ISSN: 2249-7196
IJMRR/April-June 2026/ Volume 16/Issue 2/269-279
Dr. Suresh Babu Nagarajan / International Journal of Management Research & Review

Accounting Education in Papua New Guinea: Advancing Industry Readiness in the Digital Era

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Abstract

The accounting profession in Papua New Guinea is undergoing change driven by globalization, new regulations, and digital technologies such as cloud accounting, artificial intelligence, and blockchain. University programs have started responding to these shifts. But how far has the response gone? This mixed-methods study surveyed 73 accounting students, 13 lecturers, and 17 employers across three PNG universities (UPNG, IBSU, and SCU) to examine the state of accounting education and its alignment with industry needs. Results show that 92% of students rated their subjects as relevant or highly relevant. About 75% confirmed curriculum alignment with job market needs. Software training covered MYOB (48%) and Xero (52%). All lecturers (100%) agreed that digital tools should be integrated into course delivery. Employers assessed 88% of recent graduates as adequately prepared. Areas for further development include broader software exposure, faculty training in digital tools, and stronger university-industry collaboration. All students (100%) completed internships, with 84% rating them as useful. The study confirms that PNG accounting programs provide strong theoretical foundations and identifies opportunities to strengthen digital and practical components for the benefit of graduates and the profession.

Keywords: *accounting education, digital skills, Papua New Guinea, industry readiness, curriculum alignment, digital literacy, higher education, mixed methods*

Introduction

Papua New Guinea celebrated 50 years of independence in 2025. Over those five decades, the country has built institutions, grown its economy, and expanded access to higher education. Accounting programs have been part of that growth. Thousands of graduates now work in government, private firms, and development organizations. But the profession itself has shifted. Cloud platforms now handle bookkeeping that once required rooms full of paper. Artificial intelligence assists with audit sampling. Blockchain is being tested for transaction recording. These changes are global and accelerating (Kokina & Davenport, 2017).

How well are PNG universities preparing students for this new environment? That is the central question of the study. Birt et al. (2019) examined accounting curricula across several countries and found that many programs remained tied to textbook-based instruction. They proposed a Digital Capabilities Framework that combines technical skills with professional judgment and ethical reasoning.

Deliu and Olariu (2024) described a "corporate digital divide" between organizations that adopt digital tools and those that fall behind. The same kind of divide can exist in education. Programs that integrate digital tools produce graduates ready for modern workplaces. Programs that do not risk leaving graduates at a disadvantage.

Koko and Ajinwo (2022) studied accounting education in Nigeria and found low adoption of accounting software among lecturers. The barriers were familiar: limited training, limited facilities, and limited institutional support for change. Their recommendations included embedding software into the curriculum and providing ongoing professional development for teaching staff.

In the Asia-Pacific region, Tiron-Tudor et al. (2021) documented how AI, robotic process automation, and data analytics are reshaping the skills that employers seek. Jackson et al. (2022) emphasized the role of multiple stakeholders, including employers, professional bodies, and universities, in developing accountants ready for the future.

PNG sits within this global picture. The country has its own context, including geographic challenges, infrastructure constraints, and a young population eager for opportunity. A team at the University of Papua New Guinea designed this study to examine what is working in accounting education, where opportunities for improvement exist, and how universities and industry can move forward together.

Objectives of the Study

The study had four aims. The first was to assess how far accounting curricula in PNG have incorporated digital tools and emerging technologies. The second was to identify areas where academic preparation and industry expectations could be better aligned.

The third objective was to gather perceptions from three groups: students, lecturers, and employers. Each group sees accounting education from a different angle. Together, they provide a well-rounded picture.

The fourth aim was to propose strategies for strengthening digital integration in accounting education. These strategies would draw on the data collected and on practices reported in the global literature.

Review of Related Studies

Accounting Education in PNG

Nabobo-Baba and Togi (2018) studied accounting curricula in PNG and noted that programs emphasize traditional accounting principles. Their study pointed to opportunities for greater inclusion of digital tools. Ala (2020) surveyed employers and found that graduates arrive with solid theoretical knowledge. Employers expressed interest in seeing more practical exposure to technology and digital platforms during the degree itself.

Waine and Koml (2019) examined the university side. They found that institutions face real constraints: infrastructure limitations, slow technology adoption cycles, and the need for more faculty trained in digital tools. Ivara (2024) discussed how ICT can expand access to learning resources, personalize instruction, and help build the digital literacy that graduates will need in a technology-driven economy.

