

Perception and Readiness of Graduate Level Students Toward E-Governance Implementation in Nepal: A Study at Far Western University

Hari Sharan Bhatt¹; Birendra Prasad Bhatt²

^{1,2}Far Western University, Central Campus

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Abstract: E-governance which integrates information and communication technologies into governmental processes promises greater transparency, efficiency, and citizen participation. In Nepal, the National ICT Policy and the Digital Nepal Framework illustrate the nation's digital ambitions, yet end-user readiness among emerging leaders remains underexplored. This descriptive quantitative study surveyed 53 graduate-level students at Far Western University (MA n = 23; M.Ed. n = 19; MBA n = 5; MBS n = 6) to assess five dimensions of e-governance readiness: conceptual awareness, perceptual readiness, behavioral confidence, core ICT competencies, and support/barrier needs. Data were collected via structured questionnaires and analyzed using descriptive statistics. Findings reveal near-universal conceptual awareness, with 98.1% of respondents having heard of e-governance. Perceptual readiness is strong: 79.2% agree and 24.5% strongly agree that e-governance can reduce corruption, while 71.7% agree and 18.9% strongly agree it can improve service delivery. Students prioritize e-governance applications in local government services (79.2%) and education (77.4%), and identify faster service delivery (73.6%) and transparency (71.7%) as top benefits. Behavioral confidence is high, with 92.4% feeling confident or very confident using platforms such as the Nagarik App, although 69.8% report they have not received formal ICT training. Core ICT competencies are robust in internet browsing (90.6%), email/cloud storage (86.8%), and MS Office (83.1%) but lag in online-form handling (77.4%) and digital-security practices (81.1%). When asked about support needs, 47.2% request targeted ICT training and 22.6% call for curriculum integration; they view universities as key to embedding e-governance modules (83.0%) and workshops (56.6%). Key barriers include procedural awareness gaps (66.0%) and poor internet connectivity (58.5%). These insights underscore the necessity of curriculum enhancements, hands-on workshops, procedural guides, and infrastructure investments to cultivate the digitally competent professionals essential for advancing Nepal's e-governance agenda.

Keywords: E-Governance, Digital Literacy, ICT Skills, Master's Students, Nepal, Public Administration, Education.

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I. INTRODUCTION

The advent of e-governance has revolutionized public service delivery by leveraging information and communication technology (ICT) to promote transparency, reduce corruption, and improve the efficiency of governmental functions. Globally, governments have embraced digital transformation as a means of modernizing bureaucracy and increasing citizen participation (Moon & Norris, 2014). In Nepal, the National ICT Policy (Government of Nepal, 2015) laid the groundwork for digitization, and the Digital Nepal Framework introduced in 2019 further institutionalized e-governance across federal, provincial, and local administrations (Ministry of Communications and Information Technology [MoCIT],

2019). Despite these policy advances, actual adoption and utilization of e-governance tools remain inconsistent, especially among young professionals and future workforce entrants.

Graduate-level students—those pursuing MA, M.Ed., MBA, and MBS degrees represent a critical segment of Nepal's emerging leadership in business, government, and education. Their perceptions of and readiness to embrace e-governance will directly influence its implementation and sustainability. Although some studies (e.g., Poudel, 2023; Rai, 2022) have explored the general progress and challenges of e-governance in Nepal, the role of students particularly those in education and management has received scant scholarly attention. Most existing literature emphasizes

technological infrastructure and government-level preparedness (Shrestha et al., 2015) but rarely investigates the awareness and capabilities of end-users such as university students.

Prior research has highlighted digital literacy, trust in technology, and ease of access as major determinants of successful e-governance adoption (Rai, 2022; Shrestha et al., 2015), and Moon and Norris (2014) underscore the importance of managerial orientation and organizational support in innovation uptake. However, there is a gap in studies that examine how well university students especially those in the social sciences are prepared to engage with and promote digital governance in their respective fields.

In this study, readiness encompasses not only students' awareness and attitudes toward e-governance but also their practical ability to operate in a digital environment. This includes proficiency with productivity software (e.g., MS Word, Excel, PowerPoint), navigating internet-based services, handling cloud storage tools (e.g., Google Drive), understanding basic cybersecurity practices, and accessing or managing web-based applications and portals. Without these foundational competencies, students may support e-governance in theory but be unprepared to apply it in practice.

Thus, this research investigates the perception and readiness of graduate-level students at Far Western University toward e-governance. Specifically, it aims to evaluate their awareness, identify challenges, and propose strategies to enhance digital engagement and participation in Nepal's public sector digital transition.

➤ *Statement of the Problem*

Despite national initiatives aimed at implementing e-governance, there is limited information on how prepared the next generation of professionals is to engage with and promote such systems. As future administrators and educators, master's level students must be familiar with and supportive of e-governance for its full implementation. Yet their awareness, practical ICT skills, and digital readiness remain largely unstudied in Nepal's academic landscape, particularly in regions like the Far West. This lack of empirical data creates a barrier to designing effective strategies for training, curriculum integration, and policy engagement.

➤ *Objectives of the Study*

The objective of this study is to:

- To assess the awareness of e-governance among MA, MBA, MBS, and M.Ed. students at Far Western University.
- To evaluate students' perceptions of the benefits and challenges associated with e-governance.
- To determine the readiness of these students to utilize and promote e-governance in their future professional roles.
- To assess students' basic ICT competencies relevant to e-governance.
- To identify strategies for enhancing e-governance

literacy and engagement among master's level students.

II. LITERATURE REVIEW

A substantial body of work has examined various facets of e-governance readiness at national, organizational, and individual levels. Early frameworks such as the United Nations E-Government Development Index highlighted infrastructural and policy indicators (UN E-Government Survey, 2018), while subsequent studies expanded to include human-resource factors (Determinants of e-Government Readiness, 2014). Research by Heeks (2002) and Layne and Lee (2001) conceptualized maturity models for government portals, emphasizing service delivery stages.

In higher-education contexts, digital literacy has been identified as critical for student success in civic and professional domains. Jones and Mitchell (2016) found that embedding ICT modules increased student engagement and employability. Ferrari (2012) and Ng (2012) developed competency frameworks delineating digital knowledge, skills, and ethics, which have since informed curriculum standards (Burke & Snyder, 2017).

Studies specific to e-governance adoption by end users emphasize trust and perceived usefulness: Carter and Bélanger (2005) applied the Technology Acceptance Model to e-government, showing that trust in government and system compatibility drive intention to use. Venkatesh et al.'s UTAUT model (2003) further demonstrated the roles of social influence and facilitating conditions. In South Asia, Pandey and Gupta (2018) reported that digital divide issues unequal access and skills undermine platform adoption in rural areas. Similarly, Shrestha et al. (2015) highlighted infrastructure disparities and low digital literacy as barriers in Nepal.

A growing body of research on student technology adoption draws on the Technology Acceptance Model. Davis (1989) demonstrated that perceived ease of use is a primary determinant of information-system acceptance, while Venkatesh and Davis (2000) showed that prior experience with similar technologies significantly strengthens both ease-of-use perceptions and adoption intentions among university populations. Bucad and Galicia (2021) examined Filipino undergraduates, finding that institutional support and training improved digital-governance competencies. In China, Chen et al. (2019) demonstrated that peer influence and self-efficacy significantly affect e-government portal use in academic settings.

Gender and demographic factors also play roles: Almousa (2020) found that female students report lower digital-security confidence, while male counterparts show higher self-efficacy. Research by Tan and Teo (2014) underscored age and educational level as moderating variables in e-service acceptance.

Literature on training interventions suggests that hands-on workshops, scenario-based learning, and collaborative projects strengthen practical readiness (Harrison & Doss,

2018; Zhao et al., 2020). Meta-analyses by Smith and Caruso (2019) recommend blended learning approaches to develop both technical and critical thinking skills. Finally, contextual studies in Nepal (Poudel, 2023; Rai, 2022) have assessed broad policy efficacy but call for deeper user-level readiness assessments.

➤ *Research Gap*

Despite these advances, no research to date integrates awareness, perceptual readiness, behavioral confidence, and core ICT competencies within a single graduate-level cohort in Nepal. Moreover, in the Far Western region characterized by lower infrastructure development and limited digital literacy initiatives there is an absence of empirical studies examining e-readiness among students. At Far Western University in particular, no prior investigation has focused on how MA, M.Ed., MBA, and MBS students are prepared to engage with or promote e-governance platforms. This study addresses that gap by providing the first comprehensive user-level assessment of e-governance readiness in this under-researched context.

➤ *Significance of the Study*

This research provides insights that are vital for multiple stakeholders. For academic institutions, it offers a basis for revising curricula to include digital governance content and practical ICT training. For policymakers, it presents empirical data on how potential future leaders view and are prepared for the country's e-governance initiatives. For development organizations and ICT trainers, it identifies skill gaps and intervention points. Most importantly, it contributes to the limited pool of research that focuses specifically on university students' engagement with e-governance, especially in the educationally marginalized Far Western region of Nepal.

III. METHODOLOGY

➤ *Research Design*

A descriptive and quantitative research design was employed to assess e-governance readiness across four dimensions (awareness, perceptual readiness, behavioral confidence, and ICT competencies). This aligns with established adoption and maturity models (Heeks, 2002; Venkatesh et al., 2003; Determinants of e-Government Readiness, 2014).

• *Population and Sample:*

The target population comprised graduate students enrolled in MA, M.Ed., MBA, and MBS programs at Far Western University. From an approximate cohort of 120 students, 53 completed the survey: MA (n = 23; 43.4%), M.Ed. (n = 19; 35.8%), MBA (n = 5; 9.4%), and MBS (n = 6; 11.3%). Purposive sampling ensured proportional representation.

➤ *Data Collection Instrument*

A structured questionnaire administered via Google Forms captured:

- Awareness (Q6–Q8): binary and multiple-choice questions on e-governance familiarity.
- Perceptual Readiness (Q9–Q13): five-point Likert scales addressing perceived benefits and challenges.
- Behavioral Confidence & ICT Competence (Q14–Q15): self-rated confidence in platform use and practical skill ratings across six ICT domains (office suites, email/cloud, browsing, app installation, online forms, digital security).
- Support & Barriers (Q19–Q20, Q19b): multi-select and open-ended prompts on needed support and university contributions.

