



Perception Of Pupil-Teacher Towards Integration Of Ict In Teacher Education

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Abstract: This research explores into how Pupil-teachers see the application of information and communication technology (ICT) in teacher preparation. ICT's importance in education has grown as a result of how the digital revolution is impacting many different industries. This study's goal is to ascertain how student-teachers see the use of ICT tools and techniques in teacher preparation courses. With the use of a mixed-methods approach, information from student-teachers enrolled in various teacher education programs was gathered via surveys and interviews. According to the findings, student-teachers have a generally favorable outlook on the application of ICT in teacher education and are aware of how it might improve teaching and instructing environments. However, issues including restricted technology access, inadequate training, and doubts regarding the usefulness of ICT technologies were also noted. Now in present situation ICT plays an important role in teaching learning field. ICT helps to understand the difficulties in easiest way. ICT make understand the pedagogical things in different perspectives. Teacher Educators will understand pedagogical issues by using ppt, animation, videos. ICT integration effectively raises the standard of teacher preparation. Teacher education is a Nobel profession; it makes teacher self-reliance. By the teacher education program, we can develop the inner potential of the teachers. In normal methodology of teaching, we can develop the teacher education in one perspective but by use of ICT (Information and communication Technology) we can develop the innovative idea of teacher educators. Now in present situation ICT plays an important role in teaching learning field. ICT helps to understand the difficulties in easiest way. ICT make understand the pedagogical things in different perspectives. Teacher Educators will understand pedagogical issues by using ppt, animation, videos. Integration of ICT make effective to improve the quality of teacher education. This study will help teaching learning process more productive in Teacher Education institute. This study also emphasizes how crucial a friendly and accommodating atmosphere is for the use of ICT in teaching and learning that works for student-teacher.

Index Terms - Pupil-teachers, Teacher education, Information and Communication Technology (ICT), Perception, Digital transformation, Technology access.

I. INTRODUCTION

The utilize of information and communication technology (ICT) is permeating every facet of modern life and is important to our jobs, businesses, services, and education. It is widely acknowledged as a catalyst for improvements in scientific research, teaching and learning methodologies, information exchange and access, and working scenarios. Its implementation in the classroom enhances the entire teaching and learning process by providing students with preference to acquire and utilize the necessary 21st century mastery. The perception of pupils and instructors' attitudes on ICT One important component of teacher education is

integration that influences its adoption and effectiveness. The views and opinions of pupils and teachers can affect the degree to which they are ready to adopt and use ICT instruments in their teaching and learning actions. Therefore, understanding the perceptions of pupils and teachers towards ICT integration in teacher education is necessary to ensure triumphant adoption and integration of technology in the classroom. When examining the perception of pupils and teachers towards ICT integration in teacher education, it is significant to think about a range of elements that can influence attitudes towards technology integration. Understanding how these factors shape attitudes towards technology integration can help to develop effective strategies for promoting its adoption and enhancing its effectiveness in the classroom. Any endeavor to integrate technology into a curriculum would mostly depend on the attitudes and support of the participating student-teachers. The way that future educators utilize technology in their lessons may not only influence their own learning, but also shape how they will teach as we enter a more advanced technological era.

1.1 Literature Review

Bindu C.N (2016) provide a comprehensive analysis of how Information and Communication Technology (ICT) transform modern education. It synthesizes findings from multiple studies, highlighting ICT's positive influence on learner engagement, academic performance, accessibility, and the shift from teacher-centered to learner-centered pedagogies. The paper underscores the potential of ICT to personalize education, foster collaborative and constructivist learning environments, and bridge gaps in developing countries. While well-structured and rich in references, it leans more on theoretical exploration than empirical analysis. Nonetheless, it acts as a valuable resource for instructors and policymakers aiming to harness ICT for quality and inclusive education. This paper is to explore how ICT enhances the quality, accessibility, and effectiveness of teaching and learning processes.

This study explores Turkish pre-service EFL teachers' understanding and use of technological proficiency through a qualitative lens. It reveals varied levels of technological proficiency, highlights the essential role of university educators, and emphasizes Pupil teachers' reliance on social media. The study suggests stronger pedagogical integration of digital tools and better guidance for professional use. Implications include enhancing teacher education by merging technology, pedagogy, and digital content creation (A. Sedat et al.2020).

