Digital Fluency among Teachers of Government and Private Aided Degree Colleges in Bidar District, Karnataka

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Abstract

The study explores to study the access to information and communication technology among teachers and digital fluency among teachers working in Government and Private Aided Degree Colleges in Bidar District. For this, the teachers of 24 colleges have been selected covering 589 teachers. Results are discussed to understand the digital technologies use and challenges in the academic environment.

Keywords: Internet, ICT Tools, Teaching Tools, Social Networking

Introduction

Information and technology have always altered the human behaviors be it television to laptop. It has paved many ways of understanding human needs and performing tasks in better ways. One way to help teachers use technology effectively is through professional development (PD). However, understanding of how exposure to PD relates to teachers' personal characteristics is limited. The purpose of this research was to investigate the relationships among PD exposure, teachers' abilities and values, and teachers' quality of technology integration according to Bloom's taxonomy. By surveying 724 middle and high school teachers, and using structural equation modeling, this study showed that values mediate the influence of PD exposure on technology integration. Results suggest that PD may be most effective when targeting improving teachers' values in addition to enhancing technology-related skills (Bowman, M. A., Vongkulluksn, V. W., Jiang, Z., & Xie, K, 2022)

In 21st century there is no question of availability, affordability and access to tools of information and technology for teacher, students and technology does not discriminate. But, studying about information and technology in respect to gender, location, ladder in things like, access to information and technology, digital fluency, use of Internet and impact of information and communication technology on them becomes important. Teachers' ICT abilities and attitudes toward virtual teaching are influenced by their

location. Teachers' ICT abilities have a strong and favourable association with their attitude toward virtual instruction. These findings implicate the teaching of Library and Information Science in the sense that effective teaching of information science can be achieved when teachers demonstrate good abilities and positive attitudes to virtual teaching (Metu, I. C., Agu, N. N., Eleje, L. I., Ani, M. I., Ezeugo, N. C., & Ugwuanyi, C. S., 2021).The present study rightly attempting to answer digital divide between study respondent and taking account of notions of teacher community regarding technology use in information sources, facilities and services available them to in their respective libraries. Therefore, study intended to explore the associations, relationships between selected variables and reveal about use of information and technology among teachers of government and private aided degree college in Bidar district of Karnataka.

Objectives of the study

The present study has the following objectives;
1. To study the access to information and communication technology among teachers and
2. To study the digital fluency among teachers working in Government and Private Aided Degree Colleges in Bidar District

Research Methodology

The present study has adopted descriptive research design. It attempts to adopt dependent – independent, associational design to fulfill the nature of the study. Geographically, the Bidar district of the Karnataka state has considered as a region of the study. District Bidar is a hill top city in the north-eastern part of Karnataka which has eight talukas in its locality. The teachers of 24 colleges have been selected for the study by using purposive sampling technique of non-probability sampling method. A total sample has become 589 which further taken for statistical analysis and interpretation.

Results and Discussion

Table 1
Age distribution of the respondents

Age	Frequency	Percentage
Below 30 years	27	4.6
31 to 45 years	389	66.0
Above 45 years	173	29.4
Total	**589**	**100.0**

Table 1 reveals the age distribution of the study respondents. It is found that majority proportion of the respondents, more than three-fifth (389, 66%) are belongs to the 31 to 45 years of age. A significant proportion of the respondents, more than one-fourth (173, 29.4%) belongs to the age group of 45 years and above. And, a very small proportion of the respondents, less than one-tenth (27, 4.6%) are aged below 30 years of age. Therefore, it is clear from the above table, that majority of the respondents are middle aged between 31 to 45 years.

Table 2
Designation of the respondents

Designation	Frequency	Percentage
Assistant Professor	498	84.6
Associate Professor	91	15.4
Total	**589**	**100.0**

Table 2 shows the designation wise distribution of the study respondents. It is found that majority proportion of the respondents, more than four-fifth (498, 84.6%) are assistant professors. And, a small proportion of the respondents, less than one-fifth (15.4%) are designated as associate professors.

Table 3
Access of Internet at library

Response	Frequency	Percentage
Yes	559	94.9
No	30	5.1
Total	**589**	**100.0**

Table 3 shows the response about access of Internet in their college library. It is found that majority proportion of the respondents, more than four-fifth (559, 94.9%) have opined that access of Internet is available in their college library. And, a very small proportion of them, less than one-tenth (30, 5.1%) respondents have opined that access of Internet is not available for them in their college library. Therefore, it is clear from the above table, that majority of the respondents said that access of Internet is available in their college library.

