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# The Impact of Digital Literacy on the Learning of Life Skills through the Teaching of Secondary Schools Teachers

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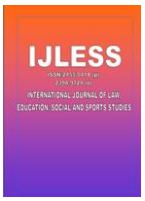


**Abstract**
This study investigates the impact of digital literacy on the teaching of life skills by secondary school teachers in Chikkamagaluru District, Karnataka. With rapid technological integration into education, teachers are increasingly required to combine digital competencies with life skills pedagogy to foster holistic student development. A sample of 88 teachers from government and private schools, both rural and urban, was analyzed using standardized digital literacy scales and statistical techniques. The findings revealed no significant gender-based differences in teaching effectiveness. However, urban teachers outperformed rural teachers, and private school teachers were moderately more effective than government school teachers in promoting life skills. The study highlights that disparities in access to digital resources, training, and institutional support influence teaching outcomes. These results underscore the need for targeted digital literacy training, equitable infrastructure development, and policy measures to bridge urban-rural and institutional divides in education.

**Keywords:** Digital literacy, life skills, secondary education, teacher effectiveness, urban-rural divide, government and private schools, Chikkamagaluru.

## Introduction

In the 21st century, education systems are undergoing a paradigm shift driven by rapid technological advancements and evolving social needs. Among these, digital literacy has emerged as a fundamental competency for both teachers and students. With the increasing integration of digital technologies into education, there is a growing recognition that the role of educators extends beyond traditional content delivery. In secondary schools, where students begin to encounter real-world challenges and complex social interactions, life skills education has become an essential component of holistic development. Teachers are thus expected to not only impart academic knowledge but also to nurture critical life competencies such as communication, problem-solving, emotional intelligence, and adaptability.

The education sector is undergoing a significant transformation as the world becomes more digitally driven. Modern teaching is not limited to conveying theoretical content; it now requires enabling learners to cope with the dynamic and often unpredictable realities of life. The development of life competencies such as resilience, leadership, collaboration, emotional awareness, and problem resolution is now considered as crucial as academic success.

With the rapid growth of digital infrastructure in schools, teachers are increasingly expected to integrate technology into their pedagogy. This requires more than just basic computer knowledge, it involves an understanding of how to use digital tools to design student centred lessons, evaluate learning creatively, and communicate content in engaging ways. Teachers with a high level of digital fluency are better positioned to promote life-enriching learning experiences.

**The Role of Digital Literacy in Education**

Digital literacy refers to the ability to effectively and responsibly use digital tools, platforms, and resources for communication, collaboration, and learning. For secondary school teachers, digital literacy is not just about technical know-how but also about integrating technology in pedagogically sound ways to enhance student engagement and understanding. When educators are digitally literate, they can design and deliver lessons that incorporate multimedia resources, interactive platforms, and real-time feedback, all of which foster a dynamic and responsive learning environment. This shift in teaching methodology significantly influences how life skills are learned, practiced, and internalized by students.

**Life Skills in the Secondary Education Context**

Life skills are defined as abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life. In secondary education, where adolescents experience rapid cognitive, emotional, and social development, life skills education helps students build resilience, develop healthy relationships, and make informed decisions. The integration of life skills into the curriculum is now viewed as critical for nurturing responsible citizens and lifelong learners. Teachers play a pivotal role in this process by modeling behaviors, creating participative learning opportunities, and contextualizing life skills in real-world scenarios.

**Interconnection between Digital Literacy and Life Skills Learning**

The infusion of digital tools into life skills education opens new avenues for experiential and personalized learning. Digital platforms can simulate real-life scenarios through gamification, collaborative projects, and virtual discussions, enhancing students' critical thinking and socio-emotional competencies. For instance, digital storytelling can help students explore empathy, while online forums can develop communication and conflict-resolution skills. The effective use of these tools depends largely on the teacher's digital literacy and their ability to weave technology seamlessly into life skill instruction. Therefore, the teacher's preparedness and proficiency in digital environments are key determinants of success in this integration.

This study concentrates on understanding the relationship between digital awareness among secondary school teachers and the transmission of life skills to their students. The geographical focus is on Chikkamagaluru, a district where a mix of urban and rural schools provides a diverse backdrop for analysis.

Through this investigation, the research aims to shed light on the critical role teachers play in shaping students' life-readiness in a digitally dependent age. The findings could have significant implications for teacher training programs, curriculum design, and policy-making in the area of digital education and holistic skill development.

