

Hybrid Teaching Methods for Special Education Teachers: An Approach for Teachers' Training

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Abstract

The purpose of study is to explore the use of hybrid teaching methods for special education teachers. This study was qualitative and exploratory. The sample of study was special education teachers' trainers (N=14) from Govt. in-service training college for teachers of disabled children, selected through purposive sampling technique. Data collection tool was a self-developed semi-structured questionnaire. Instrument's validity was confirmed by field experts (N=03) and reliability of the instrument was examined through an extensive literature review. Data was analyzed through qualitative data analysis software NVIVO version 15. Four (04) major themes emerged from the qualitative data analysis, i.e., teachers' perception, challenges for teachers, role of hybrid teaching mode, and unlocking learning potentials for best practices to maximize the effectiveness of hybrid teaching for special education teachers. Findings revealed that a lack of training exposures, inadequate resources, assessment difficulties, a non-supportive environment, and insufficient awareness were reported as major factors to make hybrid teaching more challenging for special education teacher trainers. Recommendations suggest that teacher trainers should be provided with adequate resources & training facilities by special education departments at the national & international levels to implement the hybrid teaching mode in their trainings.

Keywords: Hybrid, Teaching, Special education, Training

Introduction

Hybrid teaching is an educational approach that combines face to face instructions and online learning providing students a blended platform of learning. Hybrid and blended learning models combine the best aspects of online and in-person learning. Through the creation of interactive simulations, automated assessments, and personalized learning experiences, technological innovations like virtual reality (VR), artificial intelligence (AI), and adaptive learning platforms are revolutionizing the way hybrid education is offered (Mulenga & Shilongo, 2025). With hybrid teaching approaches, special education teachers' training demands are satisfied in a way that allows them to possess both a practical and theoretical foundation.

However, implementing hybrid teaching requires extensive planning and significant financial investment, and some students may struggle to adjust to the various instructional techniques (Rabia Imran et al., 2023). Teachers meet synchronously with their students in virtual classrooms created by prominent online platforms like Zoom, Microsoft Teams, and Google Meet (Kansal et al., 2021). These are important aspects that can be used to customize educational experiences to the particular needs of students and a variety of studying styles. In addition to fostering a thorough understanding of a subject, consuming copious amounts of online content also helps develop particular abilities such as digital literacy, problem-solving, and self-learning (Krisna, 2024).

Special education instructors must come up with inventive and practical ways to fulfill each student's requirements in today's diverse and technologically advanced classrooms. To guarantee computerized technologies are effective, specialize in their application (Salih et al., 2025). Providing educational services to students with special needs who face learning and developmental difficulties is the main goal considered in the field of special needs education (Husaeni et al., 2023). The hybrid teaching mode helped learners become more independent and adept at solving problems, which improves the efficiency of conventional classroom learning. Online learning provides a flexible approach to education, whereas hybrid teaching blends the advantages of technology and in-person interactions by integrating traditional in-person learning based on students' perspectives.

Therefore, meeting the dire need of training for special education teachers in the far areas of Punjab, hybrid teaching mode is essential for special education teachers' trainer to implement their training modules. This is the way that could help special education department to carry out training activities on regular ground by addressing the special education training needs for the teachers in the field.

Statement of Problem

Students with special needs require adaptive, creative, and utmost support from their teachers through effective teaching strategies that could meet their different learning needs. For teachers of students with various impairments, hybrid teaching approaches that blend traditional in-person training with online components have emerged as a viable way to improve educational quality. Special education teachers' trainers have the benefit of using hybrid teaching mode in the implementation of their training module for the teachers sitting in far areas of the province of the Punjab. The usefulness of hybrid teaching approaches in special education training setting has not been thoroughly studied. To address this gap, this study will be useful to highlight the significance of the hybrid teaching mode for special education teachers' trainer and the special education school teachers.

Objectives of the study

The objectives of the study were to: find out the teacher trainers' perception about Hybrid teaching methods for special education teachers, identify the challenges in implementing hybrid teaching methods for special education teachers, and explore the role of hybrid teaching for enhancing educational outcomes of special education schools.

