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Exploring the Ethics of Technology in Secondary Education: Trust, Digital Literacy, and ICT Self-Efficacy at Islamic Secondary School Teachers Kot Addu South Pakistan

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Abstract

This study examines technology ethics in secondary schools in Kot Addu District, South Punjab, Pakistan, focusing on digital tool use self-efficacy and teacher trust in educational technologies. The rapid adoption of technology raises ethical concerns about student data privacy, learning equality, and teacher perceptions of digital tools. Using SPSS 22, this quantitative study analyzes responses from 450 teachers selected based on study criteria. A multiple linear regression method was used to evaluate the impact of digital tools on student learning. The results indicate that VR and AR technologies did not significantly influence digital literacy in Islamic secondary schools, as their significance values ($0.067 > 0.05$) exceeded the threshold. However, digital tools significantly impacted student learning with a significance value of $0.000 < 0.05$. The findings highlight the critical role of digital tools in education while revealing ethical challenges related to privacy, equity, and access. This study contributes to understanding teachers' ICT self-efficacy, trust in technology, and the ethical implications of digital learning. The insights from this research provide valuable recommendations for improving education policies, ensuring responsible technology use, and enhancing teacher training programs in rural Pakistani schools.

INTRODUCTION

Schools around the globe now use technology more often because it changes how teachers teach students. Digital tools and Information and Communication Technologies (ICT) have taken a major part in educational transformation because they help students learn better and their teachers deliver better instruction. Digital tool success depends more on teacher attitudes and ability with these systems than on equipment or technical details. In secondary education digital literacy and teacher-student ICT self-confidence must develop as core components for everyone.

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Schools around the world now place greater importance on technology-based teaching practices. The use of Information and Communication Technologies in secondary education can help students become more involved in learning and do better while making sure everyone gets the same information. Advanced educational technologies prove useful yet their results depend heavily on how well teachers use digital tools plus their belief in proper computer technology usage.

Digital technology helps update teaching methods and improve student success (Zhao et al., 2002). Effective technology adoption faces strong obstacles mainly in rural regions which lack basic facilities and equipment. Research proves that teachers' views about information and communication technology shape their classroom technology integration success (Salehi & Salehi, 2012). Teachers need to know how well they handle technology to help students learn which means we must examine their digital literacy and comfort level with technology.

Digital literacy means using technology to search for information at its source and deliver it effectively. A teacher's knowledge of digital tools directly affects their success in teaching material using technology (Šabić et al., 2022). Many Pakistan teachers are just beginning with technology so they require better digital training programs to properly use ICT educational resources.

Teachers who believe they can use technology effectively form their ICT self-efficacy which impacts their technology adoption. Research reveals that people who believe in their technology abilities use classroom technology more often and produce better results (Mundy et al., 2012). Teachers who have strong self-efficacy in technology handle their teaching tools well but instructors who doubt their ability avoid using technology because of their concerns about technical issues (Fanni et al., 2013).

People ignore the importance of trust issues when they put technology into educational use. Trust includes multiple aspects of technology use such as its usability, data protection and its effect on educational processes. Teachers' faith in technology systems drives their decision to apply such systems in their classroom teaching. Research proves that educators embrace technological methods for teaching when they trust such tools perform well and consistently (Wu, 2021). Teaching staff must first trust technology for safeguarding student data privacy plus believe it supports everyday learning methods (Bøe, 2018).

Ethical problems linked with education technology have grown in importance alongside its expanding role in teaching. The risks with teacher technology use involve student privacy protection alongside fairness problems and digital access gaps (Mutula, 2011). Schools in rural Pakistan are connecting to technology but teachers need to address threats to student data protection and doubt about how electronic tools fit their classroom work. Islamic secondary schools evaluate technical tools based on their suitability with Islamic education methods and spiritual teachings. Frameworks about ethical technology need to deal with these problems so new technology remains good for schools and creates proper cultural practices (Alotaibi, 2023).

