Research Article

Revisiting the Pedagogy of Teaching - Learning: Students' Perspective

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Abstract

Pedagogy of teaching refers to the way teachers deliver the content of the curriculum to a class. Designing pedagogies that produce meaningful learning through educational concepts, competencies, content, evaluation, learning and teaching practices is paramount. Learning is dependent on the pedagogical approaches that teachers use in the classroom. Online Learning during this pandemic has changed much more than the content and approaches. The digital generation and the changes taking place in the present scenario like COVID 19 lockdown, technological advancements in teaching learning and flexibility in learning demands for innovation in teaching. This article brings out the need for revisiting the pedagogy of teaching - learning process on par with the changing educational scenario from the perspective of students. A sample of 97 students undergoing B.Ed and M.Ed Special Education courses in various specializations from the state of Tamil Nadu recorded their views upon the unanticipated transformation in the teaching learning process and its outcome in developing their knowledge and accessibility of resources. Findings of the study suggest that teachers have to augment their skills according to the emerging trends and untangle their conventional pedagogical approach in teaching by adapting to the technological changes.

Keywords: Revisiting, Pedagogy, Teaching - Learning, Students' perspective

Introduction

Pedagogy is globally stated as an approach to teaching. It signifies methods of teaching that comprise teaching styles, strategies, assessment and feedback. This process is regulated by the social and psychological phenomenon and development of learners. Pedagogy as an academic discipline studies the methodologies through which knowledge and skills are transmitted to the learners in an educational environment which encompass meaningful classroom interaction.

Pedagogy of teaching refers to how teachers convey content of the subject or curriculum to learners in the classroom. The process describes how a teacher carefully uses prior learning of students, imparting new learning experience and realizing end goals of the curriculum in a thoughtful and introspective manner. Pedagogy is defined simply as the method, and practice, of teaching. It encompasses:

- Teaching styles
- Teaching theory
- Feedback and Assessment

Pedagogy also includes the practical and the theoretical aspects of teaching which comprises various strategies and techniques adopted to teach effectively, teacher-student interaction, content for instruction, mutual goals agreed between the teacher and student and a variety of ways adopted for content delivery to the learner. A very essential thing about pedagogy is to design a meaningful learning material with good content, adopting effective evaluation strategies and finally executing it successfully. Effective pedagogies are inclusive and take the diverse needs of a range of learners, as well as matters of student equity, into account. These ideas regarding learning and development are particularly salient to education, given evidence that pre-existing knowledge systems can inform a variety of instructional behaviours such as the selection of pedagogical techniques and the interpretation of subject matter (Schoenfeld 2000).

Learning is dependent on the pedagogical approaches teachers use in the classroom. A variety of pedagogical approaches are common in the classroom, but some strategies are more effective and appropriate than others. The effectiveness of pedagogy often depends on the particular subject matter to be taught, on understanding the diverse needs of different learners, and on adapting to the on-the-ground conditions in the classroom and the surrounding context. In general, the best teachers believe in the capacity of their students to learn, and carefully utilize a range of pedagogical approaches to ensure this learning occurs. Effective pedagogy can lead to academic achievement, social and emotional development, acquisition of technical skills, and a general ability to contribute to society. .

The digital generation and the changes taking place in the present scenario like COVID-19 lockdown, technological advancements in teaching learning and flexibility in learning demands innovation in teaching. Innovative methods of teaching are methods of teaching that involve new ways of interaction between teacher and student in the process of mastering curriculum specified to attain the learning outcomes of a specified course. Through experimenting with different pedagogical techniques in the classroom, teachers amass a catalogue of knowledge about what works and what does not work. This type of learning is also known as experiential learning (Kolb 1984).

Wit, Heerwegh and Verhoeven (2012) stated that if online Learning can improve the ICT skills among the students, it is important for universities to distinguish the ways in which they want to use their skills with their learning styles. ICT skills are necessary for students because they need to benefit from online Learning so that they can improve themselves in their studies and learning styles. If students can adapt with online Learning easily, it shows that online learning has been implemented successfully in the educational institution.

