

Perception of teacher trainees towards learning through information and communication technologies

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Abstract: The quality of education depends on the quality of technology. Information and communication technology (ICT) has become popular within a very short time one of the basic building blocks of modern society. The present study was aim to find out the perception of teacher trainees towards learning through information and communication technologies. The objectives of the study were to find out the overall perception of teacher trainees on learning through ICT, difference between male and female, rural and urban, graduate and post graduate, Language and S.St ,Computer teacher and Science teacher trainees towards ICT. The study was conducted on the sample of 300 teacher trainees of Lovely professional University, Phagwara, Punjab. Stratified random sampling technique was used for the study. Self made questionnaire was used to know the perception of teacher trainees towards learning through ICT. To analyse and interpret the data quartile deviation and t-test statistical techniques were used. The findings of the study: were there exists a favourable perception of teacher trainees on learning through ICT, there exists significant difference between male and female teacher trainees, there exists significant difference between perception of graduate and post graduate teacher trainees on learning through ICT. Also it has been found that there is no difference between language and S.St, computer and science teacher.

Introduction

The quality of education depends on the quality of technology. Information and communication technology (ICT) has become popular within a very short time one of the basic building blocks of modern society. Many countries now regard understanding the basic skills and concepts of ICT as part of the core of education, alongside reading writing and numeracy. Globalization and technological change –process that have accelerated in tandem over the past fifteen year have created a new global economy powered by knowledge .The emergence of this new global economy has serious implication for the nature and the purpose of education institution .As the half life of information continues to shrink and access to information continues to grow exponentially, schools cannot remain mere venues for transmission of a prescribed set of information from teacher to student over a fixed period of time. Information and communication technology (ICT) which include radio and television, as well as never digital technologies such as computers and internet-have been touted as potential educational benefits of ICTs is not automatic. Information and communication technologies (ICT) have released a world of possibilities for education. Although some year ago, they were only consider alternative online education. Now a days, they are an irreplaceable resource in all educative modality ICT. Especially the tools available in internet and the mobile devices have allowed the development of new concepts of educational practice and research as multimedia learning. The real impact of ICT will be possible only by means of the comprehension of its function to promote learning. ICT tools can improve the quality of education but it is not enough “technology is only the beginning to make the difference “in education ICT are used like a tool that facilitates the multiplicity in knowledge representations simulation and problem solving. The education sector is arguably one major area that (ICT) are playing remarkable a role. These technology help in fascinating learn ship and exchange of education material. ICTs are helping in online system; it is another web-based application that is revolutionarily the learning platform of education. This system compliments the traditional face to face teaching and learning format. In the on line system, students can access class notes, submit assignment and also join a discussion group with other learners.

Despite the growing body of evidence on the impact of ICT use on learners, whether it wild liver its potential depends to a large extent on how teachers use information communication technology (ICT) within the teaching and learning procees.ICT has made a considerable difference to the way in which information is readily available to individual teachers and enhanced the sharing of this information with other teacher and parents. The quality of education depends on the quality of teaching. Competent, Committed and dedicated teachers are the greatest assents for any education system depends in a large measure on

our securing affair number of well educated well equipped and contented teacher-teacher education. Traditional classroom education is phenomenon of yester years days are gone when mere paper reading play role in teaching learning process. Higher education is at the top of the education pyramid and determines to a large extent the state of the education system of the country, especially its quality .As such it has a responsibility towards the whole education system as it toward the whole of society .achieving education for all should therefore be one of the responsibilities of the higher education system. The role of higher education has to be developmental and not just fitting individuals in the labour market. For that to happen, its management has to be improved so that it can function efficiency with, at least, minimum basic resources. The development of basic education and literacy should be an explicitly recognised function of higher education as instruction, research and public service. An institutional framework for the development of basic education is essential within the institutions of higher education.

