The Progressive Education Fallacy in Developing Countries

# Gerard Guthrie

# The Progressive Education Fallacy in Developing Countries

In Favour of Formalism



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### **DEDICATION**

My high school's motto was "receive the light and pass it on". One of my teachers, Bonk Scotney, saw fit to write on a school report that I was better at passing the light on than receiving it. Many of the following teachers and colleagues would have agreed, but they do have my grateful appreciation for their contributions to the intellectual journey that lies behind this book. My particular thanks are due to Keith Buchanan, Bill Hall, Harvey Franklin, Gilbert Butland, Colin Tatz, Sharon Field, Sheldon Weeks, Cyril Rogers, C.E. Beeby, Max Maddock and Goru Hane-Nou. Thanks are also due to John Evans for his excellent editorial work.

The book is dedicated with gratitude to my mother, Moo, and father, Harry.

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# **FOREWORD**

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This book is written by a seasoned academic and development consultant with considerable international experience in contexts as diverse as New Zealand, Australia, China and Papua New Guinea. It is a book that develops and extends a number of challenging arguments and perspectives that the author has engaged with throughout a varied and distinguished career. While the book has direct relevance for students, academics, development agency personnel, policy-makers and practitioners worldwide, it is deeply grounded in the author's professional experience in the Pacific nation of Papua New Guinea. Indeed, to some extent this is a personal and polemical book that enables its author to reflect upon the key issues that have characterised many of the academic publications that he has produced from the 1980s through to the present day.

Emerging from this original and detailed review of diverse empirical and theoretical material is a stimulating and controversial central thesis, the Progressive Education Fallacy. This thesis is put forward for the first time in Chapter 1 and articulated throughout the book to highlight what Gerard Guthrie claims is an unnecessary linking of enquiry teaching as a process with enquiry skills as a product. In doing so, the core theme, relating to teaching and learning pedagogies, is thoroughly interrogated with reference to a wide and challenging range of arguments. These stem from research on methodological paradigms, stages of educational development, school effectiveness, the management of educational reform, and comparative perspectives on the place of culture and context in educational development. At the heart of this is a long-considered and carefully argued critique of the uncritical international transfer of 'progressive', learner-centred pedagogies from Western education systems to a diversity of low-income 'developing' countries. This latter theme, along with the connection to Papua New Guinea, links this reflective, longitudinal study to my own on-going research in the field of comparative and international education (see Crossley and Watson 2003).

When I first arrived to work at the University of Papua New Guinea in the early 1980s, it was to research the impact of a new pilot project designed to promote curriculum change via processes of school-based curriculum development (Crossley 1984a). At this time my own research revealed concerns about the failure of project planners to consider how contextual realities in Papua New Guinea schools could inhibit school-based curriculum development in practice. On a broader level, this research challenged the uncritical international transfer of educational policies, and in this case change modalities, from Western systems (notably Australia and the UK) to Papua New Guinea and other developing countries (Crossley 1984b). Also embedded within this particular change initiative were many assumptions about the benefits to be gained from a move away from a tradition of formalistic teaching and learning styles throughout the education system. As I engaged with these issues, parallel work, then being carried out in Papua New Guinea by Gerard Guthrie, first came to my attention. His research was then focussed more directly upon teacher training, teaching and learning styles and the implementation of educational reform (Guthrie 1983). This empirically grounded research was based on a theoretically informed critique of C.E. Beeby's (1966) influential Stages of Educational Development - leading to a significant debate within the comparative and international literature of the day (Guthrie 1980; Beeby 1980; 1986). This early work informs the present study, as revisited in Chapters 2 and 3.

What moves the story on, and heightens the contemporary significance of the analysis, is the way subsequent research and experience is used to demonstrate the enduring centrality of these key issues in contemporary development cooperation initiatives and internationally inspired educational development agendas world-wide. Chapters 4 and 5 thus examine the literature on barriers and resistance to change, along with international research on school effectiveness, teaching styles and student achievement. This is followed by Section 2 (titled Refutations) and a group of chapters that focus the analysis upon Papua New Guinea (Chapters 6-8), and formalistic traditions in China (Chapter 9). Throughout these chapters readers can see how Gerard Guthrie's conceptualisation and defence of formalistic teaching and learning styles is related to traditional epistemologies, and cultural traditions and continuities. Running alongside this are related practical arguments that draw attention to the complexities (and costs) involved in promoting learner-centred pedagogies in low income countries.

