

What the Private Sector Expects from Papua New Guinea's Universities and Graduates (Paper for PATTAF)

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University education is very expensive to provide, especially science subjects. Prior and immediately post independence, in the late 1960s and 1970s, there was a strong drive towards higher education, creating a "rather unbalanced structure" (to quote Goodman, Lepani and Morowitz in 1985) in relation to inadequate primary and secondary education capacity, with 60 higher institutions by the end of the 1970s, "many of them with small enrolments, high unit costs, and overlapping courses and programs". In 1996 it was decided to divide the State universities into four, rather than restraining administrative costs and providing better coordination and specialisation of faculties and courses. Some policy makers and academics had long argued that university provision for many programmes would remain cheaper and standards higher by utilising existing institutions overseas, enabling the limited funding available for education to be concentrated into core tertiary focus areas and expanding primary school intake and advancing towards universal primary education. PNG universities, were established, commencing with UPNG and the university of Technology in 1995, not only to provide university education to meet the Government and private sector's needs but also as a vehicle and symbol of nation-building to feed the country's development process.

Until the recent years of high commodity prices, PNG largely experienced an unsatisfactory economic growth since Independence, particularly in the 1990s following the closure of the Bougainville mine and with its period of conflict, low commodity prices and poor economic management and breakdown of governance, including at the provincial and local levels. For many years economic growth failed to keep abreast of the high population growth rate. By the late 1990s the public sector was starved of operational funding, barely able to provide more than basic staff remuneration, although there remained extensive wastage and large ghost payrolls, including in education. PNG's universities were further squeezed by a policy, encouraged universally by the World Bank and other development institutions, to concentrate public funding on broader-based elementary and primary education. In principle this was correct, especially for PNG. Papua New Guinea still has by far the lowest level of primary school intake (and retention) in the Pacific, and very low by global standards for developing countries, particularly considering this country is now categorised as a middle income developing country.

The cost of primary education per student is a fraction of that for Tertiary education, and young children in their formative years have the greatest capacity to learn than over the rest of their entire lives. Nevertheless, the education system needs to be considered as an organic whole, and the economy and society needs an adequate supply of well educated tertiary graduates to fuel the needs of both the public and private sector, including providing enough teachers of the right calibre and skills to meet society's needs. The requirement is for the right balance, with public funding for tertiary education needing to be well focussed and cost effective. Throwing public funding at a privileged elite is inequitable, especially whilst nearly 50% of the country's youth are denied even primary school entry. It would be particularly problematic if it also failed to provide adequate skills of the right standard required by the country and its growing economy, particularly if those educated at public expense promptly left PNG's shores for more lucrative opportunities overseas.

According to Dick Rooney (*principal author of the Papua New Guinea Commission for Higher Education Institutional Accreditation document - 2003*), "PNG universities have the potential

to offer education, training and research programmes that can support the country's development. A labour force is being trained, especially for basic and secondary education and to address the country's health needs, as well meeting the broader needs of government, civil service, and as business leaders. PNG universities also believe they should impart cultural values, attitudes, and ethics that can help to construct a healthy civil society and support good governance and a democratic political system. Another objective is to produce graduates who are keen and able to contribute to their immediate communities and the country".

However Rooney points out that "there are many problems facing universities: overcrowding, limited or obsolete libraries, insufficient equipment, outdated curriculum, and under qualified teaching staff, to name just a few. Until quality is improved, graduating students every year from weak programmes almost certainly means that, however committed or capable the students, they will be ill-equipped to satisfy the development needs of the country or to compete internationally".

The country needs an efficient, affordable and, as far as possible fair education system, which meets the country's actual needs. Shortly after Independence, aspects of the system were fairer, in that rural schools and other infrastructure existed and students were less disadvantaged. They had greater prospects of gaining places in competitive faculties, like medicine, against relatively advantaged students from urban schools. Rural infrastructure and education services have failed to keep pace with population growth and widely deteriorated in standard (or even disappeared), relative to the conditions and relative access to information and technology in the urban areas, even for those who are not part of the privileged elite.

In real terms, despite recent increased funding, the State-owned universities receive markedly less now than 30 years ago, so it unsurprising that facilities are severely run down and finding it hard to retain or attract the numbers of required academics of the right calibre, particularly facing the high course load and limited research opportunities. The country's education system is actually provided a relatively high Budget allocation, as a proportion of GDP, by the standards of developing countries. However, this is not translating into a broad-based or adequate education service, owing to poor transport infrastructure and high costs, poor teacher attendance or retention especially in remoter schools, limited inspection capacity, mixed standards, poor coordination between national and provincial funding arrangements, etc. This is not questioning the considerable dedication and talent of thousand of teachers around the country, but it does highlight the need for more effective utilisation of funds, better oversight, including at the local level, the need for support for the entire system from schools through to teacher training in university and other colleges, and generally improving conditions in rural areas to attract and retain qualified staff.