Williams (2001) examined that ICT as a strategy is intended to raise standards of literacy and positively changed the perception of teacher's trainees towards their work. There is a significant change in perception of those teacher trainees who use ICT as a strategy. Olanitemi (2003) found that value learning and perception were significantly improved. It follows that without ICT support for students and stiffen Nigerian university the survival of trainee's amidst enormous information challenges will be very elusive. Jamieson-proctor et al. (2006) the results show that differences between male and female teachers in their confidence to use ICT with students are not a reflection of undergraduate teacher beliefs about computer. Gender differences would appear to emerge post graduation. The results from this study warrant further investigation into why female teacher are less confident than their students use ICT less frequently than students of more confident male teachers. Given the 70% of the teaching workforce in Queensland state schools is female this has major implications for student use of ICT. Haydn (2006) explored the views of initial teacher trainees on various components of their training in the use of new technology to teach their subject. There is significant impact of ICT in teaching learning process. The concluding section of the paper considers the ways in which trainee's induction into the use of the technology might be made more effective.

Anderson et.al (Sep2006) examined that ICT as a tool for meeting the challenges of every day work. This qualitative study focused on newly qualified teacher's use of information and communication technology as a tool. He found that newly qualified teachers has positive attitude toward ICT and make their work effective by the use of ICT. Cavas et al. (2006) examined that Turkish science teachers have positive attitude towards ICT and although teachers attitude toward ICT do not differ regarding gender it differ regarding age. Computer ownership at home and computer experience. It is hoped that the outcomes of this study can be used in shaping innovation practice in Turkish educational system. Muller et al. (Dec 2007) examined the varied socio- economic implications of ICT based educational change. He found that ICT in education bring changes in socio economic status of peoples.

Rekasdarkolaei (2008) revealed that there was no significant difference found between females and males previous experience with ICT. However, males on average worked with computer significantly more hours per week than female's significant differences between males and females technical ICT capabilities and situational and longitudinal sustainability were observed. Cleaves et. al (2008) examined that ICT help to increase the currency and broaden the scope of activities and occasionally to promote pupil collaboration. They recommend improved dialogue between mentors and trainees with respect to the effective use of ICT in science teaching. After the use of ICT there is significant change in behaviour of people. Gulbahar et .al (2008) The finding of this research was that there was a positive impact of ICT in primary education especially in social studies subject. The result is positively increased. Mquzakis et.al (2008) found that the teachers were satisfied with both their perception to the course and the knowledge they acquire from the training. They also find that there is a significant difference between knowledge of trained teachers or non trained teachers. Moradi et.al (2008) examined ICT literacy difference in trainee's student teachers from the view point of sexuality and will be interest to those in the field of education there is significant difference between male and female technical ICT capabilities and situation and sustainability were observed. Moradi et.al (2008) examined that there was significant difference between females and males previous experience with ICT. However males on average worked with computer significantly more hours per week than females. Significant difference between males and females technical ICT capabilities and situational and longitudinal sustainability were observed. Ocker et al. (2009) examined that face to face task without a computer versus a computerized conferencing technology that required asynchronous group work. They found no significant effects of either manipulation on quality of work or learning but did not find a significant reduction in satisfaction with the task in the computerized conferencing technology requiring asynchronous group work.

Muthukrishnan et. al (2009) examined that the learning activities to be performed in traditional learning by exploiting the modern ICT and dwells on the feasible learning activities in the domains of ICT in order to better and future the

communication learning outcomes of the students in education in general and higher education. They found that ICT really help in professional development of teaching and learning and individuals involved in the programmes of teacher education. Vijayakumari et.al (2009) examined that the ICT plan need to identify the services and remove any scepticism regarding the plane she found that while equipment, software and training launch the programme, ongoing and long term support of technology system is essential for the programme to be successful. Timothy et al. (2009) examined the factors that influence pre-service teacher's perceived usefulness of an ICT course that was conducted using the student-centred learning approach. The finding showed that perceived competence and course delivery have direct effects on pre service teacher's perceived usefulness of the course, while learning environment and facilitating conditions affect perceived usefulness indirectly. Anneberit (2009) found that development of teaching takes long time and there is a positive impact of ICT in teaching learning process. Through ICT teachers teach effectively. Michael et.al.(2009) research findings indicate that access support for and modelling of ICT use in the classroom were key issues in developing this very good use of ICT. ICT make a positive difference to teaching and learning and willingness to "learning by doing". Tasemin et.al. (2009) examined that the practice in the teaching learning process in educational institution with the help of ICT is useful. The results show that although teacher are willing to use ICT recourses and are aware of the existing potential they are facing problems in relation to accessibility of ICT resources and lack of in-service training opportunity.

