



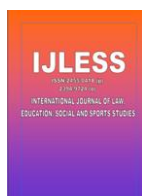
A Study on Awareness of Virtual Learning Platforms Among Primary School Teachers in Haveri District

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Abstract

The current study looks at the awareness of virtual learning platforms among 100 primary school teachers in Haveri Taluk, Haveri District, Karnataka. The goal was to look for significant differences in awareness levels based on gender, type of school management (government, private aided and private unaided) and location (urban and rural). A descriptive survey methodology was used. The researcher (2024) developed the “Awareness Scale about Virtual Learning Platforms,” which included 96 items divided into five major areas: technological proficiency, pedagogical integration, digital content development, student engagement and motivation and digital citizenship and online safety. The tool’s reliability and validity were confirmed using relevant statistical methods and expert validation, proving its applicability for the study. The data were examined using the independent samples ‘t’ test to determine group differences in the criterion variable. The data showed that male teachers were substantially more aware of virtual learning platforms than their female counterparts. Teachers from private aided schools showed greater awareness than those from government and private unaided schools. Interestingly, rural school teachers demonstrated higher levels of awareness than their urban counterparts. These disparities could be attributable to focused training initiatives in rural areas, an increased reliance on digital tools due to limited physical resources and varied institutional priorities among management types. The study emphasizes the importance of fair access to digital literacy programs for all teacher groups in order to enable the consistent integration of virtual learning in primary education.

Key words: Virtual Learning Platforms, Primary School Teachers, Awareness, Educational Technology.

1.Introduction

The integration of technology in education has altered traditional teaching methods, particularly with the rise of virtual learning platforms. These platforms provide adaptable, interactive and learner-centered education, making them especially useful during times of disruption like the COVID-19 epidemic. In India, the Ministry of Education has created projects such as DIKSHA, SWAYAM and ePathshala to empower teachers and students with easily accessible digital content. Despite the rising emphasis on digitization, teachers' awareness and successful use of these virtual platforms varies greatly, particularly in primary education, where foundational learning is essential.

Primary school teachers' awareness of virtual learning platforms is essential for effective digital pedagogy. Teachers must be skilled not just in fundamental technology abilities, but also in integrating digital technologies for lesson planning, student engagement, content development and digital safety. Gender, area and school management type all have a substantial impact on teachers' digital competency and awareness levels, according to studies (Kumari & Raj, 2021; Singh & Kaur, 2020). Teachers in private aided institutions frequently receive more institutional support and training, but those in rural areas may develop greater digital adaptability out of need owing to limited physical resources (Joshi, 2022).

Understanding the demographic characteristics that impact virtual learning awareness is crucial for establishing equitable teacher training programs. This study assesses awareness of virtual learning platforms among primary school teachers in Haveri Taluk, Karnataka and investigates the impact of gender, school administration type and locality. The findings are intended to contribute to the continuing discussion about digital inclusion and teacher preparedness in the Indian education system.

2.Review of Related Literature

The integration of virtual learning platforms has grown in importance in primary education, particularly in light of global events necessitating remote learning solutions. Understanding educators' awareness and use of these platforms is critical for successful implementation and policy formulation. This study combines findings from several studies that investigate instructors' opinions, problems and adoption levels of virtual learning tools, providing insights into the existing landscape and recommending opportunities for future research.

Studies related to Virtual Learning Platforms

Dema's (2021) qualitative study examined primary school teachers' attitudes of e-learning during the COVID-19 epidemic. Using semi-structured interviews disseminated via Google Forms, the study discovered that, while e-learning was judged a viable method during the crisis, teachers experienced problems such as insufficient resources, low technology competence, technical concerns and insufficient stakeholder support. The study stressed the importance of timely training for both teachers and students, as well as the availability of cost-effective internet connections, in order to improve e-learning effectiveness.

