controlled setting of fewer than 5 years have various statistically significant elements. Fig. 2 shows the aspects that have statistically significant correlations with each other.

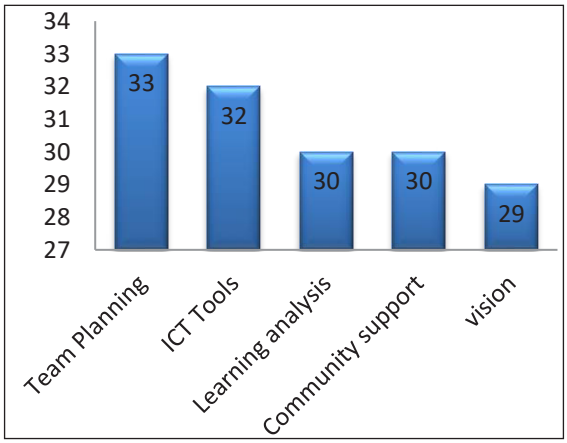

Fig. 2: Teachers More than 5 Years

Team planning has the highest correlation significance, with 33 components associated. According to reports, special educators are starting to employ Team planning as a strategic advantage for the group's benefit. Special educators use Team planning to understand the unique context and learning design better. Teachers with less than 5 years of experience in special education are more likely to employ Team planning to familiarise themselves with Special education teaching-learning design in the sense of a group. This suggests that teachers work together in groups to comprehend the teaching-learning design.

The second factor is ICT tools, which cover 33 variables with a higher level of correlation. The statistical significance of ICT tools is discovered. According to the theory, there are two movements, one positive with 20 elements and the other negative with 13 aspects. In special research schools, learning Analysis of ICT-based curriculum is prioritised. Learning analytics is used by special educators in special schools to retrieve information on specific students and their learning disabilities. Learning Analysis might assist special educators in maintaining collaborative relationships and goodwill with parents, students, and other stakeholders to provide high-quality education. Learning Analysis also entails a framework for comprehending unique children's intellectual needs and meeting those needs by their power level.

In the control situation, the number of years since a Special school was founded (organised) in Special education determines the quality of ICT inputs and usage on school grounds and how school administration assists special educators in developing their attitudes and interests toward ICT learning design. The assessment addressed the aspects in the first phase, which lasted more than 5 years after the founding of the Special School.

Table 2: Attitude towards ICT

	N	Mean	Std. Deviation
Student interest	162	4.14	.563
Student performance	162	4.12	.783
Student growth	162	3.93	.651
Student mindset	162	3.85	.613

Parents motivate the Special Children to study and perform well as they accompany their children in their learning process. It has been sensible that ICT tools have brought learning outcomes among Special Children. The learning outcomes are oriented towards teaching Special Children through ICT tools.

The pair Samples test reviews whether the relationship between Pedagogical Input and Need assessment exists among them with statistical significance.

Table 3: Paired Samples Test

Paired Samples Test									
		Paired Differences: Two Aspects					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pedagogical input - need assessment	-.278	.633	.050	-.376	-.180	-5.586	161	.000

The statistical value of the pair demonstrates that the relationship between Pedagogical Input and Need assessment is correlated in the current research. The current research has shown the negative relationship, which indicates that teachers are not prone to use these aspects in their teaching medium. The teaching inputs are to identify the learning gap among the Special Children. The input-output-oriented teaching through ICT is weak in a relationship and negatively orientation. The mean value of the Pedagogical Input and Need assessment is -.278, which indicates the negative orientation, weak relationship, and less statistical significance among the aspects computed. Though it has

shown the test's significance, it has a weak and negative relationship. When teachers cannot assess the need of the Special Children, it is challenging to plan and organize Learning effectively.

The teaching-Learning aspects are carefully planned and executed with ICT interventions. Table 4 indicates that ICT Significance in Special Education uses ICT tools and techniques to shape the teaching-learning.

Table 4: ICT Significance in Special Education

	N	Mean	Std. Deviation
Module	162	4.23	.690
Feedback	162	4.12	.873
Tools	162	4.10	.710
Resources	162	4.05	.876
Learning_Analysis	162	3.83	1.041
Evaluation	162	3.83	1.025
Assessment	162	3.71	.937

The Module in Special Education has a significant role to play. The Module is ranked in Table 8 as first having the mean value 4.23, which indicates the Module planning and preparation is given due importance. The Module in Special Education has a process involving context,

Teaching-Learning Method, and learners. The current research Special Schools have begun to integrate ICT Module in Special Education in current research schools and help the teachers to plan their teaching modules to instruct the special children for better growth.