Cavas et. al. (2006) examined that Turkish science teachers have positive attitude toward ICT and although teacher's attitudes toward ICT do not differ regarding age. Computer ownership at home and computer experience. Shirazii et.al (2009) investigated the impact of ICT expression on economic freedom in the Middle East .the finding shows that ICT expansion in Middle East has been effective both in bridging the digital dived and also in promoting economic freedom in a region that was vulnerable to political social and global conflict. However differences between countries such as educational resistance to technology acceptance both enhanced and restricted the relationship between ICT and economic freedom. Debus et.al (2009) finding suggests that employers place greatest emphasis upon experience and technological skills; although current curricula meet these requirements, their emphases warrant revision. There is significant difference between professional body curricula and Iscc 99 curriculum which was produced by academia with the latter appearing to match employment market demand more closely.

Ogieqbaen (2009) examined that the majority of the in-service teachers lacked competencies in core teacher logy areas and they all asserted that they need extensive professional development in 17 different skill areas in ICT and training into competency areas. The in-service teachers preferred attendance at conferences/seminar, university courses and mentoring as the major mode of training in ICT skills. H.Irma et.al (2009) explored that gender scripts are embedded in educational tools which are reinforced in classroom practice and affect learner experience. A greater inclusiveness of the tools appears to improve the participation of students enhances positive attitude toward learning and technology, and improves the learning effects as reported by girls and boys. Girls especially tend to benefit from the inclusiveness of educational tools. Francois et al (2009) conclude that the importance of supporting the professional development of practising teachers regarding the use of ICT with the aim of changing practise observed by students in training and optimising the probability of increasing the use of these technology in their future role as teachers.

Significance of the problem

As a teacher plays very prominent role in moulding up tomorrow's citizen, the teacher should possess training in using the most modern technologies in the field of education .So the attitude of teacher trainees is very important as it is a tendency which helps them to be favourable or unfavourable towards the usage of most modern technology in the field of education in future when they go for teaching .So it is better as the government has introduced ICT in the syllabus of teacher trainees and has provided opportunity for the teacher trainees to develop power point presentations in the subject which may encourage them to prepare lessons based on multimedia techniques.

The introduction of ICT in education will encourage and motivate the student to explore new areas of advanced with references to its latest developments in various subjects. There is a great deal of rhetoric concerning the potential uses of ICT in education.

Nearly all institutions have developed learning and teaching strategies, which respond to the need of an expanded and diverse student population. They emphasize the development of active, independent learning skills and make use of a range of new technology in resource-based delivery.

Teacher trainees too need IT skills themselves in order to assist the development of specific IT skills in their trainee-teacher student. Teacher need to be both IT skilled and to be able to apply and critically evaluate strategies for the acquisition and appropriate application of ICT in diverse curriculum areas.

Operational Definitions of the terms used

The important terms used in this study have been defined as below:

Information communication technology

It refers to the use of mostly microelectronics in teaching/learning process. It covers information processing of current technologies, computing, telecommunications and applications of microelectronics. In this study we find that how teacher trainees use this technology in their teaching practice.

Teacher trainees

They are individuals who are in process of obtaining a bachelor's degree for qualifying themselves to teach in high schools.

Perception toward ICT

It is referred as tendency to react favourable/positive or unfavourable/negative attitude or thinking towards ICT. In this study we find out how teacher trainees take ICT in their teaching learning process.

Objectives

The objectives of this study are:

- To study the overall perception of teacher trainees on learning through ICT.
- To study the difference between male and female teacher trainees perception on learning through ICT.
- To study the difference between rural and urban teacher trainees perception on learning through ICT.
- To study the difference between the graduate and post graduate teacher trainees perception on learning through ICT.
- To study the difference between
- Language and S.St teacher trainees' perception on learning through ICT.
- Language and Computer teacher trainees' perception on learning through ICT.
- Language and Science teacher trainees' perception on learning through ICT.

Delimitations

- The study was delimited to lovely School of Education.
- The study was delimited to the subjects of languages, Science, S.St and computer science only.
- The study was delimited to the sample of 300. Therefore the perception of teacher trainees on learning through ICT is varying from teacher trainees to teacher trainees.