Global and Regional Perspectives

Globally, the conversation has moved fast. Birt et al. (2019) called for scenario-based learning using real-world accounting platforms. Their Digital Capabilities Framework proposes a blend of technical skills, ethical reasoning, and critical thinking, designed to prepare graduates for workplaces that are already digital.

Kokina and Davenport (2017) studied how AI is entering the auditing profession. Their message was clear: digital literacy improves accuracy, speeds up decision-making, and reduces error. Brown and Yasukawa (2021) extended this to blockchain and cloud computing, documenting how these technologies are entering curricula in leading programs worldwide.

IFAC (2023) published guidelines on bridging the gap between academia and practice. The recommendation was direct: curriculum design should involve industry input, not just academic judgment. Real-world software should appear in the classroom.Surianti (2020) made the case that accounting education must evolve to cover data analysis, information systems, and leadership skills. Damerji and Salimi (2021) added that universities need to equip students with the technological skills that firms now treat as standard. Stewart (2023) stressed that faculty development programs are essential for reforms to succeed.

In a recent study, Deliu and Olariu (2024) examined skill gaps between what employers want and what graduates bring. They introduced "cyber, digital, and technological skills" as a distinct category, specific to Industry 5.0. Koko and Ajinwo (2022), working in the Nigerian context, recommended integrating accounting software into curricula and providing continuous training for lecturers. These recommendations carry relevance for PNG.

Research Methodology

Research Design

The study used a mixed-methods approach. Quantitative data came from structured surveys using Likert-scale, multiple-choice, and open-ended questions. Qualitative data came from semi-structured interviews and document analysis of course outlines, university reports, and professional standards.Combining both methods allowed the research team to measure patterns across a larger group and also understand the reasoning behind those patterns through in-depth conversations.

Population and Sample

Three universities participated: the University of Papua New Guinea (UPNG), the International Business School of PNG (IBSU), and Southern Cross University (SCU). The target sample was 120 respondents. Actual responses totalled 103: 73 students, 13 lecturers, and 17 employers.

Students were selected through stratified random sampling across the three universities. Lecturers and employers were chosen through purposive sampling to ensure that respondents had direct experience with accounting education or graduate employment. Employers came from both public (47%) and private (53%) sectors.

Figure 1: Respondent Profile of Student Participants

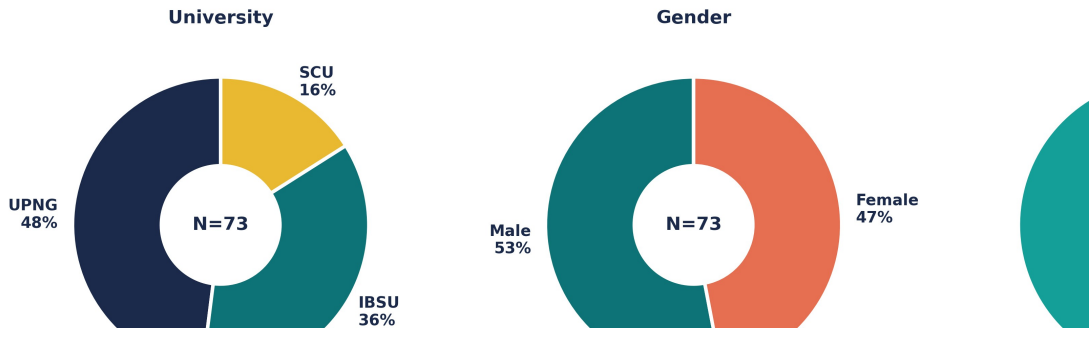

Figure 1: Respondent Profile of Student Participants (N=73)

Data Collection

Surveys were distributed both online and on paper. Semi-structured interviews were conducted face-to-face or by teleconference, primarily with lecturers and employers. The research team also reviewed academic curricula, course outlines, and institutional reports to assess the extent of digital content in current accounting programs.

Findings and Analysis

Curriculum Alignment and Subject Relevance

Students were asked whether their curriculum aligns with the needs of today's job market. Three quarters (75%) said yes. The remaining 25% said they were not sure. Nobody said no.

On subject relevance, 63% rated their courses as "relevant" to industry practices. Another 29% said "highly relevant." Only 5% chose "slightly relevant" and 3% said "moderately relevant." Nobody selected "not relevant."