Unfortunately since the beginning of the 1990s the country has failed to undertake any real human resource planning, or what was hitherto called manpower planning. The country's statistics have generally been allowed to deteriorate, and it is a sad reflection of the lack of commitment or awareness of the need for data that the 2010 Census looks increasingly unlikely to be delayed until 2011. Whilst detailed calculation of human resource needs, sector by sector, industry by industry and by the State, are of limited value, as the economy is invariably so volatile or dynamic, particularly when major new resource projects appear, such as LNG, nevertheless more accurate data on current student numbers and immediate capacity and future employment trends and likely needs is critical. Such information is sadly lacking, although there is some effort to gain a great grasp of such likely needs, trends and current capacity by the private sector, including by the Institute of National Affairs with the

Business Council, and by government, notably through the Office of Higher Education, National Training council, but in an uncoordinated manner.

The higher recent growth rate and forecast increased demand from major enclave projects, notably LNG, have certainly been putting pressure already upon limited supplies of trained graduates from all the universities and other tertiary and technical institutions. The high growth rates around the world in recent years, particularly in some industries, until the recent global economic crisis, also saw a significant brain drain developing of various professionals, such as airline pilots, aircraft and mining engineers, doctors and other health workers, but also accounting and some ICT specialists. A few of these have been returning in recent months, with PNG's continued growth and the relative slowdown and difficulties in some industries overseas. Nevertheless, understandably those PNG professionals who have universally recognised skills will be attracted by international positions offering global salaries, especially where a two tier salary structure remains within PNG. The airlines recognised recently that they had to introduce a single line salary structure within PNG if they were to retain Papua New Guinean pilots, but this clearly adds considerably to cost pressures on sometimes commercially marginal industries or public sector services. This is perhaps also more logical than employing overseas staff on international rates whilst PNG staff secure go overseas to secure international salaries; invariably, avoiding this globalisation of the portions of the labour market will become increasingly hard, although the divergence between such formal sector earnings and those of rural inhabitants in PNG will continue to grow, together with the advantage provided to those fortunate enough to secure tertiary education.

There is, therefore, a significant public sentiment, also now prevalent in some professions, favouring some conditionality to public funding of tertiary education, with a call, for example, for new engineering graduates to work under a compulsory arrangement in District technical units, so that they acquire at least 3 years of the 5 years work experience before they can become registered with the Engineers Association. Likewise in professions from medicine to teaching there is a perception that, considering the high public cost of education and training, graduates owe something back to their community through providing a period of public service, including in more remote schools or health centres or demanding tasks, such as in hospital outpatients' wards, before branching into private medicine or taking overseas appointments. The idea, widely adopted abroad, for students to secure loans, instead of State grants or scholarships, or perhaps to complement those grants, would shift the burden of costs to the student, with involvement from the banking and finance sector. In some countries the State bears the cost only if the graduate subsequently works in a core service role in the public sector or for charitable NGOs for an extended period.

The PNG universities, long starved of funds, started establishing direct relationships with the private sector in the late 1980s and 1990s, notably with the Mining industry, which was desperate to secure graduates with suitable skills in geology, mine engineering and related fields. The mining and hydrocarbon industries have enjoyed close collaboration in the areas of social impact studies, environmental assessment, and social mapping. Such relationships should be developed further, as is occurring now between Exxon (the proposed PNG-LNG main developer) and the Port Moresby Technical College. Business-university relationships should entail increased private funding of facilities and positions, including, for example faculty Chairs, but only so long as this entails a long term commitment and not a once-off contribution, which would leave the university with an additional recurrent cost. Over the past few years, UPNG has usefully utilised the services of Ted Diefenbacher, in building up relationships with future employers from the private and public sector, including encouraging student placements and with a series of addresses to students by prospective

public and private sector employers and employment fairs, aimed at enhancing students awareness of employment opportunities and employers' needs and expectations. All universities, including their administration and faculties, need to ensure that they are in touch with the market needs and that they are able to service those needs. This would also highlight how universities and some of their courses and graduates are viewed in the market place by prospective employers. Such formal and informal assessment is important in PNG and worldwide, and overseas also strongly influences the level of university funding.

