

UNESCO Forum Colloquium

Higher Education, Research and Knowledge

Paris 1-3 December 2004

“Who Is Research for:

An Observation from Papua New Guinea”

Dr Dick Rooney

Formerly Director of Academic Quality Assurance, Divine Word University, Madang, Papua New Guinea, dickrooney@hotmail.com, rooneyrichard@aol.com

Dr Evangelia Papoutsaki

Head, Communication Arts Department, Divine Word University, PO Box 483, Madang, Papua New Guinea, www.dwu.ac.pg, epapoutsaki@dwu.ac.pg, papoutsaki@yahoo.co.uk

“Who Is Research for: An Observation from Papua New Guinea”

Higher Education is central to the creation of the intellectual capacity on which knowledge production and utilization depend and the promotion of life long learning practices necessary to update people’s knowledge and skills (World Bank, 2002: 1). While most developed nations are in the process of acclimatizing their higher education systems to new challenges presented by globalisation, the increasing importance of knowledge as a main driver for growth and the information and communication revolution, most developing countries are left behind struggling with difficulties arising from inadequate responses to old but persisting challenges. Sustainable expansion of higher education, reduction of inequalities of access and gender, improvement of educational quality through updated curricula and relevance to their society’s needs and inconsistent planning and funding on *an-ad hoc* basis are some of the challenges that most of these countries continue to face.

Most developing countries having inherited the colonisers’ educational systems are still facing the challenge of shaping higher education systems that are indigenous or adapted to their national needs. With the increasing internationalization of higher education, these countries are ill prepared to absorb and appropriate yet more foreign influences and demands from international organizations to integrate in an international accreditation and quality assurance framework¹. The needs of institutions to develop within a global academic and research community and thereby adopt the predominant Western models of higher education and the developmental needs of these countries are often clashing, posing a dilemma between satisfying market forces and the need to nurture education within the socio-cultural specificities of the country.

Higher education in Papua New Guinea (PNG) is experiencing the same pressures and challenges, amplified further by colonial legacies, the country’s neo-colonial relationship with its previous colonial master, a lack of indigenous intellectual traditions, a rather anomalous situation where Christian churches have become major education providers and a difficult socio-economic and cultural environment that promotes inequalities in terms of access. This paper approaches the question of higher education and research in a developing country through the Papua New Guinean case. It explores the westernization of academic quality within the PNG higher education system and the hybridity of the university sector where different actors force knowledge to be created for the needs of a small formal economy rather than for the development needs of the country. Colonial legacies and neo-colonial practices provide the conceptual framework.

¹ World Bank is an example of this trend where international organizations provide technical and financial assistance to countries that intent to set up regional quality assurance systems instead of national ones (World Bank, 2002: xvii).

I. Country Profile

Papua New Guinea's context is unique. An Australian protectorate until 1975, it has an extremely diverse society with a staggering number of distinctive cultures and more than 800 spoken languages. The majority of the population, estimated at 5 million, lives in rural areas, largely dependent on subsistence agriculture. Half of the adult population is non-literate and the many disadvantaged populations do not speak English, the main language of education (Rooney et al, 2004).

The biggest and richest island in natural resources in the Pacific, PNG ranks 129th out of 170 countries in the UNDP human development index – below all its Pacific neighbours (UNDP, 1999). The country faces serious development challenges, most notably a weak institutional environment with poor control of government spending and a serious law and order problem. A difficult geographical terrain and weak transportation services isolate whole regions with little access to basic services such as education and health (The Joint Country Strategy, 2003). For every 300 children who start primary school, 100 have no such opportunity and of those who do only four complete high school. The overall participation rate in HE is approximately 1.5 percent of the population, which is well below the average rate of 7 percent for developing countries (Commission for Higher Education, 2000:7, a).