Hypotheses

- There exists favourable perception of teacher trainees towards learning through ICT.
- There exists no significance difference between male and female teacher trainees toward learning through ICT.
- There exists no significance difference between graduate and post graduate teacher trainees toward learning through ICT.
- There exists no significance difference between rural and urban teacher trainees perception towards learning through ICT.
- There exists no significance difference between language and science teacher trainees.
- There exists no significance difference between language and S.St teacher trainees.
- There exists no significance difference between language and computer teacher trainees.

Method and Procedure

The methodology is the most important aspect towards the study by method we mean systematic approach toward a particular phenomenon. The objective of the present study was to know the perception of Teacher Trainees on Learning through ICT. The data was collected from teacher trainees of Lovely Institute of Education. For this study samples were drawn from Lovely Institute of Education Phagwara .The total sample required 300 teacher trainees.

The sample was to be collected on the basis of Gender, Locality, Qualification and subject combination. Keeping in mind the nature of the problem, stratified random sampling technique was used to collect the data.

Questionnaire

In this study a self - made questionnaire was prepare to know the perception of teacher trainees on learning through ICT. Perception of teacher trainees is of different type like positive and negative .Thus the investigator consulted books, journals, magazines, abstracts, internet, experts opinion and other recourses to construct the items. This questionnaire had 35 positive items or 15 negative items. The scale has been developed to find out perception of teacher trainees on learning through ICT. This is the three point scale i.e. agree, disagree, undecided .The score assigned to each statement is 0, 1, 2.Each correct answer carries 2 marks and each wrong answer carries zero marks. Each neutral answer carries one mark. For positive items agree carries 2 marks, disagree carries zero marks and neutral carries one marks. For negative items disagree carries 2 marks, agree carries zero marks and neutral carries one marks. There is no negative marking in the scoring.

Validity & Reliability of the Questionnaire

Validity refers to the degree to which a study accurately reflects or assesses the specific concept that the researcher is to measure .There are many methods of obtaining the validity of the tool. The validity of the questionnaire was established through face validity and content validity method. To determine the validity of the questionnaire views of 3 experts belonging to the field of Psychology, Education, language and computer were taken. Views of these experts were incorporated to improve the quality and content of the questionnaire and to determine face and content validity. After considering their opinion it was decided to delete 11 items and 12 items were modified. Split half method was applied to determine the reliability of the questionnaire. It was administered to 100 B.Ed. teacher trainees. Instructions were given to the subjects to fill up the questionnaire. The scoring was done after splitting the test in two equal parts. Each questionnaire was divided into two parts on the basis of positive and negative items. Scores for positive and negative items were calculated separately. Correlation between the scores of positive and negative items was calculated.

Procedure

The present study focussed to know the perception of teacher trainees on learning through ICT in relation to their level of education, gender, locality and subject combination. A self constructed questionnaire was prepared to know the perception of teacher trainees on learning through ICT. This questionnaire was based on three point scale i.e. Agree, Disagree and Undecided. The questionnaire contains 50 items. The respondent has to select one option out of three options. The score assigned to each of the statement is 0, 1, and 2. Each correct answer carries 2 marks each wrong answer carries zero marks .Each undecided answer carries 1 mark. For positive items agree carries 2 marks disagree carries 0 marks and undecided answer carries 1 marks. For negative items, disagree carries 2 marks; agree carries 0 marks and undecided answer carries 1 mark. There is no negative marking in the scoring.

Statistical Techniques

The purpose of analyzing was to reduce the data to intelligible and interpretable form so that relation of research problem can be studied and stated. It involves breaking up to complex arrangement for the purpose of interpretation. So it needs the application of statistical techniques. To analyze, describe and interpret data following statistical techniques were used: Quartile deviation, S.D, t-test.

Results and Discussion

In this presented study the data were collected on the basis of median, quartile deviation, standard- deviation and t-test. In the first method , scores above the median value are consider as favourable perception and scores below the median value consider as unfavourable perception and interpretations were made on those values.

In the second method scores above the Q3 value are considered as high perception, scores between Q1 and Q3 are considered as average perception and scores below Q1 are considered as low perception. Interpretation is done on the basis of these values. In the third method the mean differences were found out and were used for testing any significant difference in the perception among the teacher trainees of various sub samples.

