

Unveiling Teaching in the Digital Era: Insights into ICT Competency among College Teachers

Dr. M.Thangam

M.Com., M.B.A., M.Phil., PGDCA., Ph.D., ASSOCIATE PROFESSOR DEPARTMENT OF BUSINESS ADMINISTRATION KONGU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), NANJANAPURAM, ERODE-638 107, TAMILNADU, INDIA. EMAIL : thangamkasc@gmail.com

Mr. A. Haja Mydeen

*RESEARCH SCHOLAR, DEPARTMENT OF BUSINESS ADMINISTRATION, KONGU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), NANJANAPURAM, ERODE-638 107.
Bharathiar University Maruthamalai Road, Coimbatore-641 046, Tamil Nadu, India. EMAIL : hajaviims23@gamil.com*

Dr.P.Karthikeyan

Head and Associate Professor School of Management Studies Kongu Engineering College, Perundurai, TAMILNADU, INDIA. Email: ptp.karthi@gmail.com

Abstract

The rapid digital transformation of higher education has significantly reshaped teaching–learning practices, placing increased emphasis on (ICT) competency among college teachers. Effective integration of ICT is essential for enhancing teaching effectiveness, student engagement, assessment practices, and overall institutional quality. Despite widespread adoption of digital tools, variations in ICT competency persist due to demographic and professional factors such as age, gender, marital status, and research experience. The study aims to examine the level of ICT competency among college teachers and analyze differences in their perceptions across selected demographic variables. Using a descriptive research design, data were collected from 200 college teachers through a structured questionnaire covering key dimensions of ICT competency, including technical skills, pedagogical integration, and assessment and feedback. Simple random sampling strengthened the credibility and reliability of the study by providing an unbiased representation of the target population. Statistical techniques such as mean analysis, t-tests, and ANOVA were employed for data analysis.

The findings reveal that while teachers generally demonstrate moderate to high ICT competency, no significant differences were observed based on gender and marital status, whereas age and research experience showed notable variations. The study highlights the need for continuous professional development and institutional support to strengthen ICT competency among college teachers in the digital era.

Keywords: ICT competency, higher education, college teachers, digital pedagogy, assessment and feedback

Introduction

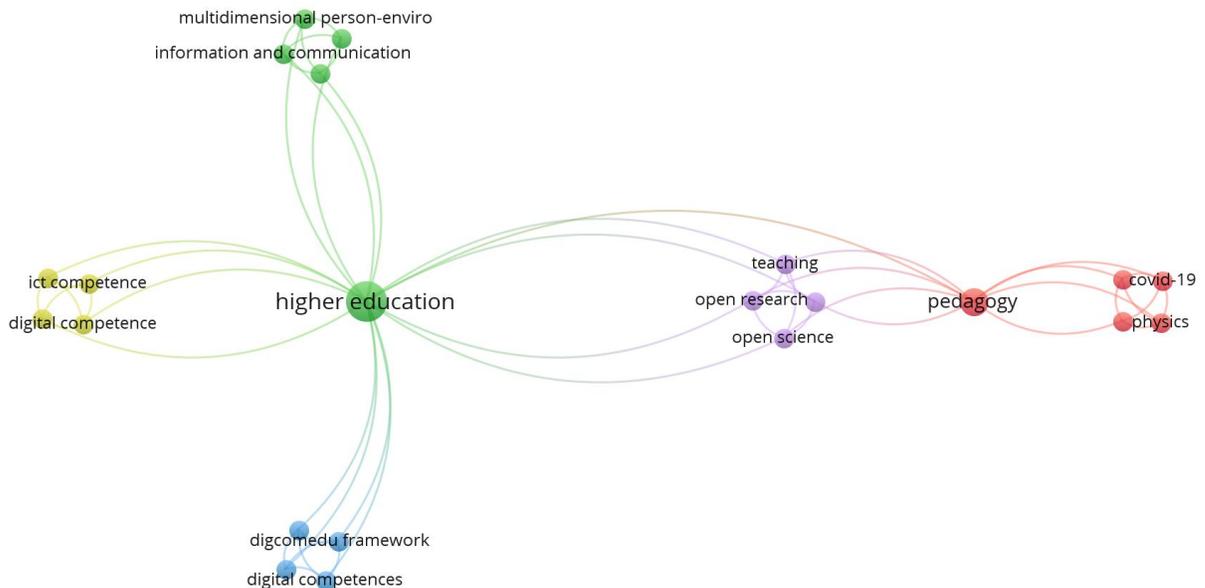
There has been a significant transformation of the digital era within the scene of higher education. The (ICT) has brought new teaching techniques, online learning systems, and e-testing systems that transform the conventional pedagogical systems. Within this dynamic scenario, college