These are encouraging numbers. A clear majority of students see a connection between what they study and what the profession requires.

Figure 2: Student Perceptions of Curriculum Quality (N=73)

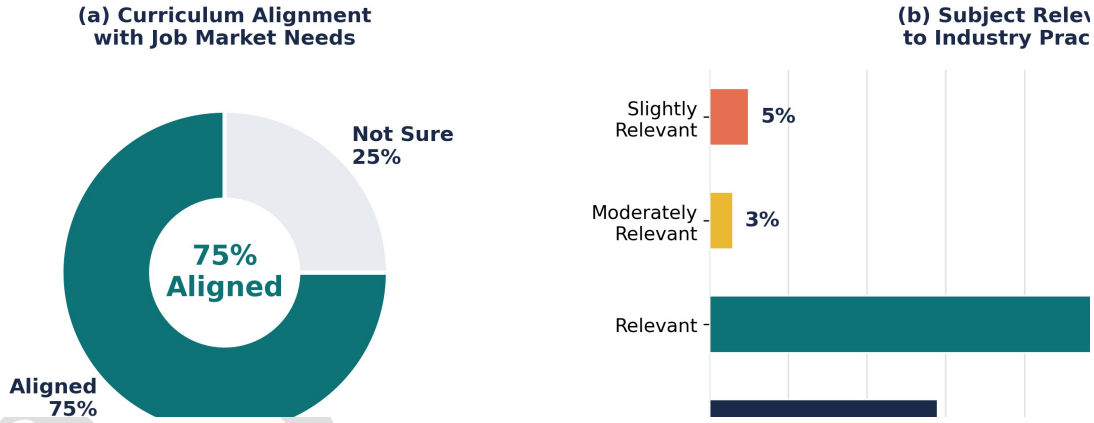

Figure 2: Student Perceptions of Curriculum Quality (N=73)

Software Training and Confidence

About 48% of students received training on MYOB during their degree, mainly at UPNG. Another 52% trained on Xero, primarily at IBSU and SCU. Each university has chosen a platform that students learn and practice with.

Confidence in using accounting software was spread across the scale. About 52% rated their confidence as "moderate." Another 38% said "high" and 4% said "very high." Only 5% reported low confidence. The fact that 42% of students rated their confidence as high or very high reflects positively on the practical components already in place. Broadening exposure to additional platforms could strengthen this further.

Figure 3: Software Exposure and Self-Assessed Confidence (N=73

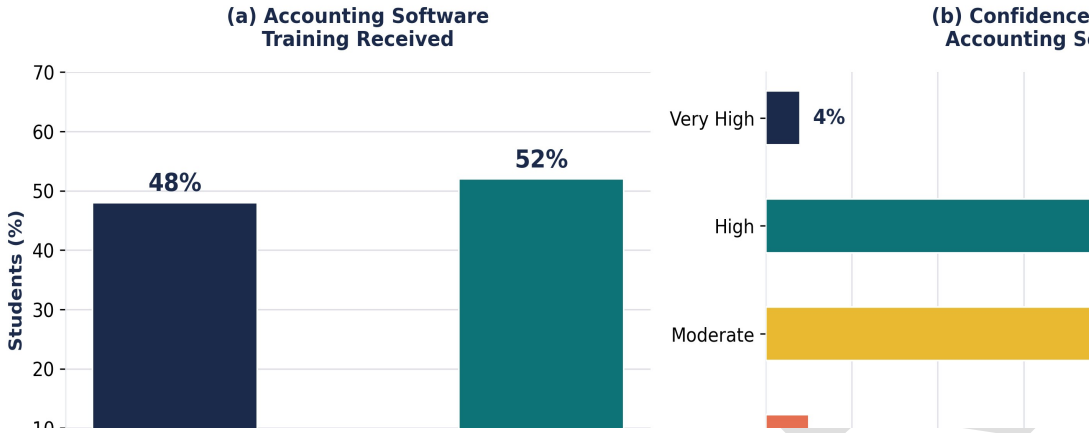

Figure 3: Software Exposure and Self-Assessed Confidence (N=73)

Digital Trends and Simulation

About 48% of students confirmed that topics related to digital trends, such as cloud accounting or data analytics, were covered in their courses. Another 41% said these topics were not covered, and 11% were unsure.