The universities also need to build up staff capacity, though more competitive conditions, and arrangements such as twinning with overseas institutions, which would provide both international teaching staff on a longer term basis, including undertake some research here, whilst also hosting PNG lecturers on exchange postings and/or for further training, experience and research.

University education is not simply about training students to have specific skills for future employment. There is a misconception amongst some students that gaining a degree is a ticket to employment and that they merit automatic recognition or reward for reaching this point. As has been observed "a university degree is not so much a ticket to earn a living, as a passport to learn how to live". Most degrees provide a broad education and basis to analyse and some skills, rather than providing you a professional qualification. Many employers are less concerned over what has been studied, than knowing that the student has learnt how to study and where to obtain information, gaining access to a wide range of practical and up to date methods and material. Many employers prefer to train new recruits with more specific skills on the job or through specific professional in-house or external course programmes. This applied also, but more particularly with technical skills, where Bougainville Copper Ltd, was renowned for setting the training standards and producing the trusted professionals and artisans sought also by other companies and industries.

What private employers particularly seek is that graduates, from social science and arts faculties as well as science, are fully conversant with and apply new technology, notably computers and software relevant to their professional field (such as accounting packages) and to accessing up to date information readily available nowadays on the Internet. There has been an Information and Communications Technology (ICT) revolution over recent years, which has transformed all sectors, and made available information sharing and knowledge dissemination for a fraction of the cost of books. Books and particularly up to date text books are critical and have been sadly lacking in the cash strapped universities over the past two decades. Students have had to desperately search for basic material in their libraries and outside, but, with computers and more online libraries, information is more readily available to anyone with access to a computer and the web.

Some of the new independent universities, notably Divine Word University (DWU), have been very adept in securing funding support to support their development and particularly to pioneer the use of computers and the Internet. The Government is largely responsible for the poor state of ICT in this country, thanks to its protection of a State monopoly telecommunications service provider, long preventing investment and competition amongst service providers or adoption of diverse technologies to access the web. This has kept the cost of internet access at exorbitant levels and bandwidth narrow, and only recently improving. The introduction of competition in the mobile phone market from mid-2007 has triggered the needed pressure upon the State to open wider ICT markets under the new ICT policy and forthcoming legislative Amendments. DWU pioneered wide access to computers and the internet amongst its students, with suitable support and oversight (to ensure focus and usage costs are restrained), whilst also developing a service provision for other

university and research intuitions around the country (under PNGARNET), which is now being widely accessed, despite misgivings from incumbent service providers.

Companies are eager to take on graduates who are eager and willing to learn, and often expect periods of long working hours, particularly with the resource projects or in fields entailing supply, manufacturing, research or other provision of services for clients. Graduates who've made the effort to build up extra skills, such as taking on extra courses, gaining work experience (often on an unpaid/voluntary basis) and a holding driving license, for example, demonstrate their commitment and gain extra recognition from potential employers. Employers tend to avoid recruiting new staff who may have undue expectations or opinions of their own status, especially when they don't have significant past practical work experience, or have adopted bad habits from some previous employment, including in some State enterprises. Companies expect strong loyalty and are generally looking for staff with sound technical skills, personable and good team players, who are ready to make a longer term commitment to the company if the opportunity prevails. Companies will invariably put new recruits through a trial period, for perhaps three months, and although there is some short term employment particularly where companies have shorter contracts, when employers find a good recruit who is able, willing to learn, loyal and honest, they are usually eager to make a commitment to them in return, training them and providing longer term opportunities.

Established companies are certainly concerned about the amount of poaching in the labour market, particularly by new market entrants, such as growth industries, such as ICT, or resource projects. It is partly inevitable that new business entrants entering the employment market will seek out new recruits and experienced professionals currently working for other organisations. This is part of the commercial world and firms must be pro-active in retaining skilled staff and attracting new recruits, especially with skills which are relatively rare in PNG, including good accountants, ICT professionals, etc. Nevertheless too much poaching can be a disincentive to established firms to make the commitment and investment in staff development for their existing staff. Applicants and new recruits should, therefore, check out prospective employers' past track record for training and staff development. As well as the commercial market place there is a role for the Government, notably through the Department of Labour and Industrial Relations, or regulatory bodies like ICCC, to apply some oversight and pressure on companies to demonstrate an adequate commitment to staff development, so that they are not simply free-loading on other companies (including State owned corporations) or the Public Service, by using other companies' trained staff, or simply bringing in overseas staff on a long term basis to fill the gaps, by avoiding the cost of staff development.