➤ *Data Analysis*

Responses were exported as CSV and analyzed using Python. Descriptive statistics (frequencies, percentages, means) were computed for each item. Multi-response fields were parsed via string splitting and aggregated to calculate total counts and percentages. Findings are presented as tables and percentage-annotated bar charts aligned with the study objectives.

IV. RESULT AND DISCUSSION

The following sections present descriptive results organized by the study's five objectives. Each subsection refers to the corresponding tables (Table Q6–Q20, Q15) and figures generated from the survey data.

A. *Objective 1 Awareness of E-Governance*

To assess the level of awareness of e-governance among MA, M.Ed., MBA, and MBS students at Far Western University, three survey items (Q6–Q8) were analyzed.

Table 1 Awareness of E-Governance Among Students (n = 53).

Response	Count	Percentage
Yes	52	98.1%
No	1	1.9%

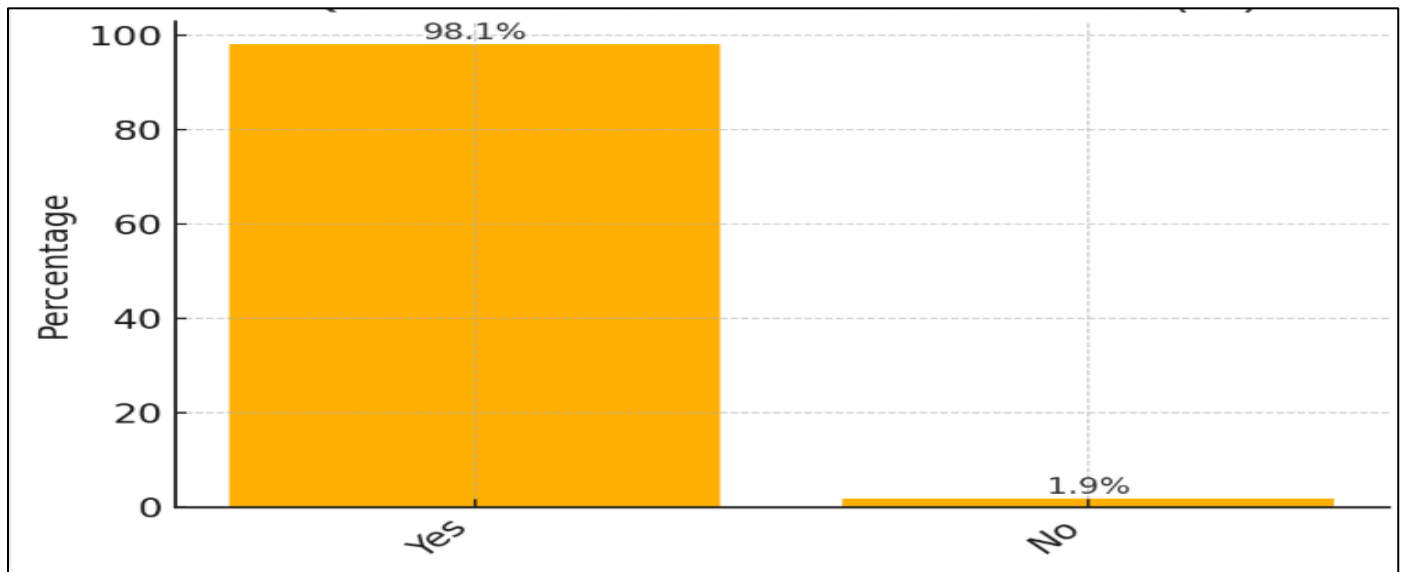


Fig 1 Bar Chart of E-Governance Awareness (%)

- Nearly all Respondents have Heard of E-Governance, Indicating Widespread Basic Exposure.

Table 2 First Source of Awareness (n = 53).

Source	Count	Percentage
Social media	24	45.3%
University lectures	17	32.1%
News media	5	9.4%
Government websites	4	7.5%
Friends/Peers	3	5.7%

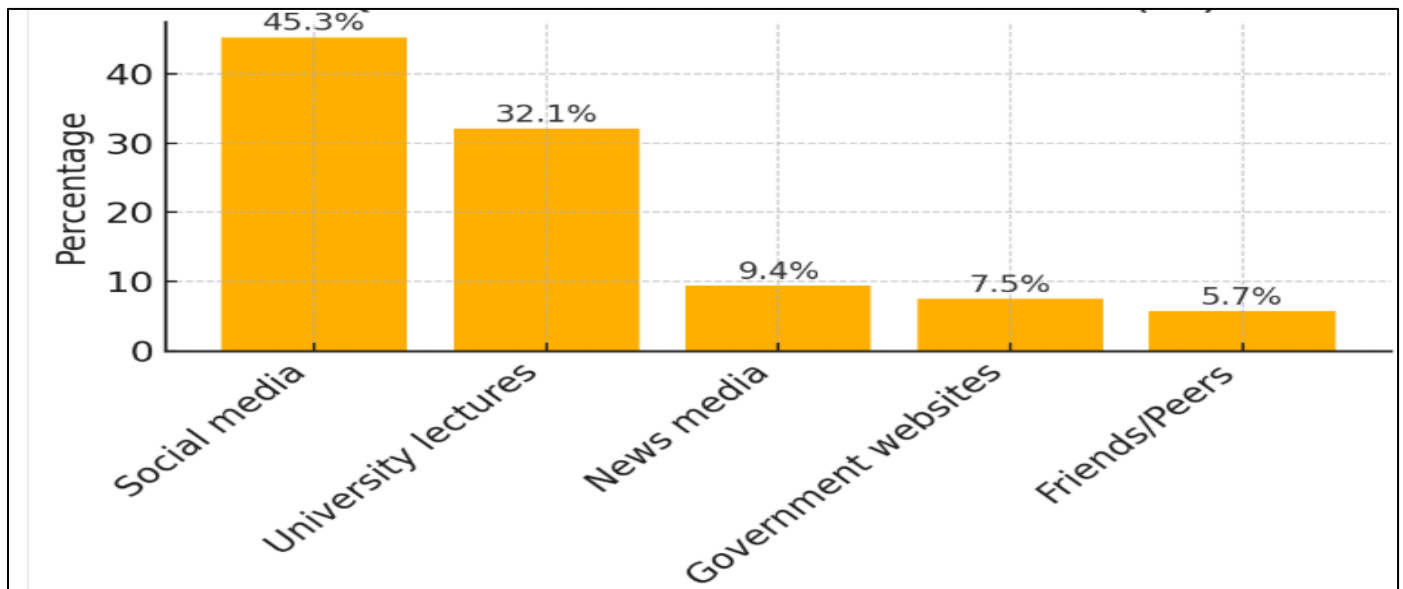


Fig 2 Bar Chart of First Sources of Awareness (%)

- Social Media and University-Led Sessions are the Primary Channels Through which Students First Learned about E-Governance.

Table 3 Familiarity with E-Governance Platforms (n = 53).

Platform	Count	Percentage
Loksewa Online	36	67.9%
Nagarik App	35	66.0%
Online Passport/Driving License system	18	34.0%
IRD e-services (tax portal)	12	22.6%

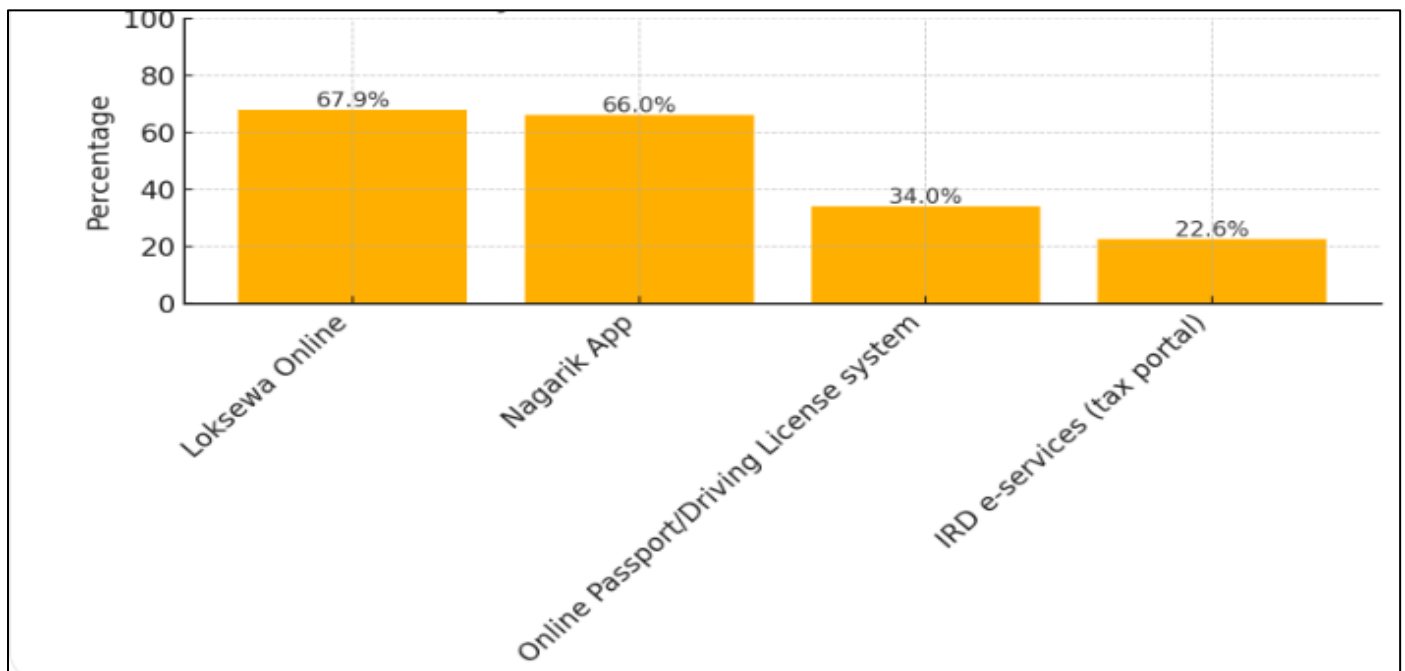


Fig 3 Familiarity with E-Governance Platforms (n = 53).

Most students are familiar with Loksewa Online and the Nagarik App, reflecting successful national platform outreach.