The Special Schools examine the options and choices for enhancing ICT interventions to teach special children. The feedback in Table 4 stands for the second position, the third position is ICT tools, and the fourth position is Resources having 4.05. Table 4 indicates how special schools use different ICT tools and techniques to enhance special children's learning patterns.

Table 5: ICT Investment in Special Schools

	N	Mean	Std. Deviation	Variance
Smart class	162	4.01	.975	.950
Internet	162	3.97	.922	.850
webcam	162	3.93	.949	.901
Talking Calculators	162	3.91	1.018	1.036
ICT software	162	3.91	1.002	1.004
Audiometers	162	3.86	1.002	1.005
Interactive_tools	162	3.79	.968	.937
Photo vocabulary	162	3.75	.953	.908

The Special Schools in the current research have invested in creating smart special schools for the effective learning of special children with Special Needs. Special Educational institutions' investment priorities are based on their budget allocations across core ICT technology and installing them for instructional purposes. Table 5 indicates the mean value of ICT technology tools like Smart class having 4.01, Internet having 3.97, Webcom having a mean value of 3.93, and ICT software having 3.91. Many Special Schools have educated their teachers to use Internet-based ICT tools to help the Special Children and instruct them for effective Learning.

The investment in Smart classes in Special Schools has indicated that teachers focus their teaching and instructional mode through ICT-based Smart classrooms and promote ICT-based Learning for Special Children. Smart class technology in Special Schools allows special students to use whichever medium they are familiar with, like visual and Auditory.

It has been observed that innovative classroom technology boosts students' confidence and encourages them to participate in extracurricular activities. Smartboard technology makes the learning experience more fun among exceptional students, and exceptional teachers can help special children with more task-oriented learning activities. Special Children are attuned to different forms of media. Special teachers instruct special children through illustrations using photos, maps, graphs, regular and animated videos. It has been noticed that every special child can grow differently from the other; the growth is also different for different special students. Incorporating technology tools into the Special classroom environment has positively changed the teaching-learning experience for the students. The promotion of ICT skill integration, the opportunity to teachers, and motivation to impart knowledge to students.

Table 6: Classroom Management through ICT Interventions

	N	Min	Max	Mean	Std. Deviation
ICT familiarity	162	1	5	4.27	1.180
ICT skills	162	1	5	4.44	.834
ICT dependency	162	1	6	4.10	.963
ICT lesson plan	162	1	5	4.11	1.241
ICT application	162	1	5	4.28	.633
ICT adaptation	162	1	5	4.07	.777
Valid N (listwise)	162				

Table 6 mean value revealed that ICT knowledge is the most frequently used component among special educators. In South Tamil Nadu, special schools have employed ICT abilities to educate successfully and efficiently in the classroom. South Tamil Nadu school administrations are assisting special instructors in developing their skills in

integrating into the learning design curriculum and enabling them to become ICT-aware individuals. The current research mean values show a gradual increase in ICT use in teaching and learning. k-Means clustering was used to find the close association of instructors who share a common platform in teaching and learning, resulting in a cluster-wise association of Special Teachers.

Table 7: Special Educator Cluster Propinquity

Number of Cases in Each Cluster			Teachers Orientation
Cluster	1	13.000	Teachers with minimum ICT Skills
	2	7.000	Teachers with bundled ICT skills
	3	26.000	Teachers with knowledgeable ICT skills
	4	116.000	Teachers with Higher ICT skills
Valid		162.000	
Missing		.000	

Teachers can introduce students to the learning and assessment paradigm because certain schools have a stronger ICT integration. Special teachers have ICT skills, as seen in the table. These clusters are categorised by how closely they are related. The first cluster represents a group of teachers that have used only basic ICT abilities in their classrooms.

It is a mash-up of a few different ICT skills. The data cluster analysis has led to a better understanding of the special educators' teaching-learning design.