instructors have ceased to be knowledge dispensers and have taken up a new responsibility of guiding the technology-mediated learning experience. ICT competency has become an important professional need of college teachers and has impacted the quality of instruction, student interaction, and even competitiveness of institutions. The move towards blended learning, online learning and learning management systems has further placed a greater burden on teachers to have sufficient digital skills and technological confidence. Although the role of ICT has increased over time, disparities in the competency levels have continued to occur across institutions, disciplines, and regions. The article is an attempt to reveal the major insights about ICT competency in college teachers in higher education, its conceptual foundations, significance, the determinants, and issues in the digital teaching age.

Literature Agenda

The VOSviewer network visualization illustrates the thematic structure of research centered on higher education, which emerges as the most central and influential concept in the map. The strong links between higher education and terms such as information and communication and multidimensional person–environment indicate that contemporary research views higher education as a holistic system where communication, learning environments, and human–technology interaction play a critical role. Closely connected to this core are themes related to digital competence, including ICT competence, digital competence, digital competences, and the DigCompEdu framework.

Figure :1



Source: VOSviewer

This cluster highlights the growing emphasis on developing digital skills among educators and students, as well as the adoption of structured frameworks to guide digital teaching and learning practices in universities. Another important thematic cluster focuses on open science and research practices, linking open science, open research, and teaching, which reflects an increasing interest in transparency, accessibility, and the integration of open research principles into higher education pedagogy. Additionally, a distinct cluster related to pedagogy, physics, and COVID-19 points to discipline-specific teaching strategies and pedagogical adaptations that emerged during the pandemic, particularly in response to emergency remote teaching. Overall, the visualization suggests that current research in higher education is highly interconnected, with digital competence development, open science practices, and pedagogical innovation—especially during COVID-19—forming complementary and mutually reinforcing themes.

Concept of ICT Competency in Higher Education

1. **Technical Skills:** The technical skills are the initial capacity of the college teachers to use and manage digital technologies in a college environment. These are the computer, internet, and learning management system (LMS) skills, presentation programs, and video conferencing communication software and discipline specific educational technology. Easy to troubleshoot small technical problems, handle digital files and learn new software without difficulty, technologically competent teachers have the resources to do their job effectively. These skills can help teachers to create efficient and accessible technology-based learning environments. Technical skills in the digital age are not reduced to merely being able to use a computer but include the knowledge of cloud-based applications, online-classrooms, and data administration systems. Good technical competence leads to less reliance of teachers on external assistance, more instructional confidence, and more classroom efficiency. In addition, it is the basis, on which advanced pedagogical and instructional technology integration is established and it is therefore a vital aspect of the general ICT competency amongst college teachers.

2. **Pedagogical Integration:** It goes beyond simply using technology and focuses on integrating digital tools with the instruction goals, learning activities and assessment techniques. Teachers in colleges having a good pedagogical integration ability are able to create learner-based setting with ICT to foster cooperation, reasoning as well as problem solving. Some of these are the application of the learning management systems in flipped classes, applying discussion forums to enable interpersonal interaction, and incorporating simulations or virtual laboratories to facilitate experiential learning. Pedagogical integration has to be well understood in terms of the subject matter and principles of instruction design. Educational instructors should also change their methods of teaching to support different needs of learners and online learning styles. Pedagogical integration of ICT, as a teaching method, is bound to change the conventional teaching approach into a participative and exciting learning experience, which enhances student motivation, understanding and academic performance.

3. **Digital Content Creation:** Digital content creation is the capacity of the college teacher to create, design and distribute instructional material through digital tools. These are the design of multimedia presentations, instructional videos, interactive learning modules, online quizzes, open educational resources. Educators that are fluent in the production of digital content are able to design learning materials to meet the varied needs and learning styles of students. This kind of

content can contribute to the conceptual knowledge, integrating text, visuals, audio and interactivity. Flexible and self-paced learning is another benefit of the digital content creation as the students can access the materials anytime or at any place. Further, educators should make sure that the digital material is pedagogically-significant, accessible, and supported by the learning outcomes. In the digital age, the knowledge of content generation enables a teacher to shift his or her teaching methods beyond the use of textbooks to embrace innovative teaching methods. These are also the skills that add to the institutional digital repositories and enhance knowledge sharing in the academic communities.