Questions of the Study

The questions of the study were: what is the teacher trainer's perception about Hybrid teaching methods for special education teachers?, what are the challenges in implementing hybrid teaching methods for special education teachers? , and what is the role of hybrid teaching for enhancing educational outcomes of special education schools?

Significance of the Research

This research on the effectiveness of hybrid teaching methods for special education teachers holds significant importance for several key stakeholders in the education community. By assessing the efficacy of hybrid teaching approaches, this research can help trainers' teacher preparation programs and provide special education instructors with the tools they need to successfully apply these approaches. Better training will result in more competent and confident teacher trainers who can use hybrid models, which will eventually improve the educational experiences of teachers. Enhancing the performance of learners is the main objective of any educational endeavor. Teachers will get practical guidance on how to adapt hybrid teaching approaches to the various requirements of teachers. This study may help find successful strategies that improve teachers' participation, engagement, and performance, which will benefit all aspects of their development. By examining how hybrid teaching might be modified to fulfill the various requirements of different learners, this study seeks to advance integration and accessibility in learning environments. The study can help create a more balanced learning environment for every learner by recognizing successful strategies.

Furthermore, Decisions about teacher preparation and professional development in education policy may be influenced by the research's conclusions. Utilizing the data collected, policymakers can promote tools and support networks that help incorporate hybrid teaching approaches into special education curricula. This study will add to the broader body of research on special education teaching approaches. It will lay the groundwork for further study and promote continuous discussion on successful teaching strategies in various educational contexts by addressing current gaps in the literature.

Limitations and De-Limitations of the Study

The following are the limitations and de-limitations of the study:

1. This study was limited to the province of Punjab only.
2. Only the special education teachers' trainer were taken as the sample of the study.
3. A self-developed instrument was used as the tool for the study due to non-availability of the standardized instrument.

Literature Review

Hybrid Acquiring knowledge is an educational model that integrates in-person classroom instruction with virtual learning exercises (Pandeshia et al., 2023). This enables more personalization and adaptability in learning, catering to

individual needs (Anurogo et al., 2024). Implementation in education requires a lot of planning to be useful and coherent to students. Included is the determination of the balance between the time allocated for online and face-to-face components, and this also calls for building a syllabus that articulates learning expectations, goals, and requirements (Ojugo et al., 2023). Teaching strategies and learning environments have changed in recent years due to the integration of technology into education, particularly in the field of special education (Liu et al., 2025).

For the purpose of to fulfill students' diverse learning needs and styles, hybrid teaching enables teachers to instruct both in-person and virtually. Hybrid education that makes use of technology, including online audio and video (Govindan et al., 2023). With this method, students can learn at their own pace and have more freedom in terms of time and space. Students can go over material again until they are satisfied with their comprehension by using online resources like audio and video (Hu & Venketsamy 2022). According to Kazu & Yalcin (2022), students' flexibility, their improvement of computer abilities, and its contribution to successful learning outcomes. Group projects and online interactive content are two ways that hybrid education promotes student involvement and responsibility.

There are various challenges to overcome while implementing hybrid methods of instruction in special education. Technological obstacles might hinder successful learning, such as making sure students have access to the gadget's they need and internet connectivity. Training on digital tools and platforms may also be necessary for educators and learners to improve their digital literacy. Rennstich (2023) found that a variety of technological problems, including erratic Internet connections, software bugs, and hardware malfunctions, might arise during the teaching process and interfere with the learning process for both teachers and students. It is imperative that all participants have access to the required technology during hybrid instruction, and that technical problems are supported (Vetrivel & Mohanasundaram 2024). Furthermore, because hybrid learning requires students to balance responsibilities, self-directed study, and both in-person and online classes, time management skills are essential (Kniffin & Greenleaf 2024). A significant problem concerns interaction and communication. Moreover, it can be challenging to evaluate students' performance in a hybrid situation.