The ethics of technology in education means students and teachers must consider moral matters that appear during technology integration into classroom activities. Our heavy reliance on technology in secondary school education creates multiple ethical questions that need proper solution. Pupils and staff throughout secondary education face ethical challenges when using digital tools that impact data security, equal access to technology, algorithm fairness, respect for tradition, and robot and automatic device morals.

Student data security stands as the biggest ethical issue between technology and education. The growth of educational technologies raises serious questions about how to keep student data private and secure. Teachers and schools need to meet data protection rules and keep students' private information secure from wrong hands (Polonetsky & Tene, 2014). The way technology

collects student data creates debates about how students control their privacy because sensors track what they do and think online.

Modern society faces an ethical problem when different groups and sections of society have limited entry to modern technology. Students across rural Pakistan and other parts of the world lack proper technological platforms because many communities and regions do not have enough access to fast internet or digital tools. The lack of equal access to technology creates major educational disadvantages that hit minority groups the hardest (Lankton et al., 2015). To properly serve all students technology-enhanced education must bridge the gap between students who can access digital tools and those who cannot.

The ethical risks associated with educational technology grow when AI helps personalize learning and rate student work because these systems may repeat the prejudice in their data. The systems primarily rely on data to make better choices yet they promote unfair practices because they replicate bias and data errors. Algorithms promote unfair educational outcomes when used with certain student groups and those who have learning disabilities (Bøe, 2018). Developers need to partner with educators and policymakers to create systems that feel fair to everyone.

Education systems in Pakistan which follow cultural and religious teachings demand technology use that matches these values. Islamic secondary schools focus on ethical technology choices because they need digital tools that uphold Islamic teachings and cultural traditions. Teaching platforms which vary from Islamic rules or let students access objectionable content might clash with educational standards of Islamic institutions (Salehi & Salehi, 2012). Schools should evaluate technology based on how well it matches traditional teachings of Islam.

Technology inside classrooms modifies the way teachers and students interact. Students and teachers may connect digitally more often than face to face because technology enables better learning but creates decreased personal interaction. Educators and students need to watch out for how digital tools change their classroom relationships and may affect students' critical thinking ability (Kholifah et al., 2023). Teachers should combine modern technology with regular student interactions to improve learning results.

As an essential skill teacher of this generation must understand and apply digital literacy to help them access and evaluate digital information effectively. Teachers who believe they can use technology well in their teaching tend to use digital tools more in classrooms (Ramorola, 2013). How effectively people use digital tools depends on both their personal technology confidence and their access to tools and training. Studies consistently ignore students' trust concerns about technology ethics safety and educational effects when discussing digital learning tools (Nazaretsky et al., 2022).

The research community has produced multiple studies about these subjects yet teachers in rural Pakistan experience distinct yet unstudied ethical problems. Researchers still need more information about technology use in rural secondary schools across Pakistan. The relationship between technology trust and digital literacy affects students at Islamic secondary schools but researchers have not deeply studied it yet. Our study examines how teachers in Kot Addu District view and use digital tools while exploring their abilities and moral guidelines when adding technology to classroom practice.

Technology's power to reshape education across all schools became real worldwide except that its effective application remains hard to achieve in Kot Addu District. Secondary teachers' self-confidence in technology teaching and digital skills combined with their technology trust control classroom digital tool success. Few researchers have studied the relationship between these factors and educational results here. The potential ethical threats to data security plus technology's academic and religious value alignment receive little consideration here. This study examines technology usage

ethics alongside how teachers trust digital tools and their ICT skills impact learning at Islamic secondary schools in Kot Addu District South Punjab.

The analysis delivered important findings about merging digital tools with secondary education systems in rural parts of South Punjab, Pakistan. Our research examined which elements help teachers use educational technology effectively by measuring their digital skills together with their belief in tech systems and their own competence. The research showed why teachers avoid new technology and proposed specialized training to help them master ICT while boosting their technology self-assurance.