On simulation exercises, 68% of students said simulations were used "sometimes" in their courses. Another 19% said "frequently." Only 12% said "rarely" and nobody said "never."

The combination of simulation usage and some digital content coverage shows that PNG universities are taking steps in this direction. There is room to expand and embed these elements more consistently across the curriculum.

Figure 4: Digital Content and Simulation in the Classroom (N=73)

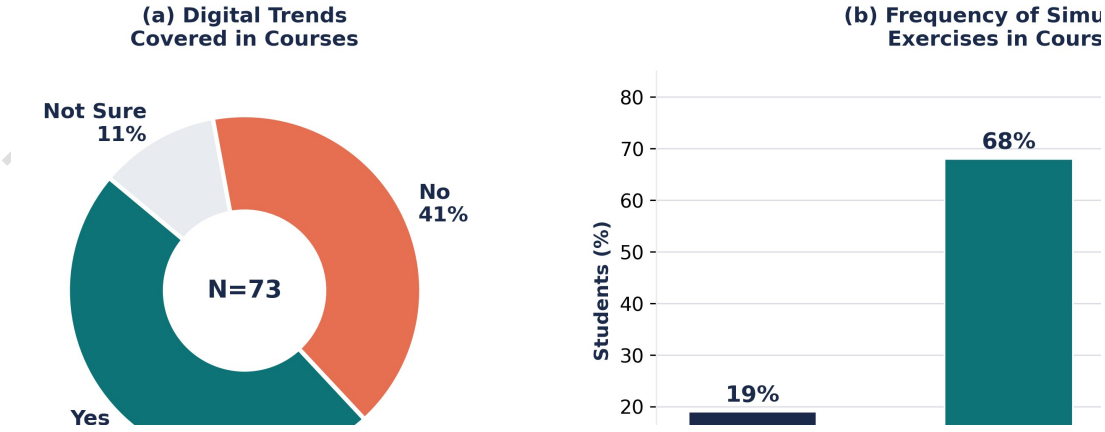

Figure 4: Digital Content and Simulation in the Classroom (N=73)

Internship Experience

Every student in the sample (100%) had completed an internship. That is a strong achievement. Of those, 84% rated their internship as useful. The remaining 16% said it was "partially useful." Nobody found it useless.

Internships represent one of the strongest bridges between the classroom and the workplace. The 100% completion rate and high satisfaction scores speak well of the partnerships that PNG universities have built with industry.

Figure 5: Internship Experience of Student Respondents (N=73)

Lecturer Perspectives

Thirteen lecturers participated, with 62% from UPNG and 38% from IBSU. All held at least a bachelor's degree. About 92% held a master's degree, 54% held a PhD, and 100% held a CPA or equivalent professional qualification. About 77% had prior industry experience before entering academia.

All 13 lecturers (100%) agreed on two things: the curriculum needs digital tools, and university-industry collaboration is important. That was unanimous agreement. No dissent.

When asked about the challenges they face in teaching digital skills, the most commonly cited barrier was lack of training (92%). Lack of facilities and software came second at 62%. Curriculum restrictions followed at 46%. Time constraints were cited by 31% and student readiness by 23%.

What digital tools do lecturers currently use? Advanced Excel was used by all 13 (100%). MYOB was used by 46%. Xero and ERP software were each used by 8%. Cloud-based tools and QuickBooks were not in use.

For online teaching, 62% of lecturers used Moodle. Google Classroom was used by 23%. Microsoft Teams and Zoom were each used by smaller groups. About 54% of lecturers had received professional development training in digital accounting tools.

Figure 6: Lecturer Challenges and Tool Usage (N=13)

