



# Digital Literacy and Awareness of Online Resources among Marginalized Students in Government Degree Colleges of Telangana: Evidence from an Online Survey

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DOI: 10.56975/ijrar.v13i1.326907

## Abstract

Digital literacy has emerged as a critical determinant of academic success and social inclusion in the contemporary knowledge economy. With higher education increasingly dependent on information and communication technologies (ICT), the ability of students to effectively access, evaluate, and use digital resources has become essential. The present study examines the level of digital literacy and awareness of online resources among degree college students in Telangana State. Primary data were collected through an online survey administered via Google Forms by the Department of Economics, Government Degree College, Siddipet. A total of 194 undergraduate students participated in the survey. The study employs descriptive statistical tools such as frequency and percentage analysis to assess students' awareness of computers, digital storage media, online academic resources, social media platforms, and the purposes of digital resource usage. The findings indicate that while a majority of students possess basic computer knowledge and actively engage with social media and general digital tools, awareness and use of advanced academic digital resources such as e-books, online courses, and digital libraries remain limited. The study underscores the need for structured digital literacy interventions within higher education institutions to bridge existing gaps and promote inclusive and effective digital learning.

**Keywords:** Digital Literacy, Higher Education, Online Resources, Social Media, Telangana, ICT

## 1. Introduction

The rapid expansion of digital technologies has profoundly transformed the landscape of higher education across the world. In India, initiatives such as Digital India, National Education Policy (NEP) 2020, SWAYAM, and the National Digital Library have emphasized the integration of digital tools into teaching and learning processes. Digital literacy, defined as the ability to locate, understand, evaluate, create, and communicate information using digital technologies, has therefore become an essential competency for students.

However, access to and effective use of digital technologies remain uneven, particularly among students enrolled in government degree colleges catering largely to poor, rural, and first-generation learners. These students often face multiple constraints such as limited digital infrastructure, inadequate exposure to advanced technologies, and socio-economic disadvantages. Despite increasing smartphone penetration, meaningful

academic use of digital resources among rural and economically disadvantaged students continues to be a major concern.

In this context, the present study focuses specifically on students studying in government degree colleges in Telangana State, where a significant proportion of enrolment consists of students from poor and rural backgrounds. The survey was conducted with the objective of understanding their level of awareness and usage of digital technologies and online resources, thereby providing insights into the digital divide within public higher education institutions.

## **2. Review of Literature**

Several studies have examined digital literacy in higher education. Gilster (1997) conceptualized digital literacy as the ability to understand and use information in multiple formats from a wide range of digital sources. Bawden (2008) emphasized that digital literacy goes beyond technical skills and includes critical thinking and evaluative abilities.

In the Indian context, studies by Kumar and Manjunath (2013) found that while college students possess basic ICT skills, their awareness of academic digital resources is inadequate. A study by Rafi et al. (2019) revealed that social media platforms dominate students' digital engagement, whereas e-learning platforms and digital libraries remain underutilized. Recent research following the COVID-19 pandemic (Mishra et al., 2021) highlighted the accelerated adoption of online learning tools but also exposed inequalities in digital access and skills.

The existing literature indicates a gap between access to digital devices and effective academic use of digital resources. However, region-specific studies focusing on degree colleges, particularly in Telangana, remain limited. The present study seeks to fill this gap.

## **3. Objectives of the Study**

The objectives of the study are: 1. To examine the socio-academic profile of degree college students. 2. To assess students' basic knowledge of computers and digital storage media. 3. To analyse awareness of online academic resources and social media platforms. 4. To identify the major purposes for which students use digital resources. 5. To suggest measures for improving digital literacy in higher education institutions.

## **4. Methodology**

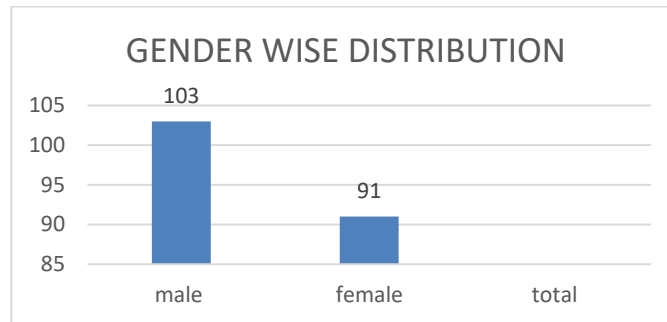
The study is based on primary data collected through an online survey conducted using Google Forms. The survey was organized by the Department of Economics, Government Degree College, Siddipet, and was administered among students enrolled in various government degree colleges across Telangana State. These colleges predominantly cater to students from poor, rural, and economically marginalized backgrounds.

