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ATTITUDE TOWARDS USING NEW TECHNOLOGY AMONG STUDENT TEACHERS

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Abstract:

The education sector of the present scenario is techno savvy atmosphere and it is mandatory for every stakeholders of education whom should willing to have it, access it, disseminate it, and get benefit from it through sharing information and instruction for teaching and learning in our every walks of life. According to Dahlstrom, & Warraich's (2012), technology is often used as a tool for information gathering and research rather than instructional purpose. Therefore, the teacher education institution should holds more responsibility in providing technological access and training to trainer and trainee through its pre-service and inservice programme based on updated curriculum framework with technology so that they can disseminate technological benefits to other stakeholders of society. So the investigator aimed to study about the attitude towards using new technology among three hundred and nine student teachers through normative survey and random sampling technique. The attitude towards using new technology scale developed by Dr. S. Rajasekar (2012) was used for collecting the data and subjected to statistical descriptive and inferential analysis. The results have revealed that most of the student teachers were at the average favourable attitude towards using new technology. It was further found that the background variables such as gender, locality and major subject studied had strong statistical significant differences with attitude towards new technology among the student teachers. Male, urban and Arts subject student teachers had more favourable attitude than their counterparts. It is right time to have in-depth analysis over the rootcuase behind the lapse of favourable attitude among the female, rural and Science subject student teachers. So it is recommended that teacher education institutions should ensure the technological skill trainings to the students' teachers at their preservice training level programme with no compramisation thereby including all new and advanced techno pedagogical skills.

Key Words: Attitude, New Technology, Student Teachers

Introduction:

Today's age of twenty first century is the age of information and technology (IT). Every aspects of life are related to science and technology developments. Huge flow of information is emerging in all fields throughout the world and it is too challenable for school teachers, teacher educators and student teachers to access, and disseminate the correct information along with the subject content. Dalhstrom's (2012) reported that students preferred laptops over smaller devices because of the larger screen and keyboard. Now information and technology is popularly using in educational field for making teaching learning process successful and interesting for students and teacher both. In 1998, UNESCO World Education report refers about student and teachers must have sufficient knowledge, skill and abilities to access to improve digital technology and the internet in their classroom, schools, and teacher educational institutions. Gashan (2015), technological training is important for teachers to deal with the technological devices for effective classroom teaching process and for preparing instruction.

The attitude towards new technology is a set of feelings, desires, fears, convictions, prejudices or other emotional tendencies that give an individual readiness to act because of his varied experiences with the technological gadgets. The idea of integrating technology into university teacher education programmes is not new, but it is becoming more relevant as teachers are expected to use technology to support their teaching and to improve student learning. **No** Child Left Behind ACT (NCLB, 2001) also encourages improving student achievement through the use of technology. NCLB in its quest to ensure highly qualified teachers established standards for teacher professional development.

While there is an obvious emphasis on technology in education, there is still a need to demonstrate and persuade teachers, teacher educators, and student teachers to see technology as an effective teaching and learning tool in the classroom. Gender, ownership of a personal computer, Internet access, professional experience, and weekly computer use seemed to play an important role in the perceived school culture regarding ICT integration in education (Erdogan, 2011). Educational institutions should tend to train student teachers who are technology-competent and who effectively use and integrate technology into their teaching activities especially instructional purpose.

Andrew Mathew (2016) experimentally verified that participants preferred a combination of learning with traditional tools (e.g. books/paper) and technological tools (laptops, tablets, phones) helps them to improve

their attitude towards technology and learning tools. The importance of access to technology, technology competency, and effective integration of technology, an understanding of how instructors and pre-service teachers in a faculty of education perceive technology can help institutions of higher education to successfully integrate, in relation with the current ICT usage in instructional purpose. Technology impact on higher-order thinking skills was predicted by teacher openness to change, the constructivist use of technology (Baylor & Ritchie, 2002).

Understanding the factors contributing to the utilization of technology and the possible relations of these factors will lead us to educate technology-competent teachers. The kindergarten teachers, gathering information about their attitudes, skills, and instructional methods related to computer use (Chen, & Chang, 2006). The future teachers achieve high confidence levels for technology implementation; meaningful technology use can come closer to being the norm, rather than the exception, in our classroom. Dexter & Riedel (2003) insisted that in order to prepare new teachers to use technology within their programs of preparation, schools, colleges, and departments of education (SCDEs) can develop and require coursework in which students learn how to operate and teach with technology and set expectations that students demonstrate their integration abilities during student teaching.