For the assessment process to be fair and honest, academics must modify their approaches to incorporate both online and in-person components (Jiang et al., 2023). Therefore, some widely applied apps like Zoom, Google Meet, and Microsoft Teams (Ho et al., 2020) & Zalo (a community-building software created and widely used in Vietnam) can let users combine screen-sharing capabilities with video discussions, allowing teachers to communicate and oversee the progress of numerous students' learning at the same time (Sun et al., 2020). The impact of Microsoft Teams-supported hybrid learning on students' academic performance and views of 21st-century self-efficacy skills in Introduction to Education (Batman 2025). The salient ingredients of hybrid learning are online content, in-person interaction, and the use of technological assistance the blending of both. Online content generally takes the form of readings, video lectures, presentations, podcasts, or interactive simulations distributed through an LMS or other associated platforms (Dede & Lidwell, 2023). Personalized learning and research tools are being made possible by artificial intelligence and data science, which is revolutionizing education. Artificial intelligence provides solutions like intelligent teaching systems and natural language processing tools that make new interactive communication devices and advanced technologies accessible to students with impairments, whereas traditional approaches frequently fall short (Evangeline & Moorthy, 2025). Technology supports such bidirectionality by providing software and hardware in support of content updates and management, communication between student and instructor, and the progress of students (Almusaed et al., 2023).

RESEARCH METHODOLOGY

Research design

This research was qualitative in approach and exploratory in nature.

Population of the Study

The population of the study was the special education teachers' trainers from the Government-In-Service training college for the teachers of disabled children.

Sample of Study

A sample of the study was the special education teachers' trainers (N=14) from the Govt In-Service training college for the teachers of disabled children. A purposive sampling technique was used in this study. The details of the sample demographic have been mentioned in Table I below:

Table I: Samples' Demographics

	Sample	No
Gender	Male	03
	Female	11
Age	25-30 years of age	02
	30-35 years of age	03
	35-40 years of age	05
	Above 40 Years of age	04
Experience	Below 5 years	01
	Above 5 years	09
	Above 10 years	04
Qualification	BS/M.A./M.Ed	02
	MS/M.Phil	10
	PhD	01
Designation	Psychologist	04
	Lecturer	04
	Others	06

Instrument for Data Collection

A semi-structured interview was developed to collect data from the participants. The first section of the questionnaire was related to the demographics of the participants, including their age, gender, and qualifications. The 2nd section of the semi-structured interview contained a total of 11 items and numerous follow-up questions to get as much information as possible about the research problem. Participants were encouraged to share answers of their own choice. Each interview took 15-20 minutes, and the responses were recorded and transcribed later by the researchers.

Validity & Reliability of Instrument

The content validity of the instrument was assessed by consulting a panel of experts (N=03). Experts in the field were consulted on each item of the instrument, and their opinions were utilized to discuss, update, and finalize each item's application. Initially, 11 questions were generated by teachers, and they decided all questions were validated. As concern to the reliability, an extensive literature review helped the researcher in the reliability of the instrument. However, pilot testing of the instrument also helped the researcher to focus on the validity process.

Data Collection Procedure

For data collection all ethical considerations were determined, consent of respondents to conduct the interview. The researcher read and interpreted the instrument while interviewing the participants in their native language. Each interview took 15 to 20 minutes. The responses of the participants were recorded and noted accordingly. Later on, the responses of the participants were transcribed and reported by the researchers.

Data Analysis

After the collection of the data, the interview responses of the participants involved were transcribed. And open coding was applied to generate categories. The categories were further elaborated with sub-themes. Then, the major themes were drawn to reach the findings of the research. The themes were also supported by the relevant literature. The data analysis was done through NVVO-15 Software.

Ethical Considerations of the Study

Ethical considerations are very crucial in research, as it is important to prioritize the well-being and rights of participants. This means obtaining informed consent, ensuring confidentiality and privacy, and minimizing any potential harm. Researchers should also strive for transparency, honesty, and fairness throughout the entire research process.