In this environment, it is difficult for any social and political organization to extend beyond the immediate boundaries of the clan or tribe. Isolation, linguistic and cultural diversity and a highly expensive and differential implementation of official policies have made nation-building a difficult task. As the country has few truly urban areas where communication among these diverse groups can take place, higher education institutions have become major vehicles for interaction and exchange of culture and ideas (Meek, 1982:50).

Although the transition from traditional practices to modern systems was slow during the colonial times, the dramatic changes it has brought to some parts of the population can be described as a passage from Stone Age to modern times in a fraction of time (Solon, 1990: 23). The relatively recent and sudden exposure to the Western world has had a multiple impact on these communities, especially through education. The change from traditional clan centered education, based on transmissional knowledge to western education, based on inquiry and reflectivity (McLaughlin, 1994: 67), delivered in English mostly by missionaries and Australian instructors up until independence has had a deep impact on social values.

Taking into account this country's distinctiveness, one needs to ask who is higher education and consequently HE research for in PNG and whose needs it should serve. Answering these questions one cannot ignore in the process to take into account the country's colonial legacies that have shaped its higher education, upon which international trends are adding new pressures.

II. HEI Landscape in PNG

There are 26 Higher Education Institutions (HEIs) in the National Higher Education System. They differ in the level and duration of their programs, the approach to education and the method by which their programs are accredited (Lim, 1996). Most are single disciplinary institutions (eight are teacher education institutions and eight health education institutions). There are six universities (four public, two private) each with separate enabling legislation with enrolments ranging from 400 to 3,000 full-time students. HEI enrolment is estimated at 6,345, representing about one per cent of the 19 - 24 age cohort in PNG. The numbers enrolled at university has increased by 22 per cent since 1997 (Rooney, 2004).

Rationalization in higher education has been achieved through amalgamation and affiliation of smaller colleges with larger HEIs and by closures. The Ministry of Higher Education, Research, Science and Technology has the overview of the sector working with 16 statutory partners. One body, the Commission for Higher Education (CHE), through its executive agency, the Office of Higher Education (OHE), is charged with the provision of policy advice, coordination, planning and other expert services. The CHE has taken the lead role in formulating policy around academic quality assurance and institutional accreditation. Universities are also to be responsible for validating tertiary level academic programs prepared by other HEIs (ibid).

There are debates in PNG about the level of support tertiary education should receive from government when there are so many issues around access and relevance of the curriculum to be addressed in primary and secondary schools. There is a widespread claim that schools in PNG are failing to equip young people with knowledge, skills and capabilities relevant for productive life after the classroom. There are issues of equity and access and a concern with the delivery of the system: its teachers, managers and students and the dominant professional cultures around them (Rooney forthcoming).

It is estimated that the cost to put a single student through university would fund 61 elementary school places or 10 secondary school students. Supporters of the universities recognize PNG needs a strong and high quality capacity to educate high-level professionals for leadership roles and to produce quality research on policy and scientific topics related to PNG culture, society and

development. But as the demand for access continues to grow with enrolment for grade 11 and 12 rising 73 per cent in the last five years, government scholarship assistance has dropped by 15 per cent (Commission for Higher Education, 2001) leaving an increasing number of high school graduates with less options for further education in a market environment that presses for more university qualifications.

At their best PNG universities offer education, training and research programs that can support growth in the formal economy. A qualified and adaptable labour force is being trained, especially for basic and secondary education and the country's health needs, as well as future government, civil service and business leaders. PNG's minister for higher education, research and technology, Roy Biyama, has identified skilled manpower demand and supply as the crucial issue facing the country and once that was overcome he believes the government should fund programs in skill shortage areas while market forces determine and dictate other course programs in the universities (Anon, 2003).