Online Learning during this pandemic is changing much more than the content and approaches. Learning happens online and students in addition to listening lectures are expected to present their seminars, assignments

and lesson plans online. With this alternative, students can develop their technological skills as well as improve their teaching skills and communication with their lectures or other students in the classroom or outside of the class. The integration of ICTs provides countless opportunities and possibilities for learners in both higher education and general education. ICTs are significant tools for empowering knowledge and information; therefore, there is a strong need for policymakers and teachers to be aware of how technologies interact and work to use them effectively.

The COVID-19 crisis has raised salient questions about the necessity, importance and usefulness of certain curriculum content. It has highlighted the relevance of certain trends, particularly the authenticity of learning situations. This requires varied, flexible and authentic learning activities. In this regard, the authentic learning experiences resulting from the COVID-19 lockdown could be used to contextualize student realities during the pandemic. This represents an opportunity to rethink curricular content and approaches.

Need for Revisiting the Pedagogy in Present Context

Pedagogy of the twenty-first century cannot be equated with the pedagogy of the twentieth century. The social behaviour of people gets highly influenced by digital technologies as they influence the way people think, communicate and channelize their influence on other people.

Changes in society, student expectations, and technology are motivating higher education faculty (university and college) to rethink pedagogy and teaching methods. The increased emphasis on applying knowledge to meet the demands of 21st century society, such as developing and using skills like critical thinking, independent learning and the use of relevant information technology requires active learning in rich and complex environments, with plenty of opportunities to develop, apply, assess and practice such skills. This enables students to learn after graduation and educate them with the skills to manage their own learning throughout life, so they can continue to learn after graduation.

According to Sclater (2012), education is also the process of facilitating learning, or the acquisition of knowledge, skills, values, beliefs, and habits. There are many methods in education to get knowledge including storytelling, discussion, teaching, training, and direct research. This pandemic has mandated yet another method of teaching learning restricted only to online learning even though online teaching learning happened earlier in a meagre way in the form of video conferencing and tele-teaching.

With the recent developments in information and communication technologies (ICTs), there is a significant change in our daily life. Eventually, integrating ICTs into teaching and learning offers significant potential for higher education institutions and new challenges for educators, through their capacity to facilitate new kinds of education in digital environments. Online Learning becomes more effective

with the continuation of traditional classes with online classes. This makes teaching learning a potential to facilitate "24/7" student learning 'anytime and anywhere', a university education which is available worldwide and delivered from anywhere in the world (Parry, 2015).

Segall and Avner (2004) stated that the focus of teacher education should move forward from traditional practices in order to adopt creative techniques through which the students inherently recognise the pedagogical nature of the content and its application in the context of teaching. Conceptualization of pedagogical content knowledge has to be re-thought based on teacher efficacy and student readiness and participation in determining teacher professionalism Park et.al (2008).

Higher Education Institutes (HEIs) are now fast adapting to alternative pedagogy to engage students remotely and to continue the teaching and learning process in a “Teach-From-Home-Students-At-Home" situation. The COVID-19 pandemic-induced pedagogy has confronted the shape of traditional teaching and learning methods. Teaching flexibility to suit the student's needs should be the new apparatus for individual teachers to bring out the essential learning outcomes with maximum virtual outreach. The lockdown presents higher education institutions an opportunity to adopt an alternative pedagogy that uses technological tools to facilitate academic activities in the virtual world.

Online Learning is more geared towards self-regulated learning and is ideal for student teachers to instil their teaching skills that are mandated for future generation students. Thus, this study was developed to find out the teaching learning pedagogy that proves to be effective with adaptability to the changing scenario in the process of teaching learning. Online Learning becomes more effective with the continuation of traditional classes with online classes.

Online learning has also not undergone the same scrutiny as classroom teaching and researches on online teaching demonstrated mixed results (Ryan et al., 1999; Kenny, 2002; Atack and Rankin, 2002; Kozlowski, 2002). Educators of the 21st century classroom have to integrate ICT in teaching learning with the rapid advancement and shift in learning process as an outcome of the pandemic. Teaching practice also has evolved radical change with the vital impact of the post COVID-19 classroom influenced with the swift development in the teaching learning process.