Kulal and Nayak (2020) studied teacher and student perspectives of online classes in Dakshina Kannada and Udupi districts of Karnataka. Structured questionnaires and descriptive statistical analysis demonstrated that students were usually comfortable with online classes and received enough teacher support. However, they did not feel that online education could replace traditional classroom instruction. Teachers acknowledged difficulty giving online classes, mostly owing to a lack of sufficient training and technical concerns, emphasizing the importance of complete educator training programs.

Nyagorme et al. (2017) examined the use of e-learning platforms in senior high schools in Accra, Ghana. The descriptive survey, which had 303 participants, used linear regression and correlation analysis to investigate the links between training, motivation, computer access and e-learning use. The findings showed that, while participants were aware of e-learning platforms, they lacked adequate training and computer literacy. Furthermore, most schools lacked adequate ICT labs and consistent internet connectivity, which hampered e-learning uptake.

Ugwu and Ohimekpen (2015) evaluated secondary school teachers' understanding and usage of e-learning tools in Yobe State, Nigeria. Using a survey method with 240 respondents, the study discovered that many teachers lacked computer literacy and were ignorant of e-learning options. Those who were aware experienced problems such as a lack of internet access, poor network connectivity and high expenses connected with e-learning resources, emphasizing the importance of infrastructure improvements and training.

Mallick (2013) investigated the knowledge of online learning among teacher trainees. The study found that online learning poses new obstacles for teachers, distinguishing significantly from traditional face-to-face instruction. It underlined the potential for online learning facilities to build good instructors by providing faster, more accessible and sophisticated educational experiences. The study suggested that online learning has the potential to replace traditional teaching techniques by meeting the different needs of today's learners.

The examined studies emphasize the importance of awareness, training and infrastructure support in the implementation of virtual learning platforms. While these studies provide valuable insights into the perceptions and challenges faced by educators in various contexts, there is a noticeable gap in research focusing specifically on primary school teachers, particularly the impact of gender, school management type and location on awareness levels. Addressing this gap is critical for designing targeted interventions and policies that meet the specific needs of primary educators in India's different educational contexts.

3.Significance of the Study

This study is particularly relevant in the present educational scene, as digital change is rapidly transforming the teaching-learning process. As primary school teachers play a foundational role in shaping young learners, their awareness and effective use of virtual learning platforms are crucial for ensuring quality education in both urban and rural contexts. This study sheds light on the existing digital gap among teachers by investigating inequalities in awareness based on gender, school management type and location. The findings can help policymakers, educational administrators and teacher training institutions establish focused professional development initiatives to address the digital skills gap. Furthermore, the study supports the objectives of India's National Education Policy 2020, which emphasizes the integration of technology in education and the need to develop teacher competence in digital pedagogy. Finally, the research intends to help create a more inclusive, equitable and future-ready education system at the grassroots level.

4.Statement of the Problem

The advancement of technology in education has resulted in an increased emphasis on virtual learning environments. While several government programs in India have pushed digital integration in classrooms, primary school teachers' awareness and efficient usage of these platforms is variable. This gap may be influenced by gender, school administration type and location. Therefore, this research aims to answer the following question: "What is the level of awareness of virtual learning platforms among primary school teachers in Haveri Taluk, Karnataka and how does it differ with respect to gender, type of school management and locality?"

5.Objectives of the Study

1. To measure primary school teachers' awareness of virtual learning platforms.
2. To assess the awareness of virtual learning platforms among male and female primary school teachers.
3. To assess awareness of virtual learning platforms among teachers in government, private aided and private unaided schools.
4. To compare the awareness of virtual learning platforms among rural and urban primary school teachers.

6.Purpose of the Study

The goal of this research is to investigate the amount of awareness of virtual learning platforms among primary school teachers and how it changes by demographic variables such as gender, type of school management and location. The study's goal is to identify awareness gaps and use them to influence the design of targeted digital training programs that promote equitable access to quality digital education in Karnataka's various school settings.

