



## **Declining students' enrolment and retention rate in Higher Education institutions in Papua New Guinea: A review**

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### **Abstract**

The higher education sector in Papua New Guinea (PNG) faces persistent challenges in converting increased access into sustained participation and successful completion. Despite policy initiatives such as the Tuition-Fee Free scheme, National Education Plan 2021–2029, and funding reforms, enrolment growth has not consistently translated into improved retention or graduation outcomes. Students from low-income households, particularly female cohorts remain disproportionately affected by financial, transport and socio-cultural barriers. Key factors contributing to attrition include financial instability, inadequate academic preparation, and limited institutional support services. The COVID-19 pandemic further exposed systemic vulnerabilities, including dependence on unstable funding and weak student welfare structures. Evidence from national and institutional trends reveals that while access has expanded, retention and completion remain constrained by insufficient student support systems and misalignment between policy objectives and institutional capacity. Addressing these challenges requires an integrated approach combining financial stabilization, academic bridging programs, counselling and mentoring services, and gender-sensitive interventions. Strengthening data-driven enrolment monitoring, enhancing employability-focused curricula, and promoting flexible learning modes can improve equity, resilience, and long-term sustainability in PNG's higher education system. A shift from access-oriented to success-oriented policy frameworks is essential for transforming higher education into an inclusive and effective driver of national human capital development.

**Keywords:** Higher education, enrolment, retention, Papua New Guinea, student success

### **1. Status of Higher Education in Papua New Guinea**

Higher education institutions (HEIs) in Papua New Guinea (PNG) face persistent and multi-dimensional challenges in transforming student access into sustained participation and successful completion. Despite major government initiatives such as the National Education Plan (2021–2029) and the Tuition-Fee Free (TFF) policy and periodic increases in education expenditure, enrolment growth has not consistently translated into improved retention or timely graduation, particularly among vulnerable cohorts including rural, low-income, female, and

first-generation students (Department of Education, 2021; Walton et al., 2017; Paraide, 2015; World Bank Group, 2023). Financial instability remains a major barrier to educational continuity, as uncertain tuition coverage, limited scholarships, and inconsistent HELP or loan mechanisms along with unpredictable sponsorships often force students to defer or withdraw. This is compounded by household financial stress from large family sizes, subsistence demands, and economic volatility, which further undermines students' ability to persist in their studies. Academic under-preparedness also contributes significantly to attrition. Students entering from uneven and diverse pre-tertiary pathways often possess foundational skill gaps and struggle with programme mismatch or unrealistic academic expectations. These issues are compounded by socio-cultural pressures such as caregiving responsibilities, early or forced marriage, and communal obligations, alongside psychological distress and mental health challenges that remain under-supported within institutions.

Institutional and systemic weaknesses exacerbate the problem. Inefficient administrative processes, inadequate counselling and academic support services, weak transition mechanisms, and poor monitoring of student progress limit the capacity of HEIs to respond to at-risk students effectively. Moreover, provincial disparities, linguistic diversity, and recurring political and economic instability often disrupt scholarship programs and destabilise funding flows, further weakening system-wide resilience. Consequently, these interlinked factors lead to significant public and private investment leakage, persistent inequalities in access and outcomes, and diminished human-capital returns essential for national development. Empirical evidence from global contexts indicates that well-designed financial aid programs, behavioural “nudge” interventions, remedial learning supports, and psychosocial counselling can substantially reduce dropout rates (Duflo et al., 2015; Global Partners for Education, 2019; Lichand et al., 2023; Sakai, 2020). However, PNG-specific analyses (Walton et al., 2017; Paraide, 2015; World Bank Group, 2023; NRI, 2024) caution that fee-free or fee-reform policies, while expanding access, risk exacerbating mid-course interruptions and inequality unless supported by stable funding, targeted assistance, and stronger institutional capacity. Therefore, the key challenge for PNG's higher education sector is not merely increasing enrolment, but developing evidence-based, sustainable systems that: (a) identify and support high-risk students early; (b) stabilize financing and minimize economic shocks; (c) remediate academic and skill deficits; and (d) address psychosocial and household barriers all while navigating volatile fiscal and political environments that shape the higher education landscape.

