

## **ICT INITIATIVES FOR THE PREPARATION OF TEACHER EDUCATORS IN J&K FOR 21<sup>ST</sup> CENTURY SKILLS**

**Mulkh Raj**

Research Scholar, Department of Education, University of Jammu, J & K, India  
*Email: teenkiraj3404@gmail.com*

**Prof. (Dr.) Renu Nanda**

Head Department of Education, University of Jammu, J & K, India  
*Email: listenrenu@yahoo.com*

---

### **ABSTRACT**

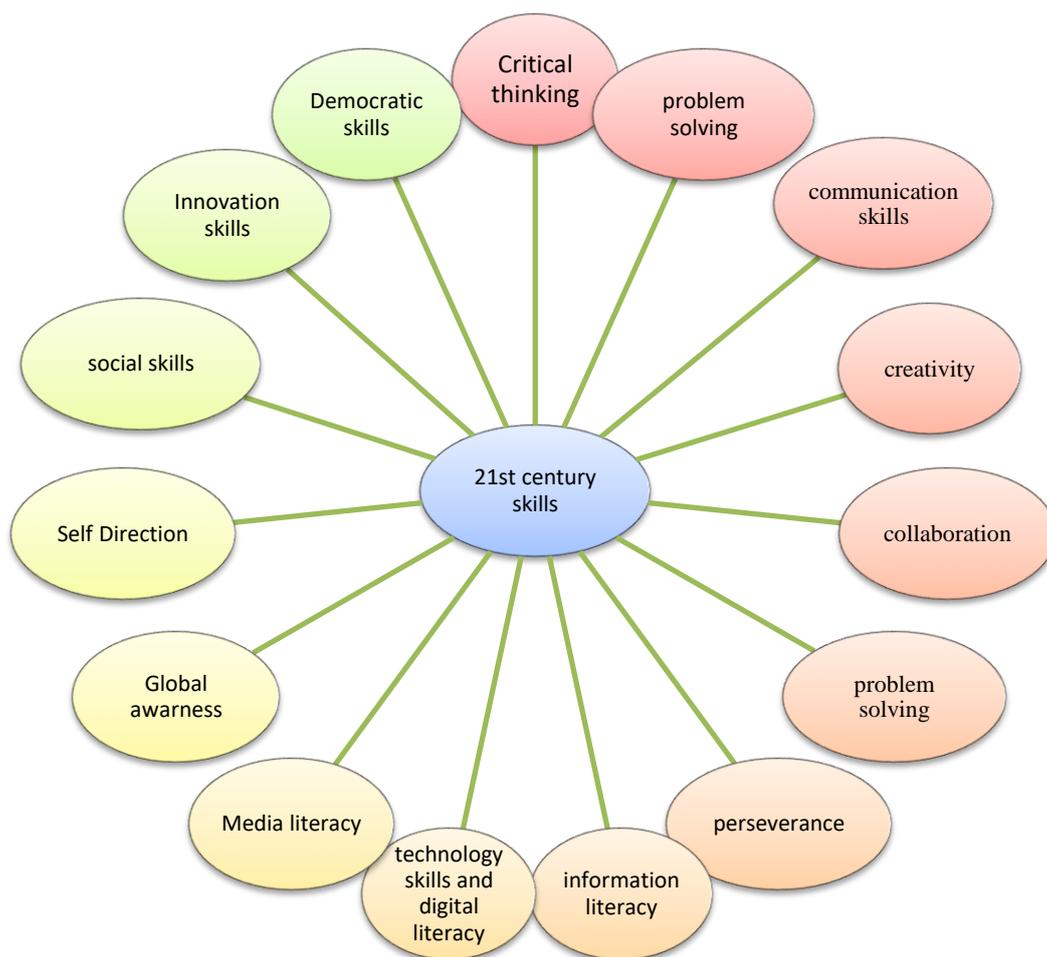
Teacher is an agent of society, state, individual, and nation. Without good teachers, no country can progress. The importance of teachers in the life of a nation cannot be overlooked. The teacher influences the immature minds of the youth. They can mould and treat the young minds into the various forms. During 21st century, ICT plays a big role for the development of educational system all over the world. ICT will assist teachers to the global requirement to replace traditional teaching methods with technological-based teaching learning tools and facilitates. In the present context, ICT plays an important role in transforming the country to the future development. The main objective of the study to know the status of technology in teacher education programme in J&K. and also to know the ICT initiatives for the preparation of teacher education programme in J&K. This paper will help for policy makers and administrators in J&K so that they can check and identify the status of teacher education in J&K.