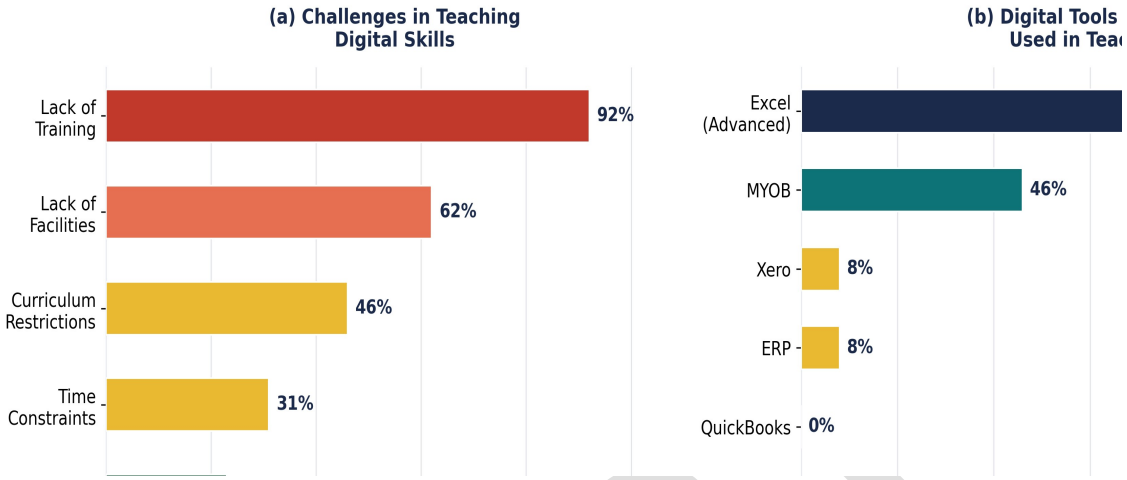

Figure 6: Lecturer Challenges and Tool Usage (N=13)

Figure 8: Lecturer Digital Platforms and Professional Developmen

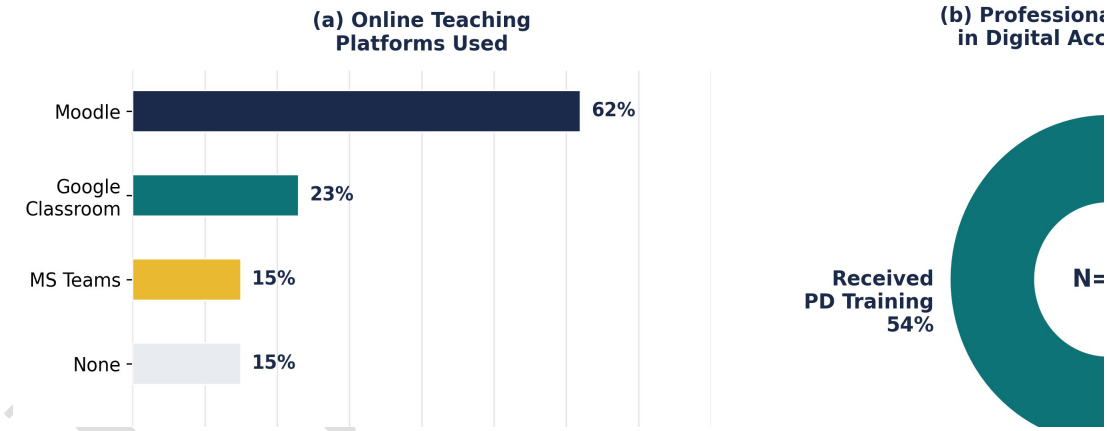

Figure 8: Lecturer Digital Platforms and Professional Development (N=13)

Employer Perspectives

Seventeen employers participated: 47% from the public sector and 53% from the private sector. Most (71%) were large organizations with more than 50 employees. Collectively, these employers had hired 186 accounting graduates in the last three years: 76 into the public sector and 110 into the private sector.

