ICAG'S JOURNEY TO E-ASSESSMENT: A STRATEGIC ANALYSIS OF TECHNICAL, OPERATIONAL AND HUMAN RESOURCE READINESS

ICAG AND WACAR RESEARCH REPORT

ABOUT **ICAG**

ICAG (Institute of Chartered Accountants, Ghana), established in 1963, is the premier national organization dedicated to advancing the accountancy profession and serving the public interest in Ghana. With over 10,000 members and 16,000 aspiring professionals, ICAG represents a vibrant community of accounting and finance experts committed to the highest standards of integrity, professionalism, and excellence.

ICAG equips professionals across Ghana and the Sub-Region for rewarding careers in accountancy, finance, and management. Through our top-tier educational programs and professional development initiatives, we cultivate our members' financial expertise, business acumen, and digital skills, preparing them to thrive in a dynamic global environment.

Our members, employed across diverse industries, drive economic growth and social progress. ICAG firmly believes that the accountancy profession is a pillar of society, fostering the growth and prosperity of Ghana's economy, businesses, and citizens. By upholding robust financial management practices, combating fraud, promoting ethical leadership, and championing sustainable development, our members lead positive transformation.

ICAG drives accountancy innovation through rigorous research and thought leadership. Our studies address current challenges and anticipate trends, maintaining our position at the forefront of the field. This research-driven, non-profit approach allows us to focus on long-term sector needs, making ICAG a key catalyst for evidence-based progress in Ghana's financial landscape and beyond.

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ABOUT THE **WACAR**

The West African Centre for Accountancy Research (WACAR), established in Ghana in April 2023 by the Institute of Chartered Accountants, Ghana (ICAG), stands as the premier hub for financial research in West Africa. WACAR's mission is to revolutionize public financial management, governance, and accountability across the region through rigorous, data-driven inquiry.

WACAR's multidisciplinary team employs advanced methodologies to produce authoritative, evidence-based recommendations in financial reporting, auditing, governance, and tax policy. These high-caliber insights directly inform policy decisions, enhance standards, and foster sustainable economic growth, tailored to West Africa's unique socioeconomic landscape.

Guided by principles of integrity, collaboration, innovation, and measurable impact, WACAR stands at the forefront of accounting research. The Centre's commitment to academic excellence and practical application positions it as an emerging global thought leader, driving transformative change in financial governance.

WACAR's outputs are poised to make significant, quantifiable contributions to West African financial ecosystems. By addressing critical challenges, WACAR's work promises to strengthen institutional frameworks, enhance transparency, and ultimately improve economic outcomes for millions across the region.

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ACKNOWLEDGEMENT

EXECUTIVE **SUMMARY**

The Institute of Chartered Accountants Ghana (ICAG) conducted a comprehensive study to assess student readiness for transitioning to online examinations with remote proctoring. Using a mixed-methods research design, this study collected data from ICAG students through a quantitative survey of 350 students, yielding 205 valid responses (58.6% response rate), complemented by qualitative insights from in-depth interviews with seven strategically selected students. This comprehensive approach revealed significant opportunities and implementation challenges for ICAG's transition to online examinations.

The study identified a notable digital divide between urban and rural areas, with computer ownership significantly higher in urban areas (73%) compared to rural regions (54%). Most students (82%) rely on mobile data connections, with 74% of rural students reporting unstable internet connectivity. Digital proficiency varies significantly by education level, with Master's degree holders showing higher advanced competency (51%) compared to Bachelor's degree holders (27%). Student readiness and attitudes vary across different levels of study. Level 1 students demonstrate the highest readiness (81.9%) and require shorter preparation time (90.9% needing ≤6 months), while Level 2 (56.7%) and Level 3 (63.8%) students show moderate readiness and need longer preparation periods. Senior students exhibit greater acceptance (73.9%) of online examinations compared to younger students (54.8%), challenging common assumptions about age-related technology adoption.

Technical infrastructure presents significant challenges across all locations. About 63% of students lack proper webcam access, and over 80% report inadequate backup power. Study space availability shows an urban-rural divide, with 62% of urban students having access compared to 50% of rural students. Power outages affect students across all areas, with 49.6% of urban, 65.4% of peri-urban, and 60% of rural students experiencing weekly or daily disruptions. Remote proctoring readiness requires particular attention, as approximately 50% of students report no prior experience. Urban students (54.3%) show higher comfort levels with webcam monitoring compared to peri-urban students (30.8%). Despite positive attitudes toward online examinations, 60-70% of students still prefer traditional examination methods.

The assessment of institutional support requirements reveals varying levels of confidence across student groups. Level 3 students demonstrate the highest confidence (60.3%) in institutional support, compared to Level 1 (54.5%) and Level 2 (46.3%). Most students rate ICAG's technical infrastructure as average or good, and notably, 70-80% believe the transition to online examinations will enhance ICAG's reputation. The study also reveals strongly positive professional impact perceptions. Over 75% of students expect online examinations to enhance their professional skills, with relevance to modern accounting rated particularly highly (71-86%). Students also recognize the potential for improved global competitiveness, with 75-80% anticipating positive impacts in this area. Students express clear preferences for support methods, favouring video tutorials (3.64/5.0) and practice tests (3.29/5.0). Their main concerns center around internet connectivity (3.85/5.0) and technical issues (3.43/5.0). However, they recognize potential benefits including convenience (3.49/5.0), faster results (3.28/5.0), and cost-effectiveness (3.05/5.0).

Based on the analysis of student readiness for online examinations at ICAG, the following recommendations are proposed. ICAG should establish a comprehensive communication strategy to address low awareness and misconceptions about remote proctoring, while implementing a robust technical support

system with dedicated headquarters staff providing continuous assistance through multiple platforms. To address the digital divide, the Institute should develop location-specific technical guidelines and establish a simulation-based orientation program featuring mock examinations and practical workshops. A gradual rollout approach should be adopted, beginning with Level 1 students and progressively scaling to higher levels, while aligning the implementation with professional competency frameworks to emphasize workplace relevance.

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STATEMENT FROM
OUR PRESIDENT

Dear Esteemed Members and Stakeholders,

As President of ICAG, I am pleased to share the findings of our comprehensive readiness assessment study for the transition to online examinations with remote proctoring. Our research reveals both encouraging prospects and significant challenges that require careful attention.

The study shows strong acceptance of online examinations across our diverse student body, with over 70% viewing this transition as beneficial for professional development. Notably, our findings challenge conventional assumptions about age-based resistance, with strong endorsement across all age groups, including remarkable support from our most senior students.

Our assessment identified several key challenges, with many students reporting limited familiarity with remote proctoring systems. Time management concerns emerged as significant, particularly for advanced level students, who indicate they need extended preparation time. Additionally, the study revealed varying levels of technical readiness concern across all student demographics.

The Institute remains committed to maintaining examination integrity while embracing this digital transformation. We will prioritize comprehensive student support, focusing on the identified preference for video-based training and practice tests. Significantly, our research shows strong confidence in the professional impact of this transition, with most students believing it will enhance future accountants' skills and global competitiveness.

Together, we will ensure this transition enhances ICAG's global competitiveness while maintaining our high standards of professional qualification. The overwhelming positive response across all student levels reinforces our confidence in this strategic direction.

Mr.Augustine Addo
President, ICAG
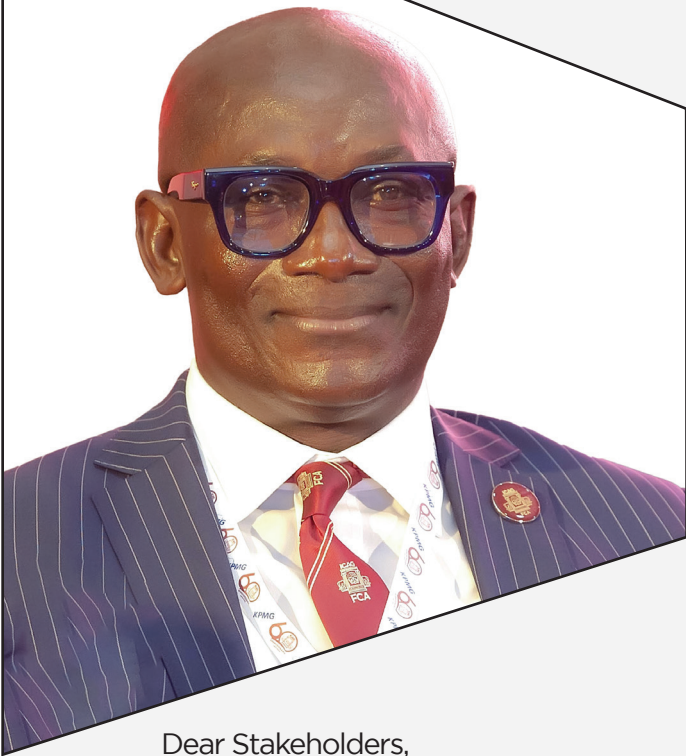
STATEMENT FROM OUR
CHIEF EXECUTIVE OFFICER

Dear Stakeholders,

I am pleased to outline ICAG's strategic approach to implementing online examinations with remote proctoring, scheduled for March 2025, based on our recent comprehensive readiness assessment study. The findings have provided valuable insights that will shape our implementation strategy.

Our research indicates a strong enthusiasm among students for this digital transition, particularly regarding its potential to enhance professional development. However, we have also identified key areas requiring focused attention, especially concerning remote proctoring familiarity and technical preparedness across our diverse student body.

To ensure a successful transition, ICAG is implementing a comprehensive framework to address identified challenges. Our preparation strategy is introducing several critical support systems. We are establishing extensive orientation programs and practice sessions to build student confidence and competency with the new examination format. The Institute is deploying comprehensive technical support systems with clear protocols to handle challenges before and during the online examination. Third, we will maintain rigorous quality assurance through sophisticated proctoring systems to ensure examination integrity.

Understanding that this transition represents a significant change in assessment methodology, we are committed to providing extensive support to ensure every student has the opportunity to perform at their best. Our approach prioritizes both technical competency development and examination integrity, ensuring ICAG maintains its high standards of professional qualification.

We look forward to working closely with all stakeholders, particularly our current and prospective students, to ensure this digital transformation strengthens ICAG's position as a leading professional accounting body.

P. Kwasi Agyemang, FCA
CEO, ICAG

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ABBREVIATIONS AND ACRONYMS

ICAG   Institute of Chartered Accountants, Ghana

SPSS   Statistical Package for the Social Sciences

WACAR   West African Centre for Accountancy Research

01.
INTRODUCTION

1.1 Background of the study

In today's digital era, technological advancement is driving a worldwide transformation in professional education, fundamentally changing both learning processes and assessment methods. Institute of Chartered Accountants, Ghana (ICAG), is preparing to migrate its examinations from traditional paper-based formats to online testing with remote proctoring. Remote proctoring technology represents a sophisticated digital surveillance system that enables examination supervision from a distance, utilizing webcams, microphones, and specialized software to monitor student behaviour, verify identity, and maintain examination integrity[1].