Qualitative Data Analysis

Main Hierarchy

Unlocking Learning Potential		Challenges for Teachers		
Visualization	Professional Opportu...	Specialized Training	In Sufficient Aware...	
Resources Provision		Non-Supportive Enviroment	Assessment Diffic...	
Promotions for Hybrid Styles		Inadequate Resources		
Role of Hybrid Teaching Mode		Teachers Perception		
Supportive Platforms	Gadgets Accessibilty	Training Exposures	Hands-on...	Challeng...
Multi Learning		Individual's Effort		
Modernization				

The qualitative data analysis from the interviews of the participants of the teacher trainers from the In-service training college for the teachers of disabled children is done through the qualitative data analysis software NVIVO-15. Major themes and their Sub-themes are presented in the above table. Four major themes, i.e., teachers' perception, challenges for teachers, role of hybrid teaching mode, and Unlocking Learning Potential, along with sub-themes or categories, appeared from the in-depth interviews of the teachers' trainers of the In-service training college for the teachers of disabled children.

Research Question I: What is the perception of teachers' trainers about Hybrid teaching methods for special education teachers?

Teachers Perception	
Training Exposures	Hands-on-Practices
Individual's Effort	Challenging Task

Theme I: Teachers' Perception

This theme reflects the perception of the participants about Hybrid teaching methods for special education teachers. The theme has emerged from the categories of hands-on practices, challenging tasks, individual effort, and training exposure. Teachers' perception toward the hybrid method of teaching has been mainly positive, with a considerable number viewing the method as flexible and more engaging to students in the learning environments; however, access to technology and quality training are still major concerns. (Ulla & Perales, 2022). Advances in information and communication technology have advanced the transformation in education from more traditional methods to increasingly technology-based approaches (Nurdiana et al., 2023; Aslan & Pong, 2023).

Category 1: Hands-on Practices

This category contains the responses of the participants about the hybrid method. The participants of the study stated that virtual learning is not effective, especially when the learning is only based on physical activities. The participants of the study expressed that in physical activities, it is significant to learn about physical activity. Virtual learning for physical activities is not possible. One of the participants narrated that.

“Physical sessions we do one-to-one are more effective as compared to the online sessions, as they do not have the same effectiveness. Things that can be conveyed physically cannot be done online.”

Category 2: Challenging Task

This category depicts that hybrid teaching methods are less facilitated for special education teachers' trainers. It meets the needs to some extent, but monitoring things online is different and difficult, and you know that training is done in a controlled environment. One of the participants narrated that.

“All the trainees do not have proper resources like internet and modern mobiles or laptops, etc.”

Category 3: Individuals' Effort

This category displays that the participants do not get training through the department. Because they do not have complete resources, materials, etc. Along with a shortage of resources, we also lack training in areas like software usage and optical utilization, therefore, everything we do is done by ourselves. One of the participants illustrated that.

“We do it for personal development and professional development, but on personal expenses, there's no role of the department.”

Category 4: Training Exposures

This category states that Special education teachers can more successfully integrate traditional and digital approaches by receiving the necessary training and exposure to hybrid teaching methods. This will improve their instructional skills and generate better academic results. One of the participants said that

“I think teachers should be facilitated with various trainings at the national and international levels regularly.”

Research Question 2: What are the challenges in implementing hybrid teaching methods for special education teachers?

Challenges for Teachers	
Specialized Training	In Sufficient Awareness
Non-Supportive Enviroment	Assessment Difficulties
Inadequate Resources	

Theme 2: Challenges for Teachers

This theme reflects the study participants' difficulties while implementing a hybrid setting as a trainer. It has emerged from the categories of assessment difficulties, insufficient Awareness, specialized training, and non-Supportive environment. Hybrid training has made the intake of technology more streamlined, allowing for improved

communication and feedback, further enabling teachers to adjust pedagogic practices to the changing needs of their students (Rivera et al. 2019).

Category I: Assessment Difficulties

This category displays the responses of participants of the study about assessment difficulties that are the biggest challenge while implementing hybrid teaching methods. With hybrid learning, participants are required to find innovative methods to assess their learners because they encounter particular difficulties. The participants of the study further endorse that teacher review of traditional evaluation techniques is necessary for hybrid learning. One of the participants narrated that.

"I think the chances of plagiarism, copywriting, and cheating are high in the assessment process held during hybrid approach."

Category 2: Inadequate Awareness

This category depicts that the participants of the study face problems with technology. Some of the participants don't know how to use different applications and websites. Videos and live streaming in hybrid learning are impacted by poor internet quality. For low-bandwidth connectivity, optimize multimedia material. One of the participants explains that

"People don't have much awareness of digital technology and don't know anything except mobile phones."