**Present Status of the Study**

The integration of digital literacy into life skills education in secondary schools is gaining increasing attention globally. Recent studies highlight that while many teachers acknowledge the importance of digital tools in facilitating life skills learning, there remains a gap in their digital competence and pedagogical integration. In India, the implementation is still uneven, with urban schools showing more progress than rural counterparts. Training programs for teachers are emerging, yet systemic support and curriculum alignment are still in developmental stages. Overall, the field is evolving, with growing recognition of its potential and a need for more structured research and policy support.

**Need for the Study**

Despite the evident benefits of combining digital literacy with life skills education, there remains a gap in understanding how secondary school teachers perceive and practice this integration. While some educators excel in using digital methods, others struggle with the pedagogical alignment of technology with life skill outcomes. Furthermore, the disparities in access, training, and institutional support present challenges to uniform implementation. Investigating the impact of digital literacy on life skills learning through the lens of teachers' experiences can provide valuable insights into effective practices, barriers, and policy implications.

**Objectives of the Study**

- **Assess gender-based variations** in how secondary school teachers cultivate students' critical thinking, communication, problem-solving, adaptability, and emotional regulation in the classroom.
- **Examine urban - rural disparities** in secondary school teachers' ability to foster essential life skills among their learners.
- **Investigate institutional contrasts** between government and private schools in the effectiveness of educators' strategies for nurturing life-oriented competencies.

**Hypotheses of the Study**

1. There is a significant difference in teaching effectiveness between male and female teachers.
2. There is a significant difference in teaching effectiveness between urban and rural teachers.
3. There is a significant difference in teaching effectiveness between government and private school teachers.

**Variables of the Study**

1. Digital Literacy
2. Learning of Life Skills

**Sub Variables of the Study**

1. Gender
2. Locality
3. Type of the School

**Sample of the Study**

The sample selected for the study consisted of 88 Secondary School teachers of Chikkamagaluru District. The teachers in the sample were randomly selected from the government and private schools located in the different parts of Chikkamagaluru District.

| **Gender** | **Male** | | | | **Female** | | | |
|---|---|---|---|---|---|---|---|---|
| **Type of the School** | Government | | Private | | Govt | | Aided | |
| **Locality** | Rural | Urban | Rural | Urban | Rural | Urban | Rural | Urban |
| **Total No. of Population** | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| | 22 | | 22 | | 22 | | 22 | |
| | 44 | | | | 44 | | | |
| | **88** | | | | | | | |

**Tool Used in the Study**

In the present study, the Investigator was used '**Digital Literacy Scale'** standardised by Ng and Wan.

**Statistical Techniques of the Study**

**1. Descriptive Statistics**

Mean, Median, and Standard Deviation were computed for different variables in the study.

**2. Inferential statistics**

't' test was employed to find out the significant difference between the Mean scores of Secondary School teachers based on the objectives.

**Results and Discussion**

**1. Gender-wise Comparison of Teaching Effectiveness**

**H1:** There is a significant difference in teaching effectiveness between male and female secondary school teachers.

The null hypothesis formulated.

**H0:** There is no significant difference in teaching effectiveness between male and female secondary school teachers.

| **Gender** | **N** | **Mean** | **S.D.** | **t-value** | **Significance Level** |
|---|---|---|---|---|---|
| Female | 44 | 242.03 | 35.87 | 0.884 | Not significant at 0.01 & 0.05 |
| Male | 44 | 234.05 | 39.51 | | |

**Interpretation**

From the above table it is observed that the 't' value is **0.884.** This value is **less than** the critical values at both the 5% significance level (1.96) and the 1% level (2.58). This means that the difference in average teaching effectiveness related to life skills between **male and female teachers** is **not statistically significant.**

Although the mean score for female teachers (242.03) is slightly higher than for male teachers (234.05), the difference is not large enough to rule out the possibility that it happened by chance. In statistical terms, we **accept the null hypothesis,** which means **gender does not have a significant impact** on teaching effectiveness with respect to life skills in this sample.

**2. Location-wise Comparison of Teaching Effectiveness**

**H2:** There is a significant difference in teaching effectiveness between urban and rural secondary school teachers.

The null hypothesis formulated.

**H0:** There is no significant difference in teaching effectiveness between urban and rural secondary school teachers.

| Location | N | Mean | S.D. | t-value | Significance Level |
|---|---|---|---|---|---|
| Urban | 44 | 248.03 | 36.87 | 3.748 | Significant at 0.01 & 0.05 |
| Rural | 44 | 216.05 | 34.51 | | |

**Interpretation**

From the above table it is observed that the 't' value is **3.748.** This value is **greater than** both critical values (1.96 at 5% and 2.58 at 1%). The **urban teachers' mean score** (248.03) is significantly higher than the **rural teachers' mean score** (216.05), and the difference is large enough to be considered statistically meaningful.