**Keywords:** *Teacher Education, ICT initiatives, 21<sup>st</sup> Century Skills.*

---

## INTRODUCTION

21<sup>st</sup> century skill is not new skills like critical thinking, collaboration, and problem solving have been taught in classroom for decades. Generally, 21<sup>st</sup> century skills refer to the knowledge, life skills, career skills, habits and traits that are critically important to student success in today world, particularly as students move on college the workforce and adult life. Here is a non-exhaustive. There are most commonly cited 21<sup>st</sup> century skills like;



In today’s knowledge society, 21<sup>st</sup> century skills are pivotal to groom next generation. The term “knowledge worker” was initially coined by Peter Drucker to describe the people who make up today’s knowledge society. Institutions that conduct educational research and training are gradually creating ICT platforms to redesign the educational framework, equip teachers with ICT expertise and

digitize educational materials using intra and inter- institutional database. With 62% of world population using internet as on 30th June 2020 with 1239% growth over last two decades (source: [www.internetworldstats.com](http://www.internetworldstats.com)). There are exponential increases in Global Digital Education Content Market more during pandemic lockdown; the transformation in educational policies putting in robust secure mechanisms enabling paradigm shift towards online education, E-learning and development of open access digitized education resources has gained immense momentum and importance. (Rather, Et.al, 2020 p6413).

### **Significance of 21<sup>st</sup> Century Skills**

- In the current situation, teacher education institutions are preparing students for jobs that might not yet exist. Career readiness means equipping students with a nuanced set of skills that can prepare them for the unknown.
- Today the age is an age of internet; it has dramatically increased access to knowledge. Students need to learn how to process and analyse large amount of information.
- Social media; it has changed human interaction and created new challenges in navigating social situations.
- Content knowledge from core subjects can only go so far, students need to be taught how to apply facts and ideas towards complex problems.
- The investigator reviewed research paper of 21<sup>st</sup> century skills and why they are important in a changing world. Now, let's review a few frameworks and how school districts are putting 21<sup>st</sup> century skills learning practice.
- Learning skills also known as the “four Cs” of 21<sup>st</sup> century learning. These are included, Critical thinking, communication, collaboration, and creativity.
- Life skills: flexibility, social skill, initiative, productivity, and leadership.
- Literary skills: information literary, media literary, technology literary.
- World Health Organisation identifies the fundamental life skills as decision making and problem solving, creative thinking and critical thinking, communication and inter-personal skills, self- awareness, empathy and coping with emotions and stress. The WHO focuses on broad psycho social skills that can be improved over time with conscious effort.

## **21<sup>st</sup> Century Learning Strategies and Implementation**

- Build staff capacity to demonstrate 21<sup>st</sup> century skills in support of student learning.
- Develop strategies to support teachers with implementation of 21<sup>st</sup> century skills.
- Access students 21<sup>st</sup> century learning skills

Equip educators with data to proactively identify and support students who are off track (source-<https://www.panoramaed.com/blog/comprehensive-guide-21st-century-skills>).

### **1. OBJECTIVES OF THE PRESENT STUDY**

- 1.1) To study ICT initiative for the preparation of teacher education programme in J&K
- 1.2) To study the status of technology in teacher education programme in J&K, in the three courses, B.Ed, M.Ed, D.El.Ed.

### **2. METHOD RESEARCH DESIGN OF THE PRESENT STUDY**

The study was conducted of 40 in-service teachers from B.Ed, M.Ed, and D.El.Ed institutes in J&K. The sample has been selected purposively. The sample was delimited to the Jammu District only.

### **3. DISCUSSION AND RESULTS**

#### **3.1) ICT Initiatives for The Preparation of Teacher Education**

For achieving the first objective the investigator revealed ICT related research papers, article, and research journals, and Ph.D. thesis. The study found that ICT constitutes information technology and communication technology both of which are developing at a very high speed. Information Technology (IT) defined by Oxford Advanced Learners Dictionary, “as the study or use of electronic equipment, especially computer for storing, analysing and sending out information” (Kamat, V .2005, p103) Communication Technology is the process of sending receiving and exchanging information with the current technology and infrastructure, this exchange can occur from anywhere and anytime and not limited to any borders (Kamat, V. 2005, p 103).