Table 7 indicates four clusters of special teachers, with 13 percent having basic ICT skills, 7% having packaged ICT skills, 26% comprehending ICT skills, and nearly 60% having integrated higher ICT skills. The cluster analysis also indicates that the availability of ICT resources in Government-run schools is very minimum and scarce in budget allocation to upgrade them. The Private run Special Schools are in a better position with ICT Infrastructure. The failure of ICT integration in these schools is prone to teachers' inability to adopt ICT skills and work with them in their instructional model. It has been observed that Schools have ICT infrastructure, but the practices and the usage of these instruments are very minimal. Teachers who integrate ICT skills on multiple levels. The quality of special education is determined by the teaching-learning process that special educators build and include into their teaching-learning design. The fourth cluster has a larger number of teachers, demonstrating that special educators employ a variety of ICT abilities to assist special needs kids in learning more effectively. According to the interviews, special instructors use lesson planning as a critical component of their ICT lesson design and implementation. While the current study investigated the availability and usage of ICT tools for instructional purposes, it was observed that they improve the teaching and learning of special education teachers.

DISCUSSION

The study found that ICT-enabled classrooms are more effective in making children with special needs learn their curriculum better. Also, through the In-depth interviews, it was understood that the teachers have an enquiring mind to learn new things as they come, which is positively associated with creating effective outcomes. The interviews conducted also clearly brought the importance of ICT through the following themes:

Teaching and Learning Flexibility

More than half of the respondents agreed that ICT instruments allowed more significant teaching and learning flexibility. Sure faucets of ICT, such as recording classes and notifying through disability-friendly technologies, have improved the teaching-learning experience. Also, the notes and the syllabus are recorded earlier, which becomes a boon to use in the future. Also, for the learners, the ICT tools help access the classes at any point in time; this enables effective Learning.

Customised Learning

Some teachers highlighted the positives of ICT tools as a boon as it helps focus on an individual child rather than the group. Further, the Learning can be customized according to the disability of the children, which is a benefit. Those with visual disabilities are catered to from those with speech and hearing impairment.

ne of the teachers reported as follows "*It makes it possible for a classroom to be enhanced with individual learning events. No longer are students stuck in a classroom they do not understand, trying to learn at a pace they cannot keep up with or participate in"*.

Effective Evaluation Process

ICT tools assist in the more effective assessment of students. Careful monitoring is used to make formative and summative assessments. This technology makes it possible to track learning progress and visualise it as graphs. It also streamlines reporting, allowing teachers to focus more on the weaker students. Based on the style of assessment offered by ICT technologies, teachers can adapt to the abilities of a specific student with minimal effort.

Interactive Learning

The Tirunelveli Special School was used as a case study. Children with special needs can benefit from teaching aids, as demonstrated by this case. There are teaching aids for special children to help them develop their wits and think creatively. Children with special needs benefit greatly from this kind of instruction since it allows them to be more creative in their approach to learning while also improving their memory and retention of previously learned material.

CONCLUSION

Using ICT technology in Special Education has had a tremendous impact on the development of the field. Identifying the ICT components used in Special Education was the goal of objective 1. It was shown that variables such as ITC tools, evaluation, webcams, and learning design were strongly linked to other variables in the current study. Teachers with more than five years of experience in Special Schools in the control group had a greater impact on their instruction. There have been 41 components to the assessment of learning design among special educators that have been strongly associated. They are all going in the same direction when using ICT in their daily lives. For the fourth aim, k-Means clustering was used to identify Special Teachers with a similar platform for teaching and learning. The use of cluster analysis has made it possible to identify Special Schools that have excelled in their use of and adaptation to ICT tools. Educators who work with children with special needs have been impacted by ICT technology in establishing a special education curriculum model. It was shown a correlation between quality education and various factors. Research in this area is notable for its cluster analysis to identify teachers into distinct groups. Common practices, such as using ICT lesson plans and ICT modules in assessment strategies and teacher expertise in using ICT tools, have helped these groups develop a strong sense of cohesiveness. Researchers have established a correlation between the teaching-learning approach of Special Educators and current classroom tools, including ICT-enabled computer systems and infrastructure. Special educators stand to benefit from a shift away from traditional teaching methods to ICT-enhanced modes of communication via digital media. There are suggestions for further research based on the current study's variables, techniques, and procedures.

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