The place of research in universities has been marginalized. This is evidenced in the most recent major policy initiative from the CHE on quality assurance. The word 'research' does not appear anywhere in the text of the document *Guidelines for Institutional Accreditation* which details the steps higher education institutions must take to be officially recognised as fit for purpose (Commission for Higher Education, 2003). Although the National Higher Education Plan II 2000-2004 and the 2000 White Paper on Higher Education, Research, Science and Technology put emphasis on the importance of research in the national social and economic development, arguing for research that is relevant to the country's needs, government funding in this sector has been minimal.

The latest symposium on higher education, Charting the Pathway for Entrepreneurialism, Higher Education, Research, Science and Technology, held in order to review the old national higher education plan and finalise the sector's new ten year plan (2005-2016) left many pending issues unresolved such as legislation for research institutes, accreditation and affiliation, access and funding. Participants' comments indicated the dilemma of a HE sector that is pushed towards commercialization in order to be self-sustained and a market oriented education in order to compete with an increasing offer of HE by private institutions² while they lament at the same time the state's lack of support for HE and research arguing like Webster from the National Research Institute that

² "Marketing is a key strategy that should be adopted and used by educational institutions to 'sell' students to the industries", comment by the Principal of the Maritime College, Richard Colleman (Cheung, 2004:5)

“it is through careful research on data and information that the interests and the needs of the people will be achieved” (Bago, 2004:5)³.

The national government and international donors have assigned HE a relatively low priority in PNG and this approach has influenced policy makers in their planning for HE and allocation of funds for research. The wider political atmosphere in PNG affects security of funding and making plans for the future. Post-independence governments in PNG have not been sure about what they want for higher education: elites, functionaries, skilled workforce, or a well educated population with life long acquired knowledge. This also applies to research. The question of what is the role of research in HE and subsequently what are the needs of the country that research can help address has not been answered. Is successful research one that translates to report/projects funded by international organizations or research that is used to provide a forum of discussion about the needs of the country and help promote an enquiring mind in the academic institutions of the country?

The trend is for a HE that offers skills applicable in the market. The demand to take on board affiliated colleges which are primarily of vocational nature is contributing to the lowering of academic standards at the country’s HEIs. It increases the pressure on HEIs in terms of quality assurance, trying to find what constitutes acceptable standards for a vocational college that is affiliated to a HEI. The call from the government for a self-sustainable HE sector indicates a reluctance to invest on HE. Higher education in developing countries cannot be self-sustainable, primarily because the majority of the student body cannot afford full time fees.

Divisions in western universities between vocational market orientated education and traditional academic training is transferring itself in developing countries with the appearance of private universities and state sponsored ones that are loosing state funding and having to turn to commercial activities, market sponsoring and foreign aid programs.

It is easy to identify some of the problems faced by PNG universities such as overcrowding, limited or obsolete libraries, insufficient equipment, outdated curriculum and under qualified teaching staff. (Rooney 2004). Many people in the sector understand that there is little point in PNG trying to produce standards that are equal to those found in the best universities in the world. Strategies used

³ “Higher Education is underfunded and its facilities and equipment are deteriorating because they have not been maintained for years. There is a need for a balanced approach to education at all levels. He lamented [Pulyasi] the government agenda in the last decade has been focused on basic education, security and preventative health. Although these are important basics for social and political equilibrium, it has led to the neglect in the tertiary and secondary education... higher education in particular has been left in a perilous state (J Daia Borepg 5

in the developed world are too sophisticated for PNG's managerial and administrative capacity and demand financial resources that are beyond its budget.

III. Divine Word University Case study

To discuss some of the practicalities of university provision in PNG we offer a case study of Divine Word University (DWU). This university has developed a public reputation in PNG as an exemplar to universities in general in the country receiving accolades from the national press (see for example Anon, 2004) and from government ministers, identifying DWU not only as a prime educational center in PNG but also potentially a prime education center of the Pacific (Barter, 2004).

DWU is a private Christian university based in Madang. It is one of the newest tertiary institutions in PNG, beginning in 1958 as Divine Word Institute and offering mainly matriculation studies for senior school students. In 1979 students began enrolling in four-year diploma programs in Business and Communication and a number of other programmes were added in the following years. The institute was later established as a University in 1996 (DWU website).