Research on technology integration in education shows us many individual factors but our study wants to fill knowledge gaps especially around teaching use of technology in rural schools of Pakistan. Most current studies study technology use in urban campuses and colleges but do not examine teaching issues in rural areas of South Punjab like Kot Addu. Experts have analyzed digital literacy and ICT self-efficacy but research shows limited information about how these factors impact trust in technology for secondary schools. Research must address how Islamic secondary schools evaluate their technology use from an ethical standpoint since their unique values affect students' opinions of technology. This investigation studies how these elements work together within Pakistani secondary schools in Kot Addu District, South Punjab.

The study helps Pakistan's secondary school teachers understand their technology obstacles while revealing ways to use this knowledge. Institutions will discuss how student and teacher trust along with digital understanding affect ICT usage in ethical ways at Islamic schools.

This study aimed to evaluate the ethics of using technology by secondary school teachers in South Kot Addu District, Pakistan, focusing on their trust in digital devices as well as their level of confidence in utilizing technology for educational purposes. This study measures the extent to which teachers feel confident in using technology to teach ethics in schools and simultaneously analyzes three main factors, namely the use of digital tools, the level of trust, and self-efficacy in information and communication technology (ICT). With this approach, this study seeks to understand the impact of these three factors on the ethical practices of technology of secondary school teachers in South Kot Addu District, Pakistan.

METHOD

The research method selected here is quantitative analysis. Data Collection based on Empiricism provides an interpretation of both samples and population through research tools to test quantitative hypotheses (Sugiyono, 2018). A deliberate sampling method guided our investigation. Research samples are selected through Purposeful Measurement which links known conditions directly to the selection process (Sugiyono, 2018). This study used a research implement or instrument by distributing questionnaires via the Google Form link to 450 samples of Islamic secondary school's teachers of district kot addu south Pakistan with Ethics of Technology in Secondary Education: The study aimed to investigate how concept teachers at Islamic secondary schools in Kot Addu South trust technology. To test our data, we employed SPSS 2021 and its latest features to validate research results or sample, collected data with research assistance tools, as recovered as analyze statistical data with the purpose of experiment hypotheses, it can be named a quantitative formulation method. Purposeful Sampling method was used in this research. Purposeful Measurement is a method of determinant a research sample that takes into relationship definite holding (Sugiyono, 2018). This study used a research implement or instrument by distributing questionnaires via the Google Form link to 450 samples of Islamic secondary school's teachers of district kot addu south Pakistan with Ethics of Technology in Secondary Education: Trust, Digital Literacy, and ICT Self-Efficacy at Islamic Secondary School Teachers Kot Addu South Pakistan. Users

to get valid and high-fidelity data. Furthermore, in this study the data were analyzed using the SPSS latest version program to test validity, reliability, condition, multiple correlation and heteroscedasticity. We tested our research goals using the t-test.

Data Source and Collection

Since truth and actual findings were main research goals we used a quantitative approach. The researcher built a questionnaire to obtain direct evidence from respondents by distributing it in person. Based on Sugiyono's (2017) primary data reflects the raw material researchers derive directly from sources. This project obtained data through Islamic secondary school teachers in kot addu south Pakistan. The researcher created google forms to obtain precise research data and distributed them to Islamic secondary teacher participants who responded using the platform collecting data primary data. According to (Sugiyono, 2017) basically primary data is information, data which directly obtained from the sources to researcher, and data was collected in secondary Islamic school's teachers in kot addu south Pakistan. For good and accurate result in research for accurate data information, the researcher distributed the form through google form and population mean Islamic secondary teachers filled the form on google. The researcher took a sample of 450 teachers from every Islamic secondary school in kot addu south when gathering data from this group.

Study Area

Research took place in Kot Addu district of southern Punjab Province Pakistan. A large number of poor families in this area earn their income by doing temporary manual work. The educational system in this area follows government rules that support Pakistan's Constitution requirement to provide free basic education. These rules are based in Article 25-A of the Constitution of Pakistan, 1973. The district has several landowners who control economic power over the residents and shape the local socio-economic landscape.