Aamir Majeed and Prof. Syedah Fawzia Nadeem (2024) explore the pivotal role of ICT in reshaping teacher education. It emphasizes how digital tools enhance student-centered learning, collaboration, personalized instruction, and professional development. The study underscores the need for teacher educators to be technologically proficient and addresses key challenges like inadequate infrastructure, internet connectivity, and resistance to change. Offering practical insights and recommendations, the paper serves as a valuable resource for modernizing teacher training and aligning it with the demands of 21st-century education.

Emmanuel Ayisi Abedi (2024) examines the discrepancy between teachers' actual classroom practices and the expectations of ICT in education policies. Through interviews with twenty teachers, it reveals that technology is mainly used for lesson getting ready and direct teaching, reflecting teacher-centred approaches. Constructivist and student-centred uses of technology are minimal, highlighting a misalignment with policy goals. The findings underscore the need for shifts in teacher knowledge, beliefs, and practices to enable meaningful integration of ICT and fulfil curriculum aims. The study offers worthwhile observations for policymakers and educators attempting to enhance efficient technology use in classrooms.

Johanna Oberg et al. (2024) in their study "Teachers' Perspectives on Using Technology to Facilitate Pupil Participation" they explore how digital technology facilitates pupil engagement in secondary education, particularly in Swedish grades 7–9. It emphasizes the distinction between passive existence and effective involvement, with a strong focus on encouraging the latter through digital means. The research investigates teachers' perspectives on how digital tools can promote meaningful participation in school activities and enhance learning. Drawing from insights gathered during teacher workshops, the study examines the use, efficacy, and areas for enhancement of current digital materials. Anchored in Garrison and Andersson's theoretical structure, the article highlights the types of interactions essential for creating efficient learning surroundings—specifically, teacher-pupil interaction, pupil-content interaction, pupil-pupil interaction, and extended interaction. Through a thematic analysis, the study offers practical guidelines aimed at addressing existing challenges and maximizing the potential of digital technologies to support active pupil participation.

Asogwa Emmanuel Chinonye et al. (2024) in their study “*Extent of Availability and Utilization of Information and Communication Technology (ICT) Tools in Teaching and Learning in Public College of Education in Enugu State*” offers valuable insight into ICT infrastructure in Nigerian teacher education. Using a well-structured descriptive survey, it reveals critical gaps in availability and underutilization of ICT tools. The findings—highlighting issues such as inadequate facilities, poor funding, and unstable power—are clearly presented and relevant. However, the analysis could benefit from broader stakeholder perspectives and deeper statistical interpretation. Overall, the study contributes meaningfully to educational ICT discourse and policy advocacy.

This current research by Mamta Kumari and Dr. Pragya Jha examines the ICT teaching abilities of Jharkhand's teacher educators. The survey method yields empirical findings from a 100 sample across 20 universities, and the research takes a quantitative approach utilizing a standardized instrument by B.K. Passi and M.S. Lalita. The results indicate that the majority of teachers possess ICT skills, with no discernible variation according to the kind of institution or geographic location (rural versus urban). Although more qualitative research might improve comprehension of contextual difficulties and professional development requirements, the study adds to the extending corpus of knowledge on ICT integration in teacher education (M. Kumari et al.2023).

Mr. Mohamad Amir Khan et al. (2025) in their study “*Perception of teacher Educators’ Towards the Implementation of Four-Year Integrated Teacher Education Programme*” offers valuable insight Four-year Integrated Teacher Education Programme. In light of NEP 2020, this report examines a current and pertinent topic in Indian teacher education. The authors provide important insights into how this change is being embraced at the grassroots level by investigating teacher educators' opinions on the recently implemented Four-Year Integrated Teacher Education Programme (ITEP). Despite being constrained by convenience sampling, the descriptive-survey approach provides a comprehensive understanding of opinions. The results show widespread support for ITEP, particularly for its ability to improve teacher quality and combine pedagogy and topic knowledge. The report does, however, correctly note implementation issues, pointing to the necessity of systemic assistance and policy improvement.