Category 3: Specialized Training

This category shows the responses of the participants about specialized training in hybrid methods. The participants of the study recommended the Training on hybrid teaching methods, i.e., classroom management techniques, effective communication, and technological integration. The participants of the study further added that specialized training of the teachers can be helpful for the implementation of hybrid teaching methods. One of the participants explains that

"Effective online applications should be introduced to trainees first with appropriate using techniques."

Category 4: Non-Supportive Environment

This category depicts that the participants of the study stated that our environment is non-supportive and is challenging for hybrid teaching. The participants of the study expressed that they feel difficulty in handling various tasks simultaneously if they need to attend any hybrid mode programme. One of the participants narrated that,

"I think teachers should be free from any pressure of extra work."

Research question 3: What is the role of hybrid teaching in enhancing the educational outcomes of special education schools?

Role of Hybrid Teaching Mode	
Supportive Platforms	Gadgets Accessibilty
Multi Learning	Expenditures Savings
Modernization	

Theme 3: Role of Hybrid Teaching Mode

This theme reflects the role of hybrid teaching mode in the training of teachers working in special education. It includes the use of resources and online support during teachers' training by teachers' trainers. The theme has emerged from the

categories of modernization, supportive platforms, expenditure savings, and multi-learning. In higher education and professional settings where critical thinking and ongoing learning are valued, hybrid learning provides student autonomy over their learning process, which is a huge advantage. Additionally, the knowledge and skills students develop in handling online resources and dealing with others digitally help them in real-life situations (Krisna, 2024).

Category 1: **Modernization**

This category depicts the responses of participants of the study about the role of the hybrid teaching method as a step toward modernization. The participants of the study described that if they are provided with such training that is based on a hybrid teaching mode, then it will bring positive change in their lives as a part of modernization. Moreover, one of the participants narrated that.

"I think hybrid teaching mode is a unique idea in which it can play its role as a moderator to equip people with modernization."

Category 2: **Supportive Platforms**

This category displays the responses of participants of the study about supportive platforms for hybrid teaching, which helps in enhancing the educational outcomes in special education schools. The participant of the study stated that a strong, user-friendly platform allows teachers to easily share materials, conduct assessments, and track student progress. One of the participants explained that.

"Supportive platforms are necessary for training special education teachers to use hybrid teaching approaches."

Category 3: **Expenditure Savings**

This category shows the responses of the participants of the study that the hybrid teaching method is very effective for people who want to get online training. This saves them time and money. The participants added that hybrid teaching reduced the expenses. The expenses of printing and distribution are reduced by digital tools and platforms. One of the participants narrated that.

"We can achieve special benefits including traveling costs and the expenses of boarding & lodging."

Category 4: **Multi Learning**

This category contains the responses of the participants of the study that, with the help of multiple modes of learning, teachers can modify the material according to the needs of the students, which results in enhancing the educational performance of students. The participants of the study who endorsed learning with different aspects found it to be significant for students. One of the participants explains that

"Special education teachers have keen responsibility to focus on their multi-learning always and I think hybrid approach is more suitable."

The qualitative data analysis was based on the responses of the teacher trainers from the Government. In-service training for the teachers of disabled children about "Unlocking Learning Potential" through the qualitative data analysis software NVIVO-15 has been mentioned below:

Unlocking Learning Potential	
Visualization	Professional Opportunities
Resources Provision	Incentive for Teachers
Promotions for Hybrid Styles	

Theme 4: **Unlocking Learning Potential**

This theme reflects the specific strategies or best practices to maximize the effectiveness of hybrid teaching for special education teachers. The theme has emerged from the categories of Resources Provision, Incentives for Teachers, Professional Opportunities, Visualization, and Promotions for Hybrid Styles. In simple terms, it is meant to give

students the opportunity for social interaction and direct support from teachers and classmates while offering flexibility and access to abundant digital resources (Anggaira & Sari, 2023).