This technological solution combines artificial intelligence algorithms with human proctors to detect and prevent academic misconduct while allowing students to take examinations from their chosen locations[2]. The transition reflects the growing need for accountants to be competent in digital technologies, as highlighted by recent studies from the International Federation of Accountants[3].
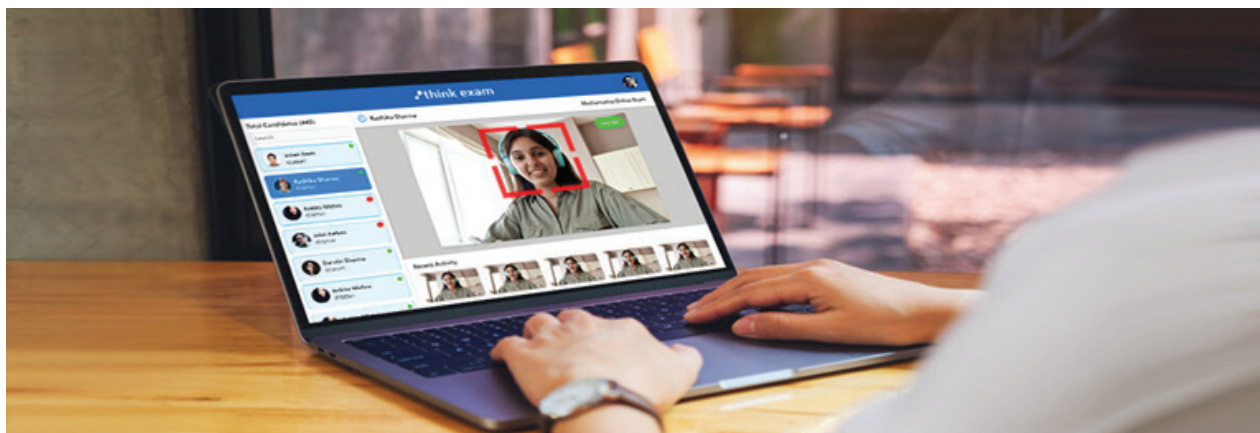
The transition to online examinations with remote proctoring, however, presents several important challenges that need careful consideration. First, there are significant differences in access to technology across Ghana. While students in cities like Accra and Kumasi generally have good internet access and computer facilities, those in rural areas often face limitations in both internet connectivity and access to necessary equipment[4].

This digital divide could affect students' ability to participate fairly in online examinations. The specific requirements of remote proctoring technology, including stable internet connections, webcams, and private examination spaces, add

another layer of complexity to these accessibility challenges.

Another key consideration is ensuring the integrity and security of online examinations through effective remote proctoring implementation. ICAG must maintain its high standards of assessment while using these new technologies for remote testing. Research however shows that while remote proctoring systems can effectively maintain examination security, proper implementation and student preparation are essential for maintaining the credibility of professional qualifications. Studies have shown that students' unfamiliarity with remote proctoring technology can lead to increased anxiety and potentially affect performance. [6]

The change also affects how students prepare for and take examinations. Many ICAG students, whether recent graduates or experienced professionals, are used to writing their answers by hand. Switching to typing responses and using digital platforms, while being monitored through remote proctoring systems, represents a significant change in how they approach examinations. The psychological impact of being monitored through webcams and the need to maintain appropriate examination environments at home add additional challenges to this transition.

ICAG also faces possible institutional challenges in implementing this change. These include training staff in remote proctoring procedures, setting up robust technical support systems for the new technology, and ensuring examination centers are properly equipped for students who cannot take examinations from home. Recent studies show that successful implementation requires comprehensive preparation at both institutional and student levels, with particular attention to remote proctoring protocols and support systems. Given these institutional challenges and the critical importance of student readiness for successful implementation, this

study aims to understand how prepared ICAG students are for online examinations with remote proctoring by examining their technological access capabilities, digital assessment readiness, and specific support requirements for effective transition to remote examination formats.

1.2 Research Questions

The research addresses the following questions:

1. What is the current state of technological readiness and accessibility among ICAG students for online examinations?
2. What are students' attitudes, perceptions, and concerns regarding ICAG's online examinations?
3. How psychologically and technically prepared are students for ICAG's remote proctored examinations?
4. What is the perceived institutional readiness and required support for ICAG's online implementation?
5. What are the professional and long-term implications of transitioning to online examinations?
6. What environmental and logistical challenges need to be addressed?
7. How prepared is ICAG's institutional infrastructure for online examinations?

1.3 Significance of the Study

The significance of this research extends far beyond its immediate application to ICAG's examination system. From an institutional perspective, this study provides crucial data that will inform ICAG's strategic planning process for implementing online examinations. The findings will enable evidence-based decision-making regarding infrastructure investments, support system development, and training program design.

The research holds particular importance for educational quality enhancement. By understanding student readiness and concerns in detail, ICAG can develop targeted interventions to maintain and potentially improve the quality of its assessment processes throughout the transition period and beyond. This understanding will help ensure that the move to online examinations enhances rather than compromises the rigor of professional certification.

The study's findings will significantly impact resource allocation decisions within ICAG. Understanding specific areas of need and concern will enable the Institute to prioritize its investments effectively, ensuring that resources are directed to areas where they will have the maximum impact on successful implementation.

In the broader context of professional education, this research contributes valuable insights to the growing body of knowledge about the digitalization of professional certification examinations in developing countries. The findings will be particularly relevant to other professional bodies in Ghana and across Africa that are considering similar transitions.

The study also plays a crucial role in risk management for ICAG. By identifying potential challenges and concerns early in the process, the Institute can develop comprehensive risk mitigation strategies to ensure a smooth transition. This proactive approach to risk management is essential for maintaining the integrity and credibility of ICAG's certification process during and after the transition.

This paper proceeds as follows: The next section details our research methodology and experimental design. We then present our findings, followed by a comprehensive discussion of implications for professional certification and education. Finally, we conclude with recommendations for stakeholders and suggestions for future research directions.

02.
METHODOLOGY

2.1 Research Design

The study employed a mixed-methods approach, combining quantitative and qualitative methods to provide a comprehensive understanding of student readiness for online examinations at ICAG. The mixed-methods approach combined quantitative data to reveal broad patterns across the student population with qualitative insights that explained the human experiences behind these patterns, providing a more complete understanding of student readiness than either method could achieve alone.

2.2 Population

The target population for this study consists of 6299 candidates who registered for the ICAG professional examinations in November 2024. This comprises Level 1 (foundation stage) with 359 candidates, Level 2 (application stage) with 3546 candidates, and Level 3 (advanced stage) with 2394 candidates. This population is significant as these candidates will be directly affected by ICAG's transition to remote proctored examinations, and their varied stages in the professional program provide insights into differing technological needs and adaptability requirements across all certification levels.

2.3 Sampling and Sample Size

The quantitative phase of the study employed Krejcie and Morgan's (1970) sample size determination table to establish the required sample size of 350 from a total population of 6,299 ICAG professional examination candidates who sat for the November 2024 examinations. This sample size was stratified across the three levels reflecting the natural distribution of examination candidates: Level 1 (158 students), Level 2 (112 students), and Level 3 (80 students). The questionnaires were administered at examination centers before the commencement of professional examinations, ensuring direct access to students. The qualitative phase included in-depth interviews with seven students strategically selected to represent different levels, geographical locations, and demographic characteristics.

2.4 Data Collection

Data collection employed both quantitative and qualitative methods. Quantitative data was gathered through paper-based questionnaires administered to students at ICAG examination centers during the November 2024 professional examinations. The questionnaire took approximately 15-20 minutes to complete and was distributed before examinations commenced. The instrument consisted of eight sections using multiple choice questions for demographic information, five-point Likert scales for measuring attitudes and perceptions, and ranking questions for prioritizing preferences and concerns.

For the qualitative component, seven in-depth interviews were conducted with purposefully selected students representing different levels, geographical locations, and demographic characteristics

2.5 Data Analysis

The study employed a mixed-methods approach to analyze the collected data. For quantitative analysis, SPSS version 27.0 was used to generate descriptive statistics and examine relationships between variables. Chi-square tests were conducted to investigate connections between demographic factors and technological readiness indicators. Cross-tabulation analysis explored relationships between key variables including geographical location, educational background, age groups, and their correlation with technical readiness and attitudes toward online examinations.

The qualitative component involved analyzing interview transcripts through thematic coding to identify recurring patterns. These qualitative findings were then integrated with the statistical results to provide a comprehensive understanding of student readiness for online examinations, with interview data providing context and deeper insights into the statistical findings.

2.6 Ethical Consideration

This study adhered to ethical research standards with approval obtained from ICAG's Research and Technical Directorate. Each participant received an information sheet explaining the study's purpose and their rights. The questionnaire administration during the November 2024 examination session was conducted with explicit permission from

ICAG's Examination Department. Data collection maintained participant anonymity, with no personal identifiers requested on the questionnaire. All responses were treated confidentially and stored securely in password-protected files accessible only to authorized research team members. The data was used solely for understanding student readiness for remote proctored examinations and informing ICAG's implementation strategy. Participation was voluntary, and students were informed that their decision to participate or not would have no impact on their examination outcomes. The findings will be made available to ICAG and participating students through appropriate institutional channels.

2.7 Limitations

The study faced several key limitations. The timing of data collection during examination periods may have influenced students' responses due to stress. The small sample size of Level 1 students (only 11 respondents) and the limited number of qualitative interviews (seven) restrict the generalizability of findings for these groups. The study's reliance on self-reported data and its focus solely on students present at examination centers may not capture the full range of experiences. Additionally, the exclusion of other stakeholders like faculty and technical staff limited the perspective on implementation challenges.

3.0
FINDINGS

3.1 Demographic Profile of Respondents

This comprehensive analysis of ICAG students reveals insightful patterns across multiple demographic dimensions. From the initial sample of 350 students, 205 provided valid responses, yielding a response rate of 58.6%. This substantial participation rate provides a solid foundation for understanding the student population's characteristics. Examining the enrolment distribution, Level 2 emerged as the predominant group, comprising two-thirds of respondents (66.3%, 136 students) (see Table 1). This strong intermediate representation, coupled with Level 3's significant presence (28.3%, 58 students) and Level 1's smaller cohort (5.4%, 11 students), suggests successful progression through the program's levels. The age demographics further illuminate the student profile, with young professionals forming the core. Most notably, individuals aged 25-34 years constitute the largest segment (41%, 84 students), closely followed by those aged 35-44 years (32.7%, 67 students) (see Table 1). This concentration of prime-age professional's underscores ICAG's appeal to career-focused individuals. Gender distribution analysis reveals a significant male skew, with men representing 61.5% (126 students) of respondents compared to women at 38.5% (79 students). This disparity is further contextualized by geographical distribution, where urban areas dominate with 62.9% of respondents (129 students), followed by rural (24.4%, 50 students) and peri-urban regions (12.7%, 26 students). Perhaps most striking is the educational background of respondents, reflecting a highly qualified student body. The vast majority hold advanced degrees, with Bachelor's (51.2%, 105 students) and Master's degree holders (40.5%, 83 students) collectively representing over 90% of respondents (see Table 1).

Table 1: Demographic Profile of Respondents

Characteristic	Category	Frequency	Percentage (%)
Level of Study	Level 1 Level 2 Level 3	11 136 58	5.4 66.3 28.3
Age Group	18-24 25-34 35-44 45-54	31 84 67 23	15.1 41.0 32.7 11.2
Gender	Male Female	126 79	61.5 38.5
Location	Urban area Peri-urban area Rural area	129 26 50	62.9 12.7 24.4
Educational Background	Senior High School Bachelor's Degree Master's Degree Other Professional Qualification	7 105 83 10	3.4 51.2 40.5 4.9
		205	100

3.2 Technological Access and Infrastructure

The Institute of Chartered Accountants Ghana (ICAG) stands at a crucial technological crossroads as it considers transitioning to online examinations. This analysis examines students' technological readiness across various demographics, revealing both opportunities and challenges that will shape the success of this digital transformation. The results from figure1 reveal that computer ownership among ICAG students reveal a notable digital divide across different geographical locations. While 73% of urban students (94 out of 129) own computers, only 54% of rural students (27 out of 50) have access. The high ownership rate of 85% in peri-urban areas (22 out of 26 students) comes from too small a sample to draw firm conclusions. The qualitative interview supports the importance of computer access, with the Interviewee 1 noting regular access primarily for learning purposes: *"Mostly, it's when I'm about to learn... aside office, but mostly for learning."* This gap between urban and rural computer access however presents a significant challenge for implementing fair and accessible online examinations, with rural students potentially needing additional support to participate effectively.