## **2. Review of Literature**

National and statistical portraits show uneven progress in Papua New Guinea's education outcomes, particularly in enrolment, retention, and completion rates. Enrolment has improved at the primary level, but significant gaps remain across provinces and socioeconomic groups (Department of Education, 2021; EPDC, 2018; UNESCO Institute for Statistics, 2019). The National Research Institute (2024) highlights uneven progress in Universal Basic Education, with geographical and cohort-related inequities that extend into the tertiary sector. DevPolicy analysis further shows that while free tuition has increased enrolment, it has not consistently improved learning or retention, and significant provincial gaps remain. (Walton et al., 2017; Walton & Hushang, 2021). Institutions must then dissect enrolment levels by province, gender, age, and socioeconomic status to delineate at-risk groups needing transition support.

Policies of free education have been studied extensively, revealing that, whereas eliminating constraints to accessing institutions removes barriers, it also strains fiscal and administrative resources (Walton, 2019; Paraide, 2015; Walton & Hushang, 2021). Shortfalls driven by insufficient funds, volatile transfers, and budget reallocations disrupted disbursements and created financial uncertainty (World Bank Group, 2023; Magury, 2019;

Howes et al., 2014). Scholarships and credit schemes are unevenly allocated across provinces, genders, and socioeconomic groups (Sakai, 2020). Unpredictable sponsorships are the leading cause of dropouts. Institutions need to diversify student finance and push for stable national allocations.

Socioeconomic factors particularly household poverty, family size, and living conditions greatly affect enrolment and retention (UNESCO Institute for Statistics, 2019; World Bank Group, 2023; Department of Education, 2021). The opportunity cost of education is higher in households with subsistence obligations and large families, often forcing children to drop out early. (May, 2004). Gendered discrimination such as early marriage and caregiving responsibilities also increases the risk of dropout (Howes et al., 2014). Therefore, the universities also need to incorporate household responsibilities for student care through childcare and flexible learning. Psychological stressors like poor confidence, imposter feelings, and poor mental health, even if under-studied in PNG, cause attrition (Avalos, 1993; Bray, 2007). Programme misfit and lack of adequate counselling services exacerbate the problem (Rosser & Joshi, 2013). Academic advising, orientation, and counselling for mental health must be strengthened. Unequal preparation at the pre-tertiary level also causes failure and drop-out, with many school-leavers presenting poor literacy and numeracy skills (Department of Education, 2021; EPDC, 2018). Foundation and bridge programmes are patchy, highlighting the need for tutoring and remedial support (Sakai, 2020).

Reviews of PNG free-fee and tuition reforms show they boost enrolment but fail to address retention when funding is unstable (Walton, 2019; Walton & Hushang, 2021; Paraide, 2015). Budget analyses detail common budget shortfalls and reallocation opportunities that stall scholarships and transfers (World Bank Group, 2023; Magury, 2019; Howes et al., 2014), causing sponsorship gaps that catalyze drop-out. Comparative studies indicate that removing fees is insufficient without means-testing, multi-year funding commitments, and financial safeguards for institutions (Rosser & Joshi, 2013; Bray, 2007). Programme and randomised evidence endorse that targeted spending support, when continuous and reliable, is correlated with lower attrition (Duflo et al., 2015). COVID-era behavioural nudge experiments shows that low-cost interventions promote retention among disadvantaged students (Lichand et al., 2023). PNG case studies recommend institution bursaries, continuity assurances, and employer/NGO sponsorships to protect funds from budget shocks (Sakai, 2020).

Strong pre-tertiary foundations in literacy, numeracy and study skills correlate with low dropout, as do successful completions of gateway units (Department of Education, 2021; EPDC, 2018). The evidence favours the use of early diagnostic testing and the use of mandatory bridging/foundations programmes to decrease early failure (Sakai, 2020). Recent studies using machine-learning and predictive analytics show promise for long-term tracking and early identification of at-risk cohorts (Shiao et al., 2023; Forti et al., 2025). The literature suggests interventions that offer flexible modes of delivery, childcare services and gender-responsive scholarships.