Students demonstrate near-universal awareness: 98.1% have heard of e-governance, primarily via social media and university lectures. They are most familiar with the national platforms, particularly the Nagarik App and Lok Sewa

Online, underscoring the effectiveness of existing outreach efforts.

B. Objective 2 Perceptual Readiness

To evaluate students' perceptions of the benefits and challenges associated with e-governance, survey items Q9–Q13 were analyzed.

Table 4 Perceived Corruption Reduction by E-Governance (Q9; n = 53)

Response	Count	Percentage
Agree	29	54.7%
Strongly Agree	13	24.5%
Neutral	4	7.5%
Disagree	5	9.4%
Strongly Disagree	2	3.8%

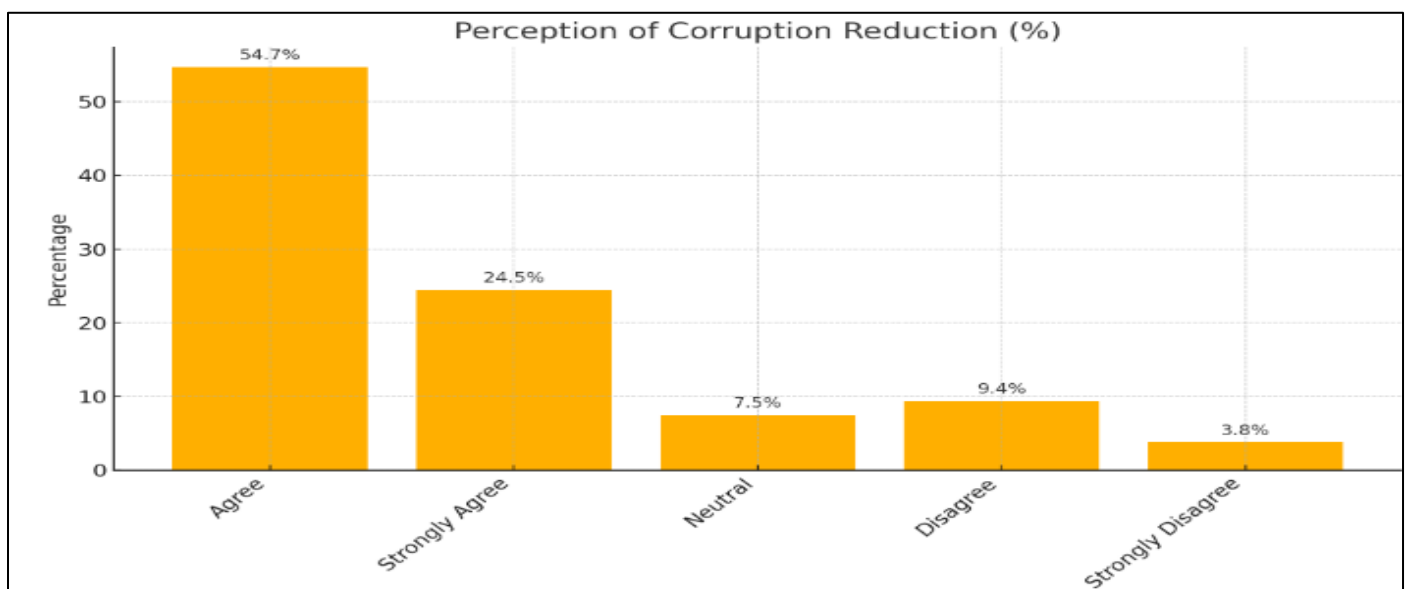


Fig 4 Bar Chart of Corruption Reduction Perception (%)

Table 5 Perceived Service Delivery Improvement (Q10; n = 53)

Response	Count	Percentage
Agree	38	71.7%
Strongly Agree	10	18.9%
Neutral	3	5.7%
Disagree	1	1.9%
Strongly Disagree	1	1.9%

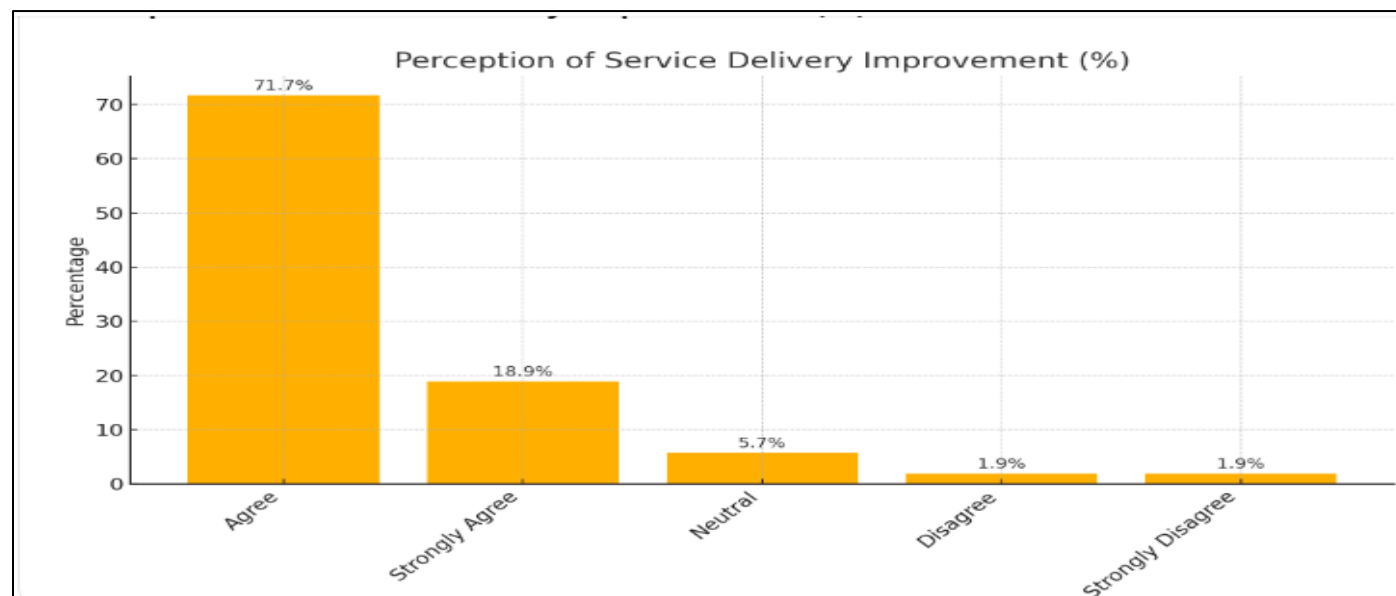


Fig 5 Bar Chart of Service Delivery Improvement Perception (%)

Table 6 Priority Sectors for E-Governance Implementation (Q11; Multi-Select; n = 53)

Sector	Count	Percentage
Local Government Services	42	79.2%
Education	41	77.4%
Revenue and Tax	34	64.2%
Financial sector	33	62.3%
Transportation and Licensing	31	58.5%
Health	28	52.8%
Other	9	17.0%

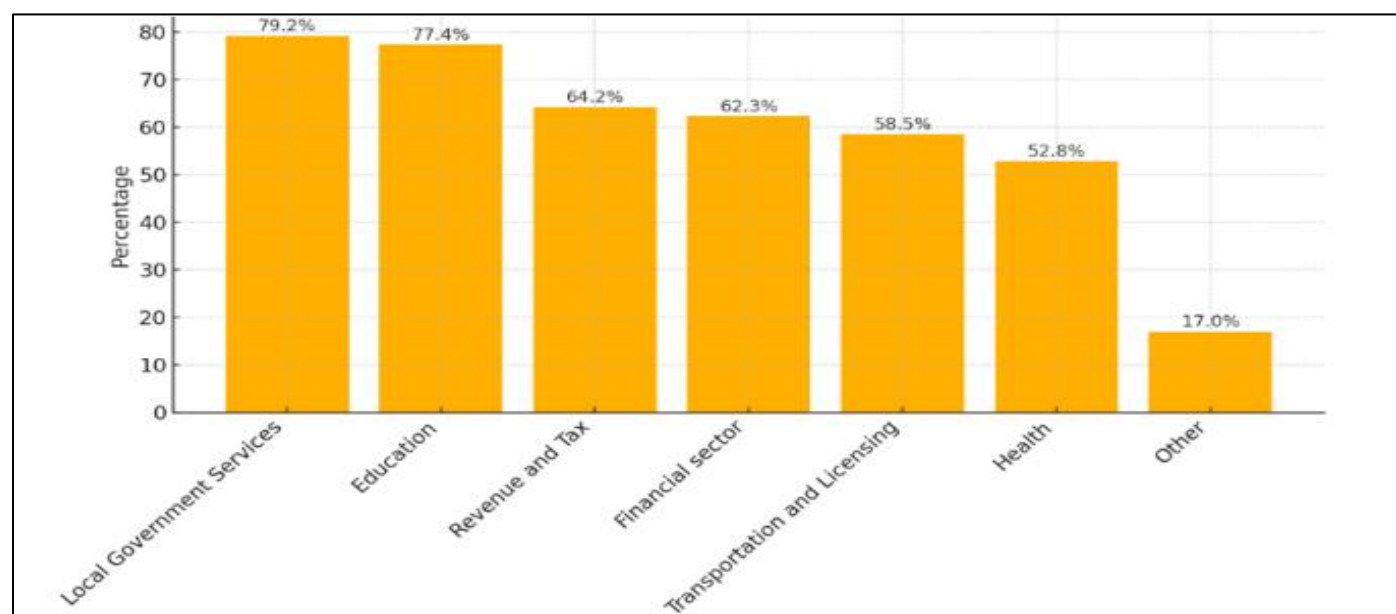


Fig 6 Bar Chart of Priority Sectors (%)

Table 7 Major Benefits of E-Governance (Q12; Multi-Select; n = 53)

Benefit	Count	Percentage
Faster service delivery	39	73.6%
Transparency and accountability	38	71.7%
Reduced paperwork	29	54.7%
Citizen empowerment	29	54.7%
Reduced corruption	28	52.8%