1. Shows Overall perception of teacher trainees towards ICT

The objective of the study was to study the overall perception of teacher trainees on learning through ICT. To find out the overall perception of teacher trainees Quartile deviation and Median were calculated. The results were discussed as below:

(A) Interpretation based on Quartile deviation

Table 1: Shows perception Level of teacher trainees on learning through ICT

Level of Perception	Number	%
High Perception	87	29
Average Perception	134	44.7
Low Perception	79	26.3
Total	300	100

The above table 1 shows that 29%, 44.7% and 26.3% have high, average and low level of perception towards ICT. So it was concluded that there is favourable perception of teacher trainees on learning through ICT.

(B) Interpretation based on Median

Table 2: Shows perception of teacher trainees towards internship on the basis of Median

Level of perception	Number	%
Above Perception	154	51.33
Below Perception	146	48.67
Total	300	100

The above table 2 shows overall perception of teacher trainees on the basis of median. The results concluded that 51.33% teacher trainees have high perception towards ICT and 48.67% teacher trainees have low perception toward ICT. So, finding based on Quartile Deviation shows that 29%, 44.7% and 26.3% teacher trainees have high perception, Average perception and low perception towards Learning through ICT 44.7%. On the basis of median it was concluded that 44.7%, 48.7% have high & low perception towards ICT. This hypothesis of the present study was accepted because majority of teacher trainees shows favourable perception toward ICT.

2. Perception of Male and Female teacher trainees towards ICT

The objective was to study the difference between male and female teacher trainees on learning through ICT. To test this objective Quartile deviation, Median and t-test were used. The results of this objective were presented as below:

(A) Interpretation based on Quartile deviation

Table 3 shows perception of male and female teacher trainees on learning through ICT.

Level of Perception	Male's Perception		Female's Perception	
	N	%	N	%
High perception	42	36.52	51	27.56
Average perception	42	36.52	85	45.94
Low perception	31	26.95	49	26.48
Total	115	100	185	100

The above table 3 shows that 36.52% , 36.52% & 27.56% male teacher trainees have high, average & low perception on learning through ICT. The result also shows that 27.56%, 45.94%, 26.48% female teacher trainees have high, average & low perception on learning through ICT.

(B) Interpretation Based on Median

Table 4: Shows perception of Male and female teacher trainees on learning through ICT

Level of Perception	Male's Perception		Female's Perception	
	N	%	N	%
Above Median	63	54.78	97	52
Below Median	52	45.02	89	48
Total	115	100	185	100

The above Table 4.4 shows perception of male and female teacher trainees on the basis of median. The result concluded that 54.78% & 45.06%, male teacher trainees have high & low perception on learning through ICT .It was concluded that 52.0% &48% female teacher trainees have high, low level of perception on learning through ICT.

(C) Interpretation based on t-test

Table 5 shows perception of male and female teacher trainees on learning through ICT on the basis of t-test

Gender	NO.	Mean	S.D	t-Value	Remarks
Male	115	64.40	12.94	0.56444	Insignificant
Female	185	64.29	12.44		

The score of male teacher trainees was compared with female teacher trainees. The mean value of male teacher trainees was found to be 64.4 whereas the mean value of female teacher trainees was found to be 64.29.The value of t-test 0.564444 indicates that there is no significant difference between the two groups at 0.1% level of significance.

The hypothesis of the present study stated that there exists no significant difference between male and female teacher trainees on learning through ICT.The result explored that significant difference exists among them so hypothesis is accepted.

3. Perception of rural and urban teacher trainees on learning through ICT

The objective was to study the difference between rural and urban teacher trainees on learning through ICT.To this purpose Quartile Deviation ,median and t-test were computed. The results were discussed below:

(A) Interpretation based on Quartile Deviation

Table 6 shows perception of rural and urban teacher trainees on learning through ICT on the basis of Quartile Deviation

Level of Perception	Rural teacher trainees Perception		Urban teacher trainees Perception	
	N	%	N	%
High Perception	26	20.48	43	24.85
Average Perception	65	51.18	83	47.97
Low Perception	36	28.34	47	27.18
Total	127	100	173	100

The above table 6 shows that 24.85% ,47.97% and 27.18% urban teacher trainees have high, average and low level of perception on learning through ICT . Whereas 20.48%, 51.18% and 28.34% rural teacher trainees shows high ,average and low level of perception on learning through ICT .