The function of artificial intelligence (AI) in teacher education is thoroughly examined in this systematic review by Dr. Gopikanta Suna and associates (Suna, G., et al.2025). The writers examine four crucial areas: AI and digital learning, AI in teacher education, AI in pedagogy, and AI-related difficulties in teaching and learning. They accomplish this by consulting over fifty research publications from reliable academic sites including Google Scholar, Science Direct, and Research Gate. Their results highlight AI's revolutionary potential in improving pedagogical approaches, tailoring education, and providing data-driven insights for teacher training. Crucially, the research emphasizes that resolving ethical, equality, and preparedness issues is necessary for a successful AI integration. This research highlights the pressing need for teacher education programs to adapt to AI skills and makes a significant contribution to the expanding conversation on educational technology.

The study by Silagan and Tumapon provides a perceptive and fact-based analysis of the key elements affecting educators' using artificial intelligence (AI) in educational settings. The research used a strong quantitative approach that includes descriptive, correlation, and causal analyses to gather the opinions of one hundred high school instructors from Liceo de Cagayan University. Three key variables—technological competence, training and support, and teacher attitudes—show high positive relationships with AI adoption, according to the research, with attitude appearing as the most potent predictor. This emphasizes the need of developing trust and familiarity with AI, as well as the psychological aspect of technological adoption. (L. D. Bob et al.2025)

1.2 Statement of Problems

The statement of the problem in this study emphasizes the need to inspection into the perceptions of pupils and teachers towards ICT blending in teacher education, identify the elements that impact these perceptions, and examine the potential advantages and limitations of ICT integration in teacher education to influence the creation of successful solutions for teacher training programs. The problem statement in this study also addresses the necessitate for teacher education programs to keep pace with the rapidly evolving technological landscape and give educators the abilities and information they need to successfully incorporate ICT into their lesson plans. It recognizes that the incorporation of ICT in teacher education is not only essential for preparing

teachers for the 21st-century classroom but also has the ability to change teaching and learning processes and improve student outcomes. In particular, the study seeks to answer the following queries: What are the perceptions of pupils and teachers towards the integration of ICT in teacher education? What factors influence these perceptions? What are the potential benefits and challenges of ICT integration in teacher education, and how can these be addressed? By exploring these questions, the study seeks to contribute to a better understanding of the role of ICT in teacher education and inform the development of effective strategies for integrating ICT in teacher training programs.

1.3 Significance of the Study

The Vitality of studies give a theoretical knowledge of the role of expertise in teacher education, the elements influencing the acquisition of ICT in teacher education, and the opportunities and challenges for successful ICT incorporation in developing nation contexts are some of the reasons why this study is significant and has conceptual implications. The study can help build successful tactics, policies, and procedures for increasing ICT incorporation in teacher education, which can raise the standard of education in progressing nations, by offering insights and empirical data. The use of ICT in education has become increasingly important in recent years. As technology proceeds to advance, it is necessary that teachers are equipped with the required abilities and understanding to incorporate these technologies into their Procedures for instruction. This is particularly important for student-teachers, who are preparing to become educators. Therefore, understanding their perceptions towards the integration of ICT in their methods for training is crucial in ensuring that upcoming teachers are well-equipped to teach in a technology-rich environment.

1.4 Research Questions

- Does the perception of Pupil teacher develop towards the integration of ICT in teacher education?
- Does the teacher education programme equip future teachers with knowledge and skill to integrate ICT during their teaching-learning?
- What are the perceptions of pupils and teachers towards the integration of Information and Communication Technology (ICT) in teacher education?
- What are the factors that influence these perceptions?
- What are the possible advantages and difficulties of integrating ICT in teacher education, and how can the challenges be addressed to ensure effective and sustainable use of technology in teacher training programs?
- What are the strategies that can be developed to effectively integrate ICT in teacher training programs, and how can these strategies be implemented to ensure successful adoption and use of technology in teaching and learning?

1.5 Objectives of The Study:

1. To study the perception of pupil teacher towards the application of ICT in teaching learning procedure.
2. To study the perception of Pupil-teacher towards integration of ICT in with reference to:
 - a. Gender: - male & female
 - b. Locality: - rural & urban
 - c. Stream: - Science, Arts & Commerce
3. To study the perception of pupil teacher towards the application of ICT in teaching learning process with reference to:
 - a. Pedagogy of physical Science
 - b. Pedagogy of Life Science
 - c. Pedagogy of Social Science
 - d. Pedagogy of English
4. To study the perception of pupil teacher towards the application of ICT in teaching learning process with reference to different courses of study:
 - a. B.Ed.
 - b. M.Ed.
 - c. PhD students
 - d. Integrated B.Ed. (B.A/BSc. -B.Ed.)

