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STUDENT TEACHERS' LEARNING STYLE AND PERCEPTION ABOUT ICT

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ABSTRACT: -

Learning Style is the way in which each person begins to concentrate on, process, and retain new and difficult information through different perceptual channels. Styles pertain to the person as an individual and that differentiate her/him from someone else. Perception refers to the sorting out, interpretation, analysis and integration of stimuli involving our sense organs and brain. It is final products that differ from raw, unprocessed sensations in important ways. The sensory inputs patterns provide the raw material for experience. Active mental processes transform these inputs into actual experience. This transformation is perception. Thus perception arises from sensory input and the ways in which this input is processed by the individual. Sample consisting of 600 student teachers in the B.Ed. colleges of Chennai, Thiruvallur, Kanchipuram and Vellore Districts of Tamilnadu State. The samples were taken with due representation given to the variables viz., gender, educational qualifications, computer knowledge, locality of college and E-mail ID. Student Teachers' Tools used for the present study is Learning Style and Student Teachers' Perception about ICT Scale constructed and validated by the investigator. The findings of the study show that the learning styles and perception towards ICT of entire sample of Student teachers is high. Further it shows that there is significant difference between student teachers of learning style towards ICT with gender and Email ID and there is no significant different between educational qualification, computer knowledge and locality of college student teachers of learning style towards ICT. Further student teachers differ significantly in their perception towards ICT with gender, computer knowledge and Email ID and there is no significant difference found between educational qualification and locality of college of student teachers towards perception of ICT.

KEYWORDS: Learning Style ,Student Teachers' Perception , computer knowledge .

INTRODUCTION
Learning Style

Learning style is the way in which each person begins to concentrate on, process, and retain new and difficult information through different perceptual channels. Styles pertain to the person as an individual and that differentiate her/him from someone else. It is generally assumed that LS refer to beliefs, preferences and behaviors used by individuals to aid their learning in a given situation. People may learn in slightly different ways or extremely different ways. Although some gifted people may learn proficiently without using their learning style preferences, low achievers perform better when they do, rather than when they don't. A decade of research demonstrates that both low and average achievers earn higher scores on

standardized achievement tests and attitude tests when taught through their learning style preferences.

Students have different characteristic strengths and preferences in the ways they take in and process information. Their learning styles will be influenced by their genetic make-up, their previous learning experiences, their culture and the society they live in. Some students may focus on facts and data; others are more comfortable with theories and mathematical models. Some respond strongly to visual forms of information, like pictures, diagrams and schematics; others get more from verbal forms like written and spoken explanations. Some prefer to learn actively and interactively; others function more introspectively and individually.

The term 'learning styles' is generally assumed to refer to beliefs, preferences and behaviors used by individuals to aid their learning under the classroom or environmental conditions. Learning styles appear to occur in three areas: cognitive, psychological and affective. Cognitive styles have been defined in terms of the way a person perceives, remembers, thinks and solves problems. Psychological styles are biological and include reactions to the physical environment that may affect learning (e.g., being a "night person" or preferring to study in a warm or a cold room). Affective styles include personality and emotional characteristics such as persistence, preferring to work with others or alone and rejecting or accepting external reinforcement.

There are several other differences in learning styles that educational psychologists have studied. One has to do with field dependence versus field independence. Field-dependent individuals tend to see patterns as a whole and have difficulty separating out specific aspects of a situation or pattern; field-independent people are more able to see the parts that make up a large pattern. Field-dependent people tend to be more oriented towards people and social relationships than are field independent people.

Perception

Perception is a psychological process in which the sensory inputs received from the sense organs are processed. Organized and interpreted based on the past experiences of the organism so that the nature of the stimuli are meaningfully understood. Perception is the process of transforming sensory inputs to which we attend into organized impressions that we experience. Mental interpretation of sensation results in perception. So, perception = sensation + meaningful interpretation. According to the psychologists, perception is identifying the process through which we interpret and organize sensory information to produce our conscious experience of objects and object relationships. Perception is the selection, organization and interpretation of sensory input. Our perceptual ability enables us to organize sensation into representations of the world around us. Perception refers to the sorting out, interpretation, analysis and integration of stimuli involving our sense organs and brain. It is final products that differ from raw, unprocessed sensations in important ways. It makes us adapt to a complex and ever changing environment. Our perceptual experiences are not isolated; they build a world of identifiable things. The sensory inputs patterns provide the raw material for experience. Active mental processes transform these inputs into actual experience. This transformation is perception. Thus perception arises from sensory input and the ways in which this input is processed by the individual. So, perception is a constructive process by which we go beyond the stimuli, which are presented to us and attempted to construct a meaningful situation.