**There Are Three Main Attributes Which Can Be Mentioned Are as Under**

S. No	Attributes	Classifications
1	Effectiveness	Most interactive Fewer Errors Customized Personalised Achievable Transparent Searchable
2	Efficiency	Faster Cheaper Fewer steps Lower costs Less people Less paper work
3	Innovation	New products New techniques

**ICT Initiatives for The Preparation of Teacher Education**

Information and Communication Technology (ICT) played a big role for the development of teacher education in India. Central and state government launched various policies and programmes for the improvement and development of teacher education in India. There are some most important ICT initiatives for the preparation of teacher education, we can discuss are as given below;

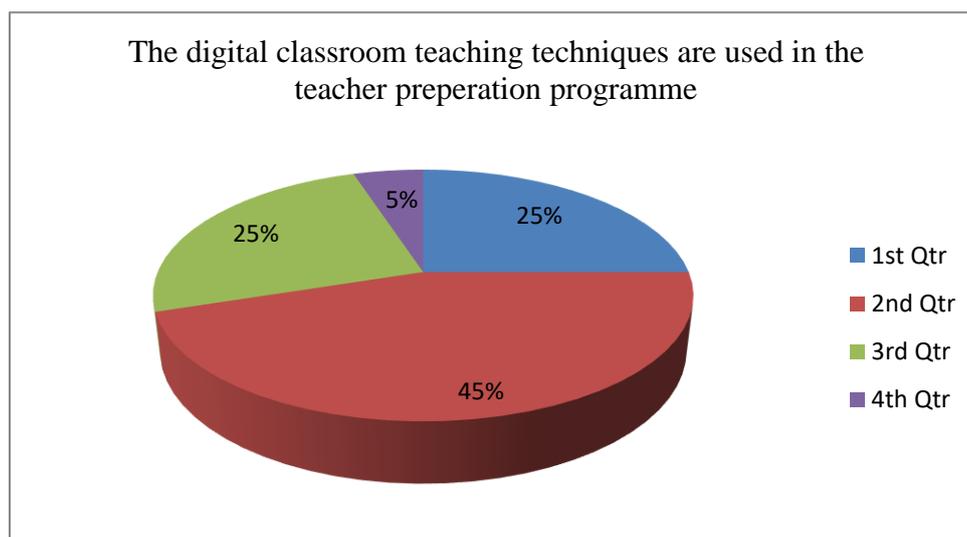
S. No	ICT Initiatives	Characteristics
1	e-Pathshalas	Read Flipbooks
2	Diksha	Access e-Resources of NCERT & other states
3	NISHTA	Access Teacher Training Modules
4	NCERT Textbook	Access PDF version of NCERT Textbooks
5	ICT Curriculum	Enhance ICT schemes
6	Accessibility in school curriculum	Online access of curriculum management programmes
7	Cyber safety and security	To provide knowledge of cyber safety and security
8	SWAYAM Prabha	
9	DTH TV Channel	
10	Kishore Manch	
11	All India Audio, Video Festival and ICT mela	

12	National Digital Library	
13	Virtual Lab	
14	E PG Pathshalas	e-Adhyayan UGC MOOCs e-Pathya
15	Shodhganaga platform	The UGC notification (Minimum standards and procedure for Award of M.Phil & Ph.D Degree, regulation 2016)
16	e-ShodhSindhu platform	Access 15,000 core peer reviewed journals and numbers of bibliographic, citations, and factual database in different discipline from a large number of publishers.
17	Vidwan portal	Focus on quickly and conveniently provide information about expert to peers, prospective collaborators, funding agencies, policy makers and research scholar in the country

Source: <https://vnit.ac.in/wp-content/uploads/2020/02/ICT-Initiative-of-MHRD-Government-of-India.pdf>