1.6 Hypothesis of Study

1. **H₀₁**- There is no significance difference between the perception of male & female Pupil-teacher towards Integration of ICT.
2. **H₀₂**- There is no significance difference between the perception of rural & urban Pupil-teacher towards Integration of ICT.
3. **H₀₃**- There is no significance difference between the perceptions of Arts, Commerce & Science Pupil-teacher towards Integration of ICT.
4. **H₀₄**- There is no significance difference among physical Science, Life Science, Social Science and Language Students with reference to their perception towards Integration of ICT.
5. **H₀₅**- There is no significance difference among B.Ed., M.Ed., Int.B.Ed (B.A/Bsc.-B.Ed) and Ph.D Students with reference to their perception towards Integration of ICT.

II. METHODOLOGY

This study investigated the perception of Pupil-teachers towards integration of ICT in Teacher Education which is relatively using pragmatism philosophy and a mixed methods methodology. According to Creswell (2014), To better comprehend a research subject, the mixed method collects, analyses, and "mixes" data from one or more studies, either quantitatively or qualitatively. Bryman (2006) highlighted that a mixed method design can yield comprehensive and in-depth information to address the research issues.

2.1 Sampling and Sampling size

For the present study, the target population is all the pupil-teachers in India. Here in this study researcher used random sampling technique to representative sample of pupil-teachers from different gender, locality, Course of Study, Stream, and Teaching Pedagogy. The sample is collected from different Teacher Education Institutes. Researcher collected 107 responses from Pupil-Teacher of India.

2.2 Participants

Researcher Collected 107 responds from Integrated B.A/BSc.-B.Ed., B.Ed., M.Ed. and PhD in Education. A Google Form was used to gather the data from different Teacher Education Institute, and convenience and purposive sampling techniques were used for data collection.

Table 1: shows variable wise distribution of participants

SL.No.	Variable	Dimension	Frequency	Percentage
1	Gender	Male	50	46.72%
		Female	57	53.28%
2	Course of Study	Int. B.A/ BSc. - B.Ed.	30	28.01%
		B.Ed.	23	21.50%
		M.Ed.	46	42.99%
		Research (PhD. Education)	8	7.50%
3	Area of Discipline	Arts	27	25.23%
		Science	77	71.96%
		Commerce	3	2.80%
4	Location	Urban	53	49.53%
		Rural	54	50.47%
5	Teaching Pedagogy	Physical Science	57	53.28%
		Life Science	21	19.62%
		Social Science	16	14.96%
		Language	13	12.14%
	Total		107	100%

Source: Primary data

Table 2: tabular representation of gender, locality with their percentage.

SL. No.	Population	Locality	Frequency	Percentage
1	Male	Urban	19	17.76%
2	Female	Urban	34	31.77%
3	Male	Rural	31	28.97%
4	Female	Rural	23	21.50%
Total Sample Size			107	100%

Source: Primary data

Researcher randomly collected data by using questioners survey method from 20 Teacher Education Institute in India.

Table 3: name of teacher education institute from which researcher collect data.

SL.No.	Name of Teacher Education
1	Aligarh Muslim University, Uttar Pradesh, India
2	Central University Of Haryana, Haryana, India
3	University of Hyderabad, Telangana, India
4	Regional Institute of Education, Bhubaneswar
5	Guru Ghasidas University, Bilaspur, Chhattisgarh, India
6	Indira Gandhi National Tribal University, Amarkantak, Madhya Pradesh, India
7	Vikram Simhapuri University, Andhra Pradesh, India
8	Vedanarayana College of Education, Andra Pradesh, India
9	Patna Training College, Bihar, India
10	Indira Gandhi National Open University, India
11	Pandit Ravishankar Shukla University, Chhattisgarh, India
12	Vyshnavi College Of Education, Andhra Pradesh, India
13	Gulbarga University, Karnataka, India
14	Annamalai University, Tamil Nadu, India
15	Maulana Azad National Urdu University, Bihar, India
16	Pondicherry University, Pondicherry, India
17	Mahatma Gandhi Kashi Vidyapith, Uttar Pradesh, India
18	Sree Velavan College of Education, Tamil Nadu, India
19	Central University of South Bihar, Bihar, India
20	Central University of Gujarat, Gujarat, India