Need for the Study

The Future lab study shows many affirmative results from review of a number of UK case studies on teacher training. Although they are not representative, most of these studies highlight positive impacts of teacher training with ICT, such as increasing teacher self-assurance and aptitude in the use of IT resources by providing them fully equipped multimedia portable computers (MPTP) or by supporting online teacher communities.

Another UK (2002) pilot study reviewed by Future lab on learning to use ICT for science teaching showed that for the 40 schools that participated, the impact of equipped computers reached far beyond individual teachers. It prompted department-wide exploration of new teaching strategies and reviewed enthusiasm for sharing and collaboration.

ICT has occupied the whole world in every corner of life. But its effective usage at educational sector only

can yield greater benefits. This is in the hands of student teachers. Particularly at teacher Education level, effective teaching can be provided to large mass using ICT. Furthermore, when these teachers find themselves in a situation where they are no longer the principal source for delivery of information they get confused about their new role in relation to the use of these technologies. In the new phase there is decentralization of knowledge source Thus, there is a need to facilitate training on ICTs for teacher educator. Under such circumstances the researcher is concerned in studying about Student Teachers Learning Styles, and Perception about Information and Communication Technology.

STATEMENT OF THE PROBLEM

Information and Communications Technology (ICT) is often used as an extended synonym or as an umbrella term for Information Technology (IT), but is a more specific term (i.e. more broad in scope) that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals), computers as well as necessary enterprise software, middleware, storage, and audio-visual systems, which enable users to access, store, transmit, and manipulate information. Usage of all of these for Teaching –Learning process is collectively called as "ICT in Education". Proper usage of ICT in Teacher Education will lead to quality in productivity, i.e., quality learning. The way in which something is regarded, understood, or interpreted is called as perception, proper level of perception on ICT leads to proper usage of it at needed situations. Hence, to know in detail about the Teacher Education Teachers learning style on ICT and their Perception. The study taken by the investigator is stated as "Student Teachers Learning Styles and Perceptions about Information and Communication Technology".

OBJECTIVES OF THE STUDY
• To find out the Student Teachers' Learning style with ICT.
• To find out the Student Teachers' perception about ICT.
• To find out whether there is any significant difference between the selected subgroups of Student Teachers with respect to their Learning style with ICT.
• To find out whether there is any significant difference between the selected subgroups of Student Teachers with respect to their Perception about ICT.

HYPOTHESES OF THE STUDY
1. The Student Teachers' Learning Style with ICT is low.
2. The Student Teachers' Perception about ICT is low.
3. There is no significant difference between the selected subgroups of Student Teachers with respect to their Learning Style with ICT.
4. There is no significant difference between the selected subgroups of Student Teachers with respect to their Perception about ICT.

Method
The present investigation was undertaken by using Normative Survey Method.

Sample of the Study
The present study was conducted with 600 Student Teachers Studying in Government, Aided and Self finance B.Ed Colleges in Chennai, Thiruvallur, Kanchipuram and Vellore Districts of Tamilnadu State. The sample was selected by using Simple Random Sampling Technique. The sample forms a representative sample of the entire population.

Tools
• Student Teachers' Learning Style on ICT Scale constructed and validated by the investigators.
• Student Teachers' Perception about ICT Scale constructed and validated by the Investigators.

Analysis and Interpretation of Data

Table 1: Mean Scores of Learning Styles of Student Teachers with reference to Demographic Variables

Demographic Variables	Sub-Groups	N	Mean	SD
Gender	Male	115	25.70	8.99
	Female	485	27.63	7.79
Educational Qualification	Graduate	446	27.02	8.10
	Post Graduate	147	27.97	7.91
	Engineering	7	27.29	8.82
Computer knowledge	Computer Literate	534	27.42	8.11
	Computer Illiterate	66	25.94	7.58
Locality of the College	Rural	259	27.71	7.28
	Urban	341	26.91	8.60
E-mail Id	Yes	491	27.61	8.07
	No	109	25.70	7.88
	Total Sample	**600**	**27.26**	**8.06**

From Table-1, the mean scores of Learning Style for different sub-groups are found to be in between 24.75 and 28.40. One can score a maximum of 48. The Student teachers scored more than the midpoint of 24. If the score is more than the midpoint or ± SD, it could be concluded that the Student teachers have high level of Learning Style. Thus, Student teachers based on demographic variables have high level of learning style. Hence it is concluded that the learning style of the student teachers with reference to demographic variables are high. So the research hypothesis is accepted.