### Objective

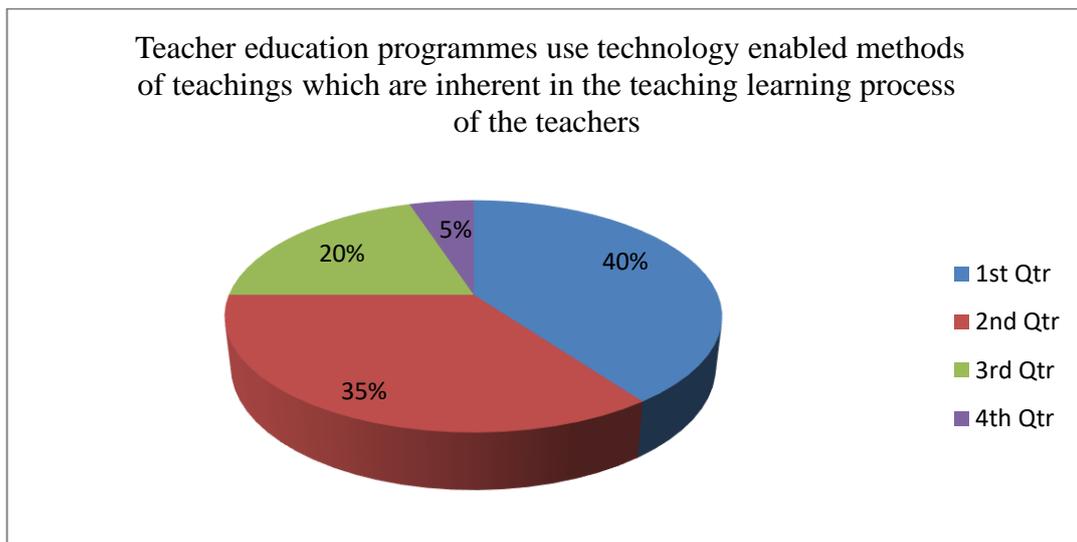
**3.2) For achieving the second objective, the investigator had prepared self-made questionnaire for teacher educators in J&K. Responses of teacher educators regarding the status of technology in teacher education programme in J&K, the investigator has drawn following analysis:**



**Figure 1**

Responses	Total No. Of Respondents	Number	Percentage
SA	40	10	25%
A		18	45%
D.A		10	25%
S. D. A		5	5%

The table shows the responses of teacher educators regarding digital classroom teaching techniques are used in the teacher preparation programme. Teacher educators in Jammu district i.e., out of 40, 18 (45%) respondents agree with the digital teaching techniques used in the teacher education programme, out of 40, 10 (25%) are strongly agree and 25% Dis-agree, and 5% strongly Disagree.

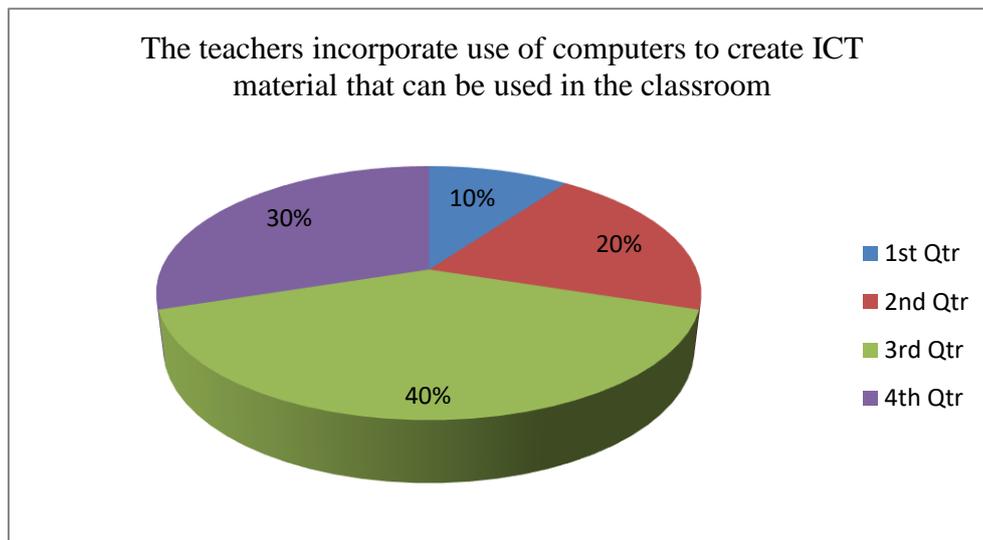


**Figure 2**

Table shows the responses of teacher educators regarding use technology enabled methods of teachings which are inherent in the teaching learning process. The investigator has drawn following analysis.

Responses	Total Numbers of Respondent	Number	Percentage
Strongly agree	40	16	40%
Agree		14	35%
Disagree		8	20%
Strongly disagree		2	5%
Total		40	

The table clearly shows the responses of numbers of teacher educators regarding use of technology enabled methods i.e., out of 40, 16 (40%) respondent (strongly agree), 14 (35%) agree, 8 (20%) disagree and 2 (5%) strongly disagree about the use of technology enabled methods which are inherent in the teaching learning process. In short, figure 1 & 2 clearly shows that teacher education programmes incorporate technology enabled methods while educating their interns.