The results from figure 1 also show remarkably consistent computer ownership across age groups, challenging common assumptions about age-related technology gaps. The 18-24 age group leads with 74% ownership, followed closely by the 35-44 age group at 72%. Even the oldest group (45-54) maintains a reasonable 61% ownership rate, suggesting that age may not be a significant barrier to online examination implementation. In relation to internet connectivity, the study reveals critical infrastructure challenges affecting online examination delivery. Students show overwhelming dependence on mobile data networks (82%) as their primary connection method. This result is strongly supported by the interview data, where Interviewee 5 highlight their reliance on mobile data for internet connectivity: *"We use mobile data, specifically hotspots from our phones to connect to the laptop"* The interviewee elaborates on the instability of mobile data connections, explaining *"Not all the time*

because sometimes when someone calls, the network could break," which aligns with the study's finding that 74% of rural students report unstable connections, highlighting a significant challenge for implementing online examinations, particularly given that mobile data is the primary internet source for 82% of students. The digital divide is further evidenced in broadband access, with urban areas showing higher penetration (15.5%) compared to rural areas (10%), raising significant concerns about examination equity and integrity.

The examination of students' digital competency levels across educational backgrounds reveals a compelling correlation between academic qualifications and computer proficiency. Master's degree holders demonstrate significantly higher advanced/expert proficiency (51%) compared to Bachelor's degree holders (27%) (Figure 1). Interviewee 3 explains their development of digital competency through previous institutional experience, stating *"Because at UPSA, we used to write online exams and use Excel to calculate the accounts, which helped us develop skills in using computers for accounting tasks,"* which supports the quantitative finding that prior institutional exposure contributes to higher digital competency, as evidenced by the significant correlation (p=0.004) between advanced academic qualifications and computer proficiency. Additionally, an analysis of computer proficiency reveals gender-based disparities in digital literacy levels, with consideration of the uneven sample distribution (129 males, 79 females). The data shows 40% of male students demonstrating advanced/expert proficiency compared to 29% of female students (p=0.030). While this difference is statistically significant, the uneven sample sizes suggest careful interpretation is needed when developing support strategies for online examination implementation.

These results indicate that while ICAG's transition to online examinations is feasible, it requires careful consideration of infrastructure support, particularly for rural students, and targeted digital literacy interventions to ensure equitable access and success for all students.
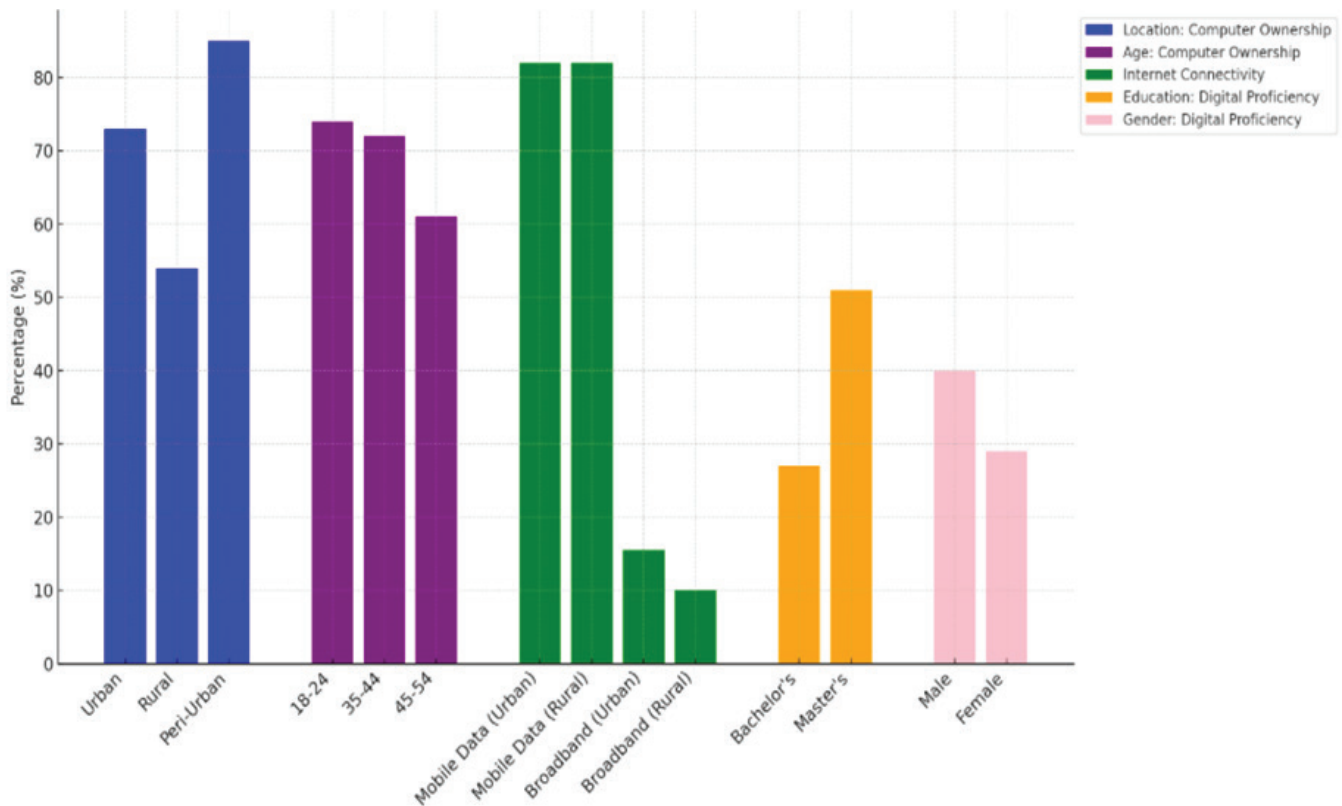
Figure 1: Analysis of Computer Ownership, Internet Connectivity, and Digital Proficiency across Geographic, Age, Gender, and Educational Demographics

3.3 Attitudes and Perceptions

The purpose of this study was to assess students' attitudes and perceptions toward online examinations across different demographic variables. The findings revealed a remarkably consistent pattern of acceptance across geographical locations. Urban areas, which comprise the largest segment of 129 students, 68.2% demonstrate positive attitudes toward the transition, indicating strong support in urban areas. Rural areas, with 50 students, show a comparable level of acceptance at 62%, while peri-urban areas (26 students) display similar enthusiasm at 65.4% (figure 2). Interviewee 4 provides deeper insight into this acceptance, with the participant noting the positive aspects of digitalization: *"The narrative is moving to digitalization. It's going to enhance*

our digital skills." However, the Interviewee 5 expresses concern about students in remote areas, explaining *"Those in remote places face challenges with network connectivity and access to laptops, which could affect their ability to participate in online examinations,"* which aligns with the quantitative findings showing only 54% of rural students have computer access and 74% report unstable internet connections.

Perceptions about examination quality demonstrate high confidence levels across locations: urban residents lead with 72.1% positive outlook, followed by rural areas at 62% and peri-urban regions at 61.5% (figure 2). This is supported by Interviewee 2 who explains the advantages of digital calculations, stating *"The way we calculate profit and loss using the computer*

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is more efficient because it provides different methods and formulas compared to manual calculations, which makes the work easier and more accurate," highlighting how computerized assessments could enhance the quality of accounting computations in examinations. Also credibility expectations are particularly strong, with urban areas showing 78.3% confidence, rural areas at 68%, and peri-urban areas at 61.5%. However, Interviewee 4 raises concern about examination integrity, explaining "The cheating issue is a major concern because when examinations are conducted online, students might have opportunities to open other websites and copy information, which is more difficult to control compared to face-to-face examinations," suggesting that high credibility expectations need to be balanced against practical challenges of maintaining examination integrity in an online environment.

The results further challenge conventional assumptions regarding age-based resistance to technological transitions in educational assessment. The data reveals a progressive increase in positive attitudes across age cohorts, with the youngest demographic (18-24 years) showing 54.8% approval, while the middle-aged cohort (35-44 years) demonstrates notably higher acceptance at 70.1%. Responses from Interviewee 7 reinforces this broad acceptance across age groups, with the participant acknowledging that while "we are used to the face-to-face examinations, the move to digitalization is necessary because it will help develop our skills from school to workplace," demonstrating an understanding of the transition's value that transcends age-based assumptions about technology adoption. Interviewee 6 also explains that traditional face-to-face exams create tension in the examination hall, while online exams offer a more comfortable personal space for writing: "With face-to-face exams there is usually a lot of tension in the examination hall, but with online exams you can work in your own comfortable space". This aligns with the quantitative findings

showing strong endorsement from the most senior age group (45-54 years) at 73.9%, contradicting traditional hypotheses about age-related technological resistance.

The analysis of attitudes toward online examinations reveals strong acceptance patterns across educational levels. Master's degree holders (n=83) demonstrate the highest positive attitudes at 74.7%, with only 7.2% showing negative responses. Bachelor's degree holders (n=105) show 61% positive attitudes, with 15.2% expressing concerns. This broad acceptance across educational levels is reflected in the interview data, where the Interviewee 3 highlights the professional benefits of online examinations: "It's really improving on your typing skills... you get to know how to use your Excel. At the end, these are skills needed in the workplace," suggesting that students across educational levels recognize how digital examination skills align with professional requirements. Quality perception remains consistently high: Master's (67.5%), Bachelor's (68.6%), and Senior High School holders (71.4%, n=7) all anticipating improvements. Interviewee 7 supports this by noting specific quality improvements: "The way we calculate profit and loss using the computer is more efficient because it provides different methods and formulas compared to manual calculations, which makes the work easier and more accurate." Credibility expectations are similarly robust across educational levels, with Bachelor's holders showing highest confidence (75.2%), followed by Master's holders (71.1%). Senior High School holders and Other Professional Qualifications (n=7 and n=10 respectively) maintain positive outlooks, though sample sizes warrant caution. Statistical analysis (p=0.252 for attitudes, p=0.301 for quality, p=0.681 for credibility) indicates educational background, while influential, is not the primary determinant of acceptance, suggesting implementation strategies should consider multiple factors beyond education level.
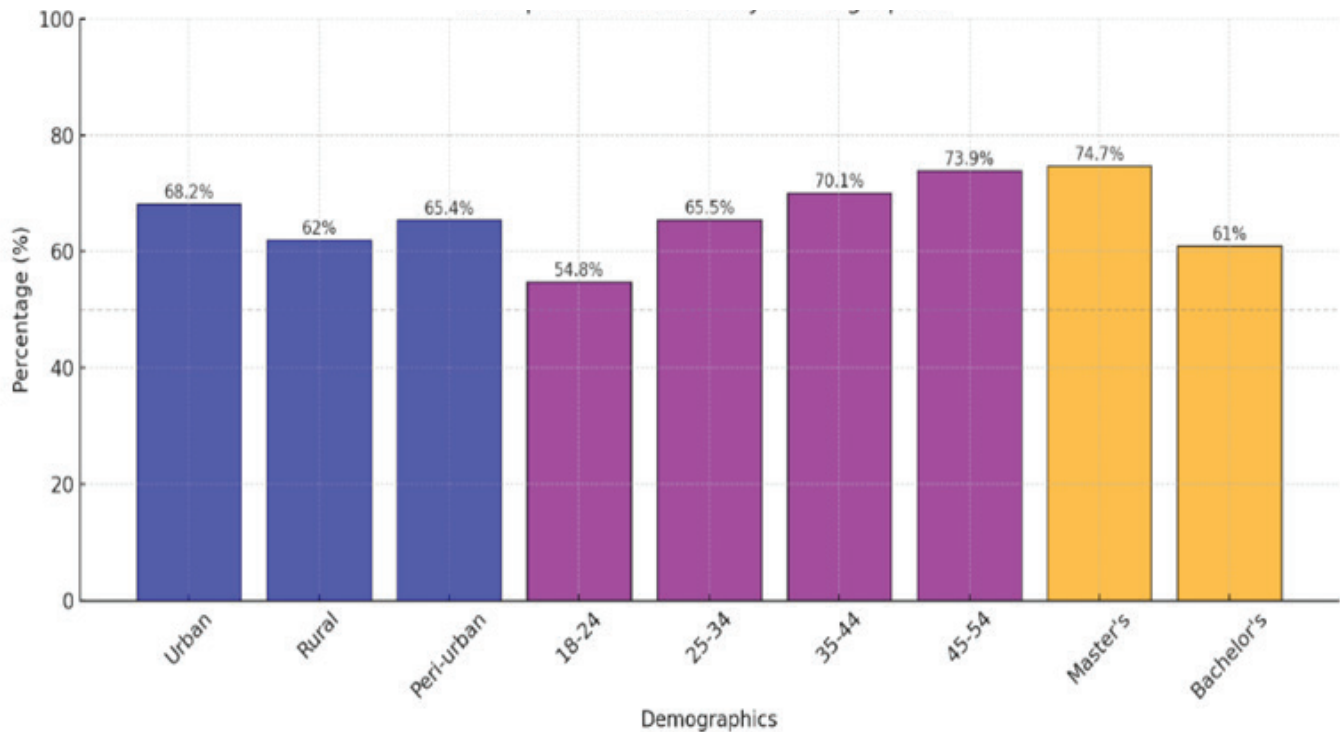
Figure 2: Analysis of Attitude and Perception of Students Towards Online Examinations Across Geographic, Age, and Educational Demographics