(B) Interpretation based on Median

Table 7 shows perception of rural and urban teacher trainees towards learning through ICT on the basis of Median

Level of Perception	Rural teacher trainees Perception of		Urban teacher trainees Perception of	
	N	%	N	%
Above Median	64	50.4	92	53.18
Below Median	63	49.6	81	46.82
Total	127	100	173	100

The above table 7 shows perception of rural and urban teacher trainees on the basis of Median. The result conclude that 50.40% rural teacher trainees have high perception on learning through ICT and 53.18% urban teacher trainees have high level of perception which is more than perception of rural teacher trainees.49.60% rural teacher trainees have low perception whereas 46.82% urban teacher trainees have low level of perception.

(C) Interpretation based on t-Test

Table 8 shows perception of rural and urban teacher trainees on learning through ICT on the basis of t-test

	NO.	Mean	S.D	t-Value	Remarks
Rural	127	62.47	12.95	2.566	Insignificant
Urban	173	66.25	12.18		

The score of rural and urban teacher trainees were compared with urban teacher trainees. The mean value of rural teacher trainees was found to be 62.47 whereas the mean values of urban teacher trainees were found to be 66.25. The value of t-test 2.566 indicates that there is no significant difference between the two groups at 0.1% level of significance.

The hypothesis of present study stated that there exists no significant difference between rural and urban teacher trainees on learning through ICT. The result. Explored that their exist no significant difference among them .so hypothesis is accepted.

4. Perception of Graduate and Post Graduate teacher trainees on learning through ICT

The fourth objective of the study is to study the difference between Graduate and Post – Graduate teacher trainees on learning Through ICT. To test this objective Quartile Deviation, median and t-test were calculated. The result of this objective was discussed as below:

(A) Interpretation based on Quartile Deviation

Table 9 shows perception of graduate and Post Graduate teacher trainees on learning through ICT.

Level of Perception	Graduate teacher trainees Perception		Post-Graduate Teacher trainees Perception	
	N	%	N	%
High Perception	58	31.52	32	27.59
Average Perception	52	28.26	53	45.68
Low perception	74	40.22	31	26.73
Total	184	100	116	100

The above table 9 shows that 31.52% , 28.26% and 40.22% Graduate teacher trainees have high average and low level of perception towards learning through ICT. The above table shows that Post-graduate teacher trainees have 27.59%,45.68% and 26.73% teacher trainees shows high , average and low level of perception Whereas Graduate teacher trainees shows 28.26% average level of perception on learning through ICT.

(B) Interpretation based on Median

Table 10 shows Perception of graduate and Post graduate teacher trainees on learning through ICT on the basis of Median

Level of Perception	Perception of Graduate teacher trainees		Perception of Post-Graduate teacher trainees	
	N	%	N	%
Above Perception	103	55.97	63	54.32
Below Perception	81	44.3	53	45.68
Total	184	100	116	100

The above table 10 shows perception of Graduate and Post graduate teacher trainees on learning through ICT on the basis of Median. The results conclude that 55.97% Graduate teacher trainees have high perception on learning through ICT and 44.03% Graduate teacher trainees have low perception toward ICT.The result conclude that 54.32%Post graduate teacher trainees have high perception toward ICT and 45.68% Post graduate teacher trainees have low perception towards ICT.

(C) Interpretation based on t-test

Table 11 shows perception of graduate and post graduate teacher trainees on learning through ICT on the basis of t-test. The score of Graduate teacher trainees were compared with Post-graduate teacher trainees. The mean value of Graduate teacher trainees were found to be 64.72 whereas the mean value of post graduate teacher trainees were found to be 63.54.The value of t-test -0.82 which indicates that there is no significance difference between the two groups at 0.1% level of significance.

Qualification	NO.	Mean	S.D	T-Value	Remarks
Graduate	184	64.72	12.209	-0.820	Insignificant
Post-Graduate	116	66.25	12.043		

The hypothesis of the present study stated that there exists no significance difference between Graduate and post Graduate teacher trainees on learning through ICT. The results explored that no significant difference exists among them. So hypothesis is accepted.

5. Perception of Language and S.St teacher trainees on learning through ICT

The objective of the study was to study the difference between the language and S.St teacher trainee's perception on learning through ICT. To test this objective Quartile Deviation, Median and t-test were calculated. The results of this objective were discussed below.