Over the next years, with major ongoing and potential growth in several industries, including the LNG development and ancillary industries, there will invariably be competition for local skills, with some industries better placed to hire at premium rates over some long established but less competitive industries. Recruits and existing employees should think carefully where they may wish to end up, as some of the competitive industries, which can pay a premium, such as hydrocarbon development (including LNG and LPG) may only offer short term contractual employment, with, for example, large numbers of staff being offloaded once the gas pipeline is constructed, whereas other businesses like coffee, oil palm and other agricultural and sustainable primary production industries may offer longer term, if less immediately lucrative opportunities. In some industries there will invariably be large numbers of overseas professional and technical recruits, including for the pipeline development, as there will simply be inadequate local skilled staff available. Papua New Guinean students, educational institutions and professional bodies (including universities and the many private colleges, such as the Institute of Business Studies) need to ensure

that this country provides the right skills and standards required by the market, thereby providing no excuse for companies to recruit large numbers overseas, except temporarily for specific skills and tasks or during periods of rapid expansion or inception, where absolutely necessary. Young Papua New Guineans can pick up needed ITC skills as well as anyone, hence the PNG professionals working in many IT-dependent work in the middle east and elsewhere. However, too few young Papua New Guineans are exposed to this technology and training early in life, so IT or the Internet, for example, which are second nature to a young Philippine child or now also a young Indian, remains alien to most young Papua New Guineans, placing them at great disadvantage later in life, and ensuing that much of the ITC employment in this country remains in the hands of skilled foreigners for the time being.

In the future, with the severe incapacity of some public sector organisations and backlog of outstanding work restoring and maintaining infrastructure and some services, it is likely there will be an increase in Public Private Partnerships, whereby private companies (churches and NGOs) are contracted or commissioned by Government to provide long term public goods and services, but utilising private capital. This may range from major construction and maintenance PPPs (e.g. for operating stretches of roads, airports or other infrastructure) to the delivery of medicines and other public goods by companies with existing wholesale and retail networks, or partnerships in training, extension, marketing and standards. This will be an area for tertiary institutions and new graduates to look out for into the future.

Finally, apart from the graduate's skills and work capacity, private employers expect certain standards of behaviour or ethics, which apply in both the workplace and outside. Employers expect employees to show respect to each other, which includes respect for both male and female staff, including proper use of technology and not, for example, accessing or downloading pornographic or other offensive material on their computers, and not participating in domestic violence against their wives, partners, children or other members of the family or community, and not being inebriated during working hours nor showing lack of control outside work. Firms have now largely adopted clear work and even off-work codes of behaviour, which include policies on corruption, and HIV/AIDS both to help protect employees and their families from risk, but also to respect the rights of those who may be affected.

PNG is increasingly part of the global community. Companies expect their staff to perform to international standards of work and ethical behaviour. Papua New Guinean businesses and their local and overseas staff must increasingly perform in the international market place, supplying goods and services in competition with products from elsewhere. In some government institutions lower standards are unfortunately still being accepted, but in companies this is not tolerated. Most companies are immensely loyal to their able and dedicated staff, whether they are managers, pilots, engineers, computing, accounting, marketing or technical staff, for example, but companies operate in a commercial world, under pressure to perform and compete with other local or international businesses operating in the same market, and therefore company staff who fail to perform, maintain their skill levels or meet accepted standards are readily dispensed with. Employment in an enterprise which is dynamic can be very exciting and rewarding, often offering wider future opportunities as the business develops, both within PNG and sometimes overseas. Many private sector employees have wider commitments to their extended family and feels obligations to the wider community, offering time, skills and effort to community projects, sometimes through church or NGO activities. So long as this effort is not distorted into any malpractice or untoward practice (such as corrupt transactions or nepotism) at the company's expense, most companies recognise and even support this commitment, as they

do with supporting individual and team efforts in sport and other achievement, which keep staff fit and focussed.

Finally, with climate, resource depletion and other environmental issues increasingly at the forefront of international and local concern, new employment opportunities will develop in the field of environmental management, emission control, low carbon energy provision and energy savings. Companies will develop stronger environmental standards, whilst business opportunities will develop for industries providing and marketing organic and socially and environmentally sound products, including under fair-trade labels, into fields like tourism. PNG universities should be at the forefront in researching, promoting and developing these opportunities for the country, in partnership with business, and providing graduates into the workforce, who are not only aware of the requirements, risks, standards and opportunities available, but will also take leadership in addressing environmental and social issues, and positioning the country to take advantage, economically, rather than be unduly buffeted by such global issues.