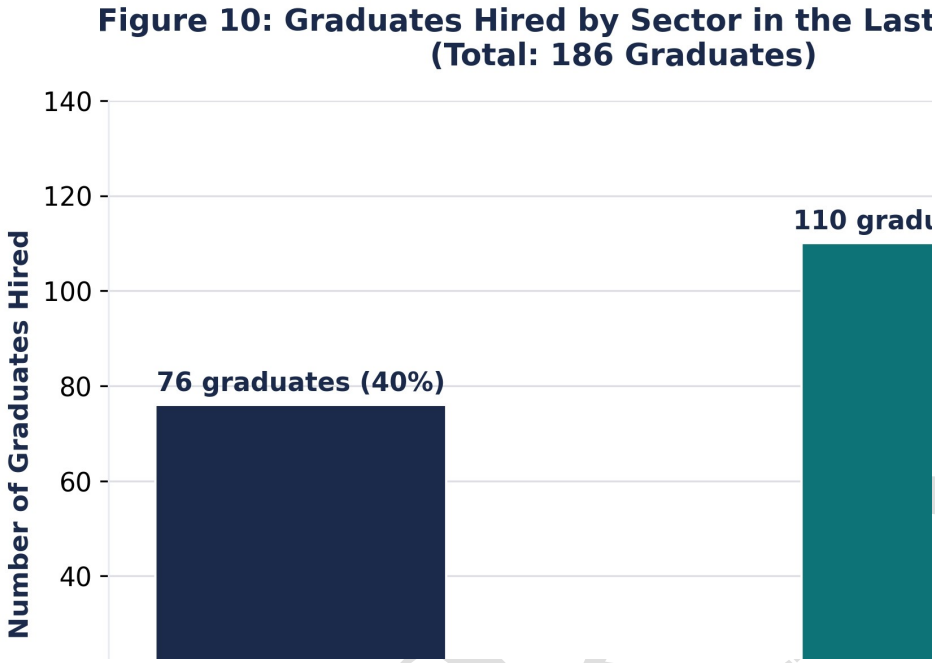

Figure 10: Graduates Hired by Sector in the Last Three Years (Total: 186)

Employers were asked about graduate preparedness. About 88% said recent graduates were "adequately prepared." About 6% said "poorly prepared" and another 6% said "not prepared at all." Nobody selected "very well prepared."

On skill gaps, practical software knowledge was the most frequently identified area for further development at 71%. Communication skills, ethical awareness, and critical thinking were each identified by 53%. Report writing was mentioned by 47%. Financial analysis and industry knowledge were each cited by 35%.

Figure 7: Employer Perspectives on Graduate Quality (N=17)

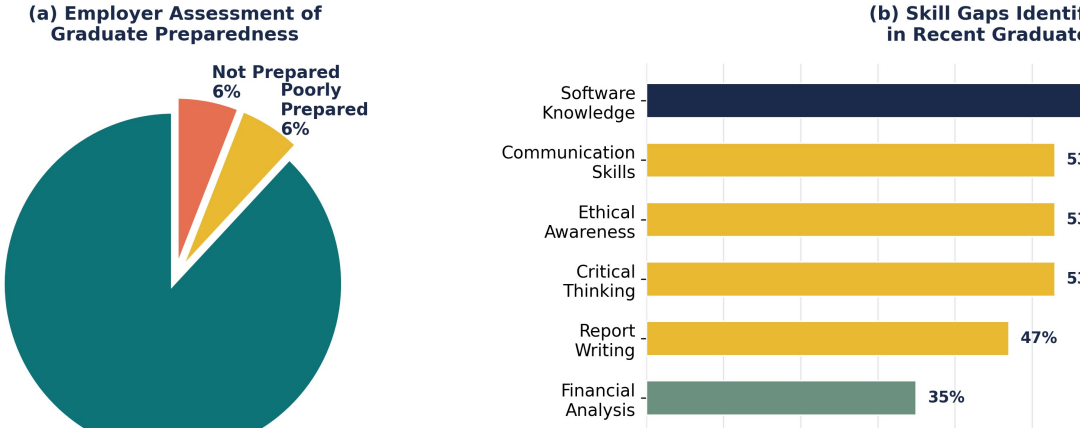

Figure 7: Employer Perspectives on Graduate Quality (N=17)

Only 18% of employers said graduates arrive with adequate digital accounting tool knowledge. About 41% said "partially" and another 41% said "no." This highlights an opportunity for universities to expand software and digital tool coverage in their programs.

On collaboration, 59% of employers said they would offer internships. Another 29% said "maybe." About 59% expressed willingness to provide input on curriculum design.