Table 2: Mean Scores of Perception about ICT of Student Teachers with reference to Demographic Variables

Demographic Variables	Sub-Groups	N	Mean	SD
Gender	Male	115	45.07	8.69
	Female	485	48.59	8.40
Educational Qualification	Graduate	446	47.94	8.56
	Post Graduate	147	47.66	8.56
	Engineering	7	51.29	9.10
Computer knowledge	Computer Literate	534	48.16	8.72
	Computer Illiterate	66	45.89	6.87
Locality of the College	Rural	259	48.88	8.25
	Urban	341	47.18	8.25
E-mail ID	Yes	491	48.30	8.83
	No	109	46.19	7.00
	Total Sample	**600**	**47.91**	**8.56**

Table-2 shows that the mean scores of Attitude for different sub-groups are found to be in between 42.71 and 51.29. One can score a maximum of 80. The student teachers scored more than the midpoint of 40. If the score is more than the midpoint or ± SD, it could be concluded that the student teachers have high level of Attitude. Thus, student teachers based on demographic variables have high level of Attitude. Hence it is concluded that the Attitude towards ICT of the student teachers with reference to demographic variables are high. So the research hypothesis is accepted.

Table 3: Mean Difference between Male and Female Student Teachers in Learning Style Scores

Variable	Gender	N	Mean	SD	't' value	Level of Significance
Learning Style	Male	115	25.70	8.99	2.11	Significant at 0.05 level
	Female	485	27.63	7.79		

From Table-3, that the calculated 't' value 2.11 of Learning Style is found to be Significant. Hence the null hypothesis is rejected and research hypothesis is accepted and it is concluded that male and female student teachers differ significantly in their Learning Style towards ICT.

Table 4: ANOVA for the Learning Style among the Student Teachers belonging to different Educational Qualification

Variable	Source of Variation	Sum of Squares	Df	Mean Square	F	Level of Significance
Learning Style	Between Groups	99.392	2	49.696	0.26	Not Significant
	Within Groups	38876.048	597	65.119		
	Total	38975.440	599			

Table-4 indicates that the calculated 'F' ratio 0.26 of Learning Style is not significant at the 0.01 level. The null hypothesis is accepted and research hypothesis is rejected. Hence it is concluded that the difference in the level of Learning Style among the different educational qualification of student teachers do not differ significantly among the three sub-groups.

Table 5: Mean Difference between Student Teachers having Computer Literate and Student Teachers who have Computer Illiterate in Learning Style Scores

Variable	Computer Knowledge	N	Mean	SD	't' value	Level of Significance
Learning Style	Computer Literate	534	27.42	8.11	1.48	Not Significant
	Computer Illiterate	66	25.94	7.58		

From Table-5, the calculated 't' value 1.48 of learning styleis found to be not significant. Hence the null hypothesis is accepted and research hypothesis is rejected and it is concluded that student teachers having computer Literate and student teachers who have computer Illiterate do not differ significantly in their learning style towards ICT.

Table 6: Mean Difference between Rural and Urban Student Teachers in Learning Style Scores

Variable	Locality of college	N	Mean	SD	't' value	Level of Significance
Learning Style	Rural	259	27.71	7.28	1.23	Not Significant
	Urban	341	26.91	8.60		

Table-6 depicts that the calculated 't' value 1.23 of Learning style is found to be not significant. Hence the null hypothesis is accepted and research hypothesis is rejected and it is concluded that rural and urban student teachers do not differ significantly in their Learning style towards ICT.