Significance of the Study:

The student teachers must have the appropriate attitude towards to use new digital tools to help all students to achieve high academic standard. Overall attitude towards using new technology was positively related with teaching effectiveness (Garrison, & Bromley, 2004). Without proper knowledge of ICT and handling new technological devices, teachers, teacher educators and student teachers cannot perform in his/her class room as an effective and efficient taught to the educand and it could not be said to be a complete one. The student teachers should have high confidence level on technology implementation on the present curricula and should have used it for successful achievement towards low cost, quick access and easy transformation instructional process with respect to teaching and learning. Therefore, the investigator interested to know the attitude towards using new technology among student teachers in order to assess the student teachers standing position to check whether they are having enough attitudes and to provide appropriate recommendations for their further improvement.

Objectives of the Study:

- To find out the level of attitude towards using new technology of student teachers.
- To find out whether there is any significant difference between male and female student teachers' attitude towards using new technology.
- To find out whether there is any significant difference between rural and urban student teachers' attitude towards using new technology.
- To find out whether there is any significant difference between science and arts subject student teachers' attitude towards using new technology.

Hypotheses of the Study:

- The level of attitude towards using new technology of student teachers is highly favourable.
- There exists no significant difference between male and female student teachers' attitude towards using new technology.
- There exists no significant difference between rural and urban student teachers' attitude towards using new technology.
- There exists no significant difference between science and arts subject student teachers' attitude towards using new technology.

Methodology:

The descriptive methodology of research was used in the study. The sample was three hundred and nine student teachers from three different college of education from Namakkal district of Tamilnadu. For the present study, the investigator adopted simple random (Probability Sampling) sampling technique for the selection of sample subjects. The attitude towards using new technology scale developed by Dr. S. Rajasekar (2016) was employed to measure the attitude. The scale contains thirty items based on the Likert's type of five point Scale. All statements are in positive form in nature. The total scoring was the total number of points scored by each subject as per the tool. For all the positive statements, the scoring 5, 4, 3, 2, and 1 is allotted for the options SA-Strongly Agree, A-Agree, UD-Undecided, DA-Disagree and SDA-Strongly Disagree. The total score is 150 and the minimum score is 30. The data that collected were assumed with assumption as parametric data and analyzed by using mean, standard deviation, and t-test for interpreting research outcomes.

Reliability and Validity:

In the case of Rajasekar's Attitude towards New Technology Scale, the correlation co-efficient based on the test-retest was found as 0.919631, and it shows the high reliability of the tool. Apart from the face validity arrived from the jurie/expert opinion, the intrinsic validity of the research tool is arrived. The square root of reliability gives the intrinsic validity. Therefore the intrinsic validity of the Rajasekar's Attitude towards New Technology Scale was 0.9589.

The investigator personally met the head of the teacher education institutions in person for getting due permission and approval for collection of data. After getting formal permission, the general instruction regarding the method of answering the front sheet personal data and the five point scale was clearly explained to them. Enough time was given to respondents for complete answering of each statements of the research tool without omissions. Then the tool was collected for further scoring and analysis.

Analysis and Interpretation:

Hypothesis 1: The level of attitude towards using new technology of student teachers is highly favourable.

Table 1: The Level of Attitude towards New Technology of Student Teachers

Low Attitude		Average Attitude		High Attitude	
N	**%**	**N**	**%**	**N**	**%**
81	26.2	147	47.6	81	26.2

From the above table.1, from the total sample, it has been interpreted that 26.2 %, 47.6 %, and 26.2 % of the student teachers have low, average, and high favourable attitude towards using new technology. Only less than fifty percentages of students' teachers have average favourable attitude towards using new technology. This is the indicative of more and more training to be given at the level of B.Ed pre - service training progrmme so that trainees can familiarise the new technological devices and its application with respect to instructional purpose.

Hypothesis 2: There exists no significant difference between male and female student teachers attitude towards using new technology.