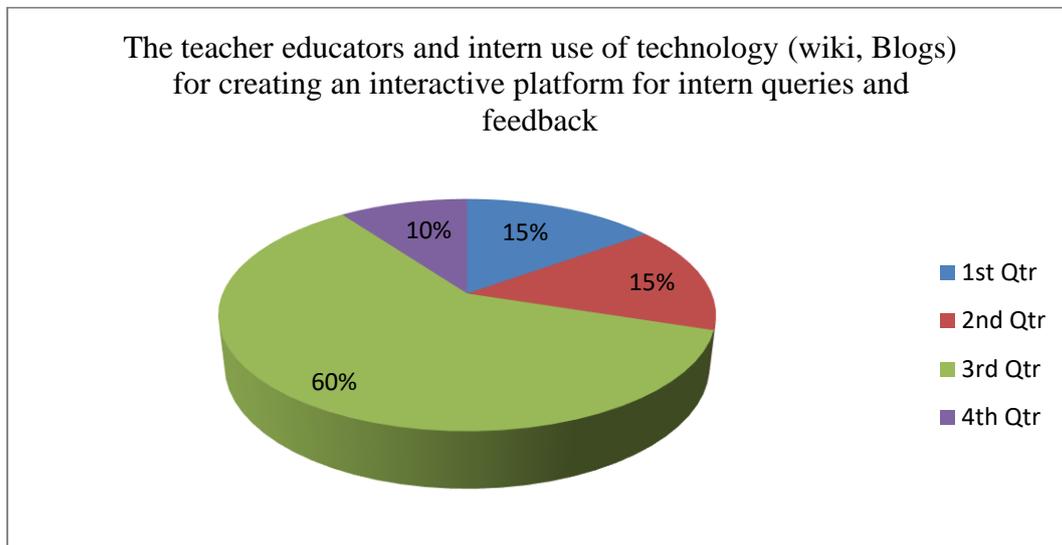


**Figure 3**

The table shows responses of teacher educators regarding use of computer to create ICT material that can be used in the classroom situations. The investigator has drawn following analysis:

Responses	Total No of Respondent	Number	Percentage
Strongly agree	40	4	10%
Agree		8	20%
Disagree		16	40%
Strongly disagree		12	30%
Total		40	100%

The table shows the response of teacher educators in Jammu district of J&K regarding the use of computer to create ICT material that can helps during classroom situations i.e., out 40 respondents in which 4 (10%) strongly agree, 8 (20%) agree, 16 (40%) disagree and 12(30%) strongly disagree.



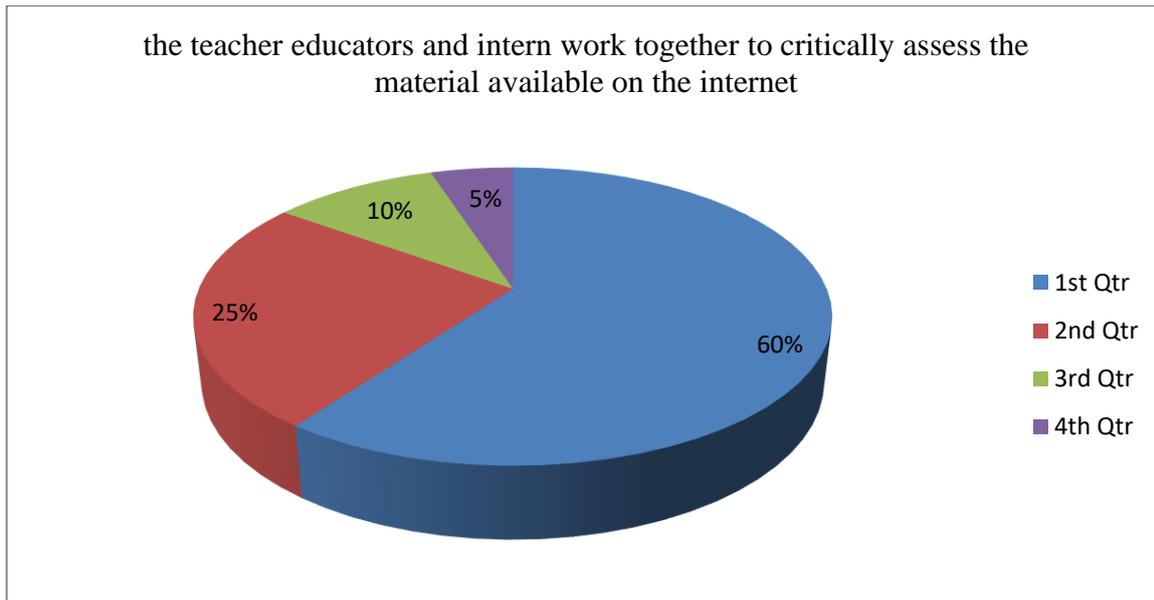
**Figure 4**

The table shows the teacher educators for creating an interactive platform for intern queries and feedback. The investigator has drawn following analysis:

Responses	Total No of Responses	Number	Percentage
Strongly agree	40	6	15%
Agree		6	15%
Disagree		24	60%
Strongly disagree		4	10%
Total		40	100%

### Interpretation

The above table no 6.4 clearly shows that out of 40 sample in which 24 (60%) respondents responded that there is less use of technology for creating an interactive platform for intern queries and feedback, because lack of suitable equipment.



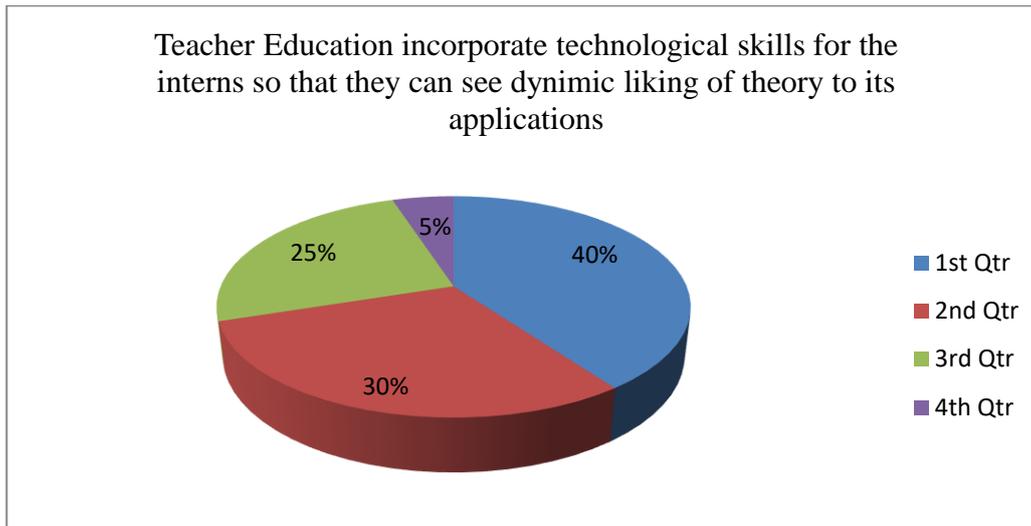
**Figure 5**

The table shows the responses of teacher educators regarding work together to critically assess the material available on the internet. The investigator has drawn following analysis:

Responses	Total no of respondents	Number	Percentage
Strongly agree	40	24	60%
Agree		10	25%
Disagree		4	10%
Strongly disagree		2	5%
Total		40	100%

**Interpretation**

The above table no 6.5 responses of teacher educators regarding work together to critically assess the material available on the internet. Therefore, out of 40 respondents in which 24 (60%) responses strongly agree.



**Figure 6**

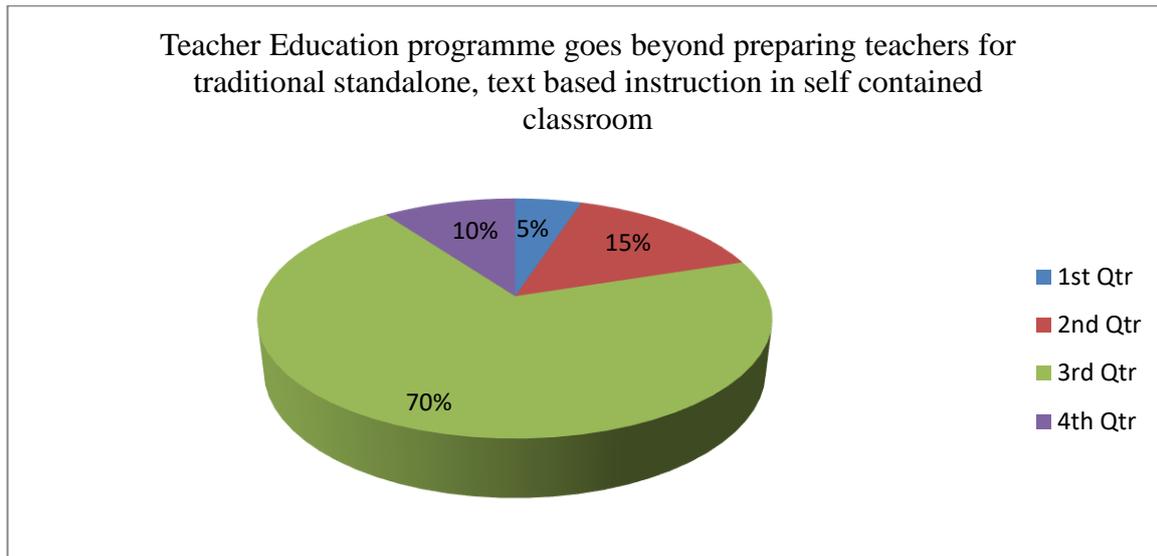
The table shows responses of teacher educators regarding incorporate technological skills to see dynamic liking of theory to its applications. The investigator has drawn following analysis:

Responses	Total No of Respondent	Number	Percentage
Strongly agree	40	16	40%
Agree		12	30%
Disagree		10	25%
Strongly disagree		2	5%
Total		40	100%

### Interpretation

The above table and figure no 1-6 clearly shows towards negative responses. Respondents have said that their programme have lack of:

- Space of computer and smart classroom for creating material for teaching
- No space to allow teachers to work together to find out material available on the internet
- No well-trained teacher
- No space to create interactive platform through technology
- Limited speed of internet connectivity
- Lack of suitable infra-structure



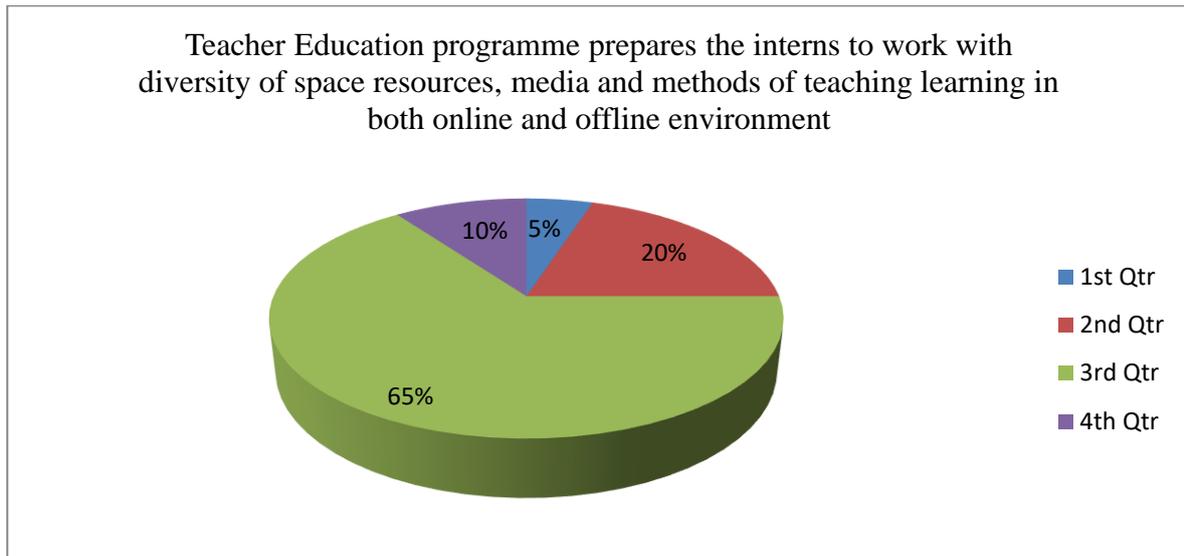
**Figure 7**

The table shows responses of teacher educators regarding preparing teachers for traditional standalone, text-based instruction in self-contained classroom. The investigator has drawn following analysis:

Responses	Total No of Respondent	Number	Percentage
Strongly agree	40	2	5%
Agree		6	15%
Disagree		28	70%
Strongly disagree		4	10%
Total		40	100%

### Interpretation

The above table no 6.7 shows the responses of teacher educators out of 40 respondents in which 28 (70%) respondents responded strongly disagree because teacher education programme trained teacher with upcoming challenges, 5% strongly agree, 15% agree and 10% respondents are strongly disagreed. Generally, in the light of above responses of respondent, the investigator finds out that, there is no module to teach the use of technology and to create original material with it in teacher education.