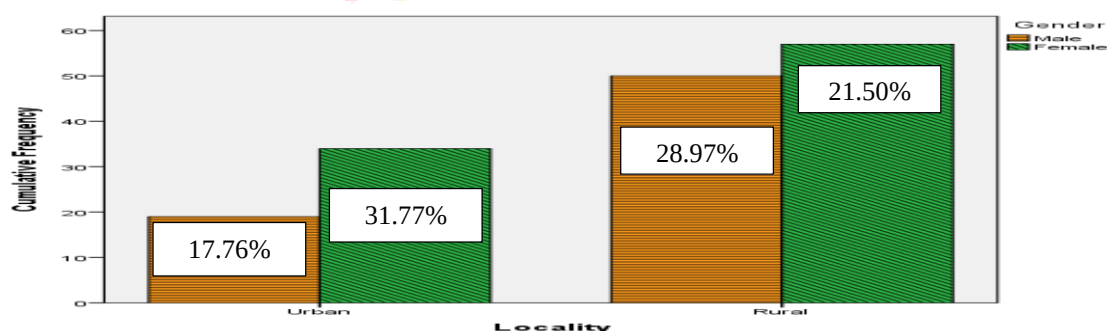
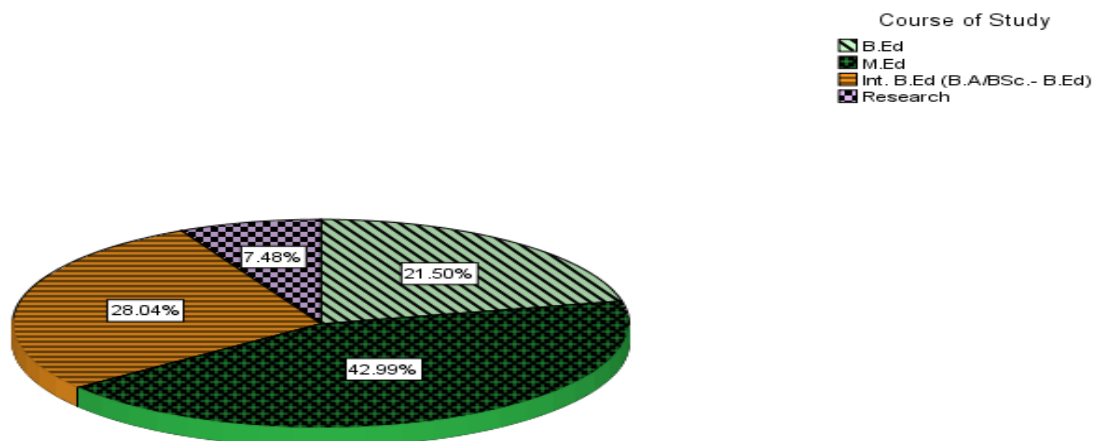


Fig.1: shows the graphical representation of locality vs gender.



Source: SPSS Output

Fig.2: It represents the Percentage distribution in reference to Course of Study.

2.3 Procedure of Data Collection

In this study data were collected by the researcher by using five-point Likert scale which had been prepared by researcher using Google form. The researcher shares the web link to the respective responses through email and to the WhatsApp group. The data were collected from pupil-teacher from different university in the various region of the country in reference to gender, locality, stream, course of study and teaching pedagogy.

2.4 Tools and Techniques

There are mainly two purposes of data collection in our study. The first purpose is to examine and observe the qualitative improvement of integration of ICT in different discipline. The second Purpose is to collect the data and examine the perception of pupil-teachers towards the integration of ICT. One major tool is used in this study self-developed questionnaire which is consisting five types answers i.e strongly agree, agree, undecided, disagree, strongly disagree as per five-point Likert Scale. Researcher Prepared perception Scale towards ICT for Pupil-Teacher by following some related studies.