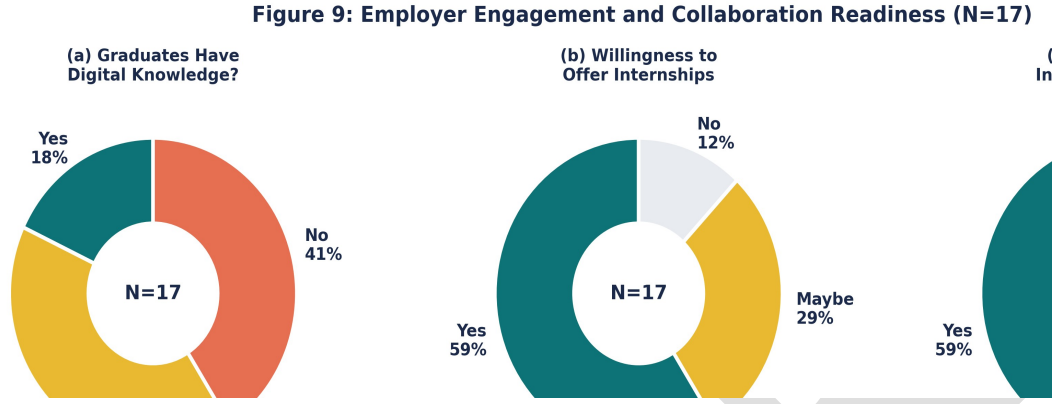

Figure 9: Employer Engagement and Collaboration Readiness (N=17)

Recommendations from Stakeholders

Student Recommendations

Students asked for more hands-on training with accounting software. They valued advanced Excel skills. Real-world case studies, practical fieldwork, and workshops were mentioned frequently. Students also requested more attention to soft skills and professional development, alongside continued internship opportunities.

Lecturer Recommendations

Lecturers called for curriculum modernization and realignment with current industry practices. They recommended stronger technology integration and investment in digital facilities. Upskilling and capacity building for teaching staff emerged as a priority. Lecturers also recommended deeper stakeholder engagement and institutional policy support for reform.

Employer Recommendations

Employers recommended integrating accounting software training into degree programs. They urged universities to bridge theory and practice more actively. Updating curricula with global standards, strengthening communication and writing skills, and emphasizing ethics and professionalism were all mentioned. Employers encouraged stronger industry-academia collaboration and investment in teacher training and resources.

UPNG's Contribution to Accounting Education

The University of Papua New Guinea's School of Business and Public Policy (SBPP) offers accounting programs that integrate both theory and practical skills. The curriculum includes Accounting Information Systems, reflecting a commitment to digital content.

SBPP uses blended learning approaches to improve accessibility and build digital literacy. The school collaborates with industry and government to keep education aligned with market needs. Research activities within SBPP address PNG-specific accounting and business questions. These efforts support the production of graduates ready to contribute to PNG's economic growth.

Discussion

Data from all three groups converge on a consistent picture. PNG accounting programs provide solid theoretical foundations. Students recognize this. So do employers. The 88% "adequately prepared" rating from employers and the 92% relevance rating from students are meaningful achievements.

Where does the opportunity lie? Primarily in expanding digital and practical exposure. Students currently learn one software platform during their degree. Exposure to additional tools would broaden their capabilities. Birt et al. (2019) recommended teaching the principles of digital accounting across multiple platforms. That approach could work well in PNG.

Lecturers are aligned on the direction. All 13 agreed that digital tools belong in the curriculum. All 13 also agreed on the importance of industry collaboration. The main barrier is support. Training, facilities, and software access are the issues, not willingness.

Jackson et al. (2022) emphasized the role of multiple stakeholders in developing future-ready accountants. PNG already has the building blocks: strong internship programs, willing employers, and lecturers who see the path forward. What is needed is investment in faculty training and expanded digital resources.

IFAC (2023) recommended that curriculum design involve industry input, not just academic perspectives. In this study, 59% of employers expressed willingness to participate in curriculum design. That is an open door waiting to be walked through.

Surianti (2020) and Damerji and Salimi (2021) both argued that the accounting profession now demands skills in data analysis and information systems. Stewart (2023) stressed that none of this happens without faculty development. PNG universities can draw on these global insights while adapting solutions to their own context.

Limitations

The study covered three universities based in or near Port Moresby. Regional and rural institutions were not included. The sample size, particularly for lecturers (13), is small. Findings should be read as indicative.

The study captures perceptions at one point in time. Technology and employer needs evolve. Longitudinal research would add depth. Objective skill assessments could complement the perception-based data collected here.

Conclusion and Way Forward

PNG accounting education stands on a solid foundation. Students value their courses. Employers recognize graduate competence. Lecturers see the direction clearly. The profession is changing. PNG universities are responding.

The next steps are clear. Curricula should expand to include broader digital tool exposure across the degree. Faculty development programs should equip lecturers with training in cloud accounting, data analytics, and modern audit software. Universities should formalize the industry collaboration that employers are willing to provide.

Internship programs are already strong. Simulation exercises are growing. Digital content is entering the classroom. These are foundations to build on. PNG at 50 has an accounting education system that works. The question now is how to make it work even better for the next generation.

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