This result shows that **urban teachers are significantly more effective** in imparting life skills compared to their rural counterparts. This may be due to better access to digital tools, infrastructure, and professional development opportunities in urban settings. Thus, we **reject the null hypothesis,** indicating **location has a significant impact** on life-skill teaching effectiveness.

**3. School Type-wise Comparison of Teaching Effectiveness**

**H3:** There is a significant difference in teaching effectiveness between government and private secondary school teachers.

The null hypothesis formulated.

**H0:** There is no significant difference in teaching effectiveness between government and private secondary school teachers.

| School Type | N | Mean | S.D. | t-value | Significance Level |
|---|---|---|---|---|---|
| Government | 44 | 229.20 | 38.10 | 2.242 | Significant at 0.05 level |
| Private | 44 | 246.45 | 36.25 | | |

**Interpretation**

From the above table it is observed that the 't' value is **2.242.** This value is **greater than** the 5% critical value (1.96), but **less than** the 1% value (2.58). The **mean score of private school teachers** (246.45) is higher than that of **government school teachers** (229.20).

The difference in teaching effectiveness between government and private school teachers is statistically significant, but **only at the 5% level**. This means that while private school teachers may be more effective in teaching life skills possibly due to better digital resources, support systems, or training the difference is **not strong enough** to be considered highly significant. Therefore, we **reject the null hypothesis at the 5% level,** but **not at the 1% level**, indicating a **moderate level of significance.**

**Summary of Interpretations**

| Comparison | Result | Null Hypothesis |
|---|---|---|
| Gender (Male vs. Female) | No significant difference | Accepted |
| Location (Urban vs. Rural) | Significant difference - Urban better | Rejected |
| School Type (Govt vs. Private) | Moderate difference - Private better | Rejected at 0.05 level |

**Major Findings of the Study**

The present study explored how digital literacy among secondary school teachers impacts the development of life skills in secondary school students. After analyzing the data collected from 88 teachers in Chikkamagaluru District, the following major findings were observed:

- **No Significant Gender Difference:** The analysis revealed that there was no statistically significant difference in teaching effectiveness (with regard to life-skills development) between **male and female teachers.** This indicates that both male and female secondary school teachers demonstrate similar capacities in utilizing digital tools to enhance life skills education in the classroom.
- **Urban Teachers Outperform Rural Teachers:** A significant difference was found between **urban and rural teachers** in terms of teaching effectiveness. Teachers working in urban schools scored higher in promoting life skills among students, which may be attributed to better access to digital infrastructure, professional development opportunities, and exposure to innovative teaching methods.
- **Private School Teachers More Effective than Government School Teachers:** The study also found a statistically significant difference in teaching effectiveness between **private and government school teachers,** though the difference was moderate. Private school teachers appeared to be more effective in facilitating life skills learning, possibly due to smaller class sizes, better training support, or greater use of digital tools.

**Discussion of the Study**

The findings of this study provide valuable insights into how digital literacy among secondary school teachers relates to the teaching of life skills in secondary schools. The results reflect the influence of demographic and institutional factors on teaching effectiveness, particularly in the context of digital education.

**1. Gender and Teaching Effectiveness**

The analysis showed no significant difference in the teaching effectiveness of male and female teachers. This suggests that **gender is not a determining factor** in a teacher's ability to integrate digital tools to support life skills learning. One possible reason is the **increased gender parity in teacher education programs**, where both male and female teachers are equally exposed to ICT training, life skills pedagogy, and continuous professional development. These findings are consistent with previous research that emphasizes the importance of training and access over demographic traits in determining teaching outcomes.

**2. Urban vs. Rural Differences**

A significant difference was observed in teaching effectiveness between **urban and rural teachers,** with urban teachers performing better. This could be attributed to the **greater availability of digital infrastructure** in urban areas, such as high-speed internet, smart classrooms, and regular access to

workshops and ICT training programs. Additionally, urban schools may be more likely to experiment with digital methods due to administrative support or curriculum innovation. These findings align with literature indicating that rural schools often face challenges related to **resource scarcity, connectivity issues, and lack of exposure to modern teaching tools.**

**3. Government vs. Private Schools**

The data revealed that **private school teachers were moderately more effective** than their government school counterparts in promoting life skills through digital means. This may be due to factors such as **better teacher-student ratios, autonomy in teaching methods, pressure for performance, or higher digital readiness** in private institutions. Private schools may also invest more in training their teachers or encouraging technology integration as a part of their competitive strategy. Similar patterns have been reported in studies showing private schools' tendency to adopt innovation faster than government institutions.