The outcomes of this research will be helpful in developing a new learning approach in teacher education with the combination of both traditional and online learning and hence it is expected that the result of this study will reveal the effectiveness of learning experiences obtained by special education student teachers through traditional classroom and online classroom. Online learning using ICT prepares learners for the future technology based classrooms and facilitates to meet the advancements of the 21st century teaching learning. Moreover, online learning positively transforms the skills of special education student teachers to prepare and introduce activities in the

teaching and learning process which can significantly change their overall teaching skills to suit the 21st century classroom. In Indian context, online teaching is a relatively new phenomenon as compared to traditional classroom teaching and this COVID-19 induced sudden lockdown made the transition to online teaching imperative. Hence the study aims to study the following objectives to identify the perspective of special education student teachers in terms of their learning experiences gained in both traditional and online classrooms.

Objectives of the study

1. To find out the learning experiences of special education student teachers through various modes of learning.
2. To compare the learning experience of special education student teachers through regular/online mode in terms of

- developing knowledge
- offering effective learning resources

Meaningful online learning and teaching needs a proper planning to cater diverse needs of the students. Compromise in this planning leads to unproductive learning, resulting in non-accomplishment of learning objectives and learning outcomes. Given these concerns, the present research seeks to answer the following research questions:

1. What are the learning experiences acquired by special education student teachers regarding various modes (Regular, Online and Both) of teaching - learning?
2. Which of the two classrooms (regular and online) develop in-depth knowledge about a content?
3. Which of the two classrooms (regular and online) offers good learning resources to acquaint with learning of new content?

Design and Sample

A quantitative survey was used to examine the learning experience of students from undergraduate and postgraduate special education courses through online and regular classrooms. A sample of 97 students undergoing B.Ed and M.Ed Special Education courses with specialization of Visual Impairment, Hearing Impairment, Intellectual Disability, Autism Spectrum Disorder and Multiple Disability from four special education teacher training institutions from Tamil Nadu were selected using purposive sampling technique. The demographic details of the participants are given in table 1.

Table-1: Demographic Details of Participants

Area	Category	Number	Percentage (%)
Gender	Male	8	8.2
	Female	89	91.8
Age Range	21 to 30	85	87.6

	31 to 40	8	8.2
	Above 40	4	4.1
Residence	Rural	46	47.4
	Semi urban	11	11.3
	Urban	40	41.2
Course	B.Ed	87	89.6
	M.Ed	10	10.3
Specialization	Visual Impairment	26	26.8
	Hearing Impairment	27	27.8
	Intellectual Disability	32	33.0
	Autism Spectrum Disorder	5	5.2
	Multiple Disability	7	7.2

Analysis of Table 1 states that the majority of the respondents of the study (91.8 percent) are female student teachers and belonged to the age range of 21 to 30 years which constituted 87.6 percent of the sample. Respondents from rural and urban areas comprised almost the same percentage (47.4 percent and 41.2 percent, respectively) whereas 11.3 percent are from semi urban areas. Majority of the respondents (89.6 percent) represented student teachers studying B.Ed Special education whereas 10.3 percent belong to M.Ed Special Education. 26.8 percent of respondents belong to the Visual Impairment specialization course, 27.85 percent of respondents belong to Hearing Impairment specialization course, 33 percent of respondents belong to Intellectual Disability specialization course and 5.2 percent of respondents belong to Multiple Disability specialization course.

Method and Materials

The learning experiences of special education student teachers in online and regular classrooms were collected using a questionnaire that consisted of two sections. First section comprised demographic details of participants and second section with 15 statements reflecting their experiences on online and regular classroom learning offered by their respective institutions and teachers. The questionnaire was developed with a focus upon the nature of the learning experienced by the students through online and regular classroom in terms of developing knowledge, flexibility, provision of learning resources, mentoring and support system with four options. Developed questionnaire was converted to google form and mailed to the sample through their respective email as the data were collected during mid-May, 2020 when all institutions of India had switched to online mode of teaching due to COVID-19 pandemic.

Results and Discussion

Research questions framed based on the objectives of the study were answered by analysing the data collected from the respondents through percentage analysis, ANOVA and Tukey Multiple Comparison.

Research Question 1: What are the learning experiences acquired by special education student teachers regarding various modes (Regular, Online and Both) of teaching - learning?

Data gathered from the 97 students pursuing special education courses with various specializations at different levels were used to answer this research question. Frequencies of each item were calculated manually and then converted into percentages to show the attitude of participants towards revisiting the pedagogy of teaching in learning.