Its vision is to be a Christian University open to all, serving society through its teaching and research in a Christian environment, placing emphasis on educational services to those interested in improving themselves intellectually and spiritually so they can become responsible citizens and positively affect the development of society.

Students come from all 20 provinces of Papua New Guinea and abroad. DWU has a special interest to advance opportunities for poorer individuals, women and to help build the economic and social capacity of the South Pacific Region.

DWU has been and continues to be a catalyst for improvement of higher education in the country. In its publicity material DWU states its commitment to working with the government towards the positive development of PNG. DWU is committed to 'continuous dialogue and partnership with all levels of community, business, government and cultures in the life and work of the University.'

A major reorganisation of the university began in 2003 with the formulation of six faculties (Arts, Education, Theology, Business and Management, Flexible Learning and Health Sciences).

DWU states 'areas of study have been selected for their long-term benefit to Papua New Guinea and where there is strong industry demand. Students work with industry and business throughout

their training and are encouraged to develop and participate in programs that help build community resources and social capital.’

DWU gathers itself from many contexts (Christian catholic, western, vocational education, developing country), producing a hybrid product, unique in its nature where physical infrastructure is growing quicker than its intellectual capacity and with a flexible adult education becoming program increasingly predominant. In that respect it is not dissimilar to many private universities in developing countries. DWU’s vocational nature and high dependency on funding donors, politicians and market have created a hybrid upon which Christian, western approaches take the form of neo-colonial practices.

The University’s ambitious leadership and efficient management have attracted a number of donor agencies and international organizations that provide assistance with human and funding resources. A large proportion of its academic staff is expatriate, many volunteers who come on a two year maximum contract. The university faces challenges of sustainability, especially because of its dependency on foreign instructors. For example, the delivery of its highly praised Masters degree in educational leadership is dependent on overseas instructors, 50 per cent of whom come from Australia on a short stay.

The university like many private universities has little funds for research. Its recently launched and rather premature PhD program was motivated by the availability of EU funding for a primary education feasibility project. The university’s research program is potentially hampered by the fact that there is a high turnover of both national and foreign staff which does not provide continuity in terms of building a research culture.

Research is often foreign driven as local staff has little motivation to do research when the rewards are so little (small salaries, little opportunities for promotion etc). The university has recently launched its first research journal. Here again, the input from foreign staff is strong. All four of its editors are expats with only one of them on a permanent contract. This imbalance is further evidenced in the content of the first issue of this journal where the majority of the papers are authored by foreign academics conducting research on PNG. There continuous the dominance of western cultural perspectives on indigenous settings (Nagai, 2000: 80).

IV. Colonial Legacies, Neo-colonial Practices and Hybridization of PNG Higher Education

At independence, the new national government found itself with an inherited educational system, transplanted directly from a colonial power, in which the emphasis was almost exclusively directed towards satisfying the high level manpower needs of the country (Smyth, 1977:4). The notion that higher education should be developed in PNG was a relatively late phenomenon in its colonial history. The development of a viable secondary education system in PNG did not even take place until the 1960s. Australia under pressure from the UN to give independence to PNG built a superstructure of western institutions in hope of training through them a cadre of Papua New Guineans to manage an independent state (Meek, 1982). The World Bank, in its PNG report, had made a clear connection between education, economy and development. Progress depended on education to change traditional attitudes, beliefs and practices and impart knowledge and skills to meet the manpower demands of the economy for skilled indigenous manpower (International Bank for Reconstruction and Development, 1964).

PNG, like its educational system is a colonial construct, a different entity to the heterogeneous society, which existed before colonial encounter. The training and education of indigenous elites that replaced expatriates working in the administrative institutions guaranteed the continuation of an educational system that maintained its colonial characteristics and created an elite system designed to achieve economic growth as the only path to development (Pagelio, 2002). Western leadership structures that encourage divisions and promote unequal relations are merely perpetuating the oppressive aspects of neo-colonialism (ibid: 19).