4. Assessment and Feedback: To measure the learning outcomes, digitally competent college teachers use web-based assessment tools, online quizzes, online assignments, e-portfolios, and automated grading tools. ICT-based testing can be used to facilitate formative and summative assessment and thus keep track of student development. Personalized feedback provided by audio, video, or written comments can also be facilitated using digital tools and improving student understanding and engagement. Moreover, learning management system data analytics assist teachers to diagnose the learning gaps and modify the instructional approaches. Online tests enhance transparency, efficiency and consistency and save on the administration workload. Nevertheless, the digital assessment needs to be designed well to maintain academic integrity, fairness, and learning objectives. ICT-based assessment and feedback when applied strategically benefits the learning process and creates an environment that is reflective and learner-centered in academic learning.

5. Ethical and Responsible Use: Ethical and responsible use of ICT refers to the awareness and application of ethical principles while using digital technologies in higher education. College teachers must understand issues related to data privacy, intellectual property rights, copyright laws, and academic integrity. Responsible ICT use involves ensuring the protection of student data, obtaining proper consent, and using licensed or open-source digital resources appropriately. Teachers also play a crucial role in promoting ethical digital behavior among students, including preventing plagiarism, cyberbullying, and misuse of online platforms. Additionally, ethical ICT practices require inclusivity, accessibility, and respect for diverse learners by adopting universal design principles. As digital technologies become increasingly integrated into education, ethical competence ensures trust, fairness, and accountability in teaching and learning processes. Therefore, ethical and responsible ICT use is an essential dimension of ICT competency that supports sustainable and values-driven digital education.

Importance of ICT Competency among College Teachers

1. Improved Teaching Effectiveness: Improved teaching effectiveness is among the greatest implications of ICT competency among college teachers. The effective application of the digital tools enables the educators to deliver complicated concepts in the form of multimedia resource like video, simulation, and interactive presentation using the digital tool, which enhances clarity and comprehension. ICT can help teachers to differentiate teaching approaches as well as can turn the traditional lecture methods into more interactive and student-centered approaches. Learning management systems are used to manage each course content, monitor progress of the students and simplify the delivery of instructions. Consequently, ICT-capable educators are able

to improve the quality of instruction, further learning and attain more positive educational results in tertiary education institutions.

2. Better Student Engagement: ICT competency plays a major role in enhancing student engagement in a classroom of higher education. Online discussion forums, cooperative tools, interactive quizzes, and virtual simulations are digital tools that promote active engagement and interest in the students. The learning environment supported by technology encourages interaction between teachers and learners, as well as other learners, which encourages learning in groups. Multimedia content is less dependent on the learning preferences and it assists in keeping the students' attention. Real-time feedback and spaces of gamified learning are also supported by ICT, which improve motivation and engagement of learners. Moreover, e-learning helps the students to be creative in expressing their ideas and also to learn on their own. Students are also active agents of learning when the teachers successfully incorporate ICT in pedagogy. Therefore, the enhanced student engagement will contribute to the increased levels of motivation, increased knowledge retention and improved learning experiences in higher education.

2. Flexible Learning Opportunities: ICT competency also allows college teachers to create and offer learning experience beyond the classic time and space barriers. Students are able to receive learning materials anywhere and at any time through online learning platforms, the recorded lectures, and digital resources. ICT-driven blended and hybrid learning models enable learners to juggle academic duties and personal and professional ones. Flexibility also meets different needs of learners such as working student needs, disabled learner needs, and remote area student needs. Besides, asynchronous learning tools promote self-paced learning, thereby allowing the students to re-read material so as to better comprehend the information. Flexibility based on ICT improves the access and inclusivity in higher education, intensifying learning to be more responsive to personal conditions. Consequently, students will have greater chances of participating in learning, lower rates of dropouts, and equity in education.