**Figure 8**

The table shows responses of teacher educators regarding teacher education programme prepares the interns to work with diversity of space resources. The investigator has drawn following analysis:

Responses	Total No of Respondent	Number	Percentage
Strongly Agree	40	2	5%
Agree		8	20%
Disagree		26	65%
Strongly Disagree		4	10%
Total		40	100%

### Interpretation

The above table no 6.8 Responses of teacher educators out of 40 respondents in which 2 (5%) strongly agree, 8(20%) agree, 26(65%) disagree and 4(10%) strongly disagree. The figure 6.8 clearly indicates a decided lack of collaborative efforts and opportunity for working in online environments. There is an apparent lack of appreciation of nuances of a digital learning space. Jammu and Kashmir is diverse Union Territory with distinct regional socio-economic development levels, thereby leading to significantly varying regional literacy rates. While urban areas are embedded with all modern gadgets including optimum facilities for both offline and online education services in both public and private sectors, most of the teacher education institutions are yet to reap the benefits of technological

advancements due to less government funds. Hence, Jammu and Kashmir teacher education institutions need to be empowered with basic ICT infrastructure which will not only increase employment opportunities to address poverty but also will bridge the literacy gap by facilitating digital education and address dropout rate.

## **CONCLUSION**

After revealed the responses of respondents, it has been clearly indicating that there is an urgent need to develop prescribed curriculum in teacher education in J&K. The rationale behind creating the novel learning space is that interns can learn the usage technology and how to create and develop original teaching learning material to be used in the classroom environment. The results are in line with research finding by Macho, (2005) that proved using ICT in education would enhance students learning outcomes. Moreover, this study proved that students learn more effectively with the usage of information and communication technology as lesson designed are more engaging and interesting. Technology needs to be taught through workshops, seminars, webinars, conferences, collaboration and interaction which will help foster practical transaction of technology. It is not theory that has to be understood and learnt, but the confidence to tinker and tweak technology and customized it for individual needs. The study finds that there is no ICT related material available in the teacher training institution of Jammu District. It also has been finds that there is no online facility available to teach students in a proper way. In compare to a study conducted by Tazci (2011) that shows most of teacher educators indicated that they only implicate elementary ICT tools for educational use, these ICT tools provided in the institutions are not enough nor in good conditions. Most importantly teachers and pupil teacher's need to understand the imperative of technology and its usage in educational system. During pandemic ICT played a big role for development of educational system in India. So, therefore there is a dire need of ICT related material to the institutions. The changes will take place when ICT related material should be available to the teacher educators, wherever they are either in school or home. Finally, ICT in classroom needs serious consideration in order to increase the competency of country's education system. This will help in increasing the world ranking. In order to enhance the usage of ICT in teacher training institutions, the government needs to improve the change in the teacher education system in J&K. The full-fledged NCTE norms and regulations should be implemented in the UT of J&K, so that educational system runs fruitfully.

## REFERENCES

1. Koehler, M & Mishara, P. (2005). Teaching learning technology by design. *Journal of computing in teacher education*, 21(31), 94-102.
2. Kapur, V. (2015). Teacher education in the age of technology. Third 21<sup>st</sup> conference at Harvard, in Boston, USA, 6(1), 2330-1236.
3. Rosdy, W., A., W., & Ghavifekr, S. (2015). Teaching and learning with technology: Effectiveness of ICT integration in schools. *International Journal of Research in Education and Science*, 1(2), 2148-9955.
4. Rahim, B., & Shamsiah, M. (2008) Teaching using information technology: Do trainee teachers have the confidence. *International Journal of Education and Development using ICT*, 4(1), 1-8.
5. Kamat, V (2005) ICT initiative in teacher education. *Teacher education in the Knowledge Era: issues, trends and challenges*. University News, 43(18), 103-108.
6. Young, S., C. (2003). Integrating ICT into second language education in a vocational high school. *Journal of computer assisted learning*, (19), 447-461.
7. Goel, C., & Goel, D., R. (2013) Teacher in the digital age: issues and concerns. *A weekly journal of higher education*. University News, 50(53), 0566-2257.
8. Rather, W., A., Singh, M., & Hajam, R., M. (2020). Digital Education in Jammu and Kashmir: Opportunities and Threats. *European Journal of Molecular & clinical Medicine*, 07(07), 2515-8280.
9. Ministry of HRD Government of India's information Brochure, "National Convention on Digital initiatives for Higher Education" (2017).