E-Competencies and Techno-Pedagogical Practices of the Under Graduate Level English Language Teachers

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Abstract:

This study investigates the e-competencies and techno-pedagogical practices of undergraduate level English language teachers in Tiruchirappalli District. With the increasing integration of technology in education, understanding the proficiency and utilization of electronic resources among teachers is paramount. Through a mixed-methods approach incorporating surveys and interviews, data were collected to assess teachers' e-competencies and their implementation of techno-pedagogical practices. Findings reveal the varying degrees of digital proficiency among teachers, highlighting both strengths and areas for improvement. Additionally, the study identifies the strategies employed by teachers to incorporate technology into their pedagogical practices. The results of this study contribute to enhancing teacher training programs and developing effective strategies for integrating technology into English language teaching at the undergraduate level in Tiruchirappalli District and potentially beyond.

Keywords: Technology, Education, Pedagogical, Training Programs, Knowledge.

1.1. Introduction

In today's rapidly evolving educational landscape, English language teachers are increasingly expected to possess a diverse set of e-competencies and techno-pedagogical practices to effectively engage students in learning. E-competencies encompass a range of digital skills, including proficiency in educational technology tools, online communication platforms, and digital content creation. (Biswas & Maity. 2022) These competencies enable teachers to navigate the digital realm with confidence, adapt to emerging technologies, and integrate them seamlessly into their instructional strategies.

Moreover, techno-pedagogical practices involve the thoughtful integration of technology into pedagogy to enhance teaching and learning experiences. This entails leveraging digital resources to design interactive lessons, facilitate collaborative learning environments, and personalize instruction to meet the diverse needs of learners. Effective techno pedagogical practices empower English language teachers to create dynamic and engaging lessons that foster critical thinking, creativity, and digital literacy skills among students.

By cultivating e-competencies and embracing techno-pedagogical practices, English language teachers can leverage the power of technology to enhance the effectiveness and relevance of their instruction, ultimately preparing students for success in an increasingly digital world.

1.2. Need And Significance Of The Study

In today's digital learning era, driven by Information and Communication Technologies (ICT), teachers play a crucial role and require specific competencies to effectively utilize various technologies for facilitating learning. The UNESCO ICT Competency Framework (2011) extensively outlines these competencies, also known as E-Competencies, necessary for 21st-century educators. While modern teachers possess these competencies, the focus shifts to how they apply them in their professional roles, including teaching, facilitating learning, and evaluation, to foster effective techno-pedagogical practices. Despite the significance of understanding E-Competencies and Techno-Pedagogical Practices, there has been limited scientific assessment, particularly within Indian higher education. Notably, existing literature lacks studies on E-Competencies and Techno-Pedagogical Practices among undergraduate level teachers, especially English Language Teachers. Thus, there exists a research gap in this critical domain, warranting the present study to address this gap and fulfil the need for comprehensive research in this area.

1.3. Statement of The Problem

Education is evolving rapidly in the digital age, with pedagogical approaches adapting to incorporate the latest digital technologies. Distribution methods now encompass a blend of face-to-face interaction and virtual interfaces, while content delivery has shifted towards text-plus-multimedia formats. The three pillars of education in the 21st century, known as the "three E's" - Enabled, Engaged, and empowered - highlight the transformative impact of emerging technologies on student learning experiences. Students now have access to a diverse array of digital tools and resources, transcending traditional classroom boundaries to create a more dynamic learning environment. Traditional teaching methods, characterized by teacher-directed instruction, no longer suffice in engaging learners or equipping them with the skills necessary to thrive in the digital era. As a result, the field of English Language Teaching (ELT) has undergone significant transformation, with the integration of Information and Communication Technologies (ICT) reshaping its scope, structure, and methodologies. This convergence of ICT and ELT has given rise to Technology Enhanced Language Learning (TELL) practices, which demand a range of e-competencies from both teachers and learners. Effective implementation of TELL practices hinges upon the proficiency of teachers in integrating technology into pedagogical approaches.

Against this backdrop, the present study seeks to investigate the e-competencies and techno-pedagogical practices of undergraduate level English language teachers in the Arts and Science Colleges of Tiruchirappalli. The study aims to address the research problem of "E-Competencies and Techno-Pedagogical Practices of English Language Teachers in the Arts and Science Colleges of Tiruchirappalli District" in order to shed light on the evolving landscape of English language education in the digital age.