Growing evidence links mental health and dropout: administrative data show mental-health issues predict separation (Zajac et al., 2024). Psychological barriers imposter syndrome, low self-efficacy, poor motivation, are important mediators of academic engagement (Avalos, 1993; Bray, 2007). Measurement of dropout intention is also a useful early indicator of actual separation (Findeisen et al., 2024). Institutions benefit from early screening, counselling, and mentoring to address these non-cognitive risks. Peer effects and reference groups (parents, friends, classmates) shape persistence decisions (Siembab, 2024). Social-capital approaches to peer mentoring, cohort communities, and structured study groups can reduce isolation and strengthen belonging, lowering dropout probability.

Research on PNG reveals governance trade-offs between central policymaking and decentralized delivery, particularly between efficiency and equity (Walton, 2019; Kanaparo et al., 2016). Administrative slow-downs, personnel gaps, infrastructure gaps (hostels, transportation), and unreliable national budgets exacerbate dropout risk. The political economy of education expenditures can generate sudden scholarship discontinuities; therefore, resilience mechanisms (contingency funds, diversified fundraising) are imperative. Lastly, governance turbulence, weak institutional capacity, and policymaking volatility compromise student retention (Walton, 2019; Howes et al., 2014; Kanaparo et al., 2016). Administrative inefficiency, poor basic infrastructure, and variable instructional quality are major deterrents. Economic recessions and shifting political agendas all too often up-end education expenditures and scholarships (Walton et al., 2017; World Bank Group, 2023). Institutions need to develop resilience through contingency funds, diversified fundraising, and robust governance to protect student progress and programme viability.

National and statistical profiles reveal mixed progress in education outcomes in Papua New Guinea (PNG). The National Research Institute (2024) highlights uneven Universal Basic Education outcomes, showing geographic and cohort-based inequalities extending to tertiary education. Analyses by DevPolicy indicate that tuition-free policies have boosted enrolment but not consistently improved learning or retention, with significant provincial variations (Walton et al., 2017; Walton & Hushang, 2021). Institutions must therefore disaggregate enrolment data by province, gender, age, and socioeconomic background to identify high-risk groups needing transition support.

Fee-free education policies have been widely examined, showing that while they remove barriers to access, they also strain fiscal and administrative capacities (Walton, 2019; Paraide, 2015; Walton & Hushang, 2021). Funding shortfalls, unpredictable transfers, and budget reallocation have disrupted payments and created instability (World Bank Group, 2023; Magury, 2019; Howes et al. 2014). Alternatives such as scholarships and loan schemes remain unevenly distributed (Sakai, 2020; The World Bank, 2024). The lack of predictable sponsorships is a major contributor to dropout. Institutions should diversify student financial aid and advocate for consistent national funding.

Socioeconomic pressures especially household poverty, family size, and rural livelihoods significantly influence enrolment and persistence (UNESCO Institute for Statistics, 2019; World Bank Group, 2023; Department of Education, 2021). Larger families and subsistence obligations increase the opportunity cost of study, often leading students to withdraw early (May, 2004). Gendered barriers, such as early marriage and caregiving expectations, further heighten dropout risks (Howes et al., 2014). Hence, universities must consider household responsibilities in student support services through childcare and flexible study options. Psychological stressors such as low confidence, imposter syndrome, and mental health challenges, though under-researched in PNG, contribute to attrition (Avalos, 1993; Bray, 2007). Limited counselling services and programme mismatches exacerbate the issue (Rosser & Joshi, 2013). Institutions should strengthen academic advising, orientation, and mental health support. Uneven pre-tertiary preparation also drives failure and dropout, as many students enter higher education with weak literacy and numeracy skills (Department of Education, 2021; EPDC, 2018). Bridging and foundation programmes have varying effectiveness, underscoring the need for remedial and tutoring support (Sakai, 2020).