7.Hypotheses of the Study

1. There is no significant difference in awareness of virtual learning platforms between male and female primary school teachers.
2. There is no significant difference in awareness of virtual learning platforms among primary school teachers working in government, private aided and private unaided schools.
3. There is no significant difference in awareness of virtual learning platforms between rural and urban primary school teachers.

8.Methodology of the Study

- **Research Method:** Descriptive Survey Method
- **Population:** All primary school teachers working primary schools in Haveri Taluk, Haveri District, Karnataka
- **Sample:** 100 primary school teachers elected through simple random sampling, representing different school management type, gender and locality.
- **Tool Used:** Awareness Scale about Virtual Learning Platforms developed by the researcher in 2024, consisting of 96 items across five domains namely 1. technological proficiency, 2. pedagogical integration, 3. digital content development, 4. student engagement & motivation and 5. digital citizenship & online safety
- **Reliability and Validity:** Established through expert review and pilot testing
- **Statistical Techniques:** Techniques like descriptive statistics and Independent Samples 't' test were utilized to analyze the data and test the hypotheses.

9.Analysis and Interpretation of Data

The goal of this section is to give the analysis and interpretation of data obtained from 100 primary school teachers in Haveri Taluk, Haveri District, Karnataka, about their knowledge of virtual learning platforms.

The data were examined using the Independent Samples 't' test in SPSS and Microsoft Excel. Gender, school administration type (government, private aided and private unaided) and locality (urban or rural) were among the variables considered.

Table-1: 't' test analysis results on Awareness of Virtual Learning Platforms based on gender.

Group	N	Mean	Std. Dev.	't' Value and Sig. Level
Male	56	65.142	17.517	2.48*
Female	44	56.159	18.330	

*Significant at 0.05 level (df=98, Table Value : 1.98).

Table 1 shows a statistically significant difference in awareness of virtual learning platforms between male and female primary school instructors. Male instructors had a higher mean score (M = 65.142) than female teachers (M = 56.159), with the t-test value (2.48) exceeding the critical value at the 0.05 significant level. This finding shows that male teachers are more familiar with or exposed to virtual learning tools, maybe as a result of increased access to digital technologies or participation in ICT-related professional development programs. It also indicates the need to improve digital training activities for female teachers in order to promote equitable technical proficiency.