**Educational Implications of the Study**

The outcomes of this study offer valuable guidance for policymakers, teacher educators, school administrators, and curriculum developers. By identifying key areas of strength and gaps in teaching effectiveness influenced by digital literacy, several practical actions can be taken to improve educational quality and student outcomes.

1. **Strengthening Teacher Training Programs:** Given the importance of digital competence in teaching life skills**, pre-service and in-service teacher education programs must integrate modules on digital literacy and life skills pedagogy**. Training should emphasize practical applications, including the use of online tools, interactive platforms, and digital content relevant to secondary school education.
2. **Guiding Digital Literacy Initiatives:** The study confirms that higher digital literacy correlates with better life skills teaching. Therefore, **targeted digital literacy enhancement initiatives** should be introduced especially focusing on continuous support, mentoring, and hands-on practice for teachers. These programs should be regularly updated to keep pace with technological advancements.
3. **Bridging Urban-Rural and School Type Gaps:** The disparity in effectiveness between urban and rural teachers, as well as between government and private school teachers, highlights the need for **equitable resource distribution**. Policymakers should prioritize the **deployment of digital infrastructure, internet access, and digital teaching aids** in rural and government schools. Special grants or incentive-based programs can also be introduced to encourage digital innovation in under-resourced schools.
4. **Enhancing Life Skills Pedagogy through Digital Means:** Digital tools can make life skills education more engaging, interactive, and relevant to real-life contexts. Integrating **educational apps, simulations, case studies, and multimedia resources** into secondary school teaching can promote critical thinking, communication, collaboration, and emotional intelligence among students.
5. **Developing Contextual Resources:** Efforts should be made to **develop digital teaching materials in local languages** and aligned with the cultural and educational needs of different regions. This ensures that teachers from diverse backgrounds can implement life skills education effectively.

**Suggestions for Further Research**

1. **Enhance Digital Literacy Training for Teacher:** Educational authorities should organize regular and comprehensive digital literacy workshops specifically for secondary school teachers, focusing on the use of technology to teach life skills effectively.
2. **Bridge the Urban-Rural Digital Divide:** Special attention must be given to rural schools by providing better digital infrastructure, internet access, and resources to ensure teachers there can utilize digital tools as effectively as their urban counterparts.
3. **Support Government Schools with Resources:** Government schools should receive increased funding and support to upgrade their digital facilities, enabling teachers to integrate digital methods in their pedagogy and enhance life skills teaching.
4. **Integrate Digital Tools into Teacher Education:** Teacher training programs should incorporate modules on digital literacy and its application in life skills education to prepare future teachers to meet the demands of modern classrooms.
5. **Develop Contextualized Digital Content:** Create and disseminate digital content and teaching aids tailored to the local context and students' needs, especially for secondary school subjects, to make life skills learning more relevant and engaging.
6. **Promote Collaborative Learning and Sharing:** Encourage collaboration among teachers across different regions and school types to share best practices and successful digital teaching strategies through online communities and professional networks.
7. **Continuous Monitoring and Evaluation:** Implement a system for ongoing assessment of digital literacy programs' effectiveness in improving teaching and learning outcomes, allowing for timely adjustments and improvements.

**Conclusion**

This study highlights the crucial role digital literacy plays in enhancing the teaching effectiveness of secondary school teachers and its subsequent impact on students' acquisition of life skills. The findings reveal no significant difference in teaching effectiveness based on gender, indicating that both male and female teachers are equally capable in integrating digital tools to foster life skills. However, significant disparities exist between urban and rural teachers, as well as between government and private school educators, suggesting unequal access to digital resources and training opportunities.

The study underscores the need for targeted interventions to bridge the digital divide, particularly focusing on rural areas and government schools, to ensure equitable learning experiences for all students. By improving digital competencies among teachers, schools can better prepare students with critical life skills such as problem-solving, communication, and adaptability skills that are essential for thriving in the 21st century.

It is imperative that policymakers, educational leaders, and teacher training institutions collaborate to design and implement comprehensive digital literacy programs. Such initiatives should focus not only on technology use but also on pedagogical strategies that effectively integrate digital tools to nurture life skills. Ultimately, empowering secondary school teachers with digital literacy will enrich classroom learning and contribute significantly to holistic student development.

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