The third section of the book, titled New Conjectures, consists of Chapters 10-12 in which the core arguments and themes of the book are drawn together. Here the defence of formalistic pedagogies is extended in ways that connect well with contemporary international development discourses and advances in numerous fields of research. By revisiting core debates about pedagogy over a 30 year period, Gerard Guthrie makes a significant, if challenging and controversial, contri-

bution to the international literature on education and development. While some may disagree with his proposals, or various dimensions of the analysis, the book draws the attention of all to critical thinking and positioning on an issue that is too often taken as unproblematic. International development agencies worldwide are, for example, often deeply committed to the promotion of learner-centred pedagogies at all levels of education systems, and in widely differing contexts and cultures. While much can certainly be gained from such developments, this challenging book asks those involved to think more carefully about the differences between contexts, to explore the philosophical, political and practical implications of such differences, to acknowledge the extent of implementation 'failure', and to reflect upon the limitations of 'one size fits all' models and assumptions.

Indeed, voices are increasingly being heard within low income countries that echo aspects of this critique (Tabulawa 1997), at the same time as they identify contrasting and more creative notions of 'formalistic' teaching and learning (see Biggs 1996). In Botswana, for example, Tabulawa (2003, p. 7) presents a stronger political critique by arguing that learner-centred pedagogy can also be seen as "...an ideological outlook, a worldview intended to develop a preferred kind of society and people. It is in this sense that it should be seen as representing a process of westernisation disguised as quality and effective teaching." Recognising the Western values that are embedded in learner-centred pedagogies, Carney (2008) also explores the political dimension of the transfer of internationally inspired reforms to Tibet; and, returning to Papua New Guinea, Le Fanu (2010; 2011) documents the barriers that continue to be faced by contemporary reforms designed to move local teachers away from formalistic styles of teaching and learning. His recent empirically grounded research in Eastern Highlands primary schools reveals that "although the teachers' practice has changed in some ways since the introduction of the curriculum, they had not adopted many of the 'student centred' teaching and learning precepts prescribed in curriculum documents" (Le Fanu 2010, p. 1). Le Fanu's research also explicitly acknowledges how formalistic teaching can be seen to have a positive role to play, for teaching some types of skills, in such contexts.

Today, the quality of education is once again at the forefront of international debate and commands the attention of many development cooperation agencies (UNESCO 2004). The latest empirical and theoretical research is beginning to acknowledge differing notions of quality and how these relate to pedagogical and contextual differences (Tikly and Barrett 2011). Gerard Guthrie's insightful and challenging book makes a valuable contribution to this trajectory of new research by stimulating a more critically informed debate; by helping to bridge past and present scholarship; by alerting those concerned to the potential of different forms of teaching and learning, including those seen as formalistic pedagogies; and by

demonstrating how contextual factors deserve greater attention in much educational and development planning and implementation.