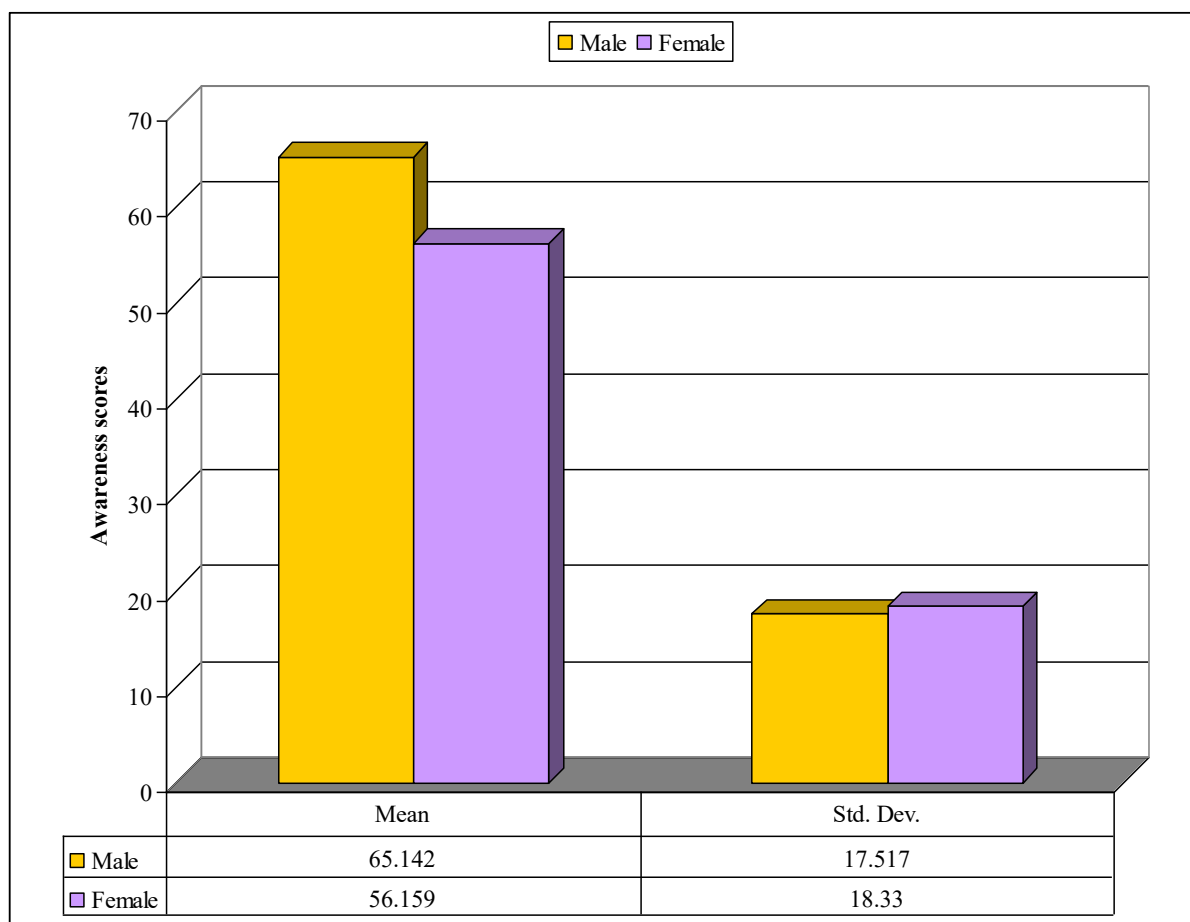


Fig.1: Bar graph showing comparison of awareness of Virtual Learning Platforms based on gender.

Table-2: 't' test analysis results on Awareness of Virtual Learning Platforms based on type of Management.

Group	N	Mean	Std. Dev.	't' Value and Sig. Level
Government	77	62.298	17.786	2.50*
Private Aided	8	75.625	13.948	
Private Aided	8	75.625	13.948	4.35**
Private Unaided	15	47.800	15.717	
Government	77	62.298	17.786	3.19**
Private Unaided	15	47.800	15.717	

*Significant at 0.05 level (df=83, Table Value of 1.99).

**Significant at 0.01 level (df=90, Table Value of 2.63)

**Significant at 0.01 level (df=21, Table Value of 2.84)

Table 2 shows a comparison of teachers in government, private aided and private unaided schools. The findings show that teachers in private aided schools are the most aware (M=75.625), followed by government (M = 62.298) and private unaided schools (M= 47.800). The t-values for each comparison are statistically significant at the 0.05 or 0.01 level. These findings could be attributable to improved resource allocation, institutional emphasis on digital integration and structured training in private aided schools. In contrast, reduced knowledge in private unaided and government schools may be due to inadequate access to digital infrastructure, a lack of institutional support, or insufficient training programs. These inequalities highlight the essential need for consistent digital training strategies across school management types.

Table-3: 't' test analysis results on Awareness of Virtual Learning Platforms based on locality.

Group	N	Mean	Std. Dev.	't' Value and Sig. Level
Urban	27	55.333	22.432	1.70 ^{NS}
Rural	73	63.356	16.227	

^{NS}Not Significant (df=98, Table Value: 1.98).