3.4 Preparedness and Support

This analysis examines students' readiness for online examinations across ICAG enrolment levels, revealing varying degrees of preparation and confidence. While 81.9% of Level 1 students report being moderately to extremely prepared, only 56.7% of Level 2 and 63.8% of Level 3 students' express similar readiness (see figure 3). This varying level of preparedness is reflected in the interview data, where participants show diverse readiness levels, from Interviewee 5 feeling *"prepared due to prior experience"* to Interviewee 1 being *"not very well prepared"* and needing *"support with typing skills."* Confidence in navigating online platforms is consistently high across levels, with 91% of Level 1, 77.2% of Level 2, and 84.4% of Level 3 students reporting moderate to extreme confidence. However, preparation time requirements differ significantly (p = .046): 90.9% of Level 1 students need 6 months or less, while 47.1% of Level 2 and 36.2%

of Level 3 students require more than 6 months. The interview data provides more granular insights into preparation time needs. Interviewee 5 indicates a shorter preparation timeline, stating *"I would need about 2 weeks to prepare since I already have experience with online platforms."* In contrast, Interview 1 suggests a longer period, explaining *"I would need about 2 months to prepare adequately because I need to improve my typing skills and become familiar with the online system."* Interviewee 4 provides a middle-ground perspective, noting *"I estimate I would need about 3 weeks to 1 month to fully prepare, even though I have some prior experience, as I want to ensure I'm completely comfortable with the system."* These combined findings demonstrate varying levels of readiness and preparation time needs across ICAG enrolment levels, with advanced-level students showing lower readiness levels and requiring longer preparation

periods compared to Level 1 students, reflecting the different complexities and demands at each examination level.

This analysis examines students' readiness for online examinations across ICAG age groups, revealing varying preparation levels and confidence. Among younger students aged 18-24, 61.3% report being moderately to extremely prepared, comparable to other age groups: 54.8% (25-34), 65.7% (35-44), and 60.9% (45-54), with no statistically significant relationship between age and preparation (p = .605). Confidence in navigating online platforms is consistently high across age groups: 80.6% (18-24), 83.3% (25-34), 77.6% (35-44), and 73.9% (45-54) reporting moderate to extreme confidence. However, preparation time requirements vary: 74.2% of students aged 18-24 need 6 months or less, compared to 52.4% (25-34), 61.2% (35-44), and 47.8% (45-54).

This analysis examines students' readiness for online examinations across different locations, revealing varying levels of preparation and confidence. In urban areas, 62.8% of students' report being moderately to extremely prepared, compared to 42.3% in peri-urban areas and 62% in rural areas. Interviewee 3 explains this geographical variation, noting *"Those in remote places face challenges with network connectivity and access to laptops, which could affect their ability to participate in online examinations."* A significant relationship exists between location and confidence in navigating online platforms (p = .048). Urban students show higher confidence levels, with 84.5% reporting moderate to extreme confidence, compared to 76.9% in peri-urban areas and 70% in rural areas. This pattern is reflected in Interviewee 4 responses where an urban student states *"I feel relatively prepared due to my prior experience with online platforms,"* while another from a remote area

expresses concerns about "network challenges and access to laptops."

This analysis examines students' readiness for online examinations across educational backgrounds, revealing varied preparation levels and confidence. Among Bachelor's degree holders, 54.3% report being moderately to extremely prepared, comparable to Master's degree holders at 68.7%, while Senior High School graduates show 57.1% readiness. As Interviewee 7 explains, *"Because at University, we used to write online exams and use Excel to calculate the accounts, which helped us develop skills in using computers for accounting tasks,"* highlighting how prior institutional exposure contributes to preparation levels. Confidence in navigating online platforms is consistently high across education levels: 80% of Bachelor's holders, 79.5% of Master's holders, and 85.7% of Senior High School graduates report moderate to extreme confidence. This is reflected in Interviewee 2 responses ranging from those feeling *"confident in technical abilities"* due to prior experience to others acknowledging the need for *"basic computer literacy training"* despite their educational background.

In summary the analysis reveals varying levels of readiness for online examinations across ICAG's student population. While overall confidence in using online platforms is high, preparation needs differ significantly based on enrolment level and location. Advanced-level students require longer preparation periods than Level 1 students, while urban students demonstrate higher confidence levels compared to their rural counterparts. Age shows no significant impact on readiness, and although educational background influences preparation levels, confidence remains consistently high across all education levels.
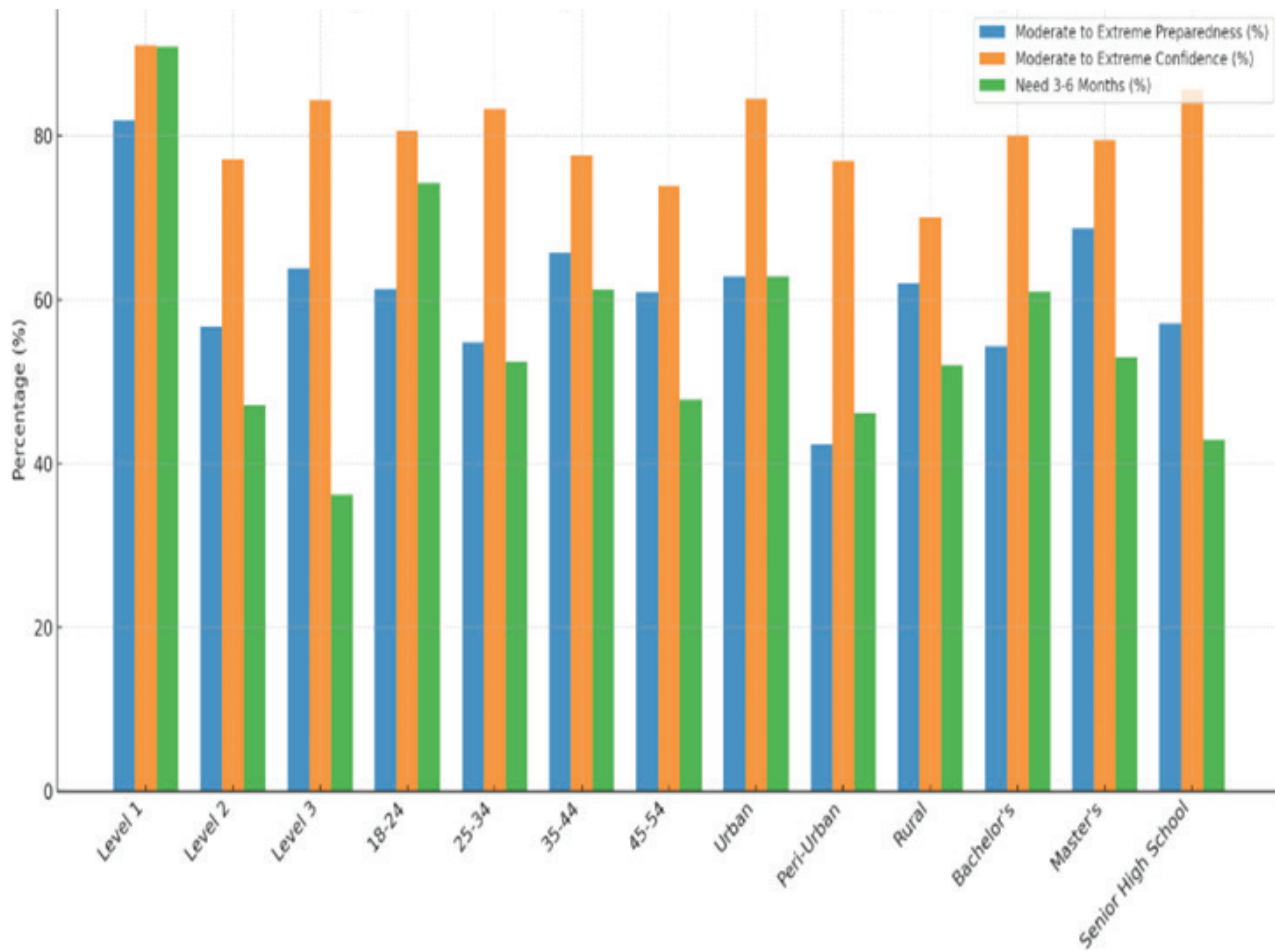
Figure 3: Analysis of level of readiness across Enrolment Levels, Age, Geographic and Educational Demographics

3.5 Technical Readiness

This analysis examines the technical infrastructure readiness across different educational backgrounds, revealing notable variations in access and resources (figure 4). Webcam accessibility varies by education level, with 71.4% of Senior High School graduates, 68.6% of Bachelor's degree holders, and 53% of Master's degree holders either lacking webcams or finding it difficult to obtain them. Access to quiet study spaces shows better distribution, with 53.3% of Bachelor's holders and 67.5% of Master's holders having or able to arrange suitable spaces. A statistically significant relationship exists between education level and backup power access (p = .014), with higher education correlating to better

backup power solutions. Result from figure 4 reveal that while 100% of Senior High School graduates and 88.6% of Bachelor's holders lack reliable backup power, Master's degree holders show slightly better access with 27.7% having reliable or somewhat reliable solutions. However, this differences in access could be possibly due to better financial resources or living conditions associated with advanced degrees.

This analysis examines the technical infrastructure readiness across different student locations, revealing significant challenges regardless of geographic area. Webcam access is consistently limited across locations, with 62.8% of urban

students, 61.5% of peri-urban students, and 64% of rural students either lacking webcams or finding it difficult to obtain them. Access to quiet study spaces shows some variation, with 62% of urban students having or able to arrange suitable spaces, compared to 61.5% of peri-urban and 50% of rural students. Power infrastructure emerges as a universal challenge, with frequent outages affecting 49.6% of urban students, 65.4% of peri-urban students, and 60% of rural students. More critically, backup power solutions are scarce across all locations, with 80.6% of urban students, 92.3% of peri-urban students, and 82% of rural students either lacking backup power or having unreliable solutions.