2.5 Reliability Test

A Reliability test is performed on the developed tool. Table-4 reveals that the Cronbach's Alpha for tested tool is 0.764 that indicated the tool is reliable for data collection. Reliability results are summarized in the Table.4

Table-4: Reliability Statistics

Reliability Statistics	
Cronbach's Alpha(α)	No. of Items
0.764	16

Source: SPSS Output

The inner consistency of the research's premises is measured by reliability. According to Hair et al. (2013), a construct is considered credible if its Alpha (α) value is higher than 0.70. Cronbach's Alpha (α) was used to evaluate construct dependability. The findings showed that the sixteen (16) items on the Authenticity Perception Scale ($\alpha = 0.764$) were deemed dependable.

III. RESULT AND DISCUSSION

A sample of Pupil-teachers from Teacher Education institutions was asked about their Perceptions on the integration of ICT into the teaching and learning process with reference to different variables.

H₀₁ “there is no significance difference between the perception of male & female pupil-teacher towards integration of ict.”

Table no.5 shows the perception of pupil-teacher towards integration of ict in reference to male and female (gender)

Gender	N	Mean	SD	F-test Value	Sig.	S _{ED}	Df	Sig.(2 tailed) p-value	95% Confidence Interval of difference		Level of significance (0.05)
									Lower	Upper	
Male	50	65.48	6.529	3.652	.059	1.096	105	.844	-1.957	2.391	Not Significant
Female	57	65.26	4.768								

The hypothesis was tested using an independent samples t-test that whether the Perception of Pupil-Teachers towards integration of ICT in Teacher Education Institutes in respect to gender differ significantly or not. The assumption of equality of variance is satisfied since the level for Leaven's test of equality of variance (F-test result value) 0.59, is higher than the alpha level 0.05.

The overall result indicates that there is slight difference of mean value score for Male is (M=65.48, S.D= 6.529) , While Female(M=65.26, S.D= 4.768) at 0.05 level of significance, as the p-value (0.844) is greater than 0.05 level, with(Class Interval i.e C.I= -1.957 to 2.391) and hence the null hypothesis i.e “ There is no significance difference between the perception of male & female Pupil-teacher towards Integration of ICT ” is retained. The result refers that the perception of Male and Female towards integration of ICT is not differing significantly. There is no significant difference on the basis of gender. Hence H₀₁ is accepted.

H₀₂ “There is no significance difference between the perception of rural & urban pupil-teacher towards Integration of ICT”

Table No.6 shows that the perception among Rural and Urban Pupil-Teacher

Locality	N	Mean	SD	S _{ED}	df	p-value	Level of significance (0.05)
Rural	53	65.49	6.494	1.094	105	.820	Not Significant
Urban	54	65.24	4.694				

Source: SPSS Output

This table shows the that overall result of perception of Rural and Urban pupil-teacher towards integration of ICT. The result illustrates that, there is no significant difference between the mean score of Rural and urban pupil-teacher at 0.05 level of significance, as the p-value (.820) is greater than 0.05 level and hence the null hypothesis i.e “There is no significance difference between the perception of rural & urban Teacher Educators towards Integration of ICT” is accepted. The result shows that there is no significant difference between the Rural and urban pupil-teachers perception towards integration of ICT in reference to Locality.

H₀₃ “There is no significance difference between the perceptions of Arts, Science & Commerce Pupil-teacher towards Integration of ICT”

Table no.7 shows that the perception of pupil-teacher towards integration of ict in reference to stream.

Stream (Area of discipline)	Source of Variance	Sum of Squares	df	Mean square	F-ratio	p-value	Level of Significance (0.05)
Arts, Science and Commerce	Between groups	33.161	2	16.581	.518	.597	Not significance
	Within groups	3329.624	104	32.016			
	Total	3362.785	106				

Source: SPSS output

This tabulated data shows that there is no significance difference between group means as decided by one-way ANOVA ($F(2,104) = 0.518$, $P=0.597$) (as p-value is greater than 0.05 level) in perception of pupil-teachers towards integration of ICT in reference to Stream. Therefore, the null hypothesis H₀₃ “There is no significance difference between the perceptions of Arts, Science & Commerce Pupil-teacher towards Integration of ICT” is retained. Hence the perception of Arts, Commerce, Science pupil-teacher is not differed from each other. So, it shows that the degree of freedom is same with reference to Stream. Here H₀₃ is accepted.

H₀₄ There is no significance difference among physical Science, Life Science, Social Science and Language pupil-teachers with reference to their perception towards Integration of ICT.