The questionnaire included multiple-choice and dichotomous questions focusing on basic digital skills, awareness of online academic resources, social media usage, and the purposes of digital resource utilization. A total of 194 undergraduate students participated in the survey. The collected data were coded and analysed using simple descriptive statistical techniques such as frequencies and percentages. Given the exploratory and diagnostic nature of the study, these tools were considered appropriate for identifying general trends and patterns in digital literacy among rural and disadvantaged student populations.

## 5. Profile of the Respondents

### 5.1 Gender-wise Distribution

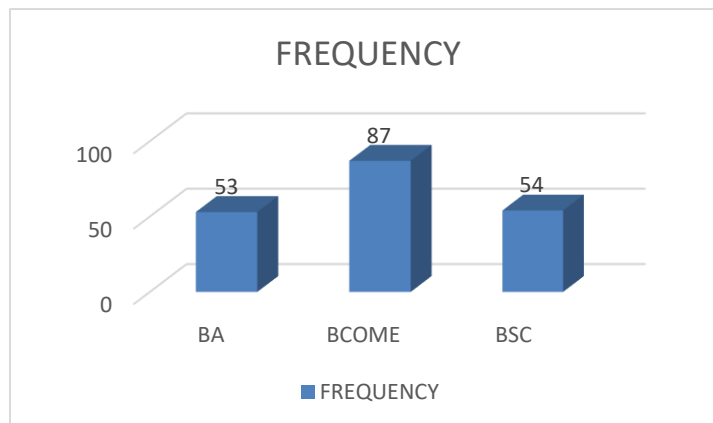
| Gender | Frequency | Percent |
|--------|-----------|---------|
| male   | 103       | 53      |
| female | 91        | 47      |
| total  | 194       | 100     |



Among the 194 respondents, 103 students (53 percent) were male and 91 students (47 percent) were female. The near-equal representation indicates that the findings are not significantly gender-biased and reflect the digital awareness of both male and female students.

### 5.2 Course-wise Distribution

| COURSE | FREQUENCY | PER CENT |
|--------|-----------|----------|
| BA     | 53        | 22       |
| BCOME  | 87        | 39       |
| BSC    | 54        | 23       |

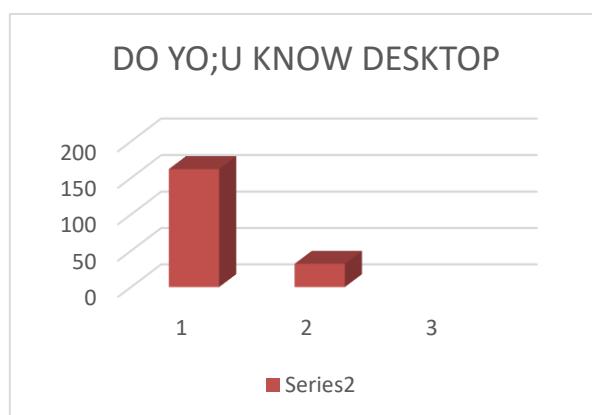


The course-wise distribution shows that 53 students (27.3 percent) were enrolled in B.A. programmes, 87 students (44.8 percent) in B.Com programmes, and 54 students (27.8 percent) in B.Sc. programmes. Commerce students constituted the largest group, which may influence the overall digital awareness pattern due to greater exposure to computer-based applications in commerce education.

## 6. Awareness of Basic Digital Tools

### 6.1 Knowledge of Desktop/Computer:

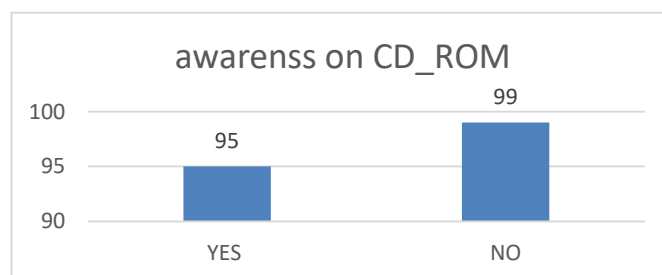
|     |     |  |
|-----|-----|--|
| YES | 162 |  |
| NO  | 32  |  |
|     | 194 |  |



A substantial majority of respondents, 162 students (83.5 percent), reported having knowledge of desktop or computer usage. Only 32 students (16.5 percent) indicated lack of such knowledge. This suggests that basic digital literacy has penetrated widely among degree college students, likely due to increased exposure to computers during schooling and college education.