This analysis examines the technical readiness of ICAG students across age groups, revealing significant variations in infrastructure access. A statistically significant relationship exists between age and webcam access ($p = .005$), with younger students facing more challenges: 71% of 18-24 year olds lack webcams, compared to 58.3% of 25-34 year olds and 62.7% of 35-44 year olds. Access to quiet study spaces is relatively consistent across age groups, with 48.4% of 18-24 year olds, 60.7% of 25-34 year olds, and 64.2% of 35-44 year olds having or able to arrange suitable spaces. Power infrastructure remains a critical concern across all age groups, with 61.3% of 18-24 year olds, 46.4% of 25-34 year olds, and 58.2% of 35-44 year olds experiencing weekly or daily outages. Moreover, 93.5% of 18-24 year olds either lack backup power or have unreliable solutions, a challenge shared across all age groups.

The interview data enriches and validates these quantitative findings across multiple dimensions. While access to webcams varies by demographics, Interviewee 1's initial confusion *("What is a webcam and what do you mean by proctoring?")* suggests that access challenges may be compounded by lack of awareness about examination requirements. Power infrastructure emerges as a universal challenge, with outages occurring *"whenever ECG decides,"* though family resources might offset individual limitations as revealed by Interviewee 4 noting *"I personally don't have access to backup power, but my brother and mother each have one."* Technical readiness presents another barrier, illustrated by participants expressing discomfort with basic software installation, indicating that technical competency could significantly impact students' ability to participate effectively in online examinations.

These patterns reveal that while technical infrastructure challenges exist across all demographics, certain groups face greater barriers to participating in online examinations. Younger students show higher vulnerability with regards to webcam access and backup power solutions, possibly due to limited financial resources and less established living arrangements at this life stage. Similarly, those with lower educational attainment demonstrate more significant challenges with infrastructure access, particularly regarding reliable backup power solutions compared to Master's degree holders. This disparity indicates that students' ability to fully participate in online examinations may be influenced by their age-related circumstances and educational level, potentially creating an uneven playing field in terms of access to fundamental examination requirements like reliable power supply, appropriate study spaces, and necessary hardware
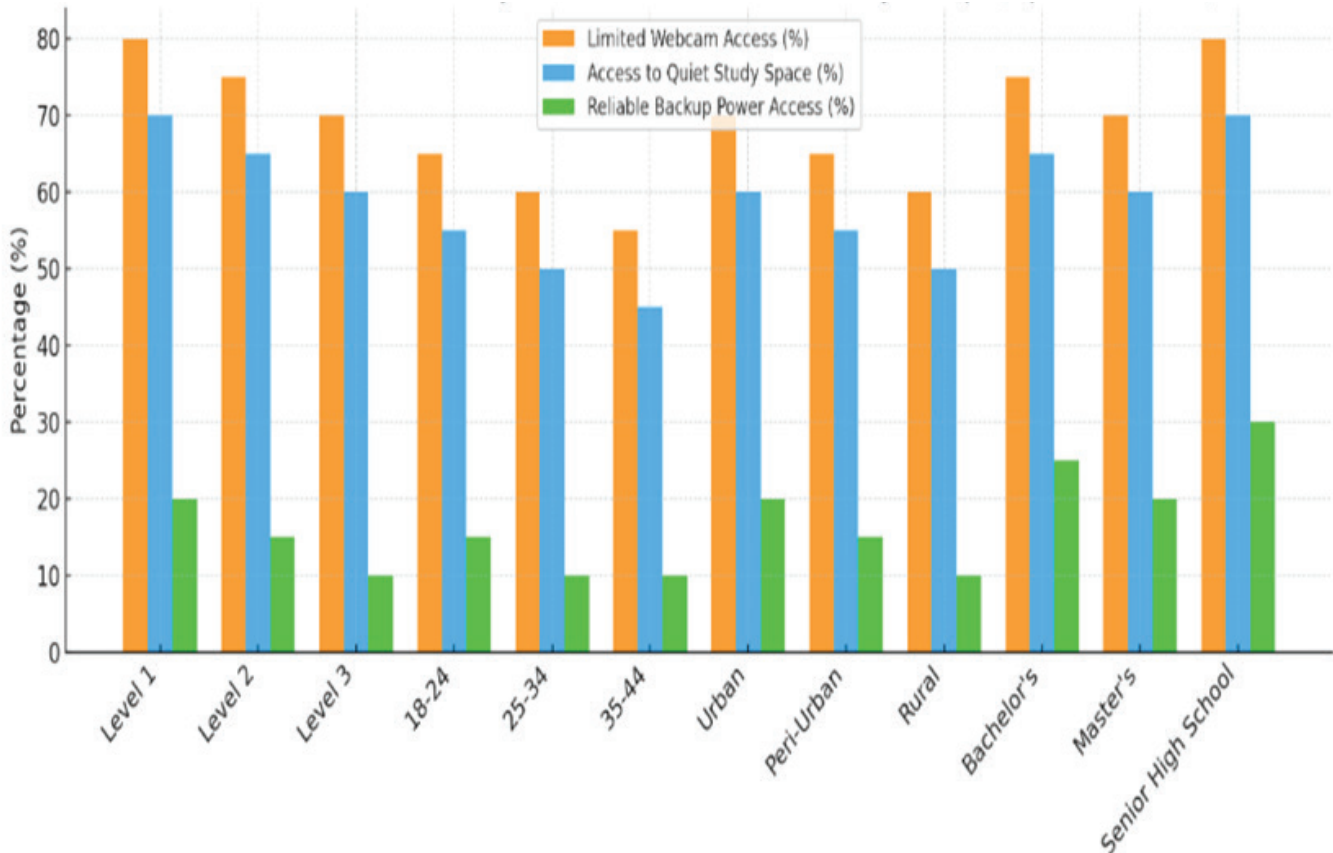
Figure 4: Analysis of Technical Readiness across Enrolment Levels, Age, Geographic and Educational Demographics

3.6 Remote Proctoring Readiness

This analysis examines students' attitudes toward remote proctoring across educational backgrounds, revealing significant concerns about implementation. Familiarity with remote proctoring systems is consistently low across education levels, with 57.1% of Senior High School graduates, 49.5% of Bachelor's degree holders, and 48.2% of Master's degree holders reporting no familiarity at all (figure 5). The response from Interviewee 6 reinforces this low familiarity, with one participant stating *"Remote proctoring… that's monitoring. Not very, this is my first time hearing that word."* However, comfort levels with webcam monitoring show more variation, with 60.2% of Master's degree holders feeling neutral to very comfortable, compared to 74.3% of Bachelor's degree holders. Interviewee 3 provides insight into students' pragmatic acceptance of webcam monitoring, with one participant

acknowledging its necessity for examination integrity by stating *"Well, it's compulsory. How else do they know if I'm cheating or not? I'm fine with it,"* despite having no prior experience with such monitoring.

Technical problems emerge as the primary concern across all education levels, worrying 36.2% of Bachelor's holders and 42.2% of Master's holders. Notably, there's a strong preference for in-person exams, with 71.4% of Senior High School graduates, 62.9% of Bachelor's holders, and 55.4% of Master's holders being somewhat or highly likely to prefer traditional examinations. This preference is echoed in the interview data, with Interviewee 3 stating *"Yes, I would prefer in person… I'm old fashioned… It's more authentic in terms of answers."*

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The analysis of remote proctoring attitudes across locations reveals varying patterns of familiarity and comfort levels. In urban areas, 45% report no familiarity with remote proctoring systems, while peri-urban and rural areas show higher unfamiliarity rates at 65.4% and 50% respectively. Comfort with webcam monitoring varies notably by location, with urban students showing higher comfort levels - 54.3% expressing comfortable or very comfortable attitudes, compared to 30.8% in peri-urban areas.

Technical concerns emerge as the predominant issue across all locations, affecting 42.6% of urban students, 34.6% of peri-urban students, and 34% of rural students. The preference for traditional examinations remains strong across locations, with 58.9% of urban students, 73.1% of peri-urban students, and 58% of rural students favouring in-person exams. These findings suggest the need for comprehensive technical support and confidence-building measures across all locations.

The interview data reveals both integrity concerns and a significant lack of understanding about remote proctoring requirements. Interviewee 5's assumption about cheating methods *"Well, assuming the camera is facing me, and then the person helping me with the exam is sitting behind the web camera"* demonstrates limited awareness of actual remote proctoring protocols, suggesting that students need to be educated about the comprehensive security measures these systems employ to maintain examination integrity.

The analysis reveals significant challenges in implementing remote proctoring for ICAG examinations. While students demonstrate varying levels of acceptance towards webcam monitoring, there is a strong preference for traditional in-person examinations across all demographics. The findings indicate that successful implementation will require addressing three key challenges: widespread unfamiliarity with remote proctoring systems, prevalent technical concerns, and significant misconceptions about examination security protocols.
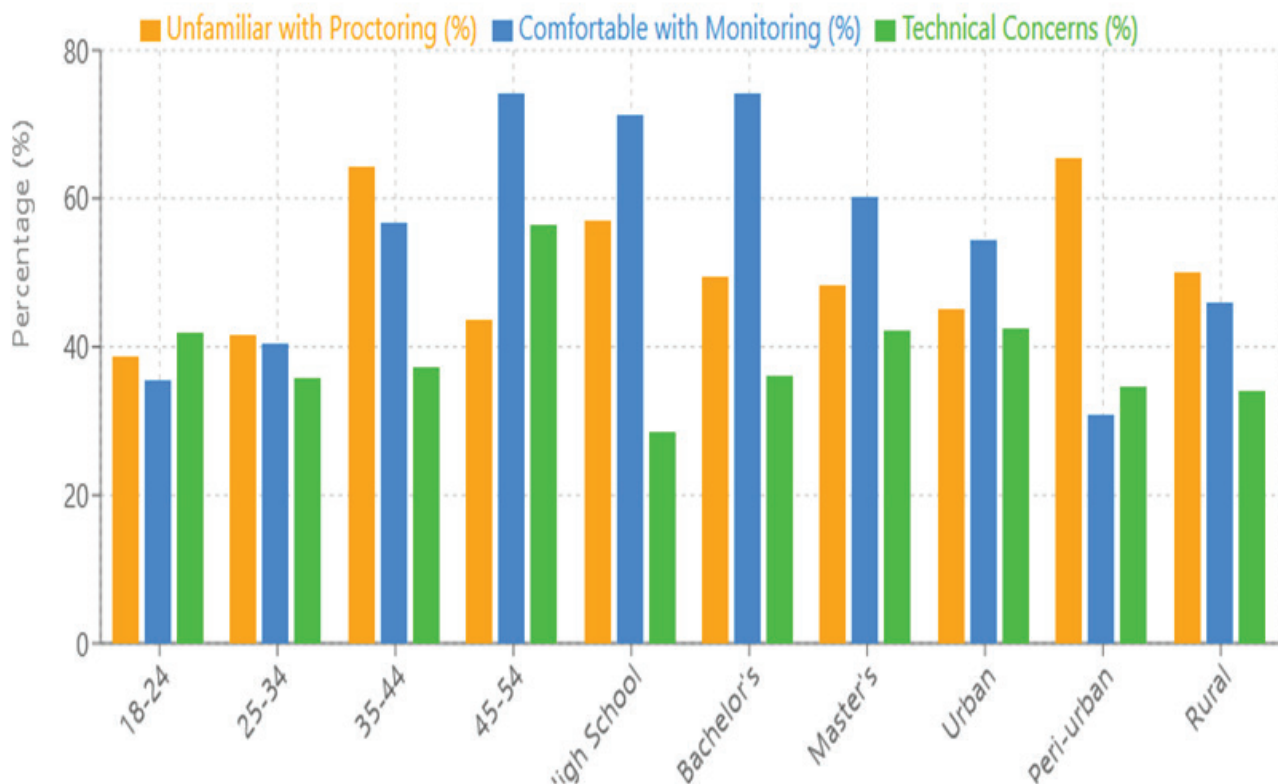

Figure 5: Analysis of Remote Proctoring across Age, Geographic and Educational Demographics

3.7 Institutional Support Requirements

This study sought to understand the perceived institutional readiness and required support for ICAG's online implementation by examining student perceptions across different demographic segments. The findings reveal varied levels of confidence and concerns (see figure 6).