1.4. Review of Related Literature

Laxmi Vijay and Singh GobindGure (2016) conducted a study on the Techno-Pedagogy Practices in Teacher Education. This study focuses on the various issues relating to ICT in education as a core component in pre-service teacher education and the different models to be adopted for its integration in education. Every teacher should know how to use technology, pedagogy and subject area content effectively in their daily classroom teaching. Hence, knowledge of ICT and skills to use ICT in teaching/learning has gained enormous importance for today's teachers. There must be congruence between the school curriculum and teacher training curriculum.

Nabin and Thakur (2015) explored the implementation of techno-pedagogical skills in higher education, highlighting its significance in providing accessible and quality education. They emphasize that techno-pedagogy plays a crucial role in meta-teaching, facilitating linguistic development, designing advanced study materials, and creating multi-grade instruction. The use of techno-pedagogical skills addresses barriers to achievement, student disengagement, and educational exclusion. However, challenges such as inadequate ICT infrastructure, limited English language and online content competence, lack of teacher incentives and awareness, and software utilization difficulties hinder effective implementation. The review underscores that technology complements good teaching rather than replacing it, emphasizing the indispensable role of techno-pedagogically skilled instructors in achieving successful electronic delivery of education.

Stephen Noel, Sowmya and Senthil Kumar (2014) found out the effect of the use of e-competences and Techno Pedagogical practices in English Grammar. The CAI package was developed by the investigator for a topic in English Grammar (structural usage) using Flash 8 software. The finding was that the achievement in English language was more when people use Techno Pedagogical practices.

1.5. Objectives of The Study

The objectives of the study are:

1. Assess the E-Competencies of Undergraduate English Language Teachers in Tiruchirappalli District.

2. Evaluate the Techno-Pedagogical Practices of Undergraduate English Language Teachers in Tiruchirappalli District.

3. Determine the significance of differences in E-Competencies among Undergraduate English Language Teachers based on variables such as Designation, Gender, Age, Professional Qualifications, Research Qualifications, Type of Management, Type of Institution, Locality of the Institution, and Teaching Experience.

4. Investigate the significance of differences in Techno-Pedagogical Practices among Undergraduate English Language Teachers with respect to variables such as Designation, Gender, Age, Professional Qualifications, Research Qualifications, Type of Management, Type of Institution, Locality of the Institution, and Teaching Experience.

5. Explore the potential correlation between E-Competencies and Techno-Pedagogical Practices among Undergraduate English Language Teachers in Tiruchirappalli District.

1.6. Hypotheses of The Study

1. Undergraduate English Language Teachers in Tiruchirappalli District lack E-Competencies.

2. Undergraduate English Language Teachers in Tiruchirappalli District do not engage in Techno-Pedagogical Practices.

3. There is no significant difference in E-Competencies levels among Undergraduate English Language Teachers in Tiruchirappalli District based on certain variables.

4. There is no significant difference in Techno-Pedagogical Practices among Undergraduate English Language Teachers in Tiruchirappalli District based on certain variables.

5. There is no significant correlation between E-Competencies levels and Techno-Pedagogical Practices among Undergraduate English Language Teachers in Tiruchirappalli District.

1.7. Methodology of The Study

The choice of methodology for this study is determined by its objectives, with a focus on descriptive analysis using a normative survey approach. Stratified random sampling was employed to ensure equal and independent representation from the defined population. Data collection utilized the **E-Competencies Assessment Scale (E-CAS) and Techno-Pedagogical Practices Assessment Scale for English Language Teachers (TEPPRASELT), 2018** developed and standardised by the investigator and Research experts. Statistical analyses included descriptive, differential, and relational methods.

1.8. Limitation and Delimitation of The Study

The present study focuses on assessing E-Competencies and Techno-Pedagogical Practices, acknowledging their complexity. While efforts have been made to comprehensively investigate various aspects, it's acknowledged that some nuances may have been overlooked. The study is limited in scope due to the following delimitations: it solely examines Tiruchirappalli district and is restricted to Undergraduate level English Language Teachers in Arts and Science Colleges. These delimitations were necessitated by constraints in time and resources.