Category 1: Resources Provision

This category contains the responses of participants of the study that, in between specialized software, online training platforms, educational apps, multimedia tools, virtual reality tools, social networks, instruction, guidance, and supervision, the best resources for providing hybrid teaching methods for special education teachers are assistive technology and adaptive devices. The participants of the study further said that special education teachers can make use of software programs such as learning management systems (LMS), online collaboration tools, interactive whiteboards, educational apps, and software designed specifically for special education. Moreover, one of the participants narrated that.

"Provision of resources to every person, gadgets, Internet connection is necessary."

Category 2: Incentive for Teachers

This category contains the responses from participants of the study on the importance of incentives for teachers in motivating them to effectively implement hybrid teaching methods and special education schools. Training programs and workshops can help teachers learn new skills and feel appreciated for their work in improving student outcomes. Flexible working hours and giving awards or certificates for good performance also encourage teachers to do their best. One of the participants narrated that.

"Providing incentives for special education teachers to practice using hybrid methods of instruction may significantly enhance their confidence and teaching abilities."

Category 3: Professional Opportunities

This category contains the participants' responses about by using both online and in-person teaching methods, teachers can develop new skills that are in high demand. They can attend workshops, webinars, and training sessions to improve their ability to use technology in teaching. The participants of the study further added that comprehensive training programs provide staff with the skills, knowledge, and competence needed to succeed in their duties and increase the reputation of the department. One of the participants explains that

"I think that hybrid teaching approach will be good addition of getting professional opportunity."

Category 4: Visualization

This category depicts the participants of the study stating that visualization helps to enhance the learning experience for students. Using visual AIDS such as charts, graphs, videos, and interactive presentations, teachers can make complex concepts easier to understand. This is beneficial for students with different learning needs, as visual representation can cater to various learning styles. One of the participants says that

"Teachers with hybrid teaching approach can be trained through the visualization of various digital activities that is the modern need based approach."

Category 5: Promotions for Hybrid Styles

This category displays the participants of the study think that promoting hybrid teaching and learning awareness campaigns makes use of the internet, webinars, workshops, and collaborations with organizations engaged in special education. Participants also described that hybrid teaching also promoted by describing its benefits. One of the participants narrated that.

"This is the time to promote hybrid teaching approach in special education institutes to go with the approach of international world for betterment."

Findings

By keeping in view the data analysis of this study, the following are the key findings of this study:

I. Teachers' perception

This study found that teachers' trainers perceive the hybrid teaching method for special education teachers as associated with a few dimensions, i.e., hands-on practices, challenging tasks, individuals' effort, and training exposure. Hybrid learning is a teaching and learning approach that has profited from the development of information and communications technologies. It describes an educational strategy that blends in-person and virtual learning (Mei et al., 2022). For timely guidance and encouragement, this strategy additionally provides for more engagement between teachers and students beyond established class times (Kucera & Haffner, 2025).

2. Challenges for Teachers

This study found that existing challenges for teacher-trainers while implementing hybrid teaching methods for special education teachers are Inadequate resources, assessment difficulties, insufficient awareness, specialized training, and a non-supportive environment. To overcome difficulties to make use of all the benefits of online learning, a balance between online and offline instruction must be struck, which the hybrid model makes possible (Mishra et al., 2020).

3. Role of hybrid teaching mode

This study found that the role of a hybrid teaching mode for special education teachers' trainers includes Gadget accessibility, Modernization, supportive platforms, expenditure savings, and multi-learning. It combines in-person and virtual instruction, integrating several learning modalities and encouraging adaptability, flexibility, and interaction among educators and learners (Guerrero-Quíñonez et al., 2023). Several advantages come with hybrid learning (Ma, 2023; Sukma et al., 2022).

4. Unlocking learning potential

This study found that unlocking learning potential for hybrid teaching methods for special education teachers can be attained through the provision of resources, providing the teachers with appropriate incentives, provision of suitable opportunities associated with the profession, visualization, and promotions for hybrid styles. It is necessary to strengthen the technology classes in special education teacher preparation programs, emphasizing the usefulness of using technology in instruction (Alanazy et al., 2021). The learning of digital competencies to improve their professional training, recognizing that technological tools are a magnificent resource for their personal development (Rodríguez-Nogueira et al., 2021).