Data Collection methods and sampling technique

This study utilized a quantitative research method Exploring the Ethics of Technology in Secondary Education: Our research investigated user trust in technology alongside their digital literacy abilities and Information and Communication Technology competence in Pakistani Islamic secondary schools. We gathered data using a structured survey form distributed to secondary school teachers across District Kot Addu's schools in South Pakistan. Teachers needed to respond to queries about which digital literacy tools they knew and used plus their digital literacy training program participation and their opinions on technology use at school.

Our team sent the survey to a group of 500 teachers who we picked randomly and looked at 450 responses that teachers completed. Our examination of the data used both statistical description tools and statistical interpretation to find trends and links among the data points. The analysis tested digital literacy program success rates and measured how male and female teachers differ in understanding technology.

The research team protected participants by obtaining their approval to use the data only for research. Training programs impacted teacher professional growth while giving us detailed number-based information about teachers' current digital knowledge.

Conceptual framework

In this study the conceptual framework formed aims to determine the potential Exploring the Ethics of Technology in Secondary Education: This research explores how much Islamic Secondary School teachers in Kot Addu South Pakistan trust digital technology, how capable they feel using it

and their general understanding of the internet. The conceptual framework of this research is as follows:

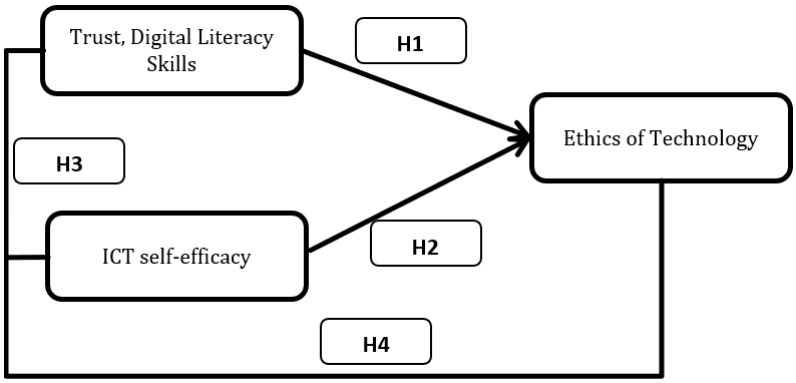

Figure 1. Conceptual Framework

Hypothesis

Teachers at secondary schools across the Kot Addu South district of Pakistan use digital tools and put their trust in ethical technology education. Our study examines how teachers in Kot Addu South District Pakistan use technology but also their basic knowledge and confidence about teaching with technology for educational purposes. Secondary, teachers in Kot Addu South District Pakistan use digital technology and trust themselves with ICT to teach ethics safely. Student teachers in Kot Addu South district of Pakistan use digital tools and trust themselves with ICT to teach technology ethics in their classrooms. Technology for educational purposes in district Kot Addu South, Pakistan.

Hypothesis 2: there is a use of ICT self-efficiacy of secondary teachers in ethics of technology for educational purposes in district Kot Addu South, Pakistan.

Hypothesis 3: There is impact of digital tools, trust and ICT self-efficacy of secondary teachers in ethics of technology for educational purposes in district Kot Addu South, Pakistan.

Hypothesis 4: There is the combined effect of digital tools, trust and ICT self-efficacy of secondary teachers in ethics of technology for educational purposes in district Kot Addu South, Pakistan.

Hypothesis testing

Testing hypothesis based on sample data represents the main concept of hypothesis testing. Our research tests fundamental synchronous statistical methods that work with frequency information. Significance tests help us decide if changes in X influence changes in Y. This research uses, digital literacy, trust, ICT self-efficacy and as its independent variables. Our research measures the Ethics of technology use at Islamic secondary schools in South Pakistan's kot addu District. This study uses the t test is as follows: As explained by Widjarjono (2010) the t test examines the impact individual contributors have on our dependent results (Widarjono, 2010).