Table 2: Test of Significance of Difference in the Attitude towards Using New Technology Means Scores between the Male and Female Student Teachers

Gender	N	Mean	S.D.	't' value	Level of Significance
Male	135	120.27	12.205	1.996	Significant
Female	174	117.59	11.041		

The above table reveals that the obtained value 1.996 is greater than that of the table value 1.96 at 0.05 level. Therefore the null hypothesis is rejected. It is inferred that, there is significant difference between male and female student teachers in their attitude towards using new technology. In the present study, Gender is found to be a determinant factor of attitude towards using new technology. While compare the mean scores of male student teachers have higher favourable attitude towards using new technology than female student teachers. There is no technological usage and attitudinal knowledge difference between male and female trainees. Equal opportunities, more exposure, and more training towards using new technology help the female trainees to improve their attitude of the female student teachers.

Hypothesis 3: There exists no significant difference between rural and urban student teachers attitude towards using new technology.

Table 3: Test of Significance of Difference in the Attitude towards Using New Technology Means Scores between Rural and Urban Student Teachers

Locality	N	Mean	S.D.	't' value	Level of Significance
Rural	204	117.77	11.351	2.049	Significant
Urban	105	120.67	11.954		

The above table reveals that the obtained value 2.049 is greater than that of the table value 1.96 at 0.05 level. Therefore the null hypothesis is rejected. It is inferred that, there is significant difference between rural and urban student teachers in their attitude towards using new technology. In the present study, Locality ofstudent teachers is found to be a determinant factor of attitude towards using new technology of student teachers. While compare the mean scores of urban student teachers have higher favourable attitude towards using new technology than rural student teachers. At the time of pre-service training, care should be taken among rural background student teachers to identify the factors behind the attitudinal differences on new technological devices when compared to urban student teachers.

Hypothesis 4: There exists no significant difference between science and arts background student teachers attitude towards using new technology.

Table 4: Test of Significance of Difference in the Attitude towards Using New Technology Means Scores between Arts and Science Subject Student Teachers

Subject studied	N	Mean	S.D.	't' value	Level of Significance
Arts	150	120.89	10.849	3.183	Significant
Science	159	116.75	11.997		

The above table reveals that the obtained value 3.183 is greater than that of the table value 1.96 at 0.05 level. Therefore the null hypothesis is rejected. It is inferred that, there is significant difference between arts and science subject student teachers in their attitude towards using new technology. In the present study, Subject studied is found to be a determinant factor of attitude towards using new technology of student teachers. While

compare the mean scores of arts subject student teachers have higher favourable attitude towards using new technology than science subject student teachers. This is the indicative that now-a –days arts subject trainees shows more interest on knowing new usage of technical devices.

Major Findings:

- Most of the student teachers are at the average favourable attitude towards using new technology.
- Gender, locality and subject of study are the determining factors of student teachers' attitude towards using new technology.

Recommendations:

Many power point presentation models are available for teaching content and methodology in web and online resources. This could be more helpful for student teachers who are trying to bring technology and instruction at first. The student teachers try to look at various blog and create a template for improving knowledge. The student teachers create a template for a web page and ask peer to use it to design a webpage about the content that are studying. These activities actually familiarize with the new concept of Web 2.0 world. A webquest guides student teachers to search the Internet for specific information. There are infinite numbers of already-constructed webquest are there, a perfect way to teachers to begin integrating internet searches into their curriculum. The student teachers should use technology for a writing assignment and instruction. Ask peer prospective teacher educators to send an email to their teachers, friends and parents. Sharing information through e-mail enhances the effectiveness and speedy access of information through technology. A class webpage is a basic site where student teachers post day-to-day announcements like online bulletin board to a much more elaborate one that includes class photos, a class blog, downloadable materials, and teachers' own domain name.

Conclusion:

The need factor is everyone should have good attitude towards using new technological devices for teaching and learning. So we build the capacity to train large number of student teacher to know and use new technology as an instrument to generate this change and cater to the training requirements of this era of techno-saavy. New technology enabled education and training would not only be cost effective but also make education effective and efficient while offering mass customization of learning, and continuous support and even we can overcome the impacts due to any pandemic problems.

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