Among Level 1 students, 54.5% express strong confidence (very or extremely confident), while 46.3% of Level 2 students and 60.3% of Level 3 students share similar confidence levels. Regarding communication effectiveness, Level 3 students show the most positive response, with 50% rating it as somewhat or very effective, compared to 39.7% of Level 2 students. The technical infrastructure assessment reveals consistent patterns across enrolment levels, with the majority rating it as average or good - notably, 63.2% of Level 2 students and 69% of Level 3 students giving these ratings. The response from Interviewee 7 however reveals uncertainty about actual technical capabilities of the Institute, with the participant admitting *"I don't know because I've not seen,"* suggesting limited awareness of ICAG's technical readiness. The impact on ICAG's reputation shows overwhelming positivity across all levels, with 81.8% of Level 1 students, 69.9% of Level 2 students, and 77.6% of Level 3 students expecting improvement. The chi-square test results (p > 0.05) indicate no significant statistical differences based on enrolment levels. While the quantitative data shows varying confidence levels across enrolment levels, the interview data reveals deeper concerns about examination integrity. Interviewee 7, while trusting ICAG as an institution, expressed strong scepticism about online examinations, stating *"I trust the company as a whole, but with online exams... there's lots of cheating involved, and they will cheat. It's not a might. It's a shall "* highlighting deeper concerns beyond basic implementation confidence.

This analysis examines student perceptions of ICAG's online examination implementation across different age groups. Among younger students aged 18-24, 48.4% express strong confidence levels, while 42.9% of those aged 25-34 share similar confidence. Notably, 59.7% of students aged 35-44 demonstrate high confidence levels. Regarding communication effectiveness, students aged 25-34 show the most positive response, with 39.3% rating it as somewhat or very effective, while 43.3% of those aged 35-44 share similar views. While the quantitative data shows moderate satisfaction levels in communication across levels, the interview data suggests more serious communication gaps, with Interviewee 6 describing it as *"Horrible because it's the first time I've heard of it,"* indicating potential shortcomings in ICAG's communication strategy. The technical infrastructure assessment reveals consistent patterns across age groups, with the majority rating it as average or good. The impact on ICAG's reputation shows overwhelming positivity across all age groups, with 74.2% of 18-24 year olds, 71.4% of 25-34 year olds, and 73.1% of 35-44 year olds expecting improvement. The chi-square test results (p > 0.05) indicate no significant statistical differences based on age groups.

This analysis examines student perceptions regarding ICAG's online examination implementation across different geographical locations. In terms of confidence levels, 34.1% of urban students' express high confidence, while 32% of rural students and 26.9% of peri-urban students share similar confidence levels. Regarding communication effectiveness, 30.2% of urban students maintain a neutral stance, while 36% of rural students and 38.5% of peri-urban students share similar views. The assessment of technical infrastructure reveals that 41.9% of urban students rate it as average, compared to 26% of rural students and 23.1% of peri-urban students. Most encouragingly, the impact on ICAG's reputation shows positive expectations across all locations, with 76% of urban students, 69.2% of peri-urban students, and 66% of rural students anticipating either slight or significant improvement. The chi-square test results (p > 0.05) across all categories indicate no significant statistical differences based on geographical location, suggesting consistent perceptions regardless of student location.

This analysis examines student perceptions of ICAG's online examination implementation across different educational backgrounds. Students with master's degrees show the highest confidence levels, with 62.7% expressing strong confidence, compared to 41% of bachelor's degree holders. In

terms of communication effectiveness, master's degree holders again demonstrate more positive perceptions, with 55.4% rating it as somewhat or very effective, while only 31.4% of bachelor's degree holders share this view. The technical infrastructure assessment reveals that 70.4% of master's degree holders and 70.5% of bachelor's degree holders rate it as average or better. Regarding ICAG's reputation, the transition is viewed most positively by master's degree holders, with 75.9% expecting improvement, compared to 69.5% of bachelor's degree holders. The chi-square test results ($p > 0.05$) indicate no significant statistical differences based on educational background, except for communication effectiveness ($p = 0.034$).

Although the majority of students across all demographics expect the transition to positively impact ICAG's reputation, these expectations are tempered by concerns about examination credibility. These findings suggest that while ICAG's move toward online examinations is generally viewed positively, successful implementation will require addressing key concerns about examination integrity and improving communication strategies.
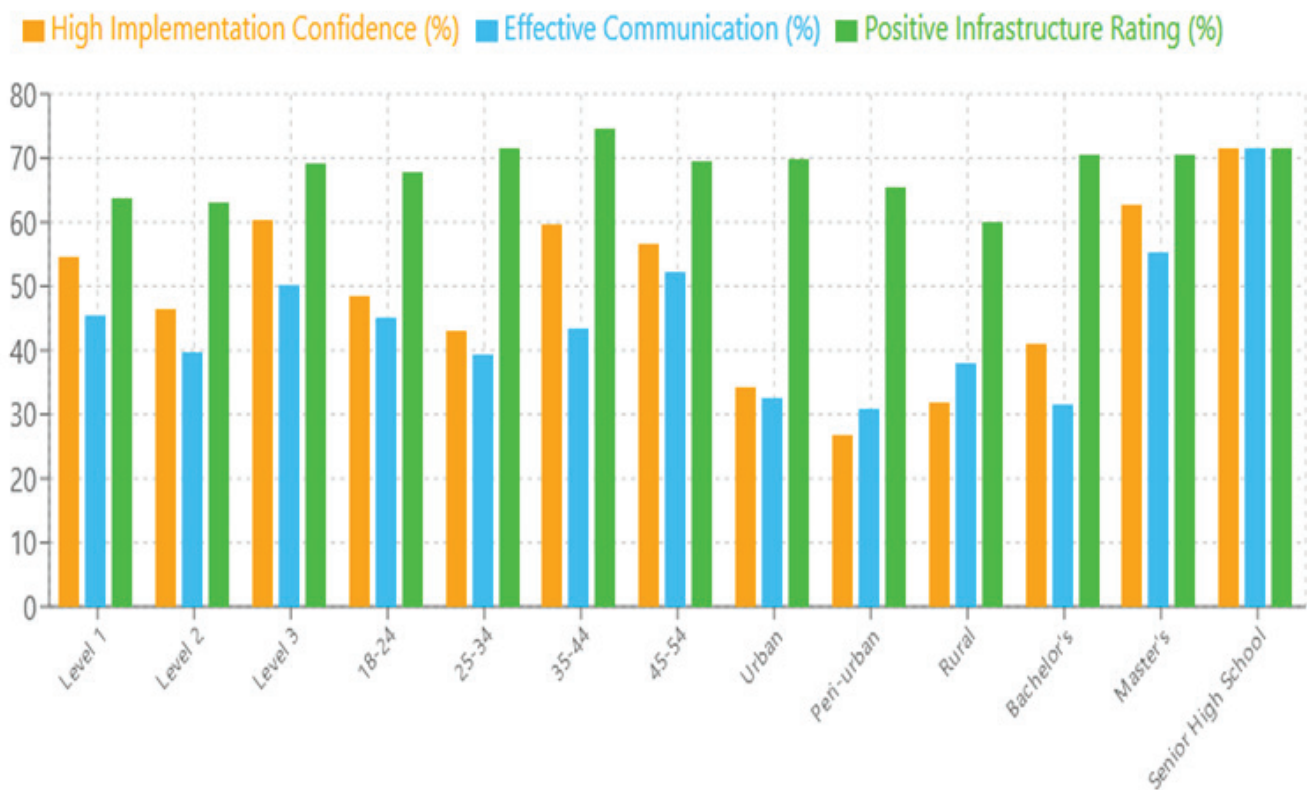

Figure 6: Analysis of Institutional Support Requirement across Enrolment Levels, Age, Geographic and Educational Demographics

3.8 Professional Impact Perceptions

This study sought to understand the professional and long-term implications of transitioning to online examinations by analysing student perceptions across different demographic segments. In terms of future accountants' skills, there is strong optimism across all education levels, with 100% of Senior High School graduates, 76.2% of Bachelor's degree holders, and 75.9% of Master's degree holders believing online examinations will enhance professional skills. The relevance of online examination skills to modern accounting practice is highly rated, with 85.7% of Senior High School graduates, 76.2% of Bachelor's degree holders, and 71.1% of Master's degree holders viewing them as very or extremely relevant. Regarding global competitiveness, 71.4% of Senior High School graduates, 75.2% of Bachelor's degree holders, and 79.5% of Master's degree holders anticipate improvement (see figure 7). The interview data support this finding with one interviewee 2 stating "I think it will enhance our skills because in the real world, most accounting work is now done digitally. We use accounting software, Excel, and other digital tools, so learning to work in an online environment during our examinations will prepare us better for the workplace."

This analysis examines perceptions of online examinations' impact across different age groups at ICAG. Regarding future accountants' skills, younger students aged 18-24 show strong optimism, with 77.4% believing online examinations will enhance professional skills, similar to 78.6% of those aged 25-34. The relevance of online examination skills to modern accounting is highly rated across all age groups, with 80.6% of 18-24 year olds and 75% of 25-34 year olds viewing them as very or extremely relevant. On employer perceptions, 61.3% of 18-24 year olds and 58.3% of 25-34 year olds expect favourable views. The impact on global competitiveness shows particularly strong positive expectations, with 77.4% of 18-24 year olds and 78.6% of 25-34 year olds anticipating improvement (see figure 7).

This analysis examines student perceptions of online examinations' broader impact across different enrolment levels at ICAG. Regarding future accountants' skills, 81.8% of Level 1 students, 76.5% of Level 2 students, and 79.3% of Level 3 students believe online examinations will enhance professional skills. The relevance of online examination skills to modern accounting practice is highly rated, with 81.8% of Level 1 students, 77.9% of Level 2 students, and 65.5% of Level 3 students viewing them as very or extremely relevant. Students across all levels show optimism about employer perceptions, with 81.8% of Level 1 students, 59.6% of Level 2 students, and 55.2% of Level 3 students expecting favourable views. This positive outlook is echoed in the interview data, with Interviewee 1 stating "This will definitely make us more competitive globally since many international accounting bodies already use online examinations, putting us on par with global standards."