(A) Interpretation based on Quartile Deviation

Table 12 shows perception of languages and S.St teacher trainees on learning through ICT on the basis of Quartile deviation

Level of Perception	Language teacher trainees perception		S.St teacher trainees Perception	
	N	%	N	%
High Perception	61	26.52	61	26.52
Average Perception	106	46.08	106	46.08
Low perception	63	27.39	63	27.39
Total	230	100	230	100

The above table 12 shows that 26.52%, 46.08% and 27.39% teacher trainees have high, average and low level of perception toward ICT.

(B) Interpretation based on Median

Table 13 shows perception of language and S.St teacher trainees towards learning through ICT

Level of Perception	Perception of Language teacher trainees		Perception of S.St teacher trainees	
	N	%	N	%
Above Median	123	51.25	123	51.25
Below Median	117	48.75	117	48.75
Total	240	100	240	100

The above table 13 shows perception of language and S.St teacher Trainees on the basis of median. The result shows that 51.25%, 48.75% Language teacher trainees have High, low level of perception towards learning through ICT whereas 51.25% and 48.75% language teacher trainees have high and low perception on learning through ICT.

(C) Interpretation based on t-test

Table 14 shows perception of Language teacher trainees and S.St teacher trainees towards learning through ICT.

	Language s teacher trainees	S.St teacher trainees	t-value	Remarks
N	240	240		
Median	63.5	63.5	1	Insignificant
S.D	12.65	12.65		

The hypothesis of the present study stated that their there exists no significant difference between Language and S.St teacher trainees perception toward learning through ICT. The results shows that no such difference exits among Language and S.St teacher trainees. So the hypothesis is accepted.

6. Perception of Language and Computer teacher trainees toward learning through ICT

The objective was to study the difference between language and computer teacher trainees perception towards learning through ICT. To test this objective Quartile deviation, Median, t-test were computed. The result of this objective was presented below:

(A) Interpretation based on Quartile Deviation

Table 15 shows perception of Language and computer Science teacher trainees towards learning through ICT on the basis of Quartile Deviation.

Level of Perception	Language teacher trainees perception		Computer Science Teacher Trainees Perception	
	N	%	N	%
High Perception	6	28.57	6	28.57
Average Perception	9	42.85	9	42.85
Low perception	6	28.57	6	28.57
Total	21	100	21	100

The above Table 15 shows that 28.57%, 42.85% and 28.57% Language teacher trainees have high, average and low level of perception towards learning through ICT. The results also shows that 28.57%,42.85% and 28.57% computer Science teacher trainees have high ,average and low level of perception towards learning through ICT.

(B) Interpretation based on Median

Table 16 shows perception of Language and Computer Science teacher trainees towards learning through ICT on the bases of Median.

Level of Perception	Language teacher trainees perception		Computer Science Teacher Trainees Perception	
	N	%	N	%
Above Median	11	52.38	11	52.38
Below Median	10	47.61	10	47.61
Total	21	100	21	100

The above table 16 shows perception of Language and Computer teacher trainees on the basis of Median. The result concluded that 52.38% language teacher trainees have high perception and 47.61% teacher trainees have low perception towards learning through ICT whereas 52.38% computer teacher trainees have high perception and 47.61% teacher trainees have low level of perception towards learning through ICT. There is difference between perception of Language and computer teacher trainees.

(C) Interpretation based on t-test

Table 17 shows perception of Language and computer science teacher trainees towards learning through ICT on the basis of t-test.

	Languages	Computer Science	t-test	Remarks
N	21	21		
Mean	63.6	63.6	0.4719	Insignificant
S.D	11.79	11.79		

The score of Language Teacher Trainees were computed with Computer Science teacher trainees .The mean value of Language teacher trainees was found to be 63.66 same as the mean value of Computer teacher trainees was found 63.66 and value of t-test is 0.4719 which indicates that there is no significant difference between the two groups at 0.1% level of significance.

The hypothesis of the present study stated that there exist no significant different between Language and computer teacher trainees towards learning through ICT. The results explored that no significant difference exists among them. So hypothesis is accepted.