In Table 3, rural teachers had a somewhat higher mean awareness score (M = 63.356) than urban teachers (M=55.333). However, the t-value (1.70) fell short of statistical significance at the 0.05 level. This shows that, while rural teachers may be using virtual learning platforms more frequently - possibly due to fewer physical resources and a greater reliance on digital tools - the observed difference is insufficient to support a persistent trend. Nonetheless, the study emphasizes the efficacy of digital outreach and capacity-building activities in rural schools and advocates for comparable reinforcement in urban regions to achieve balanced digital integration.

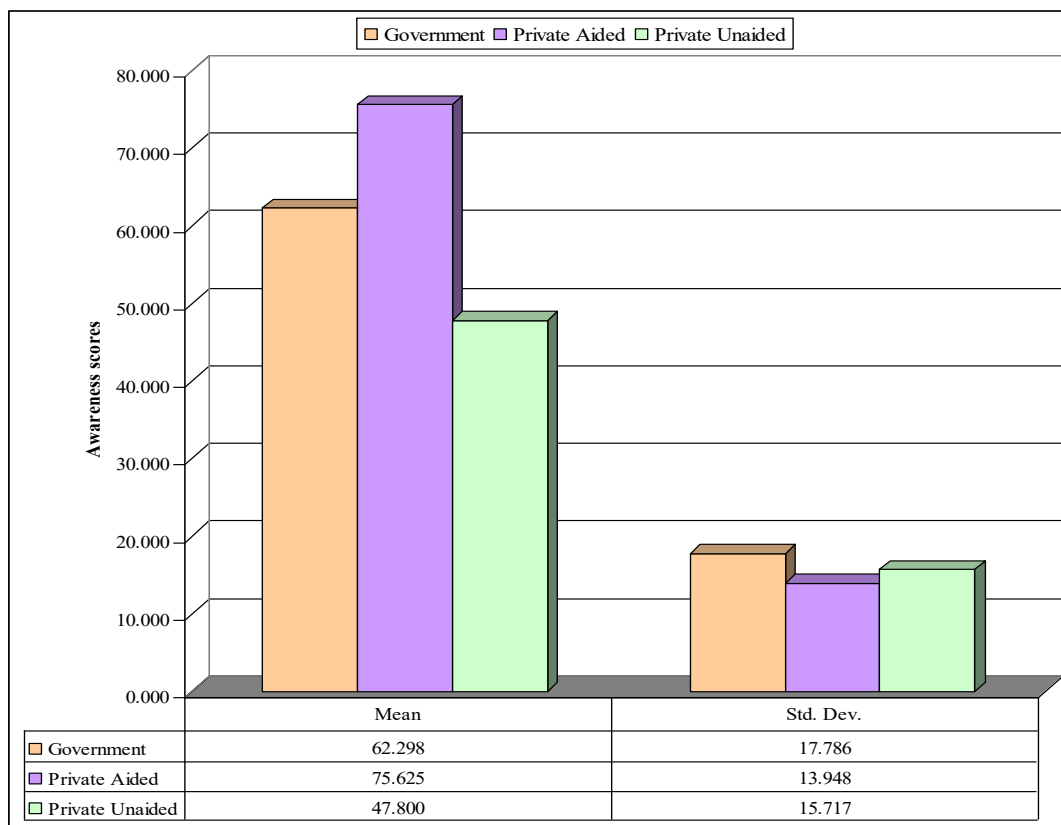


Fig.2: Bar graph showing comparison of awareness of Virtual Learning Platforms based on type of management.