In summary the analysis reveals widespread optimism about the professional implications of online examinations across ICAG's student population, with strong positive expectations for skill enhancement and global competitiveness. Both quantitative data and interview insights suggest students view this transition as aligned with the evolving digital demands of modern accounting practice.
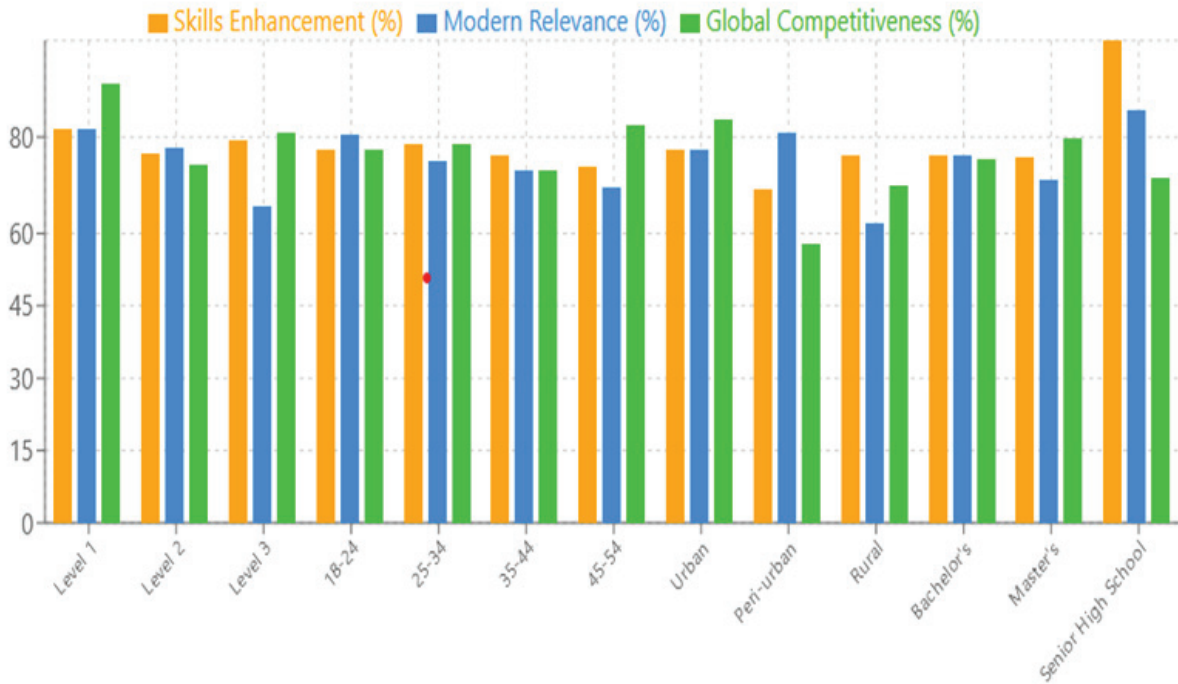
Figure 7: Analysis of Professional Impact Perception across Enrolment Levels, Age, Geographic and Educational Demographics

3.9 Perceived benefits

The study sought to understand what benefits students perceive as most valuable in ICAG's transition to online examinations. The results from figure 8 reveal that students prioritize practical advantages, with convenience emerging as the most significant benefit (mean score 3.49). Quick access to examination results ranked as the second most valued benefit (3.28), while cost-effectiveness was also rated positively (3.05).

This emphasis on convenience is echoed in the interview data, with Interviewee 2 noting *"The benefits of online exams include convenience... with face-to-face there's usually tension in the hall, but with online you have your own space."* Interestingly, environmental considerations (2.71) and enhanced security measures (2.58) were perceived as less important benefits, scoring below the median threshold.
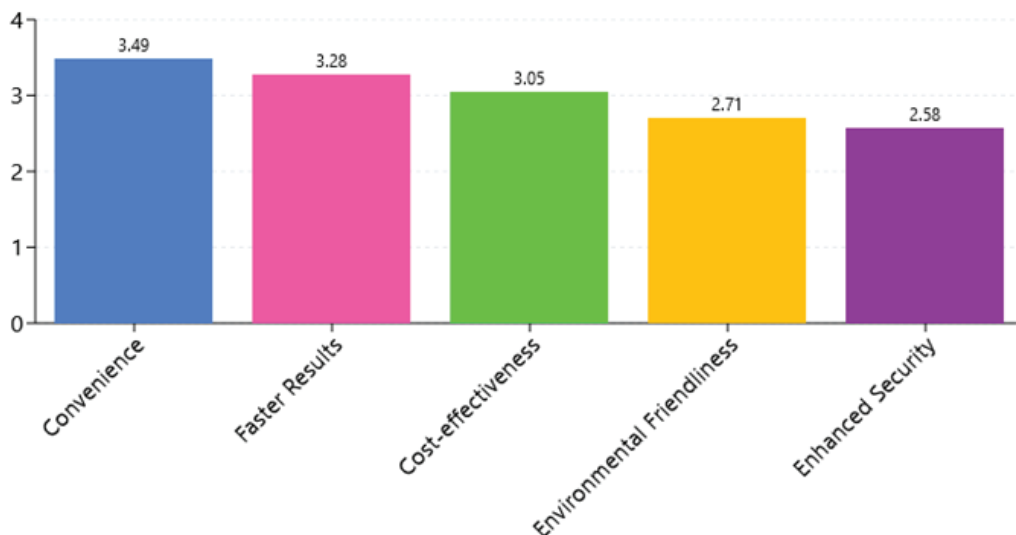

Figure 8: Analysis of Student's perceived Benefits of Online Examinations

3.10 Technical and Environmental Challenges Student Concerns Assessment for Online Examination Transition

The study aimed to identify the key technical and environmental challenges that students anticipate facing during the transition to online examinations. This investigation was critical for understanding potential barriers to successful implementation and areas requiring specific attention from ICAG. The findings from figure 9 reveal that infrastructure-related concerns dominate student apprehensions. Internet connectivity emerged as the most significant concern (mean score 3.85), followed by general technical issues (3.43), both scoring notably above the midpoint. The interview data strongly supports these concerns, with Interviewee 3 explaining *"Not all the time because sometimes when someone calls, the network could break... the connectivity is one challenge."* Students expressed moderate concern about their lack of familiarity with online examinations (3.07), while showing less worry about adapting to typing (2.77) and cheating prevention (2.20). These results suggest that students are primarily concerned about technical reliability rather than academic integrity or adaptation to the new examination format, highlighting the need for ICAG to prioritize robust technical infrastructure and support systems in their implementation strategy.
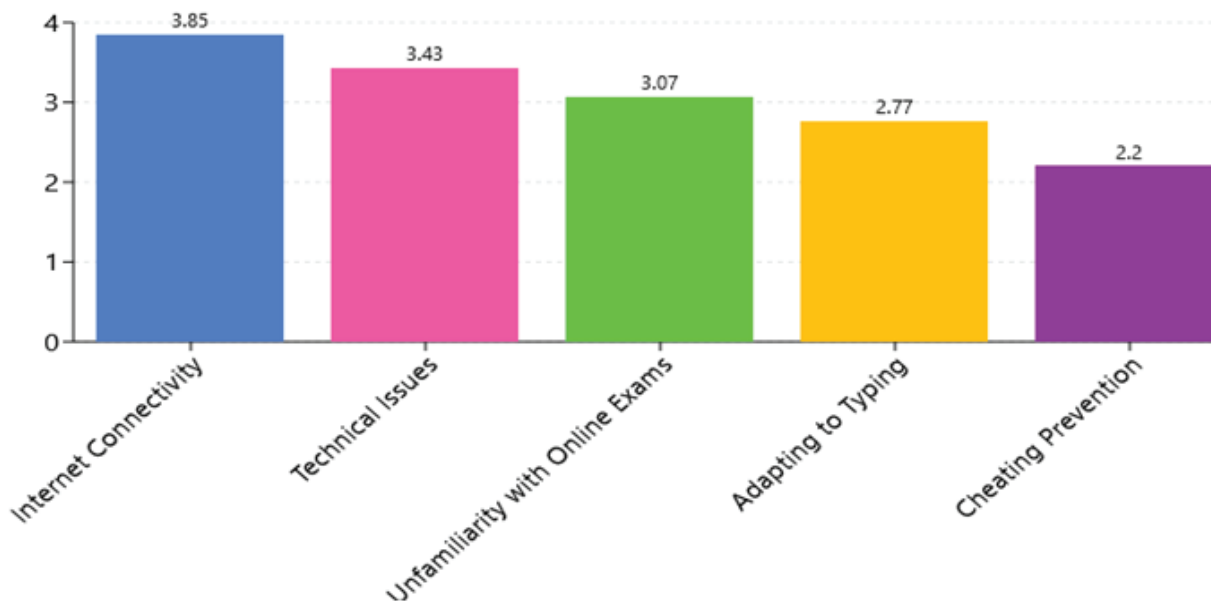

Figure 9: Assessment of Environmental Challenges Student Concerns

3.11 Student Support Needs for Online Examination Implementation

The study aimed to identify the specific types of support students need for successful transition to online examinations. This investigation was essential for ICAG to develop targeted support systems and resources that address students' most pressing needs during the implementation process. The findings from figure 10 reveal that students require most assistance with understanding the fundamentals of online examinations. Understanding the online examination format emerged as the primary support need (mean score 3.60), closely followed by developing technical skills (3.58). The interview data reinforces this, with Interviewee 4 suggesting *"A 3-day intensive seminar and mock exams would help us understand the platform and practice the types of questions we might encounter."* Time management in the

online environment was identified as a moderate concern (3.21), while students expressed less need for support in adapting study techniques (2.82) and managing stress and anxiety (2.13). These results indicate that students prioritize practical, operational support over psychological or study-related assistance, suggesting that ICAG should focus on providing hands-on, technical support and comprehensive format orientation in their implementation strategy.
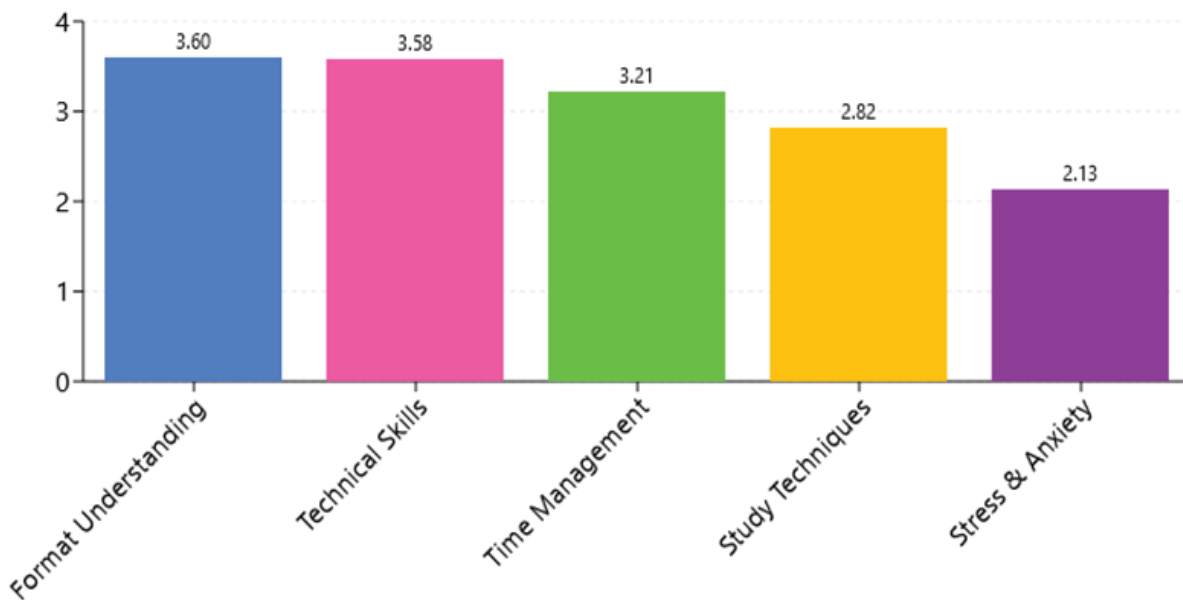