#### References

- Beeby, C.E. (1966). *The quality of education in developing countries*. Cambridge: Harvard University Press.
- Beeby, C.E. (1980). Reply to Gerard Guthrie. *International Review of Education*, 26(4), 439-444.
- Beeby, C.E. (1986). The stages of growth in educational systems. In Heyneman, S.P., & White, D.S. (Eds.), *The quality of education and economic development: A World Bank symposium* (pp. 37-44). Washington: World Bank.
- Biggs, J. (1996). Western misperceptions of the Confucian-heritage learning culture. In Watkins, D., & Biggs, J. (Eds.), *The Chinese learner: Cultural, psychological and contextual influences* (pp. 45-67). Hong Kong: Comparative Education Research Centre, University of Hong Kong.
- Carney, S. (2008). Learner centred pedagogy in Tibet: International education reform in a local context. *Comparative Education*, 44(1), 39-55.
- Crossley, M. (1984a). The role and limitations of small-scale initiatives in educational innovation. *Prospects*, 14(4), 533-540.
- Crossley, M. (1984b). Strategies for curriculum change and the question of international transfer. *Journal of Curriculum Studies*, 16(1), 75-88.
- Crossley, M., & Watson, K. (2003). *Comparative and international research in education: Globalization, context and difference.* London: Routledge Falmer.
- Guthrie, G. (1980). Stages of educational development? Beeby revisited. *International Review of Education*, 26(4), 411-438.
- Guthrie, G. (1983). An evaluation of the secondary teacher training system. *Report No.44*. Port Moresby: Educational Research Unit, University of Papua New Guinea.
- Le Fanu, G. (2010). Promoting inclusive education in Papua New Guinea. EdQual Quality Brief No.7. Bristol: University of Bristol.
- Le Fanu, G. (2011). The transposition of inclusion: An analysis of the relationship between curriculum prescription and practice in Papua New Guinea. Unpublished doctoral dissertation, University of Bristol.
- Tabulawa, R. (1997). Pedagogical classroom practice and the social context: The case of Botswana. *International Journal of Educational Development*, 17(2), 189-194.
- Tabulawa, R. (2003). International aid agencies, learner-centred pedagogy and political democratisation: A critique. *Comparative Education*, 39(1), 7-26.
- Tikly, L., & Barrett A. (Eds.) (2011). Researching education quality in low income countries: Policies and practice. Special Issue of *Comparative Education*, 47(1).
- UNESCO (2004). Education for All: The quality imperative. *EFA Global Monitoring Report* 2005. Paris: UNESCO.

# **PREFACE**

One of the legacies of post-modernism is that it now seems compulsory for authors to situate and contextualise their work, preferably with impenetrable jargon. Rather than being self-indulgent, a preface is an integral voice in establishing the authenticity of a negotiable and contestable discourse. Who am I to disagree?

The intellectual history of this book traces to my childhood in the 1950s, when my father, Harry Guthrie, was the head teacher of an authoritarian school in Wellington, New Zealand. On occasion, he would come home and rant to my mother, Muriel, about the school inspectors who were currently perpetuating endless bastardries on his school. We lived, although I did not know it then, less than ten kilometres from the Director of Education, C.E. Beeby, whose writing is central to this book. Paradoxically, Beeby was trying to democratise education, but the formalistic inspectorate ranged heavily. To hear my father tell it, the most evil of all the educational pirates who rampaged through his school was one "Black Jack" Logan. Oddly enough, some ten years later I worked on a building site excavating foundations for a house being built for Jack. My father came to visit the work, and the two had a civil enough conversation. But the day after I finished working there, a landfall engulfed the site. My father and I never once discussed religion, but I am sure that on this day he thanked God for divine retribution.

The same year, 1969, I went through the dreariest educational experience of my life, a postgraduate secondary teaching diploma course at Christchurch Teacher's College, and skated through on the least work that I could get away with. A rare highlight was the graduation speech by Peter Lawrence, the Professor of Education at the University of Canterbury, who based his talk around seven paradoxes, the fifth of which resonated alarmingly in the late 1960s: "until now you have been against authority; now you are authority." Unsurprisingly, I disliked high school teaching the following year and took part in the first ever strike by secondary school teachers in New Zealand, which was against the inspectorial system.

My ambition was an academic career, so I was pleased to escape in 1971 to a position as a Teaching Fellow in Geography at the University of New England in Australia. I cannot have been much of a geographer because it took me three weeks in Armidale to find a map and work out where the place was. I was lucky, however, to be in a large and capable department, although one hidebound about course design. Despite myself, my teacher training kicked in and I found a strength as a tertiary teacher. Another curiosity was that the Department had to me the surprising