In planning for educational change during the pre-independence period, the consent of indigenous people was not sought, hence educational policies were based on western knowledge systems and implementation was superficial because the local people lacked understanding of the underlying cultural values and processes (Nagai, 2000: 80). The new institutions introduced a new element into the PNG social context and in this sense, as Meek argues, it is futile to discuss their relevance in terms of previous forms of indigenous social organization (1982: 66). There was not any Melanesian model on which to structure a university nor was there a group of Papua New Guinean intellectuals to be advised of.

The rapid expansion of secondary schools, the establishment of a university and an institute of higher technical education just before independence were evidence of a policy that saw education from a functional point of view which created uncertainties and conflicts later on among indigenous

leaders and the public about the goals of HE in the country. Somare, the first and current Prime Minister, favored the pragmatic approach that sees education of high-level personnel and research into national problems as the primary functions of PNG universities (Solon, 1990: 194). This approach was questioned by others who argued that universities role is to equip people with an intellectual attitude towards education as a life long activity and that continuing to educate for national leadership and other professional functions of government it would weaken the social and cultural fabric of PNG's egalitarian society (ibid).

Solon's research on the university's goals in PNG revealed that administrators and academics place traditional university goals above goals that promote an understanding of indigenous goals and values. Social and cultural values, although they are considered important attributes for human development, are seen to represent major challenges to university education and difficult to harmonize with the nation's modern needs (Solon, 1999). This emphasis on conventional goals, linking education with modernization, has become the norm today at PNG HEIs evidenced in the increasing vocationalization of their programs and a need to comply with international educational standards with the introduction of quality assurance, putting more pressure on their human resources capacity and increasing dependency of foreign experts. One could argue that the pre-independence philosophy on universities preparing PNG for full participation in a modern post-industrial culture justifies PNG's universities modeling on western archetypes.

The pre-independence educational system not only remained but it expanded, creating an educational dependence on the western academic model. For several decades PNG's oldest university, the University of PNG, was heavily dependent on foreign instructors, contributing to a state of neo-colonial dependency. Neo-colonialism is further evidenced today in private universities, foreign aid and donor depended research, educational consultants and international volunteers and most notably in the management of PNG HEIs which sees four out of six management positions being help by foreigners with substantial power in shaping educational policy.

This expensive degree of dependency on foreign expertise identified by the Commission for Higher Education itself in the late 1990s does not help indigenous academics decide on their needs (Commission for Higher Education, 2000, a). However, funding allocations for higher education has been diminishing with research institutes receiving almost no support.

Education for national development discourse, based on the assumption of modernization, continues to influence education policy and practice in former colonized states. In PNG, modernization is believed to be achieved through a secondary and higher education that trains

individuals for the market forces. Thus, we have an educational model that is not consistent with the way of life of the majority of the population. Embracing formal western education although it brings the anticipated benefits, economic advancement and upward social mobility it has reinforced class distinctions and rampant social drifts (McLaughlin, 2002). In recent years there has been recognition of the unsuitability of the school curriculum to deliver appropriate education, particularly in the rural context. New curriculum centering on the needs of rural people are being devised (Rooney forthcoming).

There is evidence of an increased demand for higher education and of a market driven growth of HE programs offered by church agency, private and other HEI. The government sees this as positive and encourages private providers of education in the country (Commission for Higher Education, 2000, b).

Private education in developing countries tends to offer vocational type of education, with little or no emphasis on academic quality and research, driven by market needs (World Bank, 2000). The Communication Arts department at DWU is an example. It has an overspecialized journalism program based on a western vocational model and in the past four years it has increased its numbers by five times and has already started saturating the small media industry. As the university depends on maintaining a certain number of students in order to qualify for financial support from the National Department of Education, we will start witnessing a rising unemployment among these graduates. The vocational and overspecialized training has given them little academic and general education background, limiting their employment opportunities.