RESULT AND DISCUSSION

Result

Table 1. Use of digital tools, and trust of secondary teachers' ethics on technology

	Kot addu	Khan garh	Mailsi	Nawan kot
Male	19.62%	11.18%	14.09%	17.44%
Female	1.32%	12.65%	08.76%	15.97%

Total	20.94%	25.83%	20.84%	31.39%

It shows that male teachers in Kot Addu Tehsil did 19.62% of the work and female Teachers as a whole completed 20.94% of total tasks in all schools. 25.83% of teaching tasks came from Khan garh Tehsil teachers where males performed 11.18% and females completed 12.65%. Out of all work in Tehsil Mailsi male teachers delivered 14.09% whereas female teachers completed 8.76% for a combined result of 20.84%. Teachers in Nawan kot Tehsil handled 17.44% of the teaching work but female teachers managed only 15.9%.

Together, they did 31.39 percent. The teachers in Tehsil Nawan kot performed 20.97% better than their male counterparts. However, this outcome was higher than the 12.09% result achieved by female educators in Tehsil Mailsi. The female teachers in Nawan kot Tehsil received better outcomes from digital resources because they mastered technology tools faster than their male counterparts in Kot addu.

Table 2. ICT self-efficacy, teachers' trust in technology for educational purposes

	Kot addu	**Khan garh**	**Mailsi**	**Nawan kot**
Male	13.44%	17.13%	6.59%	14.42%
Female	11.30%	08.96%	17.00%	21.95%
Total	24.74%	26.07%	23.59%	36.37%

In Kott Addu Tehsil male teachers worked 13.44% of the lessons while female teachers taught 11.30%. Together, they did 24.74%. In Khan garh Tehsil the male teachers handled one fifth of the work while female teachers performed one tenth. Together, they did 26.07%. The teaching workload of Tehsil Mailsi split 6.59% for men and 17.00% for women. Together, they did 23.59%. At Tehsil Nawan kot males taught 14.42% of the lessons while females delivered 21.95% of instruction.

Together, they did 36.37%. The data shows female teachers in Tehsil Mailsi handled 23.95% more work than male teachers while they only earned 6.59% more tasks in Tehsil Mailsi. Female teachers at Nawan kot outperformed male teachers at Khan garh when it came to how much they trusted technology for educational work.

Table 3. Combined effect of digital tools, trust and ICT self-efficacy of secondary teachers in ethics of technology for educational purposes

	Kot addu	**Khan garh**	**Mailsi**	**Nawan kot**
Male	22.05%	17.13%	4.22%	6.67%
Female	11.24%	9.96%	11.45%	17.77%
Total	33.29%	26.09%	15.67%	24.44%

Based on our findings male teachers in Kot Addu Tehsil made up 22.05% of total while female teachers represented 11.24% but still achieved 33.29% overall in teaching performance. Khan Garh Tehsil reported 17.13% male participation compared to 9.96% female participation but achieved 26.09% total success. Mailsi Tehsil had 04.22% male teachers combined with

Female participants ranked first in Nawan kot Tehsil at 17.77% more than Khan garh Tehsil's 9.96%. In the Kot addu area male students outperformed female students in our evaluation of digital tools and teacher trust.

Discussion

Table 4.

Use of digital tools, and trust of secondary teachers' ethics on technology.	**SS**	**S**	**TS**	**STS**
I feel confident using digital tools to enhance my teaching practices.	19	80	3	4
Digital tools positively influence my ability to uphold ethical standards in teaching.	16	72	18	0
I trust that my colleagues use digital tools in ethically responsible ways.	9	58	37	2
ICT self-efficacy, teachers' trust in technology for educational purposes.	**SS**	**S**	**TS**	**STS**
I feel confident in troubleshooting basic technical issues while using ICT tools in the classroom.	7	61	34	4
I can effectively integrate ICT tools into my lesson plans to improve student learning outcomes.	22	79	5	0
I feel capable of learning new digital tools and technologies for teaching purposes.	14	85	7	0
Combined effect of digital tools, trust and ICT self-efficacy of secondary teachers in ethics of technology for educational purposes.	**SS**	**S**	**TS**	**STS**
Digital tools enhance my ability to teach effectively.	13	72	20	1
I trust that the digital tools I use for teaching maintain data security and privacy.	14	58	31	3
I can effectively use ICT tools to manage my classroom activities.	12	61	28	5