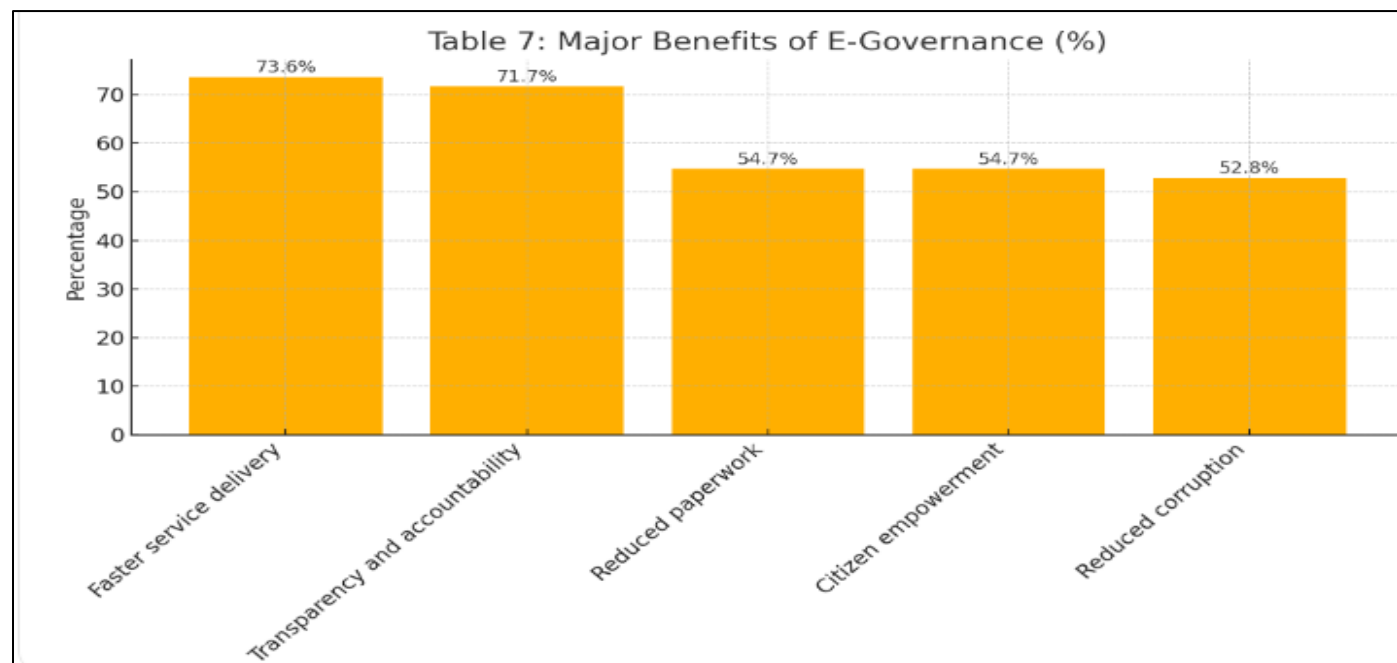


Fig 7 Bar Chart of Major Benefits (%)

Table 8 Willingness to Promote E-Governance (Q13; n = 53)

Response	Count	Percentage
Yes	42	79.2%
Maybe	9	17.0%
No	1	1.9%
Yes;Maybe	1	1.9%

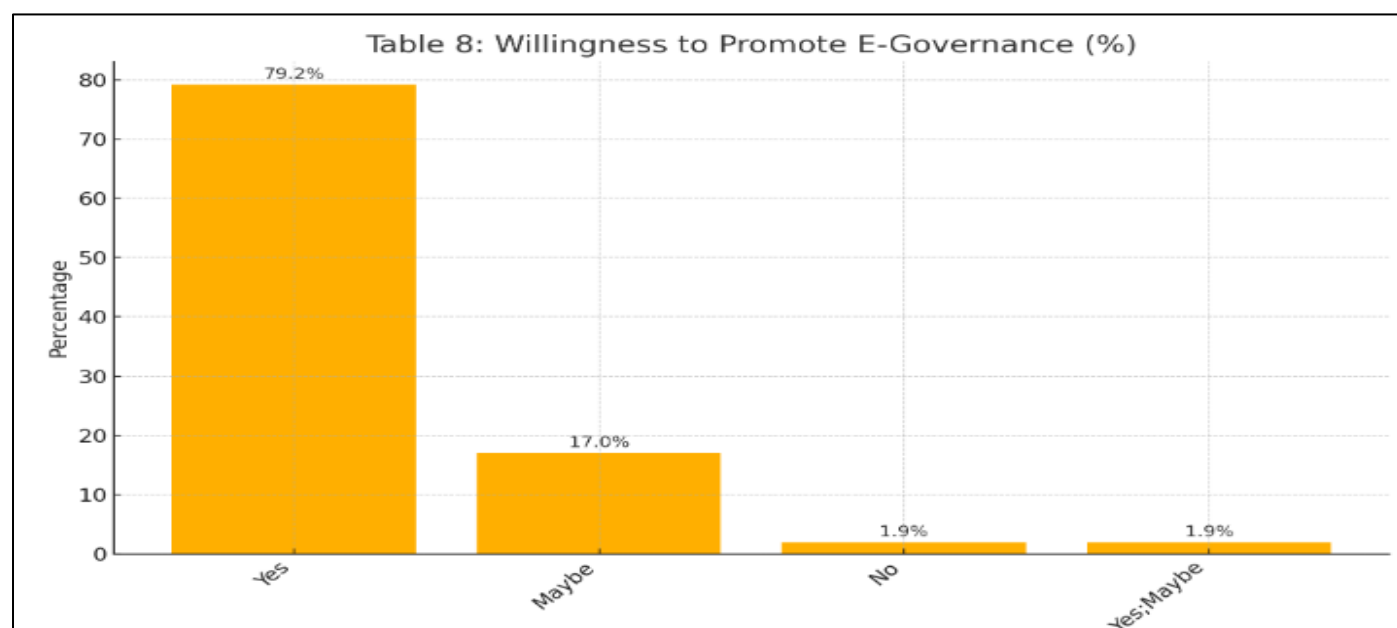


Fig 8 Bar Chart of Willingness to Promote (%)

Students exhibit strong attitudinal readiness for e-governance: 79.2% agree and 24.5% strongly agree on corruption reduction, while 71.7% agree and 18.9% strongly agree on service delivery improvements. Local Government Services, Education, and Revenue and Tax are viewed as the highest priority sectors. Faster service delivery (73.6%) and transparency and accountability (71.7%) top the list of perceived benefits, with citizen empowerment and reduced paperwork also cited by over half of respondents. Finally, 79.2% of students are willing to promote e-governance in

their future roles, indicating a positive attitude that education and training programs can further leverage and reinforce.

C. Objective 3 Behavioral Confidence

To determine graduate students' confidence in using and promoting e-governance platforms, we analyzed survey items Q14, Q16, Q17, and Q18. Exact counts and percentages are presented below, with bar charts immediately following each table.

Table 9 Confidence in Using Digital Government Platforms (Q14; n = 53)

Response	Count	Percentage
Confident	36	67.9%
Very Confident	13	24.5%
Not Confident	3	5.7%
Not at all Confident	1	1.9%

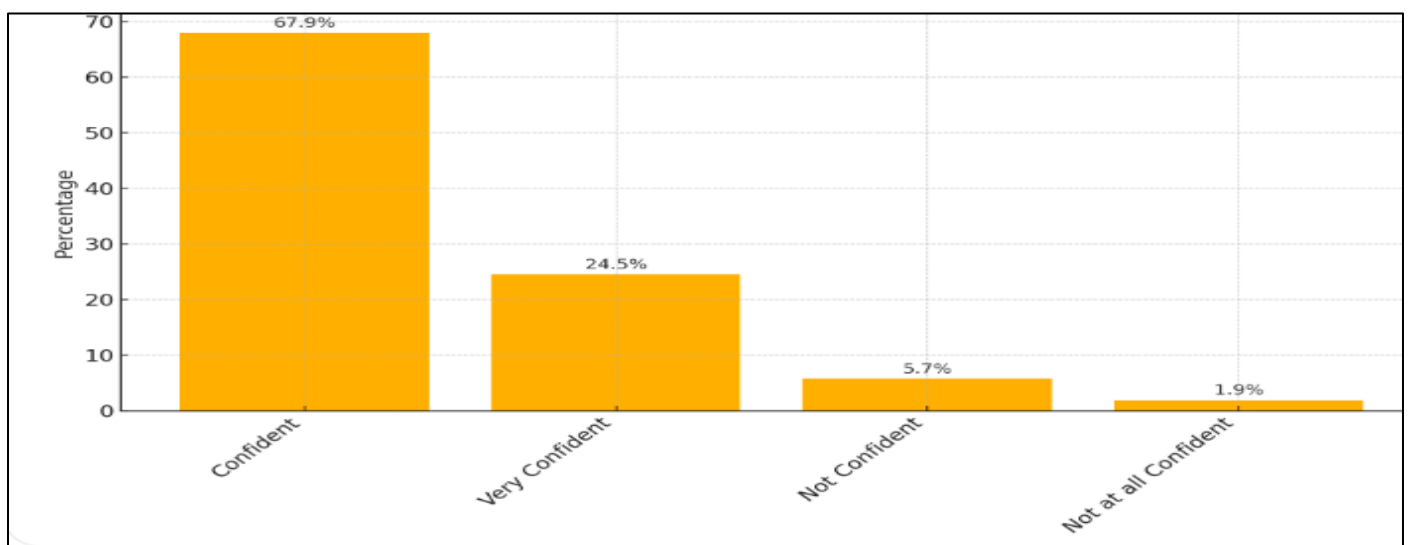


Fig 9 Confidence in Using Digital Government Platforms (%)

Table 10 Receipt of Formal ICT Training Related to E-Governance (Q16; n = 53)

Response	Count	Percentage
No	37	69.8%
Yes	15	28.3%
If yes, specify topic/duration (open-ended entry)	1	1.9%