Policy studies of PNG's fee-free and tuition reforms document how expansionary policies raise enrolment but often leave retention unaddressed when funding is unpredictable (Walton, 2019; Walton & Hushang, 2021; Paraide, 2015). Budget analyses reveal recurrent shortfalls and re-allocation risks that interrupt transfers and scholarships (World Bank Group,

2023; Magury, 2019; Howes et al., 2014) producing sponsorship discontinuities that precipitate dropout. Comparative work shows that the mere removal of fees is insufficient without means-targeted aid, predictable multi-year commitments and institutional safety nets (Rosser & Joshi, 2013; Bray, 2007). Randomised and programmatic evidence demonstrates that targeted financial support, when predictable and sustained, reduces attrition (Duflo et al. 2015; Lichand et al. 2023). PNG literature suggests institutions should combine institutional bursaries, continuity guarantees, and employer/NGO partnerships to buffer students from funding shocks (Sakai, 2020).

High dropout correlates with weak pre-tertiary foundations literacy, numeracy and study skills and with failure in gateway units (Department of Education, 2021; EPDC, 2018). Evidence supports early diagnostic testing and mandatory bridging/foundation programmes to reduce early failure (Sakai, 2020). Machine-learning and predictive analytic studies (Shiao et al. 2023; Forti et al. 2025) show potential for long-term tracking and predictive identification of at-risk cohorts, enabling targeted remediation. Household poverty, large family size, and subsistence labour demands raise opportunity costs, increasing withdrawal likelihood (May, 2004; UNESCO Institute for Statistics, 2019; World Bank Group, 2023). Gendered expectations pregnancy, caregiving, early marriage disproportionately affects female students' persistence (Howes et al., 2014). Interventions that provide flexible delivery, childcare support and gender-sensitive scholarships are recommended by the literature.

Growing evidence links mental health and dropout: administrative data show mental health issues predict separation (Zajac et al., 2024). Psychological barriers imposter syndrome, low self-efficacy, poor motivation, are important mediators of academic engagement (Avalos, 1993; Bray, 2007). Measurement of dropout intention is also a useful early indicator of actual separation (Findeisen et al., 2024). Institutions benefit from early screening, counselling, and mentoring to address these non-cognitive risks. Peer effects and reference groups (parents, friends, classmates) shape persistence decisions through encouragement, role modelling, and shared expectations (Siembab, 2024). Social-capital approaches peer mentoring, cohort communities, and structured study groups can reduce isolation and strengthen belonging, lowering dropout probability.

Administrative delays, staff shortages, infrastructure deficits (hostels, transport), and volatile national budgets magnify dropout risk. The political economy of education spending can create abrupt scholarship discontinuities; hence resilience strategies (contingency funds, diversified partnerships) are essential. Finally, governance instability, weak institutional capacity, and policy volatility undermine student retention (Kanaparo et al., 2016; Howes et al., 2014; Walton, 2019). Administrative inefficiencies, inadequate infrastructure, and inconsistent teaching quality remain critical barriers. Economic downturns and shifting political priorities often disrupt education budgets and scholarships (World Bank Group, 2023; Walton et al., 2017). Institutions must build resilience through contingency funds, diversified partnerships, and strengthened governance to safeguard student progression and programme sustainability.

### **3. Institutional barriers and declining selection rates in PNG Higher Education**

#### **1) National-level issues and systemic barriers**

Papua New Guinea's higher education system is experiencing a crisis of quality and equity. DHERST's 2024 report demonstrates that national selection rates have fallen from 40.9 percent in 2022 to 33.4 percent in 2024, despite efforts to expand access through the Tuition Fee Free (TFF) policy and digitalized admissions under the National Online Selection System (NOSS).



This signals that the issue is not merely one of capacity, but of academic preparedness and systemic alignment between secondary and tertiary education.

**a) Weak academic foundations**

A persistent misalignment between secondary curricula and tertiary expectations particularly skills gaps and pedagogical mismatches remain a major barrier. The National Department of Education's curriculum reforms have yet to adequately integrate analytical, digital, and critical-thinking skills required in higher education. Consequently, many Grade 12 graduates enter universities underprepared, particularly in English, mathematics, and science.

**b) Teacher quality and training gaps**

Teacher training colleges and faculties of education in PNG face severe funding and staffing challenges. Studies show that teacher education programs in PNG often lack continuous professional development and digital pedagogy, learner-centered methods (Urame, 2019). The shortage of qualified teachers, especially in STEM subjects, limits students' ability to achieve high GPAs necessary for university entry.