habit of debating the nature of geography. My first degrees at Victoria University of Wellington from 1965 to 1968 had been in Third World Geography and Asian Studies, the first subject under the noted radical China specialist, Keith Buchanan, the second under an anarchist, Bill Hall, Buchanan, I later discovered, was a cultural geographer, which was in distinct contrast to the regional geography that had been predominant in New Zealand, but not once in four years of geography courses do I recall him or anybody else discussing the nature of geography. Nor did I care because my interest was in 'underdevelopment', as it was then called, and then as now disciplinary boundaries seemed artificial. However, at New England everyone worried away at the nature of geography. The bon mot of the day, which I readily accepted, took a sociological perspective: geography was what geographers did. What I did at first was to follow an intellectual obsession with Harvey Franklin's work on systems of production and appropriation and their possible application to Australian Aboriginal history, finding in resonance with the research on the growth of the brain reviewed briefly in Chapter 12.5, that, now aged 24, I could quite readily comprehend material that had previously seemed impenetrable. With a free and very generous departmental rein, I read a great deal in political economy and economic anthropology. However, the concepts did not readily apply to empirical research so, applying Occam's razor, I turned seamlessly enough to a social science research thesis on Aboriginal perceptions of migration, based in another academic oddity, behavioural geography.

In 1975 my developmental interests and teaching qualifications helped me to obtain a position in the Third World as a Lecturer in Social Science at Goroka Teacher's College, which had just become a faculty of the University of Papua New Guinea. My own perspectives on education in Papua New Guinea came to straddle the period from just before Independence in 1975 for some eight years to 1983, through occasional visits as a consultant during the 1980s and 1990s, to a return to Goroka in 2002 and 2003 as Foundation Professor of Education at what had become the University of Goroka, and subsequently consulting as the Director of 16 nation-wide urban crime victimisation surveys over a five year period until 2008: in all, some ten years in the country.

Goroka Teacher's College was the only secondary teacher's college in Papua New Guinea in 1975. It had previously been a government institution, but had a staff spill with the amalgamation, and a fresh group held lively meetings about the teacher training programme. Once at Goroka, I still needed a doctorate, so I carried one step further the definition of geography. If geography was what geographers did, who were geographers? My crude but functional answer was that geographers were people who were paid to be geographers. And what now was I? I was paid by a newly independent nation to be a teacher educator: so now I was an educationalist. My ethical obligation, I felt, was to research teacher education, settling

on an evaluation of the secondary teacher education programmes, which were split between different educational approaches at the College in Goroka and the separate Faculty of Education in Port Moresby. Obtaining a year of leave in 1978 to start my PhD, I sat down at the University of Newcastle in Australia and read systematically on education for the first time.

My interest in the central topic of this book – teaching styles – had arisen at Goroka, where I had spent three years failing to teach social science students how to use progressive teaching methods, including student-focussed lesson planning. In looking for reasons for the dismal failure, I came across Beeby's work on educational stages. His description of formalism was the best available account of what was before me and some of the reasons for my inability to change it. However, a deconstruction of Beeby's analysis (much updated in Chapters 2 and 3) led me to disagree strongly with his position that countries like Papua New Guinea would inevitably follow Western progressive educational patterns (albeit, he did think, much more slowly than some of his confreres would have liked).

From my perspective as a specialist in development studies who happened to be working in teacher education, with in-depth training neither in education nor psychology, but well read in anthropology and sociology and interested in methodology, the stages model had many formal weaknesses. The major failure was lack of recognition that the model was teleological without justification of its ends in contextually-relevant cultural terms, which monumental lack of validity carried the import, to me at least, that the model should not even be used for research let alone practical application. Nonetheless, my lack of educational reading was an advantage in many ways because I came to the subject open-minded about explanatory educational theories and not caged by preset intellectual constructs other than a liking for working from first principles.

Some of the methodological first principles in which I was interested were clarified soon after when reading Karl Popper for the first time. Although I was versed in the principles of falsification from an undergraduate sociology course in Wellington and a reluctant learning of non-parametric statistics for my migration research, Popper's *Objective Knowledge* resolved two key issues to my satisfaction. One was the traditional Western metaphysical dichotomy between materialism and idealism, and the role in this of skepticism, which is strong on logic but a dead end operationally. Popper's commonsense realism cut through all this with the view that a sound metaphysical base is unnecessary for the advancement of science; rather, critical analysis is the way forward. His concept of objective knowledge that is independent of the originator once verbalised also removed the notion that all knowledge was subjective and internal (although objectified and externalised seem better terms than objective). However, this did and does not make me a positivist. My viewpoint remains phenomenological, i.e. that scientific and

methodological schools (including positivism) originate as mental constructs, and I do