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A study of digital awareness among B.Ed. trainees

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Abstract
Digital awareness refers to the awareness of the knowledge, skills and attitudes required for individuals to use digital tools effectively. This investigation aimed to evaluate the level of digital awareness among the teacher trainees. A descriptive survey was carried out on a sample of 100 male and female B.Ed. students of Bareilly district using a self-developed tool - D.A.T. (Digital Awareness Tool) containing 22 items based on the knowledge, attitude, understanding of concepts, application to digitalization. Statistical measures of mean, standard deviation and t-test were employed to analyze the raw scores so obtained, test the hypotheses and draw inferences using MS-EXCEL. The findings of the study revealed that the majority of B.Ed. students have above average levels of digital awareness. There is a significant difference between the level of digital awareness of male and female B.Ed. trainees, urban and rural background teacher trainees. In contrast, no significant difference in levels of digital awareness was reported in the case of English and Hindi medium students or those from govt. aided and private B.Ed. colleges.

Keywords: Digital awareness, teacher trainees, gender, medium, locality, type of college

Introduction

In the recent decades, there have been rapid developments and changes in terms of science and technology. Internet, the most useful technology of modern times which helps us not only in our daily lives but also in our professional lives. For educational purposes, it is now being widely used to gather information and to do research or add to the knowledge of various subjects. Internet has started playing a very vital role in education. Nowadays, individuals want a flexible education format in which time and place are changeable in line with their desires and concerns. Particularly from the perspective of lifelong learning, digitalization can be seen as an important element which forces individuals to change.

In this context of rapid digitalization of education, digital awareness, digital competence, and digital fluency have become the key to success in utilizing the various resources available to us. Digital awareness may be broadly described as the awareness of the knowledge, skills and attitudes required for individuals to use digital tools effectively.

The adaptation of the teachers to the digital age, the integration of their digital skills into the learning and teaching processes, their digital awareness, competencies and fluency constitute an issue which will drive the education system of the future. Teacher must aware about the use of various digital technology in the field of education in order to help the learners learn more effectively. So, awareness of digitalization and its numerous aspects is vital. Digital awareness is key to being able to fully utilize the benefits of the Internet. In the field of education, it is very crucial that the teachers themselves are digitally aware. Teacher trainees are on the brink of becoming full-fledged teachers and it is very important that they themselves are digitally aware and capable of handling technology-based education. This present investigation is aimed at evaluating the level of digital awareness among the teacher trainees.

Review of related literature

Topno and Sinha (2019) [3] in their study on Digital Awareness of Secondary School Teachers of Patna which was carried out on 300 secondary school teachers from Patna, revealed there is a significant difference between the mean scores of secondary school teachers in their digital awareness on the basis of gender and locality whereas there is no significance difference between the mean scores of secondary school teachers in their digital awareness on the basis of medium of instructions, type of institutions, professional qualifications, educational qualifications and years of experiences. Mohalik (2020) [1] conducted a study intended to find out the level of digital literacy and its uses among teacher trainees at secondary level using descriptive research method on sample of 170 trainees from Utkal University, Odisha, India. Self-developed questionnaire based on different aspects of digital devices and applications such as skills of trainees in digital technology, use of digital technology and applications by trainees for learning and teaching etc. was used at tool. Collected data were subjected to frequency and percentage analysis and accordingly conclusions were drawn. The study found that majority of trainees can change screen brightness and contrast, minimize, maximize and move window screen, use search command to locate a file and download and install applications, more than 50% of trainees do not know learning management system, virtual worlds, podcasts and web design applications, around 70% of trainees are aware about storage of video in camera, manage junk mail and update username and password and less than 50% of trainees knew about voice typing and cyber security, majority of trainees use group email and WhatsApp for

academic work and only 20% of trainees use digital devices for using PPT in class, create digital learning materials, provide feedback to students. Sharma and Chaudhary (2020) [4], in their study on education technology awareness among teachers for enhanced learning outcome, reported that the teachers felt that digitalisation transformed the various stages of education learning such as critical thinking, problem solving, cooperative learning, extra connect, extension and acceleration of activities of curriculum and enrichment, etc. technological patterns paved the path of exploring new ideas that supports learning patterns by generalisations to visualise a techno savvy environment that compelled the students to perform. Jagannath, Dange and Taj (2022) [2], in their study on digital literacy awareness among teachers also emphasized the need for increasing the level of digital awareness among the teachers.