### 6.2 Knowledge of CD-ROM

|     |    |
|-----|----|
| YES | 95 |
| NO  | 99 |
|     |    |



Awareness of CD-ROMs was reported by 95 students (49 percent), while 99 students (51 percent) were not familiar with this digital storage medium. The declining relevance of CD-ROMs in the era of cloud explain this limited awareness.

## 7. Awareness of Online Academic Resources

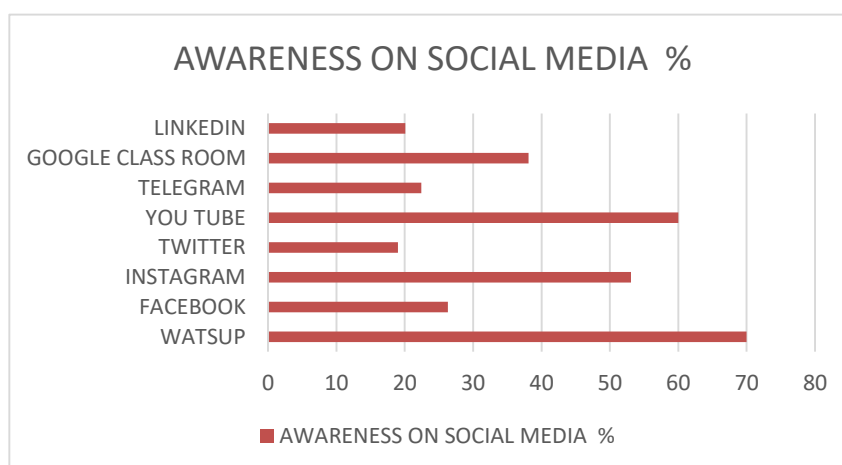
|                             | Frequency | %    |  |
|-----------------------------|-----------|------|--|
| EMAIL                       | 89        | 45.9 |  |
| E-BOOKS                     | 34        | 17.5 |  |
| EDUCATIONAL WEBSITES        | 86        | 44.3 |  |
| ONLINE VIDEO-WEBINAR        | 66        | 34   |  |
| MOBILES APP/DIGITAL LIBRARY | 66        | 32   |  |
| ONLINE COURSES              | 37        | 17   |  |

The survey assessed awareness of various online academic resources. Email services were known to 89 students (45.9 percent), and educational websites to 86 students (44.3 percent). Awareness of online video lectures and webinars was reported by 66 students (34 percent), while mobile applications and digital libraries were known to 66 students (approximately 32 percent).

However, awareness of more structured academic resources such as e-books (17.5 percent) and online courses (17 percent) was relatively low. This finding indicates that students are yet to fully integrate formal digital learning resources into their academic routines.

#### 8. Awareness of Social Media Platforms

|                   | FREQUENCY | %    |
|-------------------|-----------|------|
| WATSUP            | 136       | 70   |
| FACEBOOK          | 51        | 26.3 |
| INSTAGRAM         | 103       | 53.1 |
| TWITTER           | 38        | 19   |
| YOU TUBE          | 116       | 60   |
| TELEGRAM          | 44        | 22.4 |
| GOOGLE CLASS ROOM | 74        | 38.1 |
| LINKEDIN          | 39        | 20.1 |

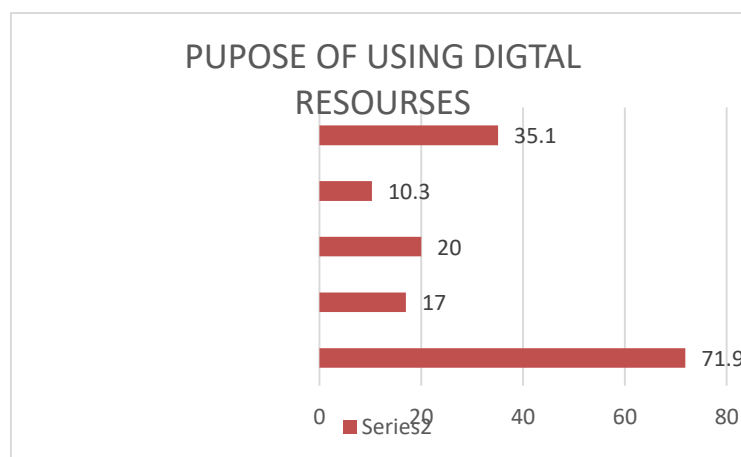


The results reveal high awareness of popular social media platforms. WhatsApp emerged as the most widely known platform, with 136 students (70 percent) reporting awareness, followed by YouTube (60 percent) and Instagram (53.1 percent). Awareness of Google Classroom (38.1 percent) suggests moderate exposure to formal online learning environments.