Table No.8 shows that the perception of pupil-teacher with reference to Teaching Pedagogy

Teaching Pedagogy	Source of Variance	Sum of Square	Df	Mean Square	F-ratio	P-value	Level of Significance (0.05)
Physical science, Life science, Social Science, Language	Between groups	87.871	3	29.290	.921	.433	Not Significance
	Within groups	3274.914	103	31.795			
	Total	3362.785	106				

Source: SPSS output

The tabulated data shows that there is no significant difference between group means as indicated by ONE-WAY ANOVA ($F(3,103) = 0.921$, $P\text{-value}=0.433$), Here P-value is greater than the 0.05 level of significance so Null hypothesis is accepted. Therefore, the null hypothesis H₀₄ “There is no significance difference among physical Science, Life Science, Social Science and Language Students with reference to their perception towards Integration of ICT.” is retained. So, there is no significant difference between the perception of pupil-teacher towards integration of ICT in reference to Teaching Pedagogy.

H₀₅ There is no significance difference among B.Ed, M.Ed, Int.B.Ed (B.A/Bsc.-B.Ed) and Ph.D Students with reference to their perception towards Integration of ICT

Table No.9 shows that the perception of pupil-teacher with reference to course of study.

Course of Study	Source of Variance	Sum of Square	Df	Mean Square	F-ratio	P-value	Level of Significance
B.Ed, M.Ed, Int. B.Ed (B.A/Bsc.- B.Ed), PhD students	Between groups	82.884	3	27.628	.868	.460	Not Significance
	Within groups	3279.901	103	31.844			
	Total	3362.785	106				

Source: SPSS output

This table shows that there is no statistically significant different found between group means as determined by ONE-WAY ANOVA ($F(3,103) = 0.868$, $P = 0.460$). Here P-value is greater than 0.05 level of significance, Therefore H₀₄ There is no significance difference among physical Science, Life Science, Social Science and Language Students with reference to their perception towards Integration of ICT. is accepted. There is no significant different between the perception of B.Ed, M.Ed, Int. B.Ed (B. A/Bsc. -B.Ed) and PhD students towards the integration of ICT. The overall result shows that Null hypothesis is retained.

3.1 Finding of The Study

The purpose of the study was to find the perception of pupil-teacher towards integration of ICT. The study examines that the perception of pupil-teacher towards integration of ICT in reference to gender, Locality, Stream, Course of study and Teaching Pedagogy.

Firstly, researcher used t-test to analyses the collected data based on the gender i.e Male and Female. Here the p-value (.806) is greater than the 0.05 level of significance, hence we conclude that there exists no significance distinction among the Male and Female's perception towards integration of ICT. Consequently, we draw the conclusion that there is no statistically significant difference in how men and women perceive the integration of ICT. The results imply that people's perceptions of ICT integration are not much influenced by gender. The views and opinions of men and women about ICT integration are comparable, suggesting that policies or efforts targeted at integrating ICT in the environment under study can be established without taking gender-based disparities in perception into consideration.

The researcher used t-test to compare the mean between the Rural and Urban area. Here the researcher analyses the on the basis of locality and find that the p-value (.790) is greater than the 0.05 level of significance, hence there is no significant difference between the rural and urban pupil-teacher's perception towards integration of ICT. It is possible for policymakers to create and execute ICT integration plans that are consistent and easy to use in both urban and rural settings. Training courses, digital infrastructure, and technical assistance are examples of resources that may be dispersed fairly to provide equal access for all student-teachers. The efficiency and coherence of educational practices can be improved by standardizing professional development and curriculum development activities. It is possible to encourage cooperative projects that bring together rural and urban schools, resulting in reciprocal education and community involvement. The same criteria may be applied to the evaluation and assessment of ICT integration, offering a clear understanding of its efficacy. Fairness may be promoted by allocating funding opportunities based on need rather than location. Both situations can benefit from community involvement initiatives and technology adoption tactics that are equally successful. All student-teachers, regardless of their location, will ultimately benefit from the simplified long-term strategic planning that is made possible by the alignment of perceptions. This planning addresses more general concerns like infrastructure upgrading and quality training.