Table-2: Experience of special education student teachers in frequencies and percentages

S.N	Learning Experience	N	Regular		Online		Both	
			Fr	%	Fr	%	Fr	%
1	Flexible Learning Experience	97	60	61.9	3	3.1	34	35.1
2	Support from teachers	97	69	71.1	4	4.1	24	24.7
3	Offers good learning resources to learn new content	97	49	50.5	16	16.5	32	33.0
5	Discussion, quiz, interaction	97	70	72.2	7	7.2	20	20.6
6	Promotes creativity	97	53	54.6	14	14.4	30	30.9
7	Better student support services in learning	97	63	64.9	5	5.2	29	29.9
8	Exposure to theoretical and practical aspects	97	80	82.5	3	3.1	14	14.4
9	Flexibility in taking up assessments - assignment, test	97	56	57.7	17	17.5	24	24.7
10	Mentoring, supervision, feedback support	97	66	68.0	9	9.3	22	22.7
11	Promotes skill development	97	48	49.5	10	10.3	39	40.2
12	Attend to individual specific need of the student	97	67	69.1	8	8.2	22	22.7
13	Sharing of knowledge among students	97	56	57.7	4	4.1	37	38.1

From the table (1) it is observed that, the learning experience provided to the students by regular classroom is comparatively high when compared to online classroom and both classroom. 82 percent of the respondents recorded that regular classrooms provide a high-quality transaction and exposure to theoretical and practical aspects and 72 percent of the respondents felt that regular classrooms provide for interactive learning experience through discussion and quiz and 71 percent of recorded that support from teachers is high when compared to online and both (regular and online) classrooms. Respondents further recorded that online classroom provides least flexible learning experience (3 percent) and exposure to theory and practical aspects (3 percent) and sharing of knowledge among the students (4 percent) when compared to regular classroom and both (regular and both) classroom. Regular classroom learning (49 percent) and both online and regular classroom learning (40 percent) share the majority of skill promotion activities related to teacher education.

Response to the above research question reveals that learning experience acquired by special education student teachers through regular classrooms in terms of flexibility, support from teachers, student support services, sharing of knowledge among students and exposure to theoretical and practical knowledge is relatively high when compared to online and both modes of classrooms. In the study conducted by (Hasan, N., & Khan, N.H. 2020) it is established that online learning may be used as a supplement to offline/face-to-face learning as in the case of blended learning and flipped learning. The complete and only use of online mode of teaching and learning is perceived to be distracting and lacking support and interaction with teachers and fellow peers that makes it less effective and more burdensome.

Research Question 2: Which of the two classrooms (regular and online) develop in-depth knowledge about a content?

Table-2: ANOVA for significance difference among the programme in developing depth knowledge

Depth Knowledge	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.360	3	2.787	3.331	0.023
Within Groups	77.805	93	.837		
Total	86.165	96			

From table (2) it is found that the calculated value of f is significant at 5% ($P<0.05$) level [$F(3, 93) = 3.331$, $p = 0.023$]. Hence, it is inferred that there is significant difference among regular, online and both classrooms in developing depth knowledge about a content among the special education students studying I & II year B.Ed Special Education and I & II year M.Ed Special Education.

Table-3: Multiple Comparisons: Tukey HSD Multiple comparison of classroom in developing depth knowledge

(I) Programme	(J) Programme	Mean	Std. Error	Sig	95% Confidence Level	
					Lower Bound	Upper Bound
I B.EdSpl.Ed	II B.EdSpl.Ed	-.27405	19835	.514	-.7930	.2449
	I M.EdSpl.Ed	-1.22000	.47527	.056	-2.4634	.0234
	II M.EdSpl.Ed	.44667	.39518	.672	-.5872	1.4805
II B.EdSpl.Ed	I B.EdSpl.Ed	.27405	19835	.514	-.2449	.7930
	I M.EdSpl.Ed	-.94595	.48142	.209	-2.2054	.3135
	II M.EdSpl.Ed	.72072	.40255	.284	-.3324	1.7738
I M.EdSpl.Ed	I B.EdSpl.Ed	1.22000	.47527	.056	-.0234	2.4634
	II B.EdSpl.Ed	.94595	.48142	.209	-.3135	2.2054
	II M.EdSpl.Ed	1.66667*	.59041	.029	.1221	3.2112
II M.EdSpl.Ed	I B.EdSpl.Ed	-.44667	.39518	.672	-1.4805	.5872
	II B.EdSpl.Ed	-.72072	.40255	.284	-1.7738	.3324
	I M.EdSpl.Ed	-1.66667*	.59041	.029	-3.2112	-.1221

*. The mean difference is significant at the 0.05 level.