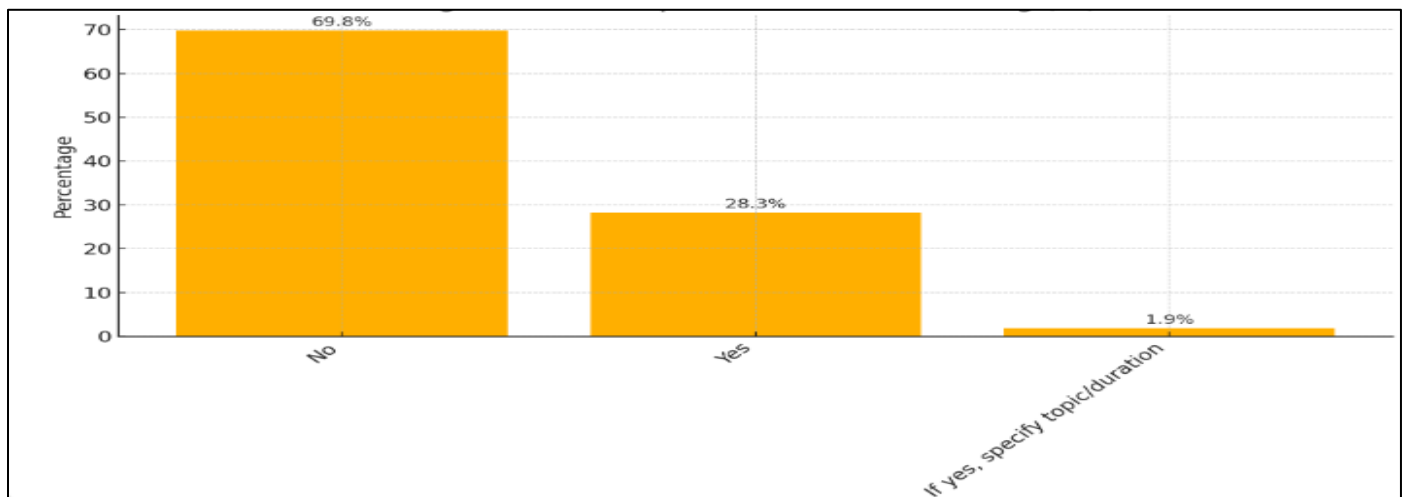


Fig 10 Receipt of Formal ICT Training (%)

Table 11 Regular use of Digital Devices for Academic/Professional Work (Q17; n = 53)

Device	Count	Percentage
Smartphone	30	56.6%
Laptop	19	35.8%
Desktop Computer	2	3.8%
No device used	2	3.8%

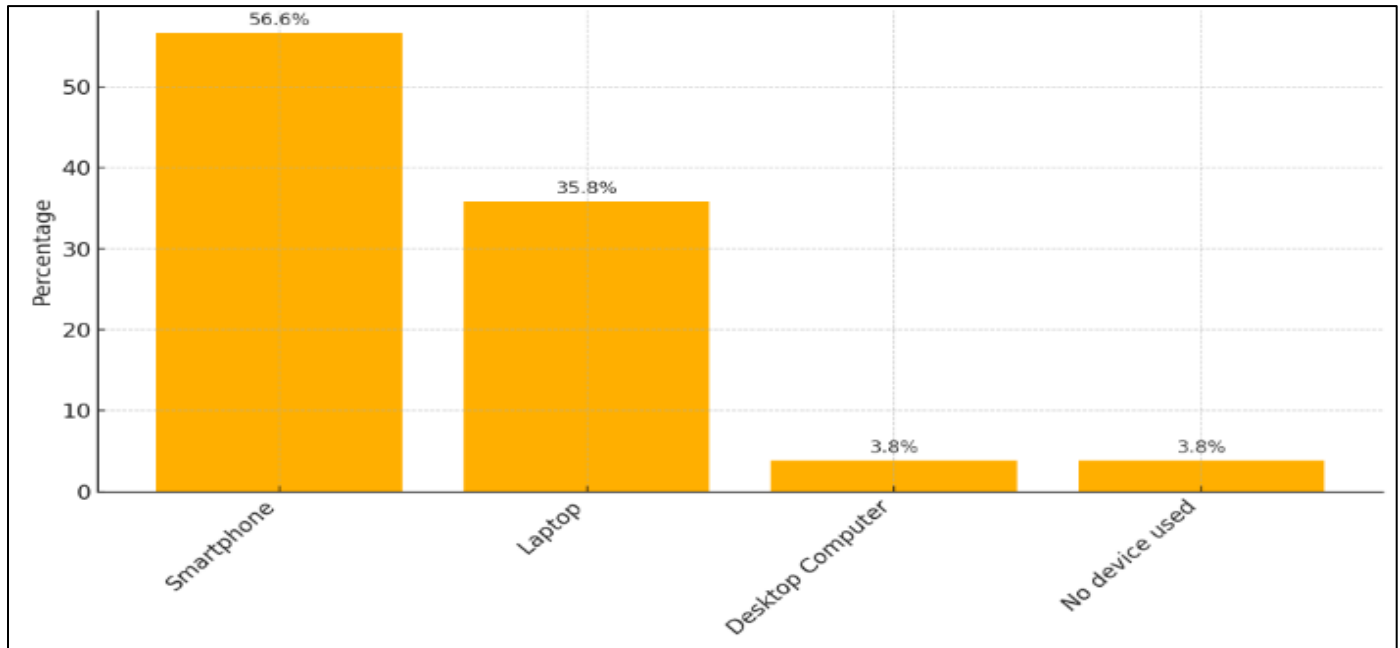


Fig 11 Regular Digital Device use (%)

Table 12 Willingness to Promote E-Governance Professionally (Q18; n = 53)

Response	Count	Percentage
Yes	42	79.2%
Maybe	9	17.0%
No	1	1.9%
Yes; Maybe	1	1.9%

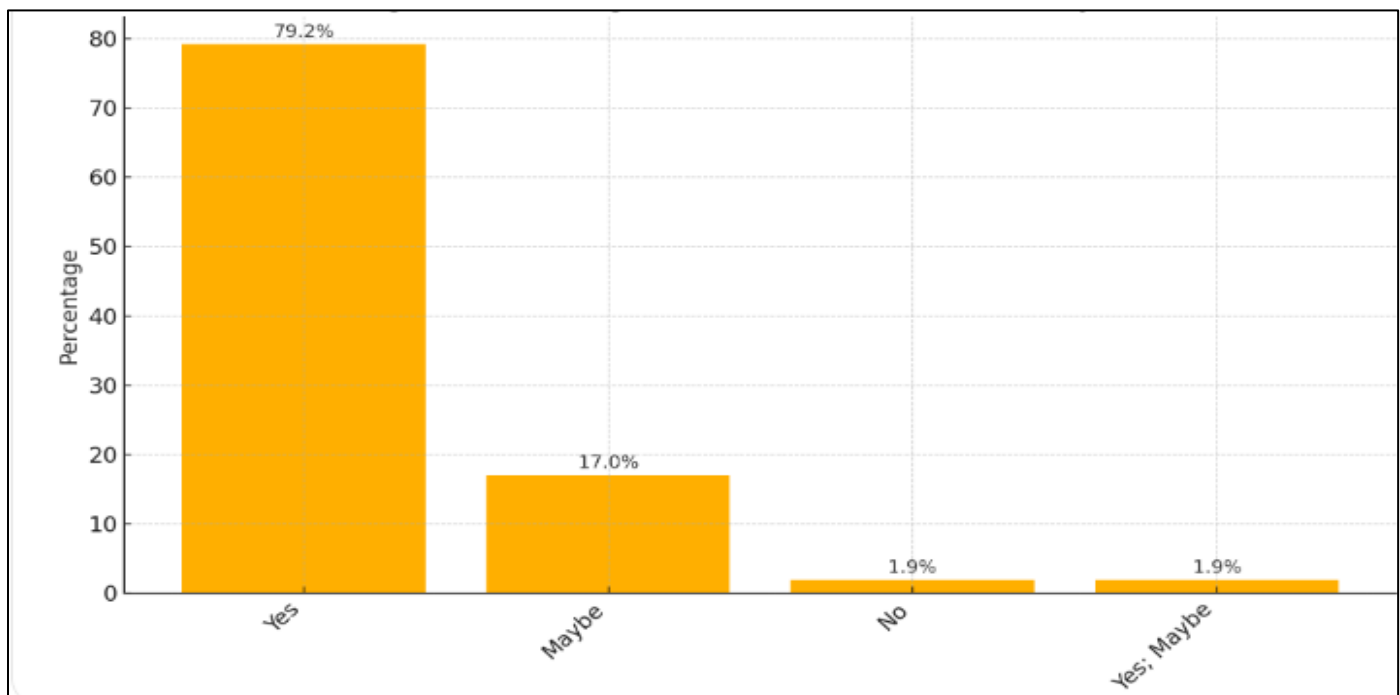


Fig 12 Willingness to Promote Professionally (%)

Overall, 92.4% of respondents report being “Confident” or “Very Confident” in using e-governance platforms, indicating strong behavioral readiness. However, 69.8% have not received any formal ICT training specific to e-governance, highlighting a need for structured skill-building. Device usage is pervasive: 92.4% of students regularly use smartphones or laptops for academic or professional tasks, underscoring access to digital tools. Finally, 96.2% express willingness to promote e-governance in their future roles,

reflecting a positive disposition that can be further supported through targeted training and experiential learning opportunities.

D. Objective 4 Core ICT Competencies

To determine graduate students’ competencies in ICT Q.15 is analyzed. Table 13 summarizes the proficiency across six domains and Figures 13-1 through 13-6 depict percentage distributions.