**c) Funding and institutional Governance**

While the PNG Government allocates an increasing share of its education budget to higher education, inefficiencies in fund disbursement and weak governance have constrained impact (World Bank, 2020). Institutions operate under tight budgets, limiting their ability to expand facilities, maintain staff quality, and introduce bridging or remedial programs for underprepared students.

**d) Digital divide and Policy implementation**

The transition to digital systems, including NOSS, has improved transparency but exposed the digital divide between rural and urban schools. Many secondary schools continue to operate without reliable internet connectivity or adequately trained ICT personnel, resulting in delays and inaccuracies in student records and enrolment-related data during the national selection process (DHERST, 2024). In the absence of parallel investments in ICT literacy and infrastructure, ongoing digitalisation efforts risk reinforcing rather than reducing existing educational inequities.

**e) Socioeconomic constraints**

Socioeconomic inequality is another national-level challenge. Families from low-income backgrounds struggle with tuition, transport, and boarding costs. These economic barriers are linked to lower persistence in enrolment (Kaiku, 2022). National loan and scholarship schemes remain underfunded, leaving many students without sustainable support mechanisms.

**f) Policy fragmentation**

Coordination gaps between DHERST, the Department of Education, and provincial administrations hinder unified implementation. Overlapping responsibilities and inconsistent standards have diluted accountability and delayed systemic improvements in education quality and monitoring (Asian Development Bank, 2019).

**2. Province-level disparities and contextual challenges**

Provincial inequalities represent one of the most pressing obstacles to equitable higher education participation in PNG. Urban provinces dominate tertiary admissions, while rural and resource-constrained regions continue to lag behind.

**a) Urban provinces (National Capital District, Morobe, East New Britain, Eastern Highlands)**

These provinces benefit from established secondary institutions, better-qualified teachers, and greater access to infrastructure such as libraries, science laboratories, and ICT hubs. Schools in Port Moresby and Lae, for instance, produce the majority of high-achieving Grade 12 students eligible for tertiary placement. However, even in urban centers, rising enrolments have led to overcrowding, while social issues such as youth unemployment and substance abuse affect student performance and motivation.

**b) Highlands provinces (Enga, Hela, Jiwaka, Simbu)**

The Highlands region faces complex socio-political and logistical challenges. Tribal conflicts, teacher absenteeism, and deteriorating infrastructure frequently disrupt the school calendar (Muke, 2018). Many schools operate with limited learning materials and rely heavily on untrained or temporary teachers. Female participation remains low due to early marriage, security risks, and domestic responsibilities, widening gender gaps in tertiary access.

**c) Coastal provinces (Milne Bay, Gulf, Oro, Western)**

Geographical isolation and transportation costs severely constrain educational access. Students often travel long distances to attend secondary schools or examination centers. Limited access to digital technologies and unreliable electricity supply hinders the implementation of the online selection system. These constraints disproportionately affect rural communities and low-income households, reducing their representation in tertiary institutions.

**d) Island regions (Manus, New Ireland, West New Britain, Bougainville)**

Small population sizes, high teacher turnover, and dependency on external funding define the educational landscape in island provinces. Manus and New Ireland, for example, struggle to maintain consistent examination performance due to under-resourced schools and limited post-secondary options. Bougainville's post-conflict reconstruction context adds an additional layer of educational instability, despite emerging efforts to strengthen community-based learning programs (Osi, 2022).

**e) Gender and Equity dimensions**

Across most provinces, female students remain underrepresented in higher education. Socio-cultural expectations, early marriage, and financial dependency contribute to higher dropout rates among girls. Studies have found that gender-sensitive interventions such as mentorship programs and scholarships significantly improve female participation (DFAT, 2025). Often reliant on donor or NGO support rather than consistent national funding

**3. Higher Education access and retention in PNG**

Research on higher education access and retention in PNG has expanded in recent years, revealing systemic and contextual barriers that align closely with DHERST's findings.

**a) Student preparedness and curriculum gaps**

Emphasize that PNG's secondary school curriculum inadequately prepares students for university-level analytical work. The disconnect between classroom content and tertiary expectations contributes to low GPA performance and high attrition rates. Similarly, Polla (2020) argued for curriculum integration that emphasizes problem-solving, digital skills, and English proficiency.