Again, the researcher used ONE-WAY ANOVA to analyse the collected data on the basis of stream. Here the p-value (0.638) is greater than the 0.05 level of significance, hence there is no significance difference among the Arts, Science and commerce pupil-teachers towards the perception towards integration of ICT. A p-value of 0.638 was found in the one-way ANOVA used to compare the views of student-teachers from the Arts, Science, and Commerce streams about ICT integration. This value is larger than the 0.05 level of significance. This suggests that there aren't any statistically significant variations in the three streams' perspectives. As a result, the academic stream has no effect on how student-teachers feel about ICT integration. This research suggests that professional development activities, curriculum design, training programs, and resource allocation may be harmonized across all streams. Furthermore, assessment criteria may be used consistently, and cooperative efforts and the sharing of best practices can be encouraged without regard for different viewpoints. The process is made simpler and more efficient for policymakers when they can develop and execute ICT integration initiatives without having to take stream-based distinctions into consideration.

The Researcher used ONE-WAY ANOVA to compare the mean between the Pedagogy of physical science, Pedagogy of life science, pedagogy of social science and Language. Here the researcher analyses the collected data on the basis of Teaching pedagogy. Here the p-value (0.369) is greater than the 0.05 level of significance, hence there is no significance between the perception towards the integration of ICT on the basis of Teaching Pedagogy pupil-teacher. We draw the conclusion that there are no statistically significant variations in student-teachers' opinions of ICT integration among those who specialize in Physical Science, Life Science, Social Science, and Language Pedagogy, since the p-value is greater than the significance threshold. This suggests that the kind of pedagogy used in instruction has little impact on how students and instructors see ICT integration.

Again, the researcher used the ONE-WAY ANOVA to analyse the collected data on the basis of Course of study i.e B.Ed, M.Ed, Int. B.Ed(B.A/Bsc.-B.Ed) and PhD students. Here researcher find that the p-value (0.294) which is greater than the 0.05 level of significance, Therefore, there is no significance difference the perception of pupil-teacher towards integration of ICT on the basis of course of study. This suggests that opinions on ICT integration across the various academic programs are not statistically significantly different from one another. As a result, the study did not substantially affect how student-teachers see the integration of ICT, indicating that comparable ICT-related training, materials, and regulations may be used consistently throughout all of these educational levels.

3.2 Conclusion

The current investigation is done to know about the perception of pupil-teacher towards integration of ICT teacher education. The researcher collects the data by using questioner method through Google form and got the response from various university students. The researcher collected the data on basis of Gender, Locality, stream, Teaching Pedagogy and course of Study. This research reveals that gender is no effect or there is no difference in the perception of pupil-teacher towards integration of ICT on basis of Gender. Similarly, Researcher found that there is no significance difference the perception of pupil-teacher towards integration of ICT on the reference of Locality, Stream, Teaching pedagogy and Course of Study. The perception of rural and urban pupil-teacher is approximately same towards integration of ICT in teaching learning process. In case of B.Ed, M.Ed, Int. B.Ed and PhD student, the researcher gets the similarity perception towards integration of ICT in Teacher Education. The researcher found on the basis of teaching pedagogy integration of ICT required for better development of teaching methodology. The researcher conclude that computer is the one of the valuable tools for improve the quality of teaching and learning. process. Teacher can develop the innovative thinking skill by adopting by a computer. ICT can help to pupil teacher for better understanding of concept. Hybrid and Hi-tech teaching aids need to be a part of the teaching learning process for theory-model reversibility. One to One connected digital devices e.g mobiles, tablets etc. is improve the competitiveness and group thought process. ICT also helps in creating awareness about developed and new pedagogical teaching aids as well as makes easier for advance the evaluation process. The researcher concludes that the overall result of perception of Pupil-teacher positively towards integration of ICT in teacher education and Pupil-teachers are ready to accept the changes towards integration of ICT in teacher education. Responses were examined in the study according to gender, location, according to the study, ICT is seen as a useful instrument for raising the caliber of instruction, encouraging creative thinking, and advancing students' understanding of concepts. It underlined the need of using digital gadgets to foster collaboration and competition in learning as well as the integration of hybrid and high-tech teaching tools. ICT also makes it

easier to learn about new teaching resources and simplifies the assessment procedure. Overall, the study found that student-teachers are ready to adopt these technological advances and have a good view of ICT integration in teacher education.

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