4. Professional Development: ICT competency is very crucial in the ongoing professional development of college teachers. Online training programs, webinars, academic networks and open education resources are available through the digital technologies and they assist in lifelong learning. Digital platforms enable teachers to do collaborative research, communicate the best practices, and be a part of global academic communities. ICT also facilitates reflective teaching practices whereby educators are able to examine digital learning metrics in order to enhance teaching practices. ICT-led professional development encourages innovation, flexibility and pedagogical learning to allow teachers to react efficiently to the emerging needs in education. In addition, digital competent educators are better positioned to use the emerging technologies like artificial intelligence, data mining, and virtual learning environments in their instruction. Ongoing ICT based professional development contributes to improvement of teaching confidence, career progression and general academic performance within institutions of higher learning.

6. Institutional Competitiveness: Institutional competitiveness in higher education is increasingly influenced by the ICT competency of its teaching workforce. Institutions with digitally skilled faculty are better positioned to adopt innovative teaching models, offer quality online programs, and attract a diverse student population. ICT competency enhances institutional

reputation by improving academic delivery, research output, and global collaboration. Technology-enabled teaching also supports accreditation requirements and quality assurance standards. Furthermore, competitive institutions leverage ICT to improve operational efficiency, student satisfaction, and graduate employability. Faculty members who effectively integrate ICT contribute to curriculum modernization and institutional adaptability in a rapidly changing educational environment. As higher education becomes more global and technology-driven, institutions that invest in developing ICT competency among college teachers gain a strategic advantage. Consequently, ICT competency is a critical factor in achieving long-term sustainability and competitiveness in higher education.

Research Gap

There is an increased focus on digital transformation in the field of higher education, available studies on ICT competency among college instructors indicate some significant gaps. Most of the past studies have merely concentrated on simple ICT use or the general concept of digital literacy, but they fail to look at the multidimensional factors including the integration of pedagogy, digital assessment, and ethical technology use. Moreover, much of the literature is concentrated in the developed nations and there is a paucity of the empirical data on developing and emerging higher education situations. The application of demographic variables, including age, gender, marital status, and research experience, in the study of the relationship between ICT competency has incongruent results presented in the studies, and thus further research is necessary. Moreover, a large part of the current research is conducted using the descriptive method, and a portion of the research is based on comparative or inductive research, to determine meaningful differences among groups. It also has little attempt of integrating ICT competency frameworks into empirical studies, which limits theoretical foundation. Thus, the problem of limited overall knowledge regarding the effects of personal and professional traits on the different aspects of ICT competency in college teachers still exists.

Importance of the Study

The study is significant in that it aims at gaining insights on the ICT competency of college teachers in the thin environment of the fast changing higher education systems. With the growing influence of digital technologies on teaching, learning, and assessment procedures, the Turkish of teachers in terms of efficiently incorporating ICT has been identified as a major factor that defines the quality of education. The research findings can be used to advance the academic discussion, as it includes various aspects of ICT competency, such as technical abilities, pedagogical integration, and digital evaluation approaches. The analysis of disparities in ICT competency according to demographic and professional measures will give useful information about which variables may affect the digital preparedness of teachers. The findings can also help the institutions of higher learning develop specific professional development opportunities and allocate resources more efficiently. Another practical implication of the study is on the part of policymakers and academic administrators who need to understand how to improve teaching performance and institutional competitiveness using digital transformation. In addition, the outcomes can be used to narrow the digital divide by determining the population that needs further assistance. On the whole, the research is quite important to advance evidence-based decision-making and sustainable integration of ICT in higher education.

Problem

ICT integration in higher institutions has become critical to the effective teaching, engagement with students, and performance of institutions. Nonetheless, most college educators are struggling to use ICT in pedagogical ways despite investing more in digital infrastructure. These difficulties are further aggravated by inadequate training, insufficient institutional support and opposition to technological change. Higher education institutions might not be able to have successful digital strategy without a clear understanding of how these factors influence ICT competency. As a result, the question arises to conduct a methodical study of the level of ICT competency in teachers of colleges and determine the existence of any significant differences between the demographic and professional groups. The solution to this issue is essential in formulating specific interventions, which will increase the digital capacity of teachers and the quality teaching and learning during the digital age.