Today, the PNG academic system, like other Asian systems, functions in an international knowledge framework which is predominately western in origin (Altbach, 1989:12). Like elsewhere, there have been no efforts to break away with western academic structures.

In PNG this has contributed to a hybridization of the educational sector. The lack of pre-colonial practices, the imposition of a colonial western model of education, neo-colonial dependencies and the current pressures to comply with Western international HE standards has led to a rather anomalous situation where HEIs are left without clear direction and proper support from the government. Pressured by a ministry of education to affiliate a number of vocational colleges and find ways for self-sustenance, the HE sector in PNG seeks commercial outlets to its activities, forcing them to offer more vocational courses weakening thus the academic component of their programs and delivering the last coup de grace to any research activities. The dependency on donor agencies for funding research activities poses risks for the independence of academic research, forcing academics to tailor their research depending on donor needs. This dependency is not

sustainable as research will be carried out not on a continuous basis but whenever the funds are available. Supervision is equally depended on foreign academics that often lack cultural understanding and long term commitment to the country.

The creation of private church based universities such as the Divine Word University is a product of the hybridization of HE, bringing in a interesting *mélange* of Christian morals, and western vocational type of education that aims to produce efficient leaders. While Christian churches in PNG are key players in the nation's development with their health and educations networks, they are highly influential instruments of modernization and westernization (Whiteman, 1984: 97).

The country has yet to find a system that best responds to the educational needs of the country, several models have been put into practice but without significant results, despite the increased numbers in secondary school leavers, the quality has dropped which has affected the quality of entry level students at HEI. The postcolonial condition is characterised by ambivalence and contradictions between modern and western and between ethnicity and cultural traditions. Schools based on western models are likely to impose a degree of modernization as dictated by the ethos of western type of school context (McLaughlin, 1994).

Hickling-Hudson argues that the globalising world has absorbed many of the negative patterns established by colonialism (1999: 87). A challenge for developing countries educators and policy makers is to bring change in the education systems of their countries.

Conclusions

What role then for HE and research in PNG? Altbach argues that the American 'Land grant' idea has been attractive to many developing countries as it stresses the importance of the university in directly serving the state and the community (1989: 15). Some elements of this idea, such as the importance of applied research and service, the role of a practical curriculum and the direct links between the university and both its surrounding community and the wider society are appealing to Asian nations since they are key goals for emerging academic systems. Perhaps, PNG HE should look towards this model.

References:

Altbach, P. & Selvaratnan (eds). 1989. *From Dependence to Autonomy*. Kluwer Academic Publishers, Dordrecht.