The verification team tested the study outcomes based on research conducted with 450 participants. Nine observations across X1, X2, and Y gained validation status during the testing process. The nine questions show professionals at Islamic secondary schools their level of digital confidence in ICT tools. Our findings are statistically valid because this research includes 450 people who fall within the r table and 0.05 limit. All evaluated variables surpassed the minimum accepted score of 0.1891 during Pearson Correlation testing. Checking the validity of these nine items allows final confirmation. Through my experience I know I can solve small computer issues when using ICT in the classroom. I'm comfy using a computer. My teaching with digital resources helps students learn better and I am skilled at learning new teaching technology. L. Digital teaching tools make my instruction better.

The research test demonstrates validity and reliability because the Cronbach's alpha scores on digital literacy and trust questions plus ICT self-efficacy questions meet or surpass the 0.70 standard. The measurements of digital literacy show high reliability with a Cronbach's alpha score of 0.873. Our ICT self-efficacy scale shows 0.883 reliability and the Trust of technology in education scale shows 0.959 reliability according to the reliability testing. All measured variables display strong reliability because their Cronbach's alpha values are above 0.60. The results of our Cronbach's Alpha reliability test for Technology Trust Use show 0.917. The variables demonstrate dependable behavior through these test findings. We apply Skewness and Kurtosis to detect if data follows a normal

distribution. The Kurtosiis test tracks peaks in distribution data while Skewness measures how skewed the data appears. When skewness and kurtosis values approach zero a data set follows a normal distribution pattern. For Trust of technology and digital literacy measures the descriptive statistics show skewness ratios of -0.438 and 0.455 while ICT self-efficacy ratios stand at 0.132 and 0.35. The results indicate our data follows a normal distribution pattern.

The Glejser model uses Abs_RES as its outcome measurement. The results showed X2 digital literacy showed 15.1% significance while X1 computer self-efficacy had 82.6% significance and X3 functional skills displayed 7.7% significance. Our regression model does not show heteroscedasticity because the significance values of all three variables exceed 5% in this examination. The Col-linearity Diagnostics results show Condition Index 46.609 exceeds 30 while Eigenvalue remains below 0.01. Our data analysis reveals multicollinearity is not affecting our results. Abs_RES serves as the model's dependent variable in our test of variance equality through Glejser. These self-efficacy scores reached 82.6% while online literacy achieved 15.1% and functional skills obtained 7.7% significance. Our data shows 7.7% of students met functional skill requirements in the contract. All three tested variables showed significance values above 0.05 which means they did not display heteroscedasticity in the regression model.

Table 5. Descriptive Statistics

	N	Range	Min	Max	Means	Std. Deviation	Variances
Digital literacy skill Trust of Technology (X1)	440	5	3	9	6,22	1,470	2.159
ICT self-efficacy (X2)	440	8	3	10	6.08	1,455	2,120
Ethics of technology Y)	440	8	3	12	6.57	1,877	3,519
Valid N (listwise)							

According to this table 440 teachers sent their responses. The scale of computer self-efficacy runs between 3 for low users up to 9 for advanced users. These results demonstrate that teacher responses to computer self-efficacy span the score from 3 to 9. The graph shows that 1.470 standard deviation ranks higher than 6.22 average. Self-efficacy shows great variation in responses based solely on computer measurements. Given that our measurement scale runs from 3 to 10 the results show digital literacy numbers between those marks. The data spread is extensive because the standard deviate of 1.455 exceeds its median value of 6.07. Our results show that the Functional Skills scale runs from 3 to 12 points. The data average 6.59 points with 1.876 points of deviation. Our findings show that the values in a digital wallet lie between 6 and 12 points with an average result of 7.26 points and a measurement variation of 1.973 points.