In contrast, professional and information-oriented platforms such as LinkedIn (20.1 percent) and Twitter (19 percent) showed lower levels of awareness. This highlights the predominance of informal and entertainment-oriented digital engagement among students.

## 9. Purpose of Using Digital Resources

| Purpose of using the digital Resources | Frequency | Per cent |
|----------------------------------------|-----------|----------|
| EDUCATION                              | 138       | 71.9     |
| ENTRAINMENT                            | 33        | 17       |
| GENERAL                                | 40        | 20       |
| OTHER                                  | 20        | 10.3     |
| EDUCATION AND ENTERTRAINMENT           | 68        | 35.1     |



Regarding the purpose of using digital resources, education was identified as the primary motive by 138 students (71.9 percent). Entertainment was reported by 33 students (17 percent), while general purposes accounted for 20 percent of responses. Additionally, 68 students (35.1 percent) indicated that they use digital resources for both education and entertainment, reflecting the multifunctional nature of digital technologies.

## 10. Discussion

The findings of the study highlight important dimensions of digital literacy among students enrolled in government degree colleges catering largely to poor and rural populations. While the majority of students reported basic knowledge of computers and regular engagement with widely used digital platforms, their awareness of advanced academic digital resources remains limited. This pattern reflects the broader digital divide between urban, well-resourced institutions and rural government colleges.

The dominance of social media platforms such as WhatsApp and YouTube indicates that students are more exposed to informal and communication-oriented digital environments. Limited awareness of e-books, online courses, and digital libraries suggests insufficient institutional orientation and training. These findings are consistent with earlier studies that emphasize how socio-economic background and institutional support significantly influence the quality of digital engagement among students, particularly in rural and economically disadvantaged settings. This gap points to the need for institutional support in guiding students towards productive academic use of digital technologies.

## 11. Major Findings

1. Most degree college students possess basic computer knowledge.
2. Awareness of traditional digital storage media such as CD-ROMs is low.
3. Students show moderate awareness of online academic resources but limited familiarity with e-books and online courses.
4. Social media platforms dominate students' digital awareness.

5. Educational purposes constitute the primary motivation for digital resource usage.

## 12. Suggestions

1. Colleges should organize regular digital literacy and ICT training programmes with special focus on rural and first-generation learners.
2. Faculty members should actively integrate e-resources into teaching methodologies and internal assessments.
3. Awareness programmes on platforms such as SWAYAM, NPTEL, DIKSHA, and the National Digital Library should be strengthened.
4. Digital infrastructure, including computer labs and campus Wi-Fi, should be enhanced in government degree colleges.
5. Students should be encouraged to use digital resources for career development, competitive examinations, and skill enhancement.

### 12A. Policy Implications

The findings of the study have important policy implications for higher education governance and digital inclusion. First, digital literacy initiatives under the National Education Policy (NEP) 2020 must explicitly address the needs of rural and socio-economically marginalized students studying in government degree colleges. Mere access to digital devices is insufficient without structured academic orientation and skill development.

Second, state and central governments should prioritize targeted funding for strengthening digital infrastructure in government colleges located in rural and semi-urban areas. Establishing functional computer laboratories, digital libraries, and uninterrupted internet connectivity can significantly enhance students' academic engagement with digital resources.

Third, faculty development programmes should incorporate training on the effective use of digital pedagogies, enabling teachers to guide students toward productive and academic uses of technology. Embedding digital literacy components within the undergraduate curriculum can ensure systematic and sustained skill development.

Finally, bridging the digital divide among marginalized students is essential not only for improving academic outcomes but also for promoting social mobility, employability, and inclusive growth. Policies aimed at digital empowerment of rural students will contribute to equitable access to higher education opportunities and support the broader goals of inclusive and sustainable development.

## 13. Conclusion

The study concludes that degree college students in Telangana, particularly those studying in government degree colleges serving poor and rural communities, have attained a basic level of digital literacy. Most students are familiar with computers and commonly used digital platforms; however, their awareness and utilization of advanced academic digital resources remain inadequate.

The findings underline the persistence of a digital divide within higher education, rooted not merely in access to devices but in the quality of digital exposure and academic orientation. Strengthening digital infrastructure, integrating digital literacy into the curriculum, and providing targeted training programmes in government degree colleges are essential for empowering rural and economically disadvantaged students. Enhancing digital literacy among this segment of learners is crucial for promoting equity, academic success, and inclusive development in higher education.

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