### **b) Institutional capacity and funding constraints**

The World Bank (2020) reported that PNG's higher education institutions face chronic underfunding has resulted in outdated facilities, staff shortages, and low research output. Public universities operate with limited autonomy, constraining their ability to innovate or expand student support programs. These institutional weaknesses directly contribute to restricted tertiary access and unmet demand for higher education.

### **c) Teacher training and professional development**

Urame (2019) and Kaiku (2022) both observed that teacher education programs in PNG have suffered from inconsistent policy support. Many teacher training colleges lack adequate funding, curriculum modernization, and access to technology. Consequently, new teachers are often underprepared to deliver competency-based education that aligns with 21st-century learning outcomes.

### **d) Socioeconomic and Gender inequalities**

DFAT (2025) found that poverty and gender inequity are major determinants of educational attainment in PNG. Female students face compounded disadvantages due to cultural expectations and limited access to safe learning environments. Moreover, household poverty often forces students particularly in rural provinces to leave school prematurely.

### **e) Digitalization and access**

DHERST (2024) technical brief highlighted both the promise and pitfalls of the National Online Selection System (NOSS). While the system improved transparency, it also revealed digital inequities across provinces, where many rural schools lack internet access or trained ICT officers. This echoes findings from the Asian Development Bank (2019), which emphasized that without digital infrastructure investment, ICT reforms risk reinforcing educational inequality.

### **f) Regional case studies and policy directions**

Osi (2022) examined Bougainville's post-conflict education rebuilding, noting that localized, community-led initiatives significantly improve school retention and tertiary transition rates. This aligns with broader evidence suggesting that decentralization and local ownership enhance education resilience in fragile settings.

## **4. Conclusion and recommendations**

Papua New Guinea's declining tertiary selection and retention rates represent not merely a statistical concern but a deep structural challenge that mirrors wider national development constraints. The persistence of low transition rates from secondary to tertiary education highlights systemic weaknesses in foundational learning particularly in literacy, numeracy, and critical thinking as well as in institutional capacity and policy coherence. These challenges extend beyond access they touch the very heart of equity, quality, and sustainability in the national education system.

At the national level, chronic underfunding of education, inadequate teacher training, weak infrastructure, and outdated curricula continue to erode learning outcomes and hinder the transition to higher education. Fragmented policy implementation and limited coordination



between national and provincial education authorities have created inconsistencies in student preparedness and institutional readiness. Provinces with poorer infrastructure, lower household incomes, and limited access to qualified teachers remain particularly disadvantaged, perpetuating cycles of inequality and exclusion. In addition, the tertiary education system itself faces multidimensional pressures financial instability, insufficient student support systems, and a misalignment between academic programs and labour market demands. Many students enter higher education underprepared academically and financially fragile, often balancing studies with family and community responsibilities. The combination of these factors contributes to high dropout rates and low graduation outcomes, undermining the country's human capital development and economic growth ambitions. A transformation in approach is urgently needed. Future reforms must embrace an integrated, data-driven, and equity-centered strategy that addresses both the supply and demand sides of tertiary education. The goal should not only be to increase enrolment but to ensure that students persist, complete, and transition into meaningful employment. Evidence from DHERST reports, World Bank assessments, and policy analyses by PNG's Department of Education underscores that sustainable progress requires comprehensive reform, not isolated interventions.

A national early risk detection system should be institutionalized to identify students at risk of withdrawal due to financial hardship, absenteeism, or poor academic performance. Integrating attendance, grades, and fee records into a centralized monitoring platform can enable proactive mentoring and remedial interventions before students disengage. Such systems, already proven effective in other developing contexts, would allow PNG to maximize returns on its investment in scholarships and public education spending. Equally vital is financial stabilization a key determinant of persistence in higher education. Establishing an Emergency Continuation Fund and expanding targeted bursary programs in partnership with provincial governments, private sector sponsors, and NGOs would provide essential safety nets for students from low-income families. This should be complemented by flexible payment arrangements and greater transparency in scholarship allocation to promote fairness and accountability.