Operational Definitions

For the present study**,**

Digital awareness refers to the awareness of the knowledge, skills and attitudes required for individuals to use digital tools effectively.

B.Ed. trainees refer to the students enrolled in B.Ed. course (2 year) in regular mode in colleges.

Objectives of the Study

- To compare between the level of digital of awareness of male and female B.Ed. trainees.
- To compare between the level of digital of awareness of B.Ed. trainees from English and Hindi medium background.
- To compare between the level of digital of awareness of B.Ed. trainees from government aided and private colleges.
- To compare between the level of digital of awareness of B.Ed. trainees from urban and rural areas.

Hypotheses of the Study

- There is no significant difference between the level of digital awareness of male and female B.Ed. trainees.
- There is no significant difference between the level of digital awareness of B.Ed. trainees from English and Hindi medium background.
- There is no significant difference between the level of digital awareness of B.Ed. trainees from government aided and private colleges.
- There is no significant difference between the level of digital awareness of B.Ed. trainees from urban and rural areas.

Delimitations

Due to constraints of time, manpower and resources, the present investigation was delimited to the following areas:

- The study was delimited to only B.Ed. trainees from urban and rural areas studying in Bareilly district.
- The study was delimited to only B.Ed. trainees studying in government-aided and private colleges of Bareilly district, affiliated to M.J.P. Rohilkhand University, Bareilly.
- The study was delimited to 100 B.Ed. trainee students (65 male, 35 female) from government aided (44) and private (56) B.Ed. colleges affiliated to affiliated to M.J.P. Rohilkhand University, Bareilly.
- The study was delimited to high school students from urban (61) as well as rural (39) areas of Bareilly district.

Methodology

The researchers opted for descriptive survey method for the present study and used a quantitative research design. Stratified random sampling technique was adopted to select a sample of 100 male and female B.Ed. students of Bareilly district studying in different govt. aided and private colleges affiliated to M.J.P. Rohilkhand University, Bareilly. The investigator employed a self-developed tool - D.A.T. (Digital Awareness Tool) containing 22 items, some with sub sections, involving the knowledge, attitude, understanding of concepts, application to digitalization. The test items were based upon the everyday uses of digital platforms and apps. The test items were in English since it was difficult to mention certain terms in Hindi. The researchers personally visited the concerned B.Ed. Colleges of Bareilly district to collect the required data. Once the data collection and scoring of the tool was done, the statistical measures of mean, standard deviation and t-test were employed to analyze the raw scores so obtained, test the hypotheses and draw inferences using MS-EXCEL.

Data Analysis and Interpretation

Once the data was collated and analysed, the null hypotheses were tested using t -test. The findings of the study have been expressed in tabular and graphical form, as below:

Table 1: Level of digital awareness of male and female B.Ed. students

Category	N	Mean	S.D.	t-value	Level of significance
Male	65	157.03	14.57	2.65	0.01
Female	35	152.58	13.68		

A perusal of the data presented in Table 1 reveals that male B.Ed. trainees exhibit significantly higher level of digital awareness as compared to the female B.Ed. trainees. The calculated mean score of male B.Ed. trainees on the Digital Awareness Tool (D.A.T.) is found to be 157.03 with a standard deviation of 14.57. In the case of female B.Ed. trainees' mean score on the Digital Awareness Tool (D.A.T.), it is found to be 152.58 with a standard deviation of 13.68. The calculated t-value is 2.65 (df=99) which is more than table value of t (2.63), at 0.01 level of significance. Therefore, the first null hypothesis "*There is no significant difference between the level of digital awareness of male and female B.Ed. trainees*" is rejected.

Graphically the data presented in Table 1 may be depicted as:

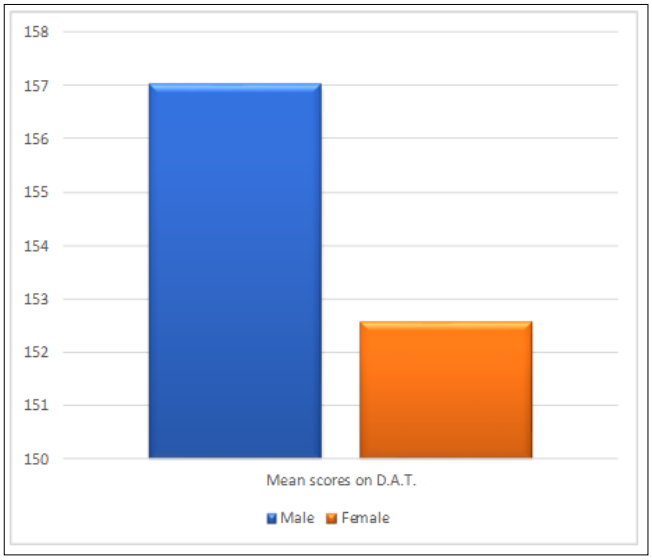

Fig 1: Level of digital awareness of male and female B.Ed. students

Table 2: Level of digital awareness of English and Hindi medium B.Ed. students

Category	N	Mean	S.D.	t-value	Level of significance
English	41	156.23	14.93	1.59	Not significant
Hindi	59	153.25	13.74		

An examination of the contents of Table 2 indicates that B.Ed. trainees from English medium background and those from Hindi medium background do not differ significantly in terms of level of digital awareness. The calculated mean score of B.Ed. trainees from English medium background on the Digital Awareness Tool (D.A.T.) is found to be 156.23 with a standard deviation of 14.93. In the case of Hindi medium background B.Ed. trainees' mean score on the Digital Awareness Tool (D.A.T.), it is found to be 153.25 with a standard deviation of 13.74. The calculated t-value is 1.59 (df=99) which is less than table value of t (2.63), at 0.05/ 0.01 level of significance. Therefore, the second null hypothesis "*There is no significant difference between the level of digital awareness of B.Ed. trainees from English and Hindi medium background*" is accepted. Graphically data presented in Table 2 may be depicted as:

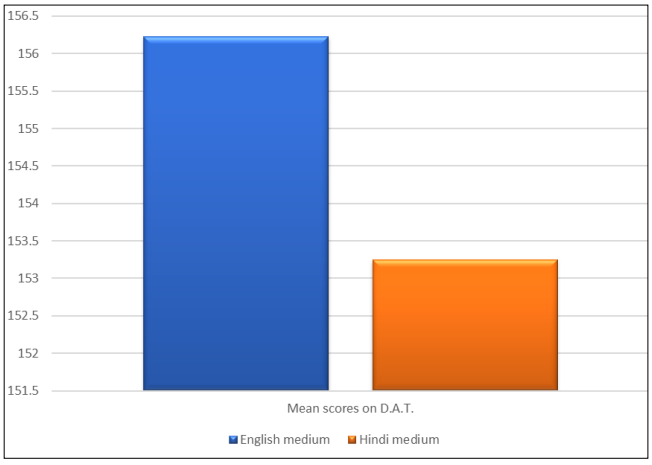

Fig 2: Level of digital awareness of English and Hindi medium B.Ed. students

Table 3: Level of digital awareness of B.Ed. students from government-aided and private colleges

Category	N	Mean	S.D.	t-value	Level of significance
Government-aided	44	156.93	13.54	1.63	Not significant
Private	56	154.28	14.67		

An examination of the contents of Table 4.3 indicates that B.Ed. trainees from government aided colleges and those from private colleges do not differ significantly in terms of level of digital awareness. The calculated mean score of B.Ed. trainees from government aided colleges on the Digital Awareness Tool (D.A.T.) is found to be 156.93 with a standard deviation of 13.54. In the case of B.Ed. trainees from private colleges, the mean score on the Digital Awareness Tool (D.A.T.), it is found to be 154.28 with a standard deviation of 14.67. The calculated t-value is 1.63 (df=99) which is less than table value of t (2.63), at 0.05/ 0.01 level of significance. Therefore, the third null hypothesis "*There is no significant difference between the level of digital awareness of B.Ed. trainees from government aided and private colleges*" is accepted. Graphically the data presented in Table 3 may be depicted as:

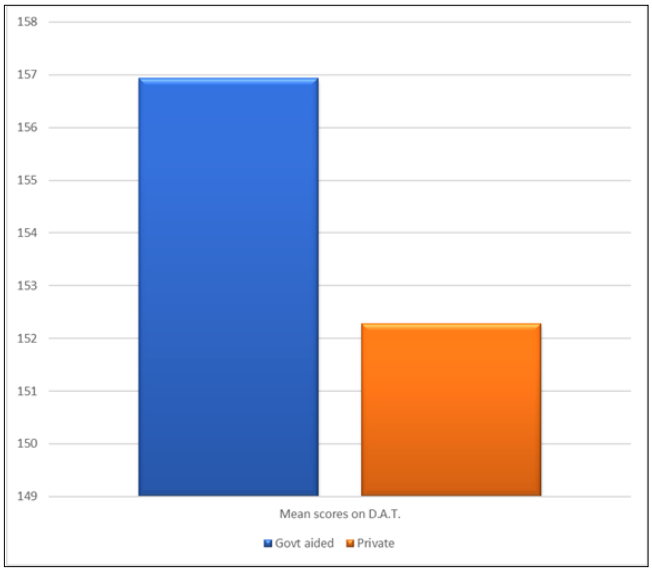

Fig 3: Level of digital awareness of B.Ed. students from government-aided and private colleges