1.9. Research Tools

The following tools were used for the purpose of data collection in the present study.

a.   General Information Questionnaire

b.   E-Competencies Assessment Scale (E-CAS)

c.   Techno-Pedagogical Practices Assessment Scale for English Language Teachers (TEPPRASELT)

The details of the above mentioned tools are given below:

✓ General Information Questionnaire: This questionnaire comprises 26 items designed to gather baseline data on the sample, including demographic variables such as gender, age, academic and professional qualifications, research background, institution management type, and locality.

✓ E-Competencies Assessment Scale (ECAS): Developed to evaluate English Language Teachers' competencies in electronic technologies, services, gadgets, and applications, this scale consists of 80 statement items.

✓ Techno-Pedagogical Practices Assessment Scale for English Language Teachers (TEPPRASELT): This scale aims to assess the integration of technology into teaching practices among English Language Teachers at the undergraduate level in Arts and Science colleges. It contains 30 statement items.

1.10. Analysis and Interpretation of Data

Hypothesis 1: ($H_0 1$)

The Under Graduate Level English Language Teachers of Tiruchirappalli District do not have any E-Competencies.

Table 1.0 (a) showing the Analysis of the Mean E-Competencies

Score of the Whole Sample

Variable	No. of Teachers	Maximum Obtainable Score	Mean
E- Competencies	200	240	144.95

The mean E-Competencies score of 144.95 out of 240 for 200 Under Graduate Level English Language Teachers in Tiruchirappalli District indicates a high level of competence, surpassing the median. This rejects the hypothesis that they lack E-Competencies, confirming their proficiency in this area. Further analysis of the data, including scores and percentages, provides a more detailed understanding of their competency levels.

Table 1.0 (b) showing the Analysis of the Mean of E-Competencies

Scores of the Whole Sample

Levels	Scores	No of Teachers	Percentage
Low	0-80	29	14.5%
Average	81-160	84	42%
High	161-240	87	43.5%

The table 1.0(b) shows that E-Competency levels among Under Graduate Level English Language Teachers in Tiruchirappalli district vary from low to high. Specifically, 29 teachers (14.5%) have low competency, 84 teachers (42%) have average competency, and 87 teachers (43.5%) have high competency. Notably, the highest number of teachers (43.5%) fall into the high competency category. This rejects the hypothesis that these teachers lack E-Competencies, indicating instead that their competency level is high.

Hypothesis 2: (H$_0$2)

The Under Graduate Level English Language Teachers of Tiruchirappalli District do not involve themselves in any Techno-Pedagogical Practices.

Table 1.1(a) Techno-Pedagogical Practices of the Under Graduate Level English Language Teachers of Tiruchirappalli District

Variable	No. of Teachers	Maximum Obtainable Score	Mean
TechnoPedagogical Practices	200	90	26.575

The table 1.1(a) displays the mean Techno-Pedagogical Practices score for 200 Under Graduate Level English Language Teachers in Tiruchirappalli District, which is 26.575 out of a possible 90. This suggests a low level of engagement in such practices. Thus, the hypothesis that these teachers don't engage in Techno-Pedagogical Practices is rejected, indicating instead that they do utilize them to some extent. Further analysis of the data provides additional insight into the use of these practices by the teachers.

Table 1.1(b) Showing the Analysis of the Mean of Techno Pedagogical Practices

Scores of the Whole Sample

Levels	Scores	No of Teachers	Percentage
Low	0-30	140	70%
Average	31-60	43	21.5%
High	61-90	17	8.5%

The table 1.1 (b) illustrates that Techno-Pedagogical Practices among Under Graduate Level English Language Teachers in Tiruchirappalli District vary widely, ranging from low to high. Specifically, 140 teachers (70%) demonstrate low levels of these practices, 43 teachers (21.5%) have average levels, and 17 teachers (8.5%) exhibit high levels. Notably, the majority (70%) fall into the low-level category. Consequently, the hypothesis that these teachers don't engage in Techno-Pedagogical Practices is dismissed, with the conclusion being that they indeed have a low level of involvement in such practices.

Hypothesis 3: ($H_0 3$)

There is no significant relationship between the level of E-Competencies and the Techno-Pedagogical Practices of the Under Graduate Level English Language Teachers of Tiruchirappalli District.