The Tukey honestly significant difference (HSD) test was performed under the significant result of ANOVA in developing in depth knowledge about a content through online classroom and regular classroom among students of B.Ed Special Education I and II year and M.Ed Special Education I and II year. Multiple comparison results presented significant statistical differences among students pursuing M.Ed Special Education I year when compared to all other categories of students. The mean difference of M.Ed Special Education I year students is significant ($P = 0.05$, $P < 0.05$)when compared to B.Ed Special Education I year and M.Ed Special Education II year respectively. Hence it can be specifically inferred that M.Ed Special Education I year students develop in-depth knowledge about a content through online mode of teaching when compared to M.Ed Special Education II year and B.Ed Special Education I year students.

In the study conducted by (Abdelrahman Mohamed Ahmed, 2020) it is established that ICTs prepare learners for the future and trains them to meet the technological advances of the 21st century. Moreover, ICTs positively change how activities are prepared and introduced in teaching and learning, which can significantly change the overall academic performance of the student teachers. This lines up with the response to the above question that master educators (M.Ed Special

Education) prefer online learning rather than other two modes of learning when compared to B.Ed Special Education student teachers.

Research Question 3: Which of the two classrooms (regular and online) offers good learning resources to acquaint with learning of new content?

Table-4: Tukey HSD Multiple comparison of classroom in offering learning resources

(I) Programme	(J) Programme	Mean	Std. Error	Sig	95% Confidence Level	
					Lower Bound	Upper Bound
Intellectual Disability	Multiple Disability	.16518	.36640	.991	-.8544	1.1847
	Autism Spectrum Disorder	-.20625	.42227	.988	-1.3813	.9688
	Visual Impairment	-.21394	.23185	.887	-.8591	.4312
	Hearing Impairment	-.62847	.22946	.056	-1.2670	.0100

From table-4 multiple comparison results presented significant statistical differences among students pursuing special education in Hearing Impairment when compared to all other specialization. The mean difference of students pursuing special education in Hearing Impairment is significant (P = 0.05) when compared to students pursuing Special Education courses in Multiple Disability, Autism Spectrum Disorder, Visual Impairment and Intellectual Disability. Hence it can be specifically inferred that students pursuing special education with Hearing Impairment as their specialization put forward that online classes offer good learning resources to acquaint with learning of new content than regular class. In the study conducted by (Hasan, N ., & Khan, N.H. 2020) it is revealed that the highly preferred mode by student teachers during online learning was teacher-made text materials and textbook materials compared to all other modes of materials and texts.

Conclusion

Pedagogies are constantly evolving.

It can be modified for 21st-century learning based on the changing scenario in teaching and learning. A pedagogy must fit the audience, and focus on helping students develop an understanding of the material beyond basic memorization and surface knowledge. Students should be able to relate concepts back to the real world, and even their own lives. eLearning

provides positive impact when used and best utilized by teachers and lectures and also helps in the application of 21st century skills in the education system (Masoumi & Lindström, 2012; Khasawneh et al., 2016).

Every pedagogy is different. A good starting point is to create a philosophy of teaching that outlines the objectives of being a good teacher adapting to changing scenarios. Also, an inspirational teachers' effectiveness is reflected in the plan to relate the work in the classroom to professional development to progress in the career. Then, design classroom experiences around this philosophy, work with students to adapt methods to encourage positive responses, and determine strategies to evaluate and assess their performance. Also, consider technology can be integrated into lesson plans and class work, as well as promote inclusivity. Zinger et.al (2017) further adds that both pre-service teacher education programs and in-service teacher professional development (PD), plays crucial roles in promoting teacher technological pedagogy and improved classroom practice.

The analyses of this study revealed that student teachers enjoyed learning through online mode, as it provided them with depth knowledge and adequate learning resources for learning enrichment. Based on the findings of this study, it is suggested that teachers have to augment their skills according to the emerging trends and untangle their conventional pedagogical approach in teaching by adapting to the technological changes. Taking all of this into consideration makes for a great recipe for a successful pedagogical approach. The more a teacher is aware of the way of teaching, the better he/she understands what works best for the students.

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