Table 13 (Percentages %): ICT Skill Competencies

Skill Area	Excellent	Good	Fair	Poor	No Experience
MS Word, Excel, PowerPoint	20.8%	62.3%	17.0%	0.0%	0.0%
Email & cloud storage (Google Drive, OneDrive)	37.7%	49.1%	11.3%	0.0%	1.9%
Internet browsing & search engines	28.3%	62.3%	7.5%	0.0%	1.9%
Installing & using apps/software	30.2%	58.5%	9.4%	0.0%	1.9%
Handling online forms or web portals	20.8%	56.6%	18.9%	1.9%	1.9%
Understanding of digital security (passwords, privacy, phishing, etc.)	30.2%	50.9%	13.2%	3.8%	

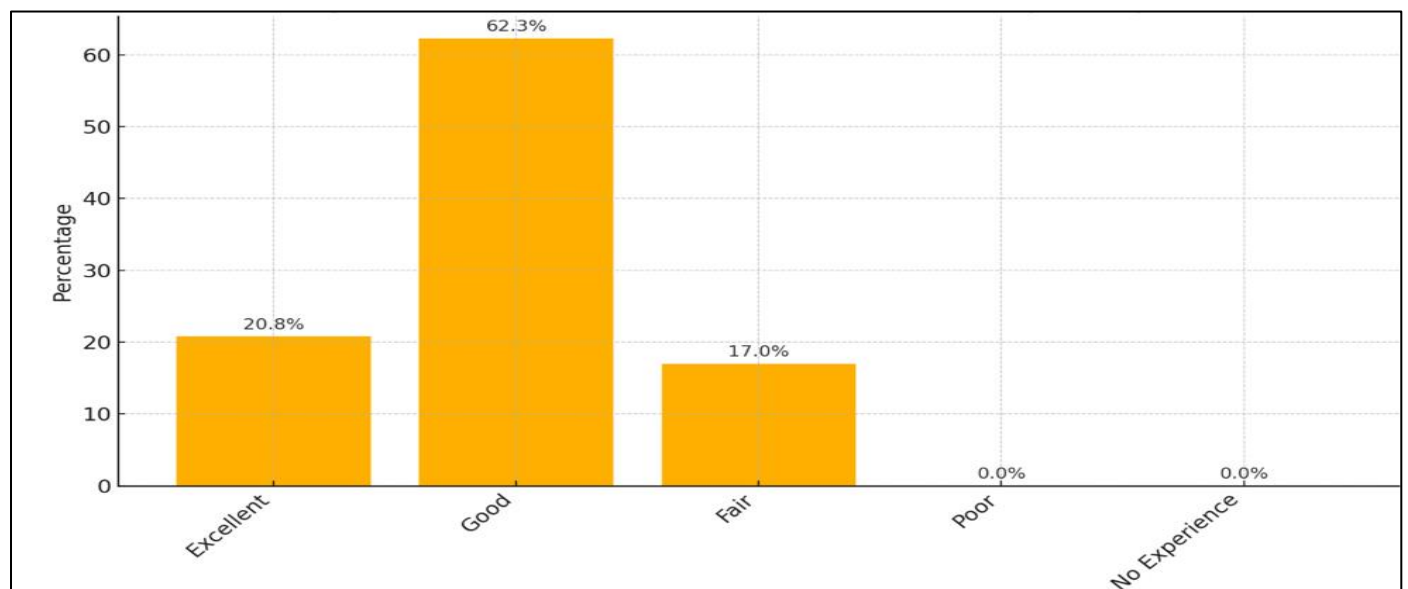


Fig 13-1 MS Word, Excel, PowerPoint Competency (%)

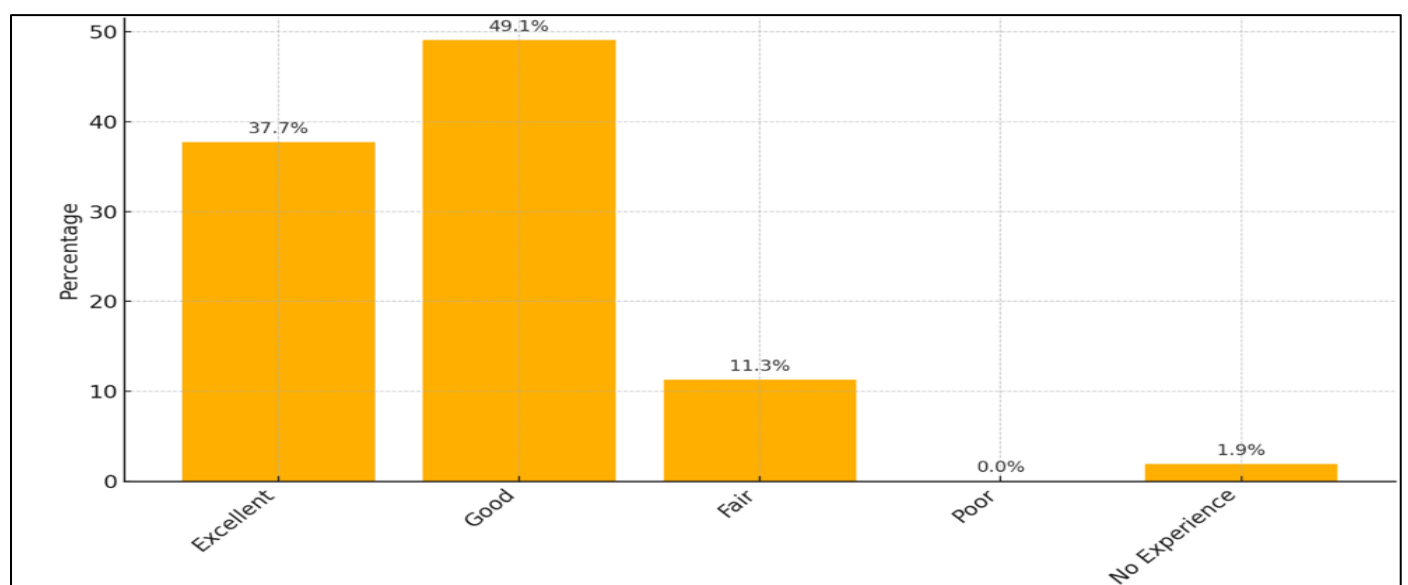


Fig 13-2 Email & Cloud Storage (Google Drive, OneDrive) Competency (%)

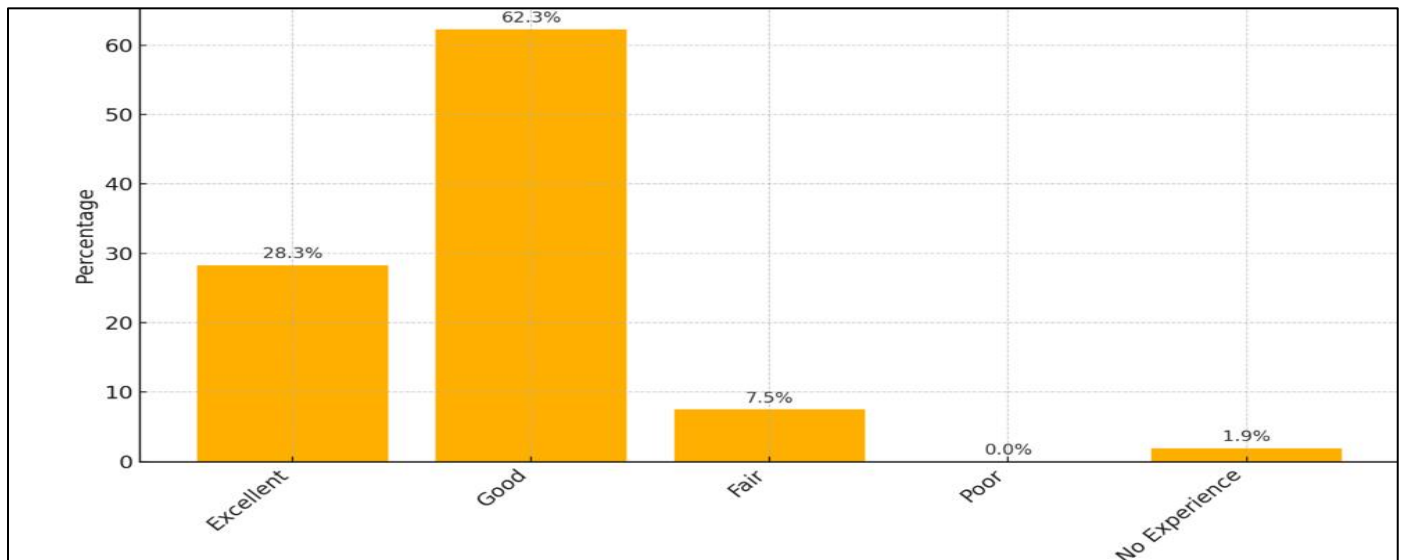


Fig 13-3 Internet Browsing & Search Engines Competency (%)

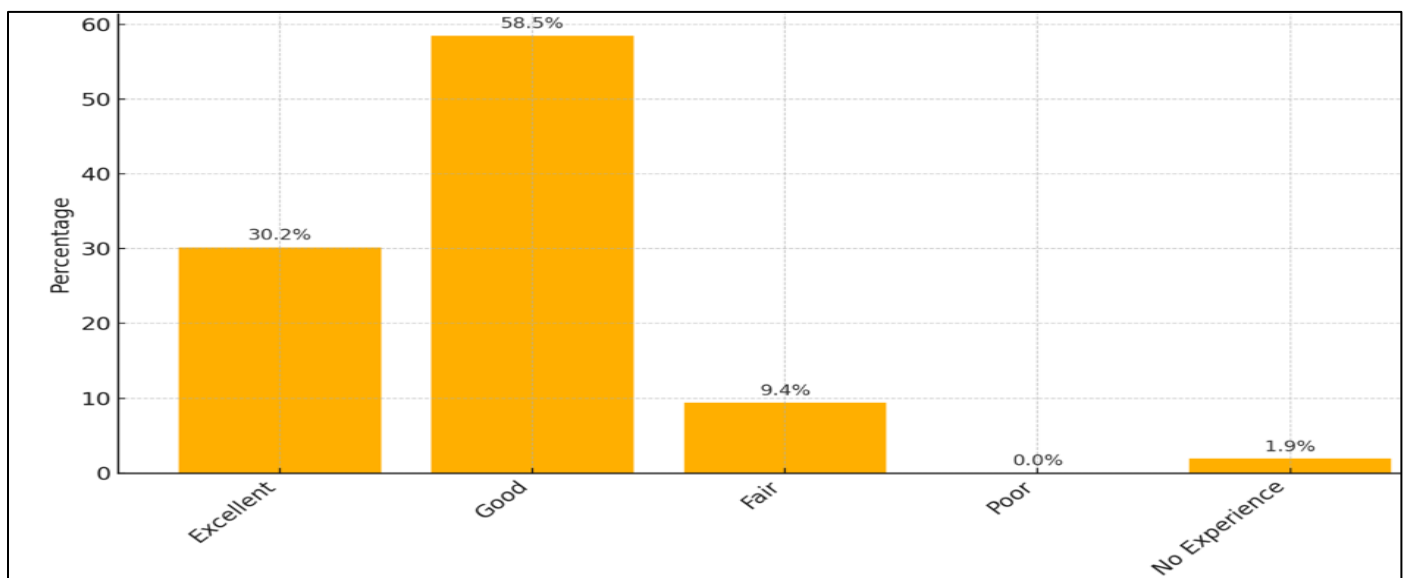


Fig 13-4 Installing & using Apps/Software Competency (%)