Objectives of the Study

1. To analyze the perception of ICT competency among college teachers based on demographic variables such as age and gender.
2. To determine the influences the ICT competency of college teachers in higher education.
3. To examine the difference in ICT competency among college teachers based on their research experience.
4. To provide insights for enhancing ICT competency among college teachers for effective teaching in the digital era.

Research Methodology

Sample and Sampling Technique

The present study adopted a quantitative research approach to examine ICT competency among college teachers in higher education. The population for the study comprised college teachers working in higher education institutions. To ensure fairness, representativeness, and elimination of sampling bias, **Simple Random Sampling technique** was employed for selecting the respondents. A total sample of **200 college teachers** was drawn for the study. The sample included teachers of different age groups, gender, marital status, and varying levels of research experience, ensuring adequate diversity. The chosen sample size was deemed sufficient to conduct meaningful statistical analysis and draw valid conclusions regarding ICT competency dimensions such as technical skills, pedagogical integration, and assessment and feedback. Simple random sampling strengthened the credibility and reliability of the study by providing an unbiased representation of the target population.

Analysis and Results

The article explores ICT competency among college teachers in higher education, highlighting its dimensions, significance, influencing factors, and challenges. By synthesizing recent literature and conceptual insights, the study underscores the critical role of ICT competency in enhancing pedagogical effectiveness and academic quality. The article concludes by offering strategic recommendations for strengthening ICT competency among college teachers in the digital era.

Null Hypothesis

H₀₁: There is **no significant opinion** in the perception scores among college teachers belonging to different **age groups**

H₀₂: There is **no significant opinion** in the perception scores among college teachers with different levels of **research experience**

Table 1: Difference in the perception according to the level of age and Research Experience

Age group	N	Mean	Std. Deviation	F value	P value	Research Experience	N	Mean	Std. Deviation	F	Sig.
Young	26	11.6154	2.82951	5.156	0.019	Below 5 Years	62	10.7581	3.08186	2.786	0.006
Middle	154	9.5714	3.04832			5-10 Years	97	10.3505	3.50607		
Old	20	13.2500	3.55224			Above 10 Years	41	9.0244	2.84155		
Total	200	10.2050	3.29504			Total	200	10.2050	3.29504		

Table 1 presents the differences in teachers’ perception scores based on **age groups** and **research experience**. The analysis reveals a statistically significant difference in perception across different age groups, as indicated by the F value (F = 5.156) and the corresponding p value (p = 0.019), which is below the 0.05 level of significance. This result suggests that age plays a significant role in shaping teachers’ perceptions.

Specifically, teachers in the **old age group** reported the highest mean perception score (Mean = 13.25), followed by those in the **young age group** (Mean = 11.62), while the **middle-aged group** recorded the lowest mean score (Mean = 9.57). This indicates that older teachers tend to have more favorable or stronger perceptions compared to their younger and middle-aged counterparts.

In contrast, the analysis of **research experience** shows no statistically significant opinion in perception scores among teachers with varying levels of research experience, despite observable variations in mean values. Teachers with **below five years of research experience** reported the highest mean score (Mean = 10.76), followed by those with **five to ten years** (Mean = 10.35), whereas teachers with **above ten years of experience** recorded the lowest mean score (Mean = 9.02). Since the significance value is greater than 0.05, these differences are not statistically meaningful. Overall, the findings indicate that **age significantly influences teachers’ perceptions**, whereas **research experience does not have a significant impact**.

Factors	Gender		Mean Rank	Test	Result	Status		Mean Rank	Test	Result
Technical skills	Male	80	10.6625	3.65937	-.001	Married	94	10.5106	3.37207	-.2.118
	Female	120	9.9000	3.00532	.846	Unmarried	106	9.9340	3.21683	.752
	Total	200	10.2050	3.29504		Total	200	10.2050	3.29504	
Pedagogical integration	Male	80	10.6625	3.65937	-.531	Married	94	10.5106	3.37207	-.431
	Female	120	9.9000	3.00532	.614	Unmarried	106	9.9340	3.21683	.624
	Total	200	10.2050	3.29504		Total	200	10.2050	3.29504	
Assessment and feedback	Male	80	13.4750	3.96496	-.621	Married	94	13.6702	3.12942	-.209
	Female	120	12.9000	3.39896	.658	Unmarried	106	12.6509	3.98818	.800
	Total	200	13.1300	3.63720		Total	200	13.1300	3.63720	

Gender

Unveiling teaching in the digital era reveals that ICT competency among college teachers is no longer optional but essential for effective higher education delivery. As technology continues to redefine academic practices, equipping teachers with robust ICT skills is critical for enhancing teaching quality, student learning outcomes, and institutional performance. By addressing existing challenges and investing in targeted capacity-building initiatives, higher education institutions can foster digitally competent educators capable of navigating the complexities of the modern educational landscape.