Figure 10: Assessment of Student Support Needs

3.12 Perceived Benefits of Different Preparation Methods for Online Examinations

The study sought to determine which preparation methods students consider most effective for transitioning to online examinations. This investigation was crucial for ICAG to develop and implement the most appropriate and effective training resources that align with students' learning preferences. Figure 11 reveals that students strongly prefer interactive and visual learning approaches. Video tutorials emerged as the most valued preparation method (mean score 3.64), with practice tests (3.29) and hands-on training sessions (3.25) also rated highly. This preference for practical preparation is reflected in the interview data, with Interviewee 5 emphasizing *"We need capacity building for all students… practice sessions are very important."* Traditional approaches such as written guidelines (2.75) and one-on-one support (2.66) were perceived as less beneficial. These results demonstrate that students favour self-paced, visual, and practical learning methods over conventional text-based or individualized instruction, suggesting that ICAG should prioritize the development of comprehensive video-based training materials and interactive practice opportunities in their implementation strategy.
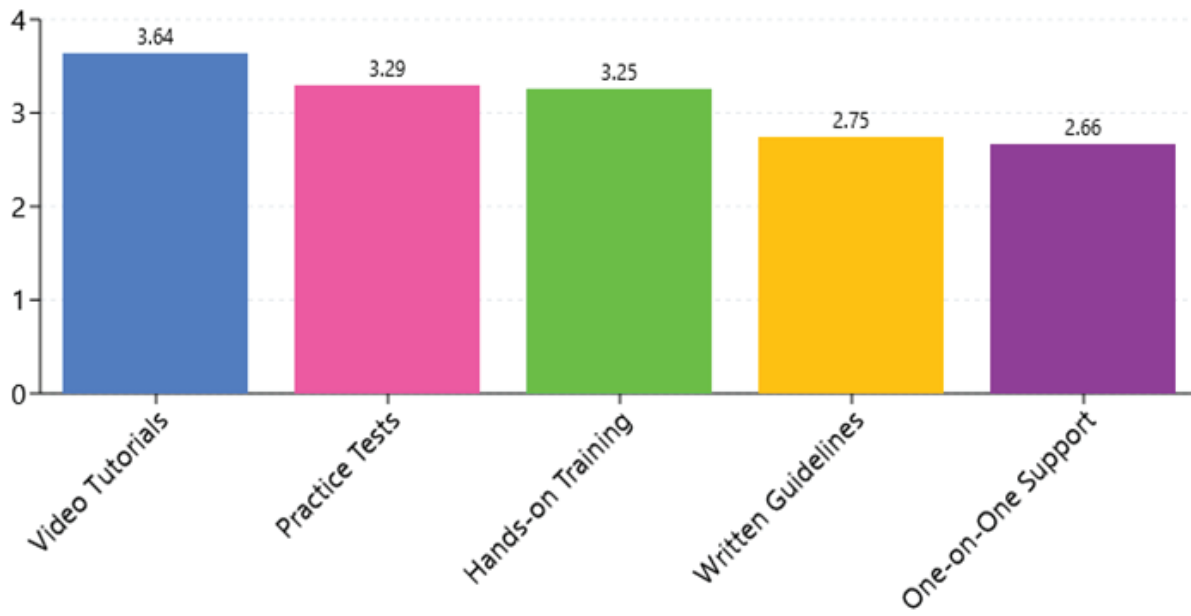
Figure 11: Assessment of Perceived Benefits of Different Preparation Methods

04.
CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

The comprehensive analysis of ICAG students' readiness for online examinations with remote proctoring reveals a complex landscape that will significantly influence the future of professional accounting education in Ghana. The study, drawing from a substantial pool of valid responses, provides critical insights into the technological, psychological, and institutional dimensions of this transition.

The findings illuminate significant disparities in digital infrastructure between urban and rural areas, creating potential barriers to examination equity. A widespread dependence on mobile data networks, combined with persistent power infrastructure challenges across all locations, underscores the fundamental technical hurdles that shape students' ability to participate in online examinations. The technical readiness assessment further reveals that webcam accessibility and reliable power backup solutions remain significant challenges across all demographics.

Notably, the study challenges conventional assumptions about technological adoption in professional education. The findings demonstrate that age does not constitute a significant barrier to acceptance of online examinations, with senior students showing remarkable openness to digital assessment methods. This insight suggests that resistance to technological change may be less about generational differences and more about practical implementation concerns.

Student attitudes toward the transition demonstrate a striking contrast between general optimism and specific practical concerns. While there is broad positive sentiment toward online examinations across geographical locations, students express significant apprehension about internet connectivity and technical reliability. The clear preference for visual and interactive learning methods, particularly video tutorials and practice tests, reflects students' pragmatic approach to preparing for this transition.

The professional impact analysis reveals a sophisticated understanding among students about the relationship between digital competency and modern accounting practice. Despite current infrastructure challenges, students across all education levels recognize that online examination skills align closely with the evolving demands of the accounting profession. This recognition suggests that the transition to online examinations is viewed not merely as a change in assessment format but as an integral part of professional development.

The implications of this study extend beyond ICAG to the broader landscape of professional education in developing countries. The findings offer valuable insights into the complexities of digitalizing professional certification examinations, particularly in contexts where infrastructure reliability presents significant challenges. The study reveals that successful digital transformation in professional education requires more than just technological solutions; it demands a deep understanding of student readiness, infrastructure capabilities, and professional relevance.

Thus, while the transition to online examinations presents substantial technical and infrastructural challenges, the strong foundation of student support and clear recognition of professional benefits suggests potential for successful implementation. The findings indicate that the path forward lies not in overcoming resistance to change, but in addressing practical barriers to participation. This transition represents a critical juncture in ICAG's evolution, with implications that will shape the future of professional accounting education in Ghana. The success of this transition will depend on how effectively these insights are translated into an implementation approach that acknowledges both the challenges and opportunities revealed by this study.

4.2 Recommendations

Based on the study findings, several key recommendations emerge for ICAG's successful transition to online examinations:

• Following the low awareness and misconceptions about remote proctoring, ICAG needs to establish a comprehensive communication strategy. The Institute should maintain regular updates through email, SMS, and a dedicated portal, while conducting monthly awareness sessions about online examination benefits. Additionally, ICAG must demonstrate security features through live sessions that showcase how AI monitoring and browser restrictions prevent examination malpractice to build confidence in examination integrity among students

• Due to the significant digital divide revealed in the study between urban and rural students in computer ownership, widespread reliance on unstable mobile data, and widespread lack of reliable power backup solutions across all locations, the study recommends that ICAG should develop comprehensive technical specifications and guidelines tailored to different student segments. These guidelines should include detailed instructions for managing internet disruptions for rural students, guidance for urban students on optimizing their existing technical setup, and clear specifications for minimum hardware requirements, internet bandwidth, and webcam standards, with specific considerations for Level 3 students who demonstrated higher concern about examination complexity.

• Based on the general relatively high technical concerns among students with regards to the online examination, ICAG should implement a comprehensive technical preparation and support system. At the headquarters level, a dedicated technical team should be established to provide continuous support through multiple platforms including a help desk system, live chat, and remote assistance tools. Additionally, this team should also provide targeted computer literacy training for students requiring additional support, focusing on essential skills like file management and software navigation.

• Due to low familiarity with remote proctoring systems, ICAG should develop a comprehensive orientation program that combines self-paced and instructor-led components. Monthly mock examinations should simulate actual exam conditions, including the complete proctoring experience from webcam setup to examination submission. The Institute should create multimedia learning resources featuring practical demonstrations of common technical issues and their solutions, such as handling internet disruptions or webcam malfunctions during examinations. Regular hands-on workshops in groups of 15-20 students should focus on essential skills like managing online calculators, uploading solutions, and navigating between questions. Additionally, ICAG should provide an examination simulation platform where students can independently practice these skills and experience different scenarios they might encounter during actual examinations.

• In recognition of students' strong awareness of the connection between online examination skills and modern accounting practice requirements, while acknowledging persistent implementation concerns, the study recommends that ICAG should align its digital skills development program with broader professional competency frameworks. This alignment should include creating resources that demonstrate the direct connection between online examination skills and workplace digital requirements, while developing materials that emphasize how digital assessment competencies reflect modern accounting practice demands.

• Considering the substantial variations in student readiness across different demographics and locations, along with differing preparation time requirements between academic levels, the study recommends a gradual rollout approach beginning with Level 1 students, who demonstrated higher preparation confidence. Following successful implementation and

feedback from Level 1, ICAG should progressively scale to Level 2 and finally Level 3 students, who indicated needing more preparation time. This phased approach should begin with lower-stakes assessments, incorporating feedback at each level to refine the system before full implementation. Each level will transition fully to online examinations once implemented, with no option to revert to traditional paper-based examinations, ensuring a complete and consistent transition to digital assessment.
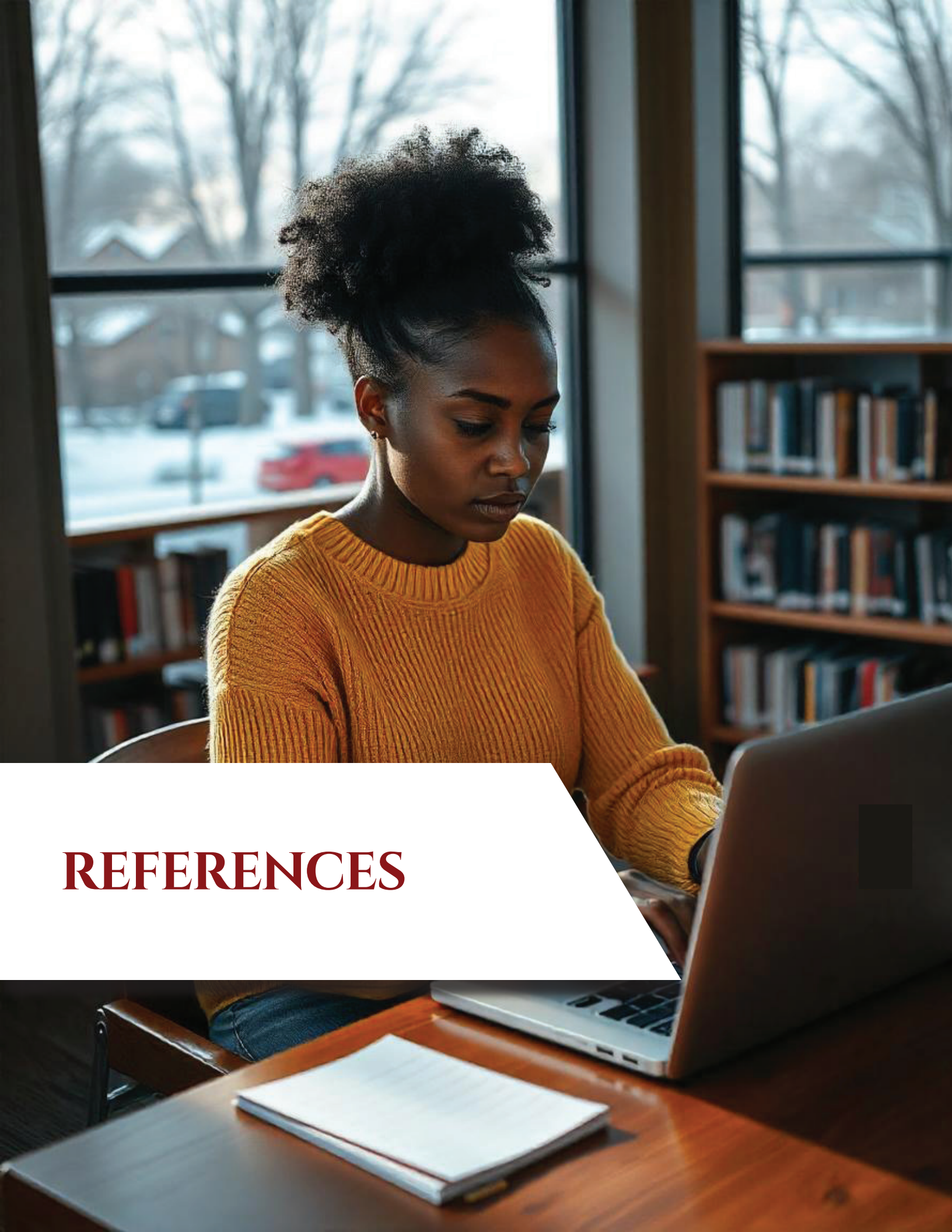
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*All images used in this report were sourced from the internet.