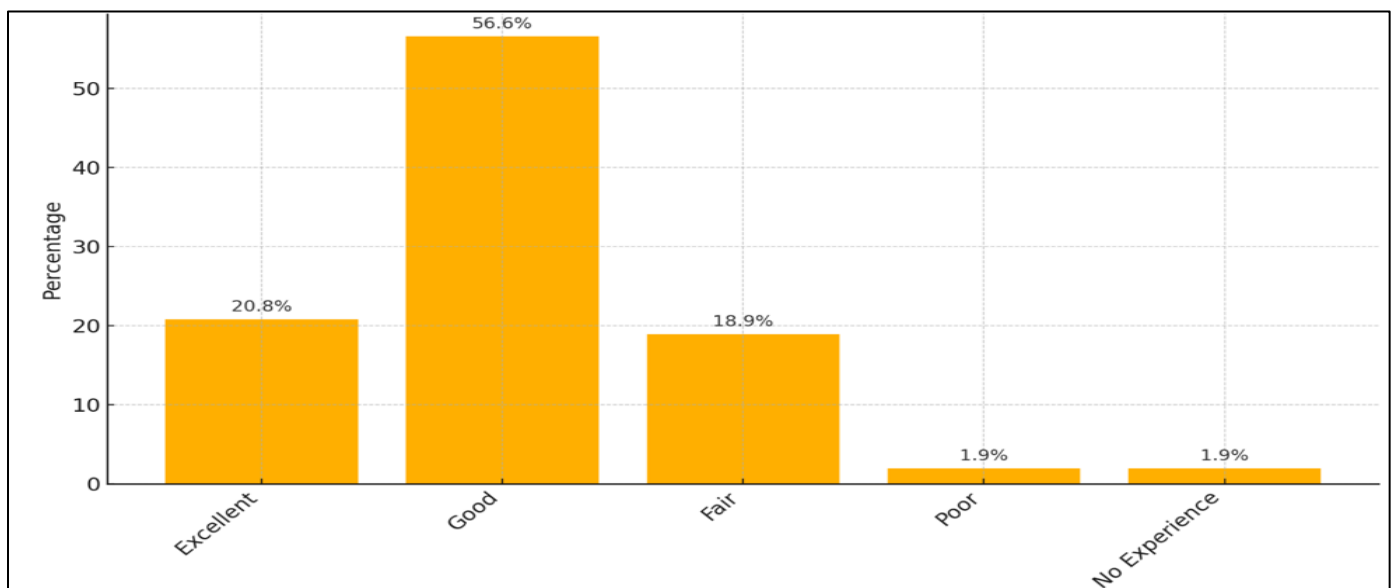


Fig 13-5 Handling Online forms or Web Portals Competency (%)

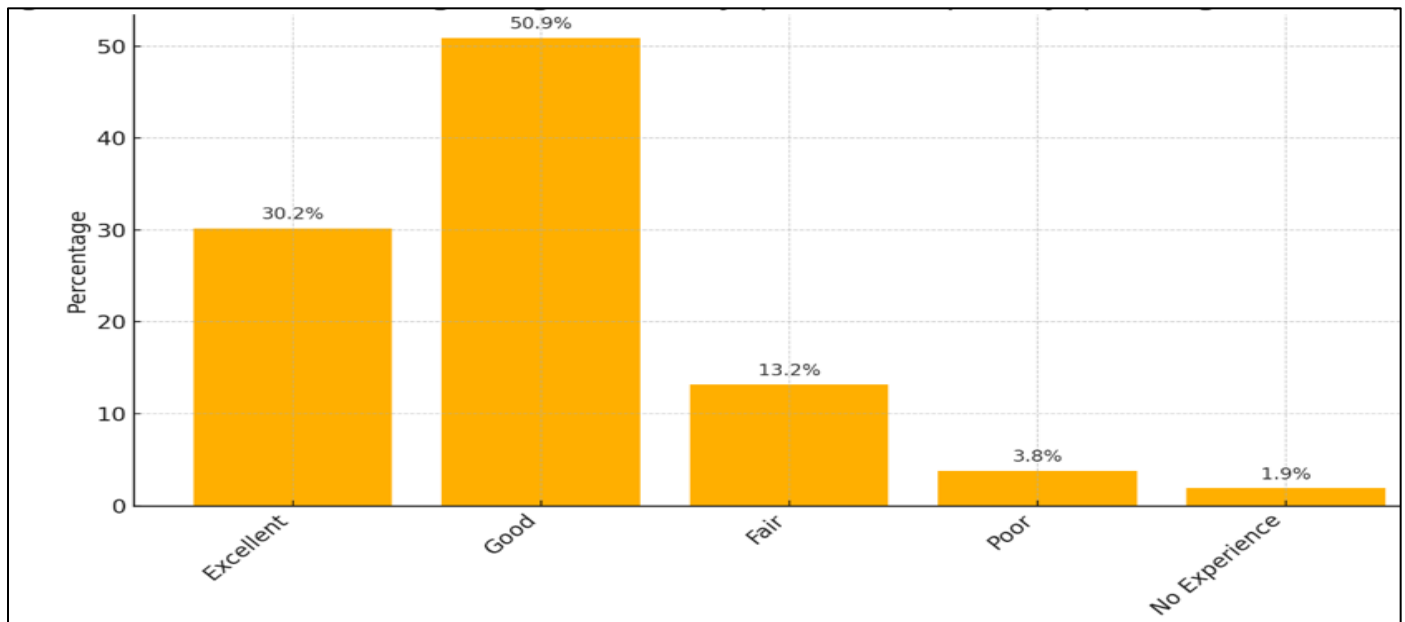


Fig 13-6 Understanding of Digital Security (Passwords, Privacy, Phishing, etc.) Competency (%)

Table 13 summarizes proficiency across six domains, and Figures 13-1 through 13-6 depict percentage distributions. Combined Excellent+Good ratings are: internet browsing (90.6%), email/cloud storage (86.8%), app installation (88.7%), MS Office (83.1%), digital security (81.1%), and online-form handling (77.4%). The relatively lower rating in security practices and form handling highlights the need for focused skill development workshops.

E. Objective 5 Support Needs and Barriers

For Objective 5, survey items Q19a (Support Needed), Q19b (University Contributions), and Q20 (Barriers) were analyzed to uncover the types of support students require and the obstacles they face when engaging with e-governance platforms. The tables and graphs are shown below.

Table 14a Support Needed for E-Governance use

Support Needed	Count	Percentage
ICT Training	25	47.2%
Curriculum inclusion	12	22.6%
Peer learning and group projects	9	17.0%
Awareness campaigns	6	11.3%
Mentorship programs	1	1.9%

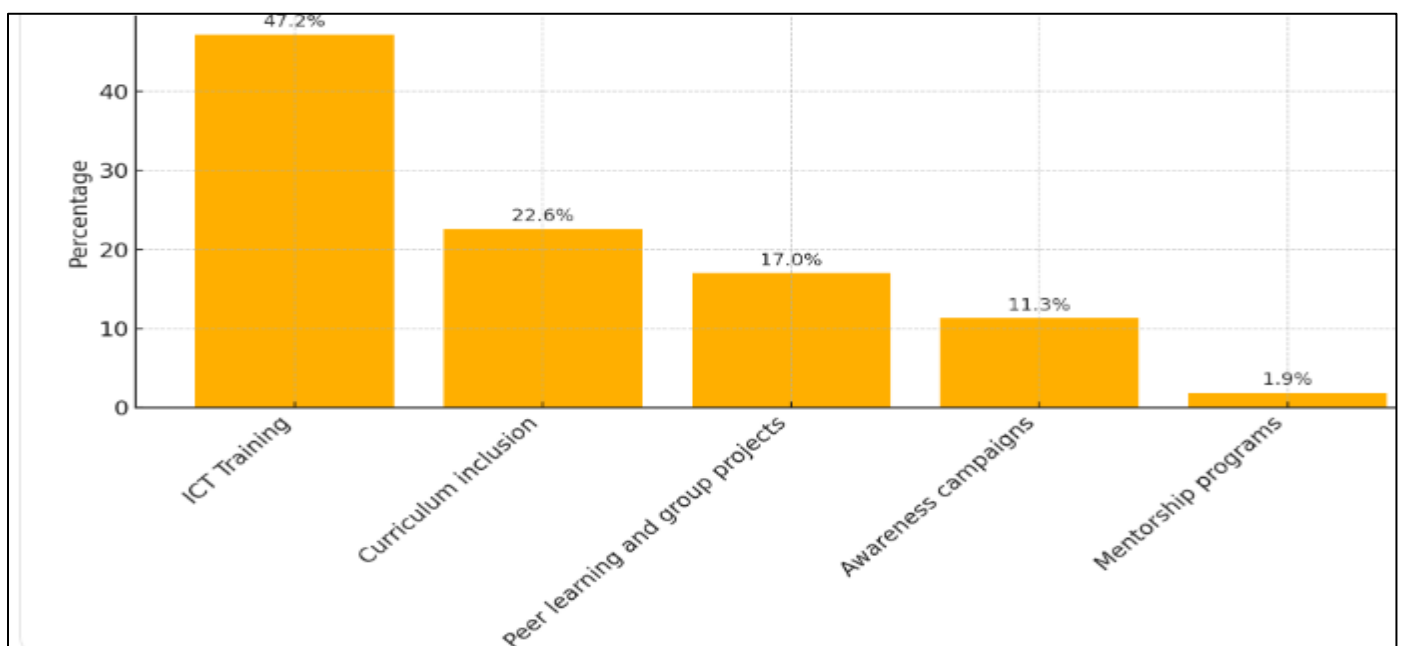


Fig 14a Support Needed for E-Governance use (%)

Table 14b University Contributions to E-Governance

University Contribution	Count	Percentage
By integrating e-governance topics into the curriculum	44	83.0%
By organizing workshops and training programs	30	56.6%
By providing access to digital infrastructure and labs	27	50.9%
By collaborating with government agencies on digital projects	24	45.3%
By encouraging student-led digital innovation labs	18	34.0%
Other	3	5.7%