Table 4: Level of digital awareness of B.Ed. students from urban and rural areas

Category	N	Mean	S.D.	t-value	Level of significance
Urban	61	156.65	14.31	2.73	0.01
Rural	39	151.33	13.69		

A perusal of the data presented in Table 4 reveals that B.Ed. trainees from urban areas exhibit significantly higher level of digital awareness as compared to the B.Ed. trainees from rural areas. The calculated mean score of urban area B.Ed. trainees on the Digital Awareness Tool (D.A.T.) is found to be 156.65 with a standard deviation of 14.31. In the case of rural area B.Ed. trainees' mean score on the Digital

Awareness Tool (D.A.T.), it is found to be 151.33 with a standard deviation of 13.69. The calculated t-value is 2.73 (df=99) which is more than table value of t (2.63), at 0.01 level of significance. Therefore, the fourth null hypothesis "*There is no significant difference between the level of digital awareness of B.Ed. trainees from urban and rural areas*" is rejected. Graphically the data presented in Table 4 may be depicted as:

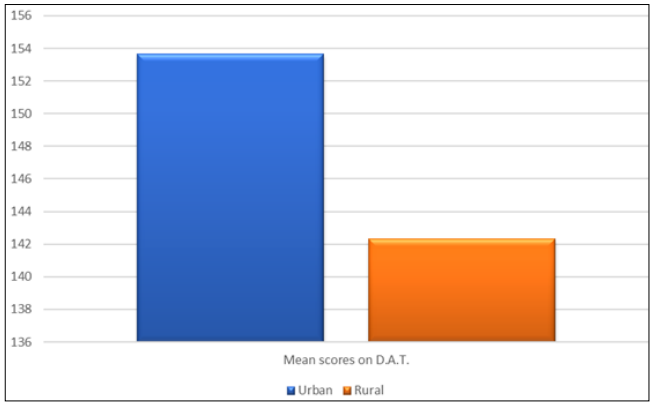

Fig 4: Level of digital awareness of B.Ed. students from urban and rural areas

Conclusion

The findings of the present investigation may be summarized as follows:

- The majority of B.Ed. students have above average levels of digital awareness.
- There is a significant difference between the level of digital awareness of male and female B.Ed. trainees, with male students exhibiting significantly higher digital awareness levels as compared to their female counterparts. In other words, gender does play an important role in the digital awareness among the teacher trainees.
- There is no significant difference between the level of digital awareness of B.Ed. trainees from English and Hindi medium background. In other words, language/ medium of instruction does not play an important role in the digital awareness among the teacher trainees.
- There is no significant difference between the level of digital awareness of B.Ed. trainees from government aided and private colleges. In other words, type of college does not play an important role in the digital awareness among the teacher trainees.
- There is a significant difference between the level of digital awareness of B.Ed. trainees from urban and rural areas. In other words, type of locality does play an important role in the digital awareness among the teacher trainees.

Educational Implications

One of the fundamental components of the United Nations' sustainable development 2030 agenda is quality education. It aims to ensure inclusive and equitable quality education for all. Digital technologies have emerged as an essential tool to achieve this goal. The recent COVID-19 Pandemic has further institutionalized the applications of digital technologies in education. These digital technologies have made a paradigm shift in the entire education system. It is not only a knowledge provider but also a co-creator of information, a mentor, and an assessor. Technological improvements in education have made life easier for students. In such a scenario, it is vital that we train our future teachers in such a manner that they are technically competent and can easily adapt to the new evolving technological shifts occurring in the field of educational technology.

The present investigation aimed to evaluate the levels of digital awareness among the teacher trainees so that requisite measures may be taken to improve their skills and technical know-how. The findings of this study and more detailed ones along similar lines will not only help the teacher trainers but also the policy makers and curriculum designers.

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