The issue of academic preparedness also demands immediate attention. Introducing bridging and diagnostic programs in English, mathematics, and digital literacy can help close the competency gap between secondary and tertiary education. These initiatives should be paired with peer-led tutoring systems and enhanced teacher development programs to ensure that instruction quality meets tertiary standards. Without stronger academic foundations, higher education risks achieving numerical expansion without substantive quality. At the same time, expanding socio-psychological support structures remains essential. Many PNG students face mental health challenges, social pressure, and cultural obligations that can disrupt their studies. Institutions should therefore strengthen counselling and welfare services, embed gender-sensitive support systems, and promote inclusive student engagement programs that foster belonging and resilience. These investments contribute directly to retention and academic success.

Curriculum modernization and industry alignment must also form a central pillar of reform. Regular curriculum reviews, guided by labour market data, alumni feedback, and employer consultation, can ensure that programs remain relevant to the country's evolving economic priorities. Practical training, entrepreneurship modules, and digital skill integration will enhance employability and bridge the gap between education and the world of work. This will also reduce graduate underemployment, a growing concern in PNG's youth population. The adoption of digital and flexible learning models offers another avenue to bridge access gaps, especially for rural and working students. Investments in ICT infrastructure, offline

learning materials, and blended delivery systems can democratize learning opportunities across geographic and socioeconomic divides. Partnerships with telecommunications companies and provincial education offices could support device loan programs and rural learning hubs, ensuring that no student is left behind due to digital exclusion.

Improved data transparency and accountability are essential for effective planning, monitoring, and policy evaluation in higher education. Institutions should collect and report disaggregated enrolment and performance data by province, gender, income, and parental education to enable more precise targeting of interventions. Establishing national dropout dashboards, online enrolment systems, and feedback mechanisms will enhance institutional accountability and inform future reforms. Transparent data can also guide resource allocation toward the most vulnerable groups, supporting equity-based policy decisions. Moreover, campus safety and health infrastructure are crucial components of educational equity and parental confidence. Establishing campus-based emergency and health services, particularly in remote regions, demonstrates a tangible commitment to student welfare and can increase enrolment among groups that currently perceive higher education as unsafe or inaccessible. For rural and female students in particular, these measures can be transformative in reducing dropout rates and increasing participation. To foster an academic culture that supports innovation and civic engagement, the creation of student research forums and policy dialogues is recommended. Such platforms can nurture critical thinking, creativity, and leadership, while linking academic work to national development goals. Encouraging student-led projects that address community challenges would deepen the social relevance of higher education and empower students as agents of change.

Finally, expanding institutional and industry partnerships through Memoranda of Understanding (MoUs) can significantly enhance employability and institutional credibility. Strengthening linkages with the private sector, government departments, and international agencies ensures that tertiary graduates have access to internships, mentorships, and job placement pathways. Leveraging these partnerships for applied research and innovation can also generate new revenue streams and promote institutional sustainability. Taken together, these measures form the foundation of a coherent and forward-looking national strategy for tertiary education reform in Papua New Guinea. The vision must extend beyond simply increasing student numbers to building a system that nurtures success, inclusivity, and resilience.

PNG's National Education Plan (2021–2029), the Higher Education Sectoral Policy Framework, and supporting analyses from global partners such as the World Bank and ADB already provide the strategic scaffolding for such transformation. What remains is sustained political will, institutional commitment, and adequate funding. The path forward requires balancing expansion with quality assurance, equity with efficiency, and tradition with innovation. Ultimately, the success of Papua New Guinea's education reforms will determine the nation's capacity to achieve its broader development aspirations from reducing poverty and unemployment to advancing gender equity and sustainable growth. A skilled and adaptable workforce is not merely an educational outcome but a national necessity. The evidence is clear: without comprehensive, data-driven, and equity-oriented reforms, the gap between enrolment and completion will continue to widen, perpetuating cycles of exclusion and inefficiency. Conversely, with coordinated policy action, sustained investment, and a commitment to inclusivity, Papua New Guinea can transform its tertiary education system into a catalyst for human capital development and national progress. The time for reform is no longer future oriented it is immediate and imperative. A united, province-sensitive, and student-centered

approach to tertiary education offers the most powerful pathway toward realizing Papua New Guinea's vision of inclusive, resilient, and knowledge-driven national development.

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