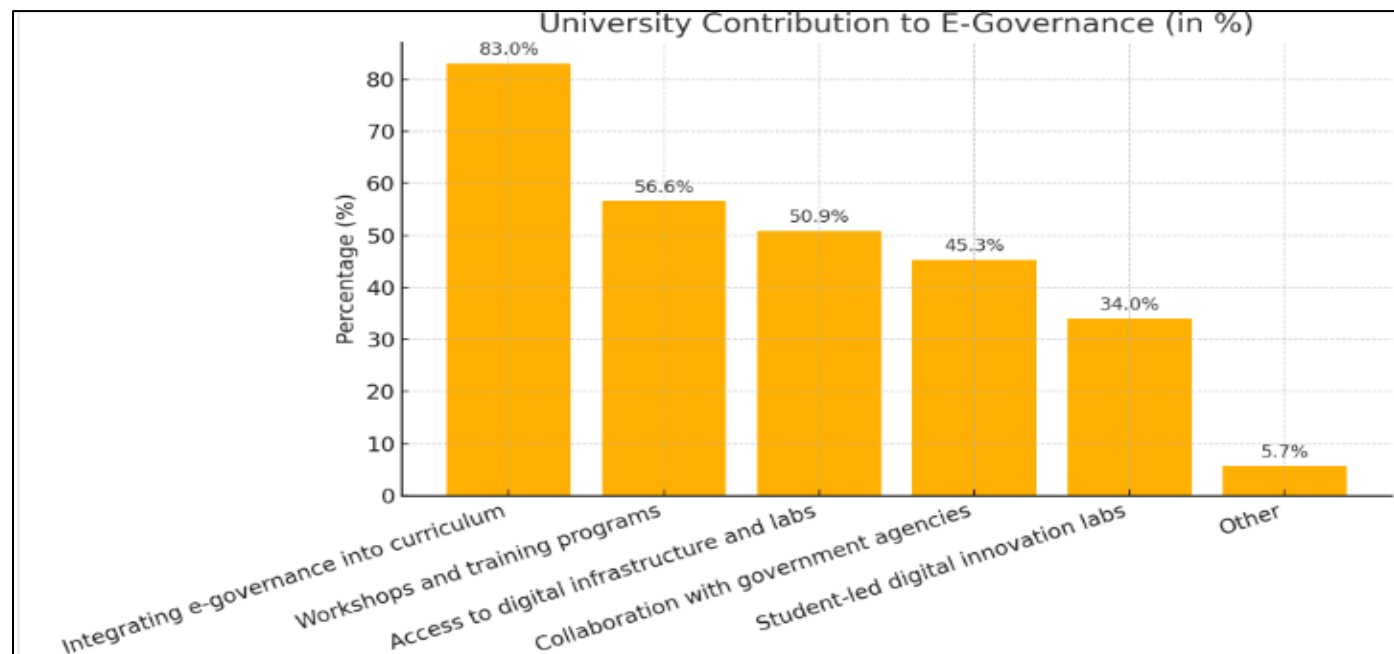


Fig 14b University Contributions to E-Governance (%)

Table 15 Barriers to E-Governance Use

Barrier	Count	Percentage
Lack of awareness	35	66.0%
Poor internet access	31	58.5%
Software is not built	17	32.1%
Lack of trust	17	32.1%
Complexity of use	14	26.4%

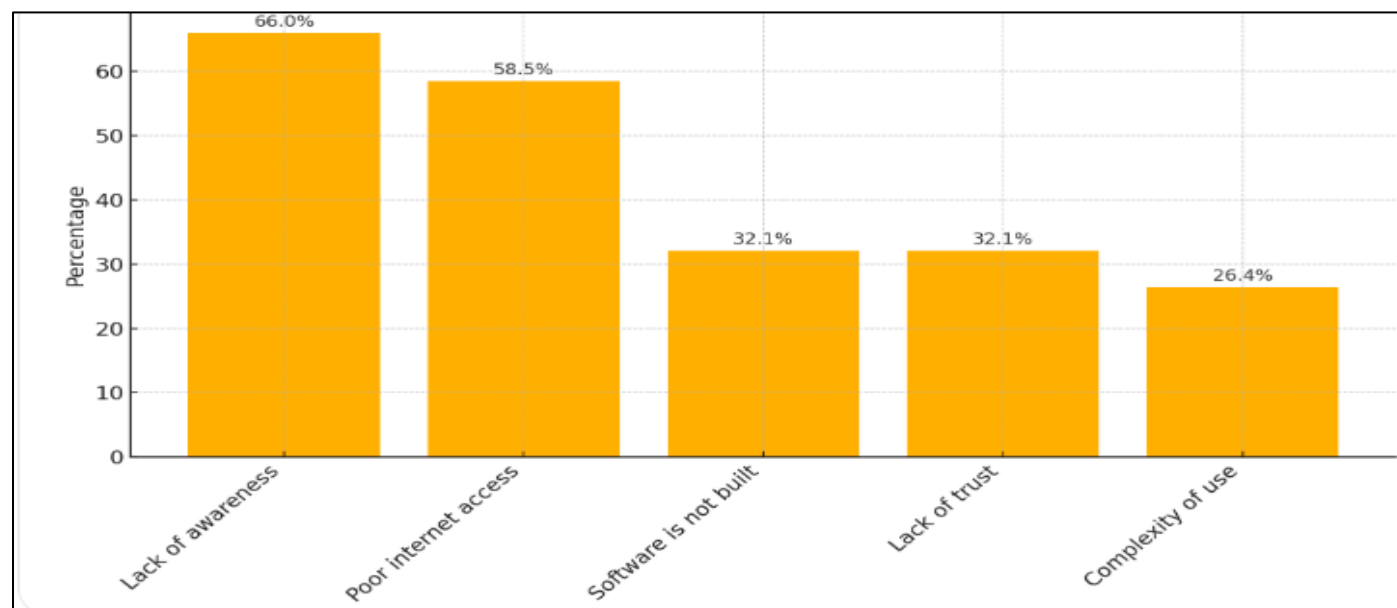


Fig 15 Barriers to E-Governance use (%)

Students overwhelmingly cite ICT Training (47.2%) and Curriculum inclusion (22.6%) as key support needed to engage effectively with e-governance. They see universities playing a leading role by integrating e-governance topics into curricula (83.0%) and organizing workshops and training programs (56.6%). Major systemic barriers include Lack of awareness (66.0%) and Poor internet access (58.5%), followed by technology constraints (“Software is not built,” 32.1%) and trust issues (32.1%). These findings underscore the importance of targeted capacity-building and infrastructure improvements to enhance graduate students’ readiness for e-governance implementation.

V. CONCLUSION

This study demonstrates that graduate-level students at Far Western University possess a very high level of conceptual awareness of e-governance, with virtually all respondents (98.1%) having heard of it and most familiar with core platforms such as the Nagarik App and Lok Sewa Online. Their attitudes are overwhelmingly positive: over three-quarters agree or strongly agree that e-governance reduces corruption (79.2%/24.5%) and improves service delivery (71.7%/18.9%), and they prioritize its application in local government services and education. Behavioral confidence is likewise strong more than nine out of ten students feel confident or very confident navigating digital government portals yet fewer than one-third have received formal ICT training, revealing a clear gap between willingness and structured preparation.

In terms of practical skills, students report solid proficiency in routine tasks MS Office (83.1%), internet browsing (90.6%), and email/cloud storage (86.8%) but are less secure in handling online forms (77.4%) and digital-security practices (81.1%). When asked what would help them engage more fully, nearly half cite ICT training and a fifth call for curriculum inclusion, while they see universities as key to integrating e-governance modules and organizing hands-on workshops. Persistent barriers most notably procedural “awareness” of how to use specific portals (66.0%) and poor internet access (58.5%) underscore the need for coordinated capacity-building and infrastructure investment.

Together, these results show that while students fully understand and support e-governance in principle, they still need practical help to make it work in real life. In plain terms, they know why digital government matters and feel positive about using it, but many lack hands-on training, step-by-step guidance, and reliable internet access. If universities and policymakers work together to offer targeted workshops, clear how-to materials, and stronger connectivity, these future leaders will be ready to drive Nepal’s e-governance forward.

RECOMMENDATION

To build upon these findings and strengthen e-governance readiness across Nepal’s higher education sector, several strategic interventions are proposed. First, future research should adopt broader sampling by extending the

survey to master’s students across both public and private universities nationwide. Such an approach would enhance the generalizability of findings while capturing regional and institutional variations in e-governance readiness, thus offering a more comprehensive understanding of the national landscape.

Additionally, longitudinal studies are recommended to assess the effectiveness of targeted interventions over time. By implementing pre- and post-intervention assessments around activities such as hands-on ICT workshops or integrated curriculum modules, researchers can measure changes in students’ awareness, confidence, and digital competencies, thereby generating evidence-based insights into the impact of structured training programs.

Equally important is the integration of e-governance into graduate curricula. Embedding practical projects and dedicated digital security modules within core courses (such as MA, M.Ed., MBA, and MBS) will bridge the gap between conceptual knowledge and operational skills, ensuring students gain direct experience with the tools and processes they are expected to master.

In tandem, collaborative pilot projects with local government bodies should be initiated to provide students with real-world exposure. These partnerships would allow students to co-design and evaluate e-governance initiatives, fostering deeper engagement while offering tangible evidence of their potential contributions to Nepal’s digital transformation.

Further, investment in ICT infrastructure is essential. Universities should advocate for enhanced campus internet connectivity, secure computer laboratories, and dedicated practice environments that support uninterrupted access to e-governance platforms. These resources will eliminate technical barriers and create conducive learning conditions for skill application. Finally, the development of procedural awareness tools—including step-by-step user guides, in-app tutorials, and quick-start videos for platforms such as the Nagarik App and online tax portals—will directly address the barrier of limited familiarity. By simplifying access and navigation, such resources will empower students to confidently engage with digital services.

Collectively, these measures will not only enrich the research base but also cultivate a digitally competent cadre of future leaders who are prepared to both understand and actively advance Nepal’s e-governance agenda.

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