- Anon 2003. PNG lacks data on skilled manpower requirements; forum discussion downloaded Nov 4 2004. <http://www.pngbd.com/forum/showthread.php?t=10450&highlight=lacks+data>
- Anon (2004) *Pride in a Unique Institution*, The National Apr 30. Downloaded on 4 November 2004 from www.thenational.com.pg/0430/editorial.htm
- Bago, L. *Research, Higher Education 'Vital'*, Post-Courier, Wed Oct 29, 2004, p 5.
- Barter, P. 2004. Postscript to speech given at Divine Word University Apr 29. Downloaded Nov 4 2004 www.igr.gov.pg/dylibrary
- Cheung, E. *Schools urged to 'sell' students*, Post-Courier, Wed Oct 29, 2004, p 5.
- Commission for Higher Education. 2000 (a). *The National Higher Education Policy and Implementation Strategy – Enterprise and Education*, White Paper on Higher Education, Research, Science and Technology, Vol I. Office of Higher Education, Port Moresby.
- Commission for Higher Education. 2000 (b). *Papua New Guinea National Higher Education Policy and Implementation Strategy – National Higher Education Plan II, 2000-2004*. Vol II, Office of Higher Education, Port Moresby.
- Commission for Higher Education. 2001. Report of the Feasibility Study on Distance and Flexible Learning in Papua New Guinea. Office of Higher Education, Port Moresby.
- Commission for Higher Education, 2003. *Guidelines for Institutional Accreditation*. Office of Higher Education, Port Moresby.
- Daia Bore, J. *Higher Education in Bad Shape, Claims Pulyasi*, The National, Wed Oct 27 p 5.
- Divine Word University. 2004. *About Us*. Downloaded Nov 4. www.DWU.ac.pg
- Hickling-Hudson, A. 1999. Globalization, Postcolonialism and Educational Change. In D. Meadmore, B. Burnett & P. O'Brien (eds). *Understanding Education: Context and Agendas for the New Millennium*. Sydney: Prentice Hall, pp 82-90.
- International Bank for Reconstruction and Development. 1964. *The Economic Development of the Territory of Papua and New Guinea*.
- Lim, D. 1996. Higher Education Project, Awards, Accreditation and Advanced Standing in Papua New Guinea Higher Education, Commission for Higher Education, Port Moresby.
- McLaughlin, D. 1994. Through Whose Eyes Do Our Children See the World Now? Traditional Education in Papua New Guinea. *Papua New Guinea Journal of Education*, vol.30, No 2, pp63-79.
- McLaughlin, J. 2002. *Seeking Hybrid Identities through Ambivalence: A Postcolonial Interpretation of the Experiences of an International (Australian and Papua New Guinean) Secondary Project*. Paper Presented at Australia New Zealand Comparative and International Education Conference. Armidale: University of New England.
- Meek, L. 1982. *The University of Papua New Guinea: A Case Study in the Sociology of Higher Education*. University of Queensland Press, St Lucia.

Nagai, Y. *New Approaches to University Research in Indigenous Settings: An Example from Papua New Guinea*, chapter 6 in G.T. Teasdale & Z. Ma Rhea (eds). 2000. *Local Knowledge and Wisdom in Higher Education*. Oxford: Pergamon, IAU, UNESCO.

Pagelio, J. 2002. *A Study of Leadership of the Department of Education in Papua New Guinea: Perspectives from Postcolonial and Leadership Theories*. Unpublished thesis. Brisbane: Queensland University of Technology.

Rooney, D. 2004. Institutional Accreditation in Papua New Guinea, Striving for Quality. *International Higher Education*, No.36 Summer. pp.23-25.

Rooney, D. Forthcoming. Education Damages the Social and Economic Fabric of PNG, in N. Sullivan (ed.), *Foreign Policy, Governance and Development: Challenges for Papua New Guinea*. DWU Press, Madang, PNG.

Rooney, D., Papoutsaki, E., Pampa, K. 2004. *A Country Failed by its Media: A Case Study from Papua New Guinea*. Paper presented at the 13th AMIC conference, Thailand, July 3-5.

Smyth, W.J. 1977. Education in Papua New Guinea: Which Direction? *Commonwealth Council for Educational Administration*. No 10, Dec, pp1-10.

Solon, M. 1990. *The Goals of Universities in Papua New Guinea*. Unpublished Thesis, University of Alberta, Canada.

The Joint Country Strategy (2003) between Australia, the World Bank and the ABD.

United Nations Development Program. 1999. *Pacific Human Development Report, Creating Opportunities*. Suva, Fiji.

World Bank, the International Bank for Reconstruction and Development. 2000. *Higher Education in Developing Countries, Peril and Promise*. Washington DC.

World Bank Report. 2002. *Constructing Knowledge Societies: New Challenges for Tertiary Education*, Draft (16 April).

Whiteman, D. 1984, Melanesia: Its People and Cultures. In D. Whiteman (ed). *An Introduction to Melanesian Cultures*. Goroka: The Melanesian Institute, pp 85-101.