H₀₃: There is no significant opinion between male and female college teachers in their perception of **technical skills** related to ICT competency.

H₀₄: There is no significant opinion between married and unmarried college teachers in their perception of **technical skills** related to ICT competency.

Table 2: Difference in the perception according to the Gender and Marital Status

The table presents a comparison of male and female college teachers' perceptions across three ICT competency factors, namely technical skills, pedagogical integration, and assessment and feedback. The analysis indicates that male teachers (N = 80) reported slightly higher mean scores than female teachers (N = 120) across all three factors. However, these differences were not statistically significant.

For technical skills, male teachers recorded a mean score of 10.66, while female teachers reported a mean score of 9.90. The test result ($p = 0.846$) indicates that the observed difference is not significant, suggesting that gender does not influence perceptions of technical skills among college teachers.

Similarly, for pedagogical integration, male teachers again showed a marginally higher mean score (10.66) compared to female teachers (9.90). The test result ($p = 0.614$) confirms that this difference is statistically insignificant.

In the case of assessment and feedback, male teachers obtained a mean score of 13.48, while female teachers scored 12.90. The corresponding p-value (0.658) indicates no significant gender-based difference.

Overall, the findings reveal that gender does not significantly influence ICT competency perceptions among college teachers across the selected dimensions. This suggests a relatively uniform level of ICT competency irrespective of gender in the study population.

Marital Status

The table presents the comparison of ICT competency factors based on the marital status of college teachers using mean scores and significance values.

For **Technical Skills**, married teachers (Mean = 10.51, SD = 3.37) reported slightly higher scores compared to unmarried teachers (Mean = 9.93, SD = 3.22). However, the test result indicates that this difference is **not statistically significant** ($p = 0.752$). This suggests that marital status does not have a meaningful influence on the technical skills of college teachers. With regard to **Pedagogical Integration**, married teachers again showed marginally higher mean scores (Mean = 10.51, SD = 3.37) than unmarried teachers (Mean = 9.93, SD = 3.22). Nevertheless, the difference was found to be **statistically insignificant** ($p = 0.624$), indicating that both married and unmarried teachers integrate ICT into pedagogy at similar levels.

In terms of **Assessment and Feedback**, married teachers (Mean = 13.67, SD = 3.13) scored slightly higher than unmarried teachers (Mean = 12.65, SD = 3.99). The test result reveals **no significant difference** between the two groups ($p = 0.800$).

Overall, the findings demonstrate that **marital status does not significantly influence ICT competency** across technical skills, pedagogical integration, or assessment and feedback among college teachers.

Implications for the Study

The fact that there were no strong differences in the ICT competency variables regardless of gender, marital status, age, and years of research experience is likely an indication that ICT competency is becoming common and professional requirement as opposed to a demographic based characteristic. This underscores the increasing process of normalization of digital skills in the teaching profession in higher education institutions. In the case of institutions, the findings suggest that professional development programs should be based on the improvement of the general levels of ICT competency instead of concentrating on a particular demographic. The research also confirms the role played by institutional support systems, including access to digital infrastructure, a sustained training program, and an enabling digital culture in the development of ICT competency. To the policymakers, the findings highlight the necessity of incorporating ICT competency frameworks in policies and quality assurance mechanisms in the development of the faculty. This research is academically valuable because it adds empirical evidence to the current literature to the effect that the demographic variables, in digitally changing higher education settings, might no longer have a significant impact on ICT competency. Therefore, the paper can be useful in the development of inclusive and equitable ICT capacity-building strategies.