7. Perception of language and Science teacher trainees towards learning through ICT

The objective of the study was to study the difference between language and science teacher trainees perception toward learning through ICT.To prove this objective Quartile Deviation , Median and t-test were calculated. The results of this objective were discussed as below:

(A) Interpretation based on Quartile Deviation

Table 18 shows perception of Language and Science teacher trainees towards learning through ICT on the basis of Quartile Deviation

Level of perception	Languages Teacher Trainees		Science Teacher Trainees	
	N	%	N	%
High Perception	11	22.9	11	22.9
Average Perception	24	50.00	24	50.00
Low Perception	13	27.08	13	27.08
Total	48	100	48	100

The above table 4.18 shows that 22.9%, 50.00%,27.08% language teacher trainees have high ,average and low level of perception towards learning through ICT. As same as 22.9% 50.00% and 27.08% science teacher trainees have high, average and low level of perception towards learning through ICT.

(B) Interpretation based on Median

Table 19 shows perception of language and Science teacher trainees towards learning through ICT on the basis of Median.

Level of perception	Perception of language teacher trainees		Perception of Science teacher trainees	
	N	%	N	%
Above Median	24	50	24	50
Below Median	24	50	24	50
Total	48	100	48	100

The above table 19 shows perception of language and science teacher trainees on the basis of median. The results conclude that 50% language teacher trainees have high perception towards learning through ICT, 50% language teacher trainees have low perception on learning through ICT. Same as same 50% of Science teacher trainees have high perception and 50% science teacher trainees have low perception on learning through ICT.

C) Interpretation based on t-test

Table 20 shows Perception of Language and Science teacher trainees towards Learning through ICT on the basis of t-test.

	Language	Science	t-test	Remarks
N	48	48		
Mean	66.05	66.05	0.8688	Insignificant
S.D	12.56	12.56		

The score of language teacher trainees were computed with Science teacher trainees. The mean value of Language teacher trainees was found to be 66.05 whereas the mean value of Science teacher trainees was found to be 66.05. The value of t-test is 0.8688 which indicates that there is no significant difference between the two groups at 0.01 level of significance.

The hypothesis of the present study stated that there exist no significant difference between Language and Science teacher trainees towards learning through ICT. The results explored that no significant difference exists among them. So the hypothesis is accepted.

Conclusion

In view of the result of this study, following conclusion has been drawn.

1. The hypothesis of the study was that there exists a favourable perception of teacher trainees on learning through ICT. To test this hypothesis the mean scores of teacher trainees is computed. On the basis of results it is concluded that there exists a favourable perception of teacher trainees on learning through ICT. So this hypothesis is accepted.
2. The hypothesis of the study was that there exists significant difference between perception of male and female teacher trainees on learning through ICT. To test this hypothesis the mean score, quartile deviation median and t-value of male and female teacher trainees scores are computed through results it is concluded that there exists significant difference between male and female teacher trainees. So this hypothesis is accepted.
3. The hypothesis of this study was that there exists no significant difference between perception of rural and urban teacher trainees on learning through ICT. To test this hypothesis the mean score; quartile deviation, median and t-value are computed. On the basis of result it is concluded that there exists no significant difference between rural and urban teacher trainees and their perception. So this hypothesis is accepted.
4. The hypothesis of the study was that there exists no significant difference between perception of graduate and post graduate teacher trainees on learning through ICT. To test this hypothesis mean value, quartile deviation, median and t-value is computed. On the basis of results, it is concluded that there exists significant difference between perception of graduate and post graduate teacher trainees on learning through ICT. So the hypothesis is rejected.
5. The hypothesis of this study was that there exists no significant difference between perception of Language and S.St teacher trainees on learning through ICT. To test this hypothesis the mean score, median, Quartile deviation-value of language and S.St teacher trainees were computed. On the basis of these results it is concluded that there exists no significant difference between perception of language and S.St teacher trainees So the hypothesis is accepted.
6. The hypothesis of this study was that there exist no significant difference between perception of Language and Computer science teacher trainees. To test this hypothesis the mean scores, median, quartile deviation and t-score is computed. On

the basis of the results it is concluded that there exists no significant difference between perception of language and computer science teacher trainees.

7. The hypothesis of this study was that there exists no significant difference between Language and Science teacher trainees. To test this hypothesis the mean scores, median, quartile deviation-value were computed .On the basis of the results it is concluded that there exists no significant difference between the perception of language and science teacher trainees.

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