Table 7: Mean Difference between E-mail ID Yes and E-mail ID No Student Teachers in Learning Style Scores

Variable	E Mail ID	N	Mean	SD	't' value	Level of Significance
Learning Style	Yes	491	27.61	8.07	2.27	Significant at 0.05 level
	No	109	25.70	7.88		

From Table-7, the calculated 't' value 2.27 of Learning style is found to be significant. Hence the null hypothesis is rejected and research hypothesis is accepted and it is concluded that E-mail ID Yes and E-mail ID No student teachers differ significantly in their Learning style towards ICT.

Table 8: Mean Difference between Male and Female Student Teachers in Perception Scores

Variable	Sub-Groups	N	Mean	SD	't' value	Level of Significance
Perception	Male	115	57.85	12.776	2.00	Significant at 0.05 level
	Female	485	60.44	10.735		

Table-8 reveals that the calculated 't' value 2.00 of Perception is found to be significant. Hence the research hypothesis is accepted and it is concluded that male and female student teachers differ significantly in their Perception towards ICT.

Table 9: ANOVA for the Perception among the Student Teachers belonging to different Educational Qualification

Variable	Source of Variation	Sum of Squares	DF	Mean Square	F	Level of Significance
Perception	Between Groups	362.204	2	181.102	0.45	Not Significant
	Within Groups	74639.636	597	125.025		
	Total	75001.840	599			

From Table-9, the calculated 'F' ratio 0.45 of Perception is not significant at the 0.1 level. The research hypothesis is rejected. Hence it is concluded that the difference in the level of Perception among the different Educational qualification of student teachers do not differ significant.

Table 10: Mean Difference between Student Teachers having Computer Knowledge and Student Teachers who do not have Computer Knowledge in Perception Scores

Variable	Computer Knowledge	N	Mean	SD	't' value	Level of Significance
Perception	Computer Literate	534	60.47	10.874	2.95	Significant at 0.01 level
	Computer Illiterate	66	55.62	12.767		

Table-10 indicates that the calculated 't' value 2.95 of perception found to be significant. Hence the null hypothesis is rejected and research hypothesis is accepted and it is concluded that student teachers having computer Literate and student teachers who have computer Illiterate differ significantly in their perception towards ICT.

Table 11: Mean Difference between Rural and Urban Student Teachers in Perception Scores

Variable	Sub-Groups	N	Mean	SD	't' value	Level of Significance
Perception	Rural	259	59.64	11.977	0.56	Not Significant
	Urban	341	60.17	10.565		

From Table-11, the calculated 't' value 0.56 of perception is found to be not significant. Hence the null hypothesis is accepted and research hypothesis is rejected and it is concluded that rural and urban student teachers do not differ significantly in their perception towards ICT.

Table 12: Mean Difference between E-mail ID Yes and E-mail ID No Student Teachers in Perception Scores

Variable	Sub-Groups	N	Mean	SD	't' value	Level of Significance
Perception	Yes	491	60.67	10.348	2.84	Significant
	No	109	56.64	13.973		

From Table-12, the calculated 't' value 2.84 of perception is found to be significant. Hence the null hypothesis is rejected and research hypothesis is accepted and it is concluded that E. Mail Id Yes and E. Mail Id No student teachers differ significantly in their perception towards ICT.

FINDINGS
1. The Learning style towards ICT of entire sample of Student teachers is high.
2. The Perception towards ICT of entire sample of Student teachers is high.
3. It is concluded that male and female student teachers differ significantly in their Learning Style towards ICT.
4. It is concluded that the difference in the level of Learning Style among the different educational qualification of student teachers do not differ significantly among the three sub-groups.
5. It is concluded that student teachers having computer Literate and student teachers who have computer Illiterate do not differ significantly in their learning style towards ICT.
6. It is concluded that rural and urban student teachers do not differ significantly in their Learning style towards ICT.

7. It is concluded that E. Mail Id Yes and E. Mail Id No student teachers differ significantly in their Learning style towards ICT.

8. It is concluded that male and female student teachers differ significantly in their Perception towards ICT.

9. It is concluded that the difference in the level of Perception among the different Educational qualification of student teachers do not differ significant.

10. It is concluded that student teachers having computer Literate and student teachers who have computer Illiterate differ significantly in their perception towards ICT.

11. It is concluded that rural and urban student teachers do not differ significantly in their perception towards ICT.

12. It is concluded that E. Mail Id Yes and E. Mail Id No student teachers differ significantly in their perception towards ICT.

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