Hypothesis testing

t test

Table 6. t test

Coefficients a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Betas		
1 (constant)					
Digital literacy skills (X1)	1,539	,547		2,949	,003

Computer self-efficacy (X2)	,657	,335	,468	1,868	,065
Functional skills (Y)	,716	,162	,678	4,123	,000

Experiments show significant relationships between teachers' competency and self-efficacy in 0.090 and 0.067 but ethics of technology in 0.000. Our research suggests H1 should be discarded. School administrators in Islamic secondary schools across Kot Addu, Pakistan notice no difference in their ICT self-efficacy's impact on their trust for technology and ethics abilities. Our analysis proves H2 false because 0.090 remains above 0.05. Research findings show that ethical technology growth in Islamic secondary school teachers from kot addu South Pakistan stays unaffected by digital skills and trust. Our evaluation shows that H3 should be supported because 0.000 is lower than our 0.05 threshold. The combination of trust and ICT self-efficacy affects Islamic secondary school teachers' technology ethics stood in kot addu South Pakistan.

Recommendations

Technology integration in secondary education for Kot Addu District rural areas depends on teaching programs that teach teachers better digital skills and show how to use ICT effectively. Educators need daily learning opportunities to become skilled at working with digital resources. Schools need to protect students' privacy by rigorously following ethical standards and validating that technology systems meet state rules. Education needs equal access to technology for all students to receive fair opportunities in learning. Students at Islamic schools must benefit from educational technologies that properly fit their faith and traditions.

Findings

Results show that teachers in Kot Addu Islamic schools have minimal relationship between their ICT self-efficacy and their technology trust as well as ethical use of technology (H1 rejected).Research shows Islamic secondary school teachers' digital skills and trust levels do not influence their ethical technology use in the classrooms (H2 rejected).Ethics in technology directly influences both teachers' trust in technology and their self-confidence in using ICT applications (H3 proved valid).Teachers master digital skills at different rates and feel varying levels of confidence about technology ethics which shows professional growth needs customized support.5 (H1 rejected).

Digital Literacy and Trust's Influence on Ethics of Technology Digital literacy and trust do not have a significant impact on the development of ethics of technology among Islamic secondary school teachers, as shown by a significance value of $0.090 > 0.05$ (H2 rejected).

Significance of Ethics on Trust and ICT Self-Efficacy Ethics of technology significantly impacts the trust in technology and ICT self-efficacy among teachers, with a significance value of $0.000 < 0.05$ (H3 accepted).

Wide Variability in Teacher Responses The variability in teacher responses regarding digital literacy, ICT self-efficacy, and ethics of technology highlights disparities in skill levels and confidence, emphasizing the need for tailored professional development initiatives.

CONCLUSION

The research findings show technology can boost secondary education capacity in Kot Addu District but academic staff's weak comfort level with technology combined with low trust of digital tools and ethical worries about data safety and cultural practices blocked its smooth integration. ICT self-confidence alone fails to boost or decrease secondary school teachers' technology trust and ethical behavior practices. The impact of digital literacy and trust increases when these elements receive supporting reinforcement strategies. The way technology affects society directly impacts how

teachers develop both their technology trust and their skill at using technology. To use technology responsibly in secondary schools the district should build programs that teach students digital skills plus ICT and ethical awareness. Cultural values hindered its effective integration. Limited Impact of ICT Self-Efficacy ICT self-efficacy alone does not significantly influence secondary school teachers' trust in technology or their ethical use of it, indicating a need for additional support and training to bridge this gap.

Digital Literacy and Trust Require Reinforcement While digital literacy and trust are essential, their standalone impact on enhancing ethics of technology among teachers is limited, suggesting that a more integrated approach is needed to align these factors effectively. Ethics of Technology as a Key Driver The ethics of technology significantly influence teachers' trust and ICT self-efficacy, underscoring the importance of embedding ethical considerations into technology-related teacher training programs.

Focus on Holistic Development A comprehensive strategy that includes improving digital literacy, ICT self-efficacy, and ethical awareness is critical for fostering responsible and effective technology use in secondary education, particularly in rural and underserved areas.

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