Recommendations and Suggestions

As per the study findings, a number of recommendations are offered in order to support ICT competency among the teachers in higher education in colleges. To start with, the institutions must introduce regular and systematic ICT training sessions more concerned with technical and pedagogical aspects of integrating digital tools. Such programs must be real life, practical and in line with the new educational technologies. Second, colleges and universities ought to improve their digital infrastructure such as good internet connectivity, access to learning management systems, and technical support. Third, faculty development programs are expected to promote peer mentoring, joint learning, and exchange of best practices regarding the use of ICT. Fourth, the performance appraisal system and professional advancement should include ICT competence to encourage faculty participation. Also, institutions ought to encourage ethical and responsible ICT use by means of offering awareness on digital ethics, data privacy, and academic honesty. Lastly, the policymakers are advised to provide institutions with a federal financial aid, policy guidelines, and national-level strategies in digital education. With proper implementation, these recommendations can help achieve a sustainable digital change and teaching quality in the higher education.

Conclusion

The results highlight that ICT competency transcends individual characteristics and is more strongly shaped by institutional environments, access to resources, and opportunities for professional development. Teachers across diverse backgrounds demonstrate comparable levels of technical skills, pedagogical integration, assessment practices, and digital engagement. This reflects the growing integration of technology into routine academic practices and the increasing digital readiness of higher education faculty.

The study underscores the importance of moving beyond demographic-based assumptions and focusing on systemic strategies to enhance ICT competency. Institutions must prioritize continuous capacity building, infrastructure development, and supportive leadership to ensure effective technology integration. Furthermore, ethical and responsible use of ICT must remain a central concern to maintain academic integrity and data security.

Reference

1. Ahmad, A., & Hussain, A. (2023). Exploring the Impact of Information and Communication Technology (ICT) Stress on Job Satisfaction among Academics in Malaysian Higher Education Institutions. *International Journal of Psychosocial Rehabilitation*, 27(1), 2293-2304.
2. Al-Fudail, M., & Mellar, H. (2021). Investigating the Impact of Information and Communication Technology Tools on Students' Academic Performance and Self-Regulated Learning Skills in Higher Education. *Journal of Computing in Higher Education*, 33(1), 53-72.
3. Ali, G., Haolader, F. A., & Muhammad, K. (2013). The role of ICT to make teaching learning effective in higher institutions of learning in Uganda. *International Journal of Innovative Research in Science, Engineering and Technology*, 2(8), 4061-4073
4. Al-Shobaki, S., Khatib, T., Abu-Zaid, A., & Al-Suradi, M. M. (2023). The Impact of Technostress on Job Performance among Faculty Members in Palestinian Universities. *International Journal of Educational Technology in Higher Education*, 20(1), 1-18.
5. Christensen, R. (2002). Effects of technology integration education on the attitudes of teachers and students. *Journal of Research on technology in Education*, 34(4), 411-433.
6. Daramola, F. O., Yusuf, M. O., & Oyelekan, O. S. (2015). Information and Communication Technology Literacy among Student-Teachers in Universities in Nigeria. *Malaysian Online Journal of Educational Technology*, 3(4), 13-22.
7. Hamzah, N. (2023). The Relationship between Information and Communication Technology (ICT) Competency, Stress, and Performance among Academic Staff in Malaysian Public Universities. *Journal of Higher Education Policy and Management*, 45(1), 76-92.
8. Lim, V. K. G., & Teo, T. S. H. (2023). Prevalence, Reasons, and Outcomes of Technostress among Teachers in Singapore. *Computers & Education*, 177, 104396.
9. Ruchi Jain and Amita Chourasiya (2022) A Review On Occupational Stress Among Faculties Of Higher Education Institutes In India, *The Journal Of Oriental Research Madras*, Vol. XCIII-I, pp.200
10. Tarafdar, M., Pullins, E. B., & Ragu-Nathan, T. S. (2022). Examining Impacts of Technostress on Student Performance: A Nomological Network. *Information Systems Research*, 23(3), 809-823.
11. Tarafdar, M., Pullins, E. B., & Ragu-Nathan, T. S. (2023). Techno stress and Student Well-Being: The Role of Perceived Digital Support. *Journal of Management Information Systems*, 40(1), 191-220.
12. Walson, O.B.A., & Nnokan, N.C. (2017). Demographic variables as predictors of teachers' teaching effectiveness in the management of secondary schools in Rivers State, Nigeria. *Journal of Education and Society*, 7(3), 508-528
13. Yusuf, M.O. & Onasanya, S.A. (2004). Information and communication technology (ICT) and teaching in tertiary institutions. *Teaching in Tertiary Institutions*, 67-76