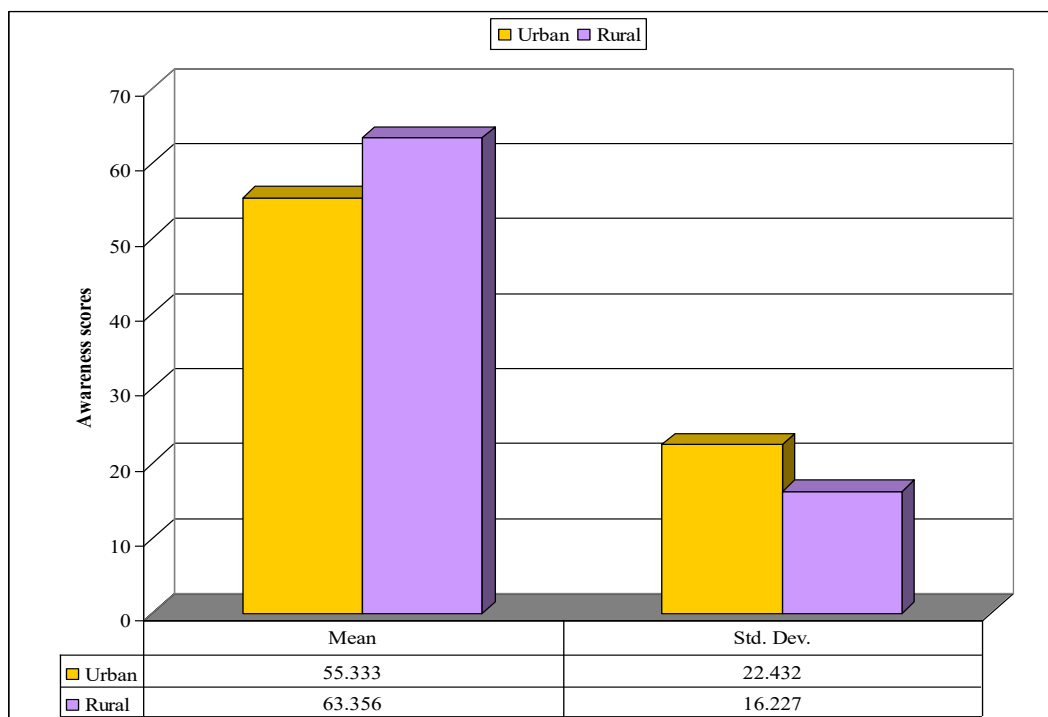


Fig.3: Bar graph showing comparison of awareness of Virtual Learning Platforms based on locality.

10.Findings of the Study

1. Male teachers have significantly higher awareness of virtual learning platforms compared to female teachers.
2. Private aided school teachers show significantly higher awareness than government and private unaided school teachers.
3. Although rural teachers exhibit higher awareness scores than urban teachers, the difference is not statistically significant.

11.Conclusion

The study found differences in awareness of virtual learning platforms among primary school teachers based on gender and school management. However, there was no significant difference in locale. These findings highlight the significance of specialized training and digital literacy programs, particularly for female instructors and those employed in government and private unaided schools.

12.Educational Implications

The following implications made by the researcher to improve awareness about virtual learning platforms among primary school teachers :

7. **Differences by gender towards Awareness:** The study demonstrates that male teachers are more aware of virtual learning platforms than female professors. In India, this necessitates specialized professional development initiatives for female teachers, particularly in rural regions. ICT training that is flexible, accessible and geared toward women can help close the digital divide and promote inclusiveness.
8. **Differences by School Management towards Awareness:** Teachers in private aided schools demonstrated greater awareness than those in government or private unaided schools. This emphasizes the importance of systematic and frequent ICT training in under-resourced schools. Government initiatives and public-private partnerships should be employed to ensure fair training opportunities for all school types.
9. **Differences by Locality towards Awareness:** Though not statistically significant, rural teachers demonstrated slightly more awareness than urban instructors, probably because to targeted outreach during the pandemic. Urban schools, particularly budget private schools, should receive similar funding to guarantee that digital training efforts are balanced.

13.Suggestions for Further Research

1. A bigger sample size from different districts may result in more generalizable findings.
2. A qualitative study might investigate the reasons for increased awareness among private-aided and rural instructors.
3. Longitudinal studies can determine the efficacy of digital instruction over time. Future research can look into awareness levels based on teaching experience, subject specialty and prior digital training.

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