Table 4
Access of Internet at home

Response	Frequency	Percentage
Yes	486	82.5
No	103	17.5
Total	**589**	**100.0**

Table 4 shows the response about access of Internet at their home. It is found that majority proportion of the respondents, more than four-fifth (486, 82.5%) have opined that access of Internet is available at their home. And, a small proportion of them, less than one-fifth (103, 17.5%) respondents have opined that access of Internet is not available for them at their home. Therefore, it is clear from the above table, that majority of the respondents said that access of Internet is available at their home.

Table 5
Mode of Internet access- Broadband (Cable/ Wi-Fi)

Level of access	Frequency	Percentage
Free access	220	37.4
Limited access	120	20.4
No access	249	42.3
Total	**589**	**100.0**

Table 5 shows the level of respondent's access to the Internet using Broadband (cable/ wi-fi) mode. It is found that majority proportion of the respondents, more than two-fifth (249, 42.3%) have opined that they have no access to Internet using Broadband (cable/ wi-fi) mode. A significant proportion of them, less than two-fifth (220, 37.4%) have opined that they have free access to Internet using Broadband mode and a small proportion of them, more than one-fifth (120, 20.4%) have opined that they have limited access to Internet using Broadband (cable/ wi-fi) mode.

Therefore, it is clear from the above table, that majority of the respondents said they have no access to Internet using Broadband (cable/ wi-fi) mode.

Table 6
Level of expertise using Laptop

Level	Frequency	Percentage
Excellent	259	44.0
Good	169	28.7
Average	161	27.3
Total	**589**	**100.0**

Table 6 shows respondent's level of expertise in using laptop. It is found that majority proportion of the respondents, more than two-fifth (259, 44%) have excellent level of expertise in using laptop. Significant proportions of them, more than one-fourth (169,28.7%) and (161, 27.3%) have good and average level of expertise in using laptop respectively. Therefore, it is clear from the above table, that majority of the respondents have excellent level of expertise in using laptop.

Table 7
Level of expertise using Mobile with Internet

Level	Frequency	Percentage
Excellent	489	83.0
Good	100	17.0
Total	**589**	**100.0**

Table 7 shows respondent's level of expertise in using mobile phone with internet. It is found that majority proportion of the respondents, more than four-fifth (489, 83%) have excellent level of expertise in using mobile phone with internet And, a small proportion of them, less than one-fifth (100, 17%) have good level of expertise in using mobile phone with internet. Therefore, it is clear from the above table, that majority of the respondents have excellent level of expertise in using mobile phone with internet.

Table 8
Frequency of use of IT services over last 12 months – Social Networking sites (Facebook)

Frequency	Frequency	Percentage
Always	458	77.8
Often	80	13.6
Sometimes	51	8.7
Total	**589**	**100.0**

Table 8 shows respondent's responses about frequency of use of IT services over last 12 months i.e., social networking sites (Facebook). It is found that majority proportion of the respondents, more than three-fourth (458, 77.8%) have opined that they had always used social networking sites (Facebook) as IT service over last 12 months. Small proportions of them more than one-tenth (80, 13.6%) and (51, 8.7%) opined that they often and sometimes used social networking sites (Facebook) as IT service over last 12 months respectively. Therefore, it is clear from the above table, that majority of the respondents had always used social networking sites (Facebook) as IT service over last 12 months.

Table 9
Response to 'Use of computer and other digital devices result in people becoming isolated'

Level of agreement	Frequency	Percentage
Strongly Agree	122	20.7
Agree	318	54.0
Neutral	149	25.3
Total	589	100.0

Table 9 shows respondent's level of agreement with item 'Use of computer and other digital devices result in people becoming isolated'. It is found that majority proportion of the respondents, more than two-fourth (318, 54%) have agree with the statement. Whereas, significant proportion of them more than one-fourth (149, 25.3%) are neutral with the statement and small proportion of them more than one-fifth (122, 20.7%) are strongly agree with the statement. Therefore, it is clear from the above table, that majority of the respondents are agree that use of computer and other digital devices result in people becoming isolated.

Conclusion

It is concluded that the based on the data analysis of results; it can be inferred that there is significant difference in the access, digital fluency, use of internet and impact of information and communication technology between government and private-aided colleges participants. Human resource development centers have to take up this issue of spreading information and communication technology in all teachers. Colleges have to work on connectivity, speed, training issues and allocating sufficient personnel's to promote ICT in teaching-learning pedagogy.

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