Table 1.2 Showing the Correlation between the E-Competencies and Techno-Pedagogical Practices of the Under Graduate Level English Language Teachers of Tiruchirappalli District

Variables	N	Mean	'r' Value
E-Competencies	200	144.95	0.364
Techno-Pedagogical Practices		26.575	

The 'r' value obtained from the table1.2 is 0.364, indicating a moderate positive correlation between E-Competencies and Techno-Pedagogical Practices among Under Graduate Level English Language Teachers in Tiruchirappalli District. This correlation falls within the range of ± 0.3 to ± 0.69. Thus, it refutes the hypothesis that there's no significant correlation between these variables. In conclusion, there exists a moderate positive correlation between the two among the teachers in Tiruchirappalli District.

1.11.   Major Findings of The Study

The majority of English language teachers at the undergraduate level are Assistant Professors, comprising 95%, while the remaining 5% are Associate Professors. In terms of gender distribution, 39.5% are male and 60.5% are female.

Regarding age, 62% fall between 24 to 36 years, 26.5% between 37 to 47 years, and 11.5% between 48 to 58 years. Concerning professional qualifications, 33.5% hold a B.Ed., 5.5% have an M.Ed., while 59.5% lack any professional qualifications, and 1.5% possess other qualifications.

For research qualifications, 29.5% have an M.Phil., 10.5% hold a Ph.D., and 60% do not have any research qualifications. In terms of the type of management, 9% work in government arts and science colleges, 44.5% in government-aided colleges, and 46.5% in private colleges.

 When considering the type of institution, 7% work in men's institutions, 29% in women's institutions, and 64% in co-educational institutions. Urban colleges employ 67% of the teachers, while 33% work in rural colleges. In terms of teaching experience, 26.5% have 0-2 years, 25% have 2-6 years, and 48.5% have 6 years and above.

Among 200 Undergraduate English Language Teachers in Tiruchirappalli District, 43.5% exhibit high E-Competencies. Assistant Professors excel over Associate Professors, while male teachers outperform females. Age, professional qualifications, research qualifications, institution type, and locality show no significant differences in E-Competencies. However, teaching experience significantly affects E-Competencies, with teachers having 0-2 years performing better.

Among 200 Undergraduate English Language Teachers in Tiruchirappalli District, 70% exhibit low Techno-Pedagogical Practices. Assistant Professors excel over Associate Professors, while male teachers outperform females. Age, professional qualifications, research qualifications, and type of management show no significant differences. However, differences exist based on gender, institution type, locality, and teaching experience. There's a low positive correlation between E-Competencies and Techno-Pedagogical Practices.

1.12.   Recommendations of The Study

On the basis of the findings conclusions and their educational implications, the present study makes the following recommendations.

✓   The teachers must attend workshops and in-service training courses in order to develop the ability to use electronic technologies which could enhance the E-Competencies.

✓   Teachers, especially those teaching at the Under Graduate level can design such learning experiences like assignments, project works etc., which necessitate the display of Teachers, especially those teaching at the Under Graduate level can design such learning experiences like assignments, project works etc., which necessitate the display of higher level of E-Competencies which improves the Techno-Pedagogical practices on the part of teachers.

1.13.   Suggestions for Further Research

In the realm of English Language Teaching in India, there has been a scarcity of research investigating the factors influencing the E-Competencies and Techno-Pedagogical Practices among Undergraduate Level English Language Teachers in Arts and Science Colleges. This study, while contributing valuable insights, also highlights avenues for further research:

✓ Comparative studies could be conducted with Postgraduate Level English Language Teachers to discern any differences in E-Competencies and Techno-Pedagogical Practices.

✓ Similar investigations can be extended to other districts beyond Tiruchirappalli in Tamil Nadu, providing a broader understanding of English language teachers' competencies and practices across the state. This could inform state-level policies regarding electronic technologies in education.

✓ Exploratory studies involving teachers from other disciplines within Arts and Science Colleges could be pursued to broaden the scope of understanding.

✓ Future research endeavors may consider employing diverse methodologies beyond scales, such as interviews and observations, to deepen insights into the subject matter.

1.14. Conclusion

The present study has been done with a clear focus on the E-Competencies and Techno-Pedagogical practices of Under Graduate level English language teachers. But the findings and conclusion of the study are quiet relevant to the higher level teachers of the entire state of Tamil Nadu, though not the entire country. Hence, the suggestions and recommendations of the present study deserve a closer look by the government authorities and other agencies, working for the enhancement of the higher education system in the state and the country.

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