Discussion

Teachers in special education may prefer hybrid methods of teaching that meet a range of learning needs by combining multimodal instruction, flexible learning pathways, and personalized adjustments. The development of information and communications technologies has benefited education through a method known as hybrid learning and teaching, which combines in-person and virtual instruction (Mei et al., 2022). With this method, teachers can adapt their instruction to the various requirements of their students while using technology to increase student involvement. This will bring digital equity in special education. Utilizing this model, students can understand material, interact with students and instructors, and complete projects in addition to traditional classroom settings that facilitate interactive discussion and hands-on learning, through digital platforms. There is flexibility with the online hybrid learning feature. When it comes to time and location, adding multimedia content to educational resources to make them far more thorough personalized, and independent learning, is achievable (Antonelli et al., 2023). Special education teachers at special education schools can learn at their own pace with hybrid learning's variable pacing and individualized paths, which maximize learning potential. By empowering special education teachers' trainers, this method promotes independence, involvement, and academic success. The implication of this method will surely bring quality changes in the special education domain in Punjab. Learning with this method capitalizes improving education quality and increasing access to educational programs (Mirzoeva et al., 2024). The integration of technology into educational practices has led to innovative learning models, with hybrid learning (HL) emerging as a particularly promising approach (Kayi, 2024).

In the province of Punjab, only one in-service teachers' training college is providing services to majority of special education school teachers through implementing the training module in face to face classes. Implementing hybrid teaching methods presents difficulties for teachers, including handling technical problems, ensuring fair access to resources, and modifying methods of instruction to accommodate both in-person and online learners. A hybrid approach to teaching and learning highlighted several issues for both educators and students, such as time management, communication barriers, technology issues, and assessment complexity (Gudoniene et al., 2025). Successful implementation requires integrating digital infrastructure, pedagogical approaches and firm policy guidelines while considering local contexts and institutional capabilities (Martins et al., 2025).

The use of a range of online learning strategies, including Social, network-based learning, information, communication and technology (ICT), learning management systems, and internet-based learning technologies and learning on the go, has also remained encouraged by the ongoing growth in recent years of online education among educators then academic institutions (Huang et al., 2020). Hybrid teaching overcomes the shortage of teachers' trainer in special education through encompassing the skill based, needs of the special education teachers. Hybrid teaching modalities empower special education instructors to modify training according to each student's requirements, offering adaptable learning ways and individualized assistance.

Conclusion

To sum-up the study, hybrid teaching approach can be effective with some appropriate measures. Teachers require continuous professional development programmes for successful implementation of hybrid teaching techniques. The approach of hybrid teaching methods allows the teachers' trainer to blend traditional and digital approaches. Provision

of different resources such as gadgets, internet connection infrastructure, and access to technology are the key factors to deliver through hybrid teaching approach. Based on a flexible and individualized support to help teachers of special education sitting in far areas of Punjab, this study highlights the efficacy of hybrid teaching approach in special education teachers' training programmes. Special education teachers' trainers can design such educational settings in the future that accommodate various trainees of special education by combining traditional and digital methods. As concern to the successful implementation of this study's findings, teachers are required to get continuous training and assistance. Educational institutions can improve student outcomes and instructor confidence by investing in teacher training, which will raise the standard of special education programs through hybrid teaching approach.

Recommendations

The following are the recommendations of the study:

1. Teachers' trainers should be provided with adequate guidance & training facilities by special education department at national & international level for the purpose of skill development through hybrid teaching method.
2. The special education department Punjab should provide adequate resources including high-speed internet connection to maximize the effectiveness of hybrid teaching methods for special education trainers of the in-service training college and special education school teachers.
3. A comprehensive training module with hybrid teaching method should be developed by the management of in-service teachers training college of special education and various stakeholders including qualified PhDs special education and other veteran of the field to facilitate special education school teachers sitting in far areas of Punjab.
4. In-service teachers training college should promulgate importance of hybrid teaching method, and the use of modern technology through trainings and literature in the light of findings of this study.
5. Researchers in future should conduct researches on the same phenomenon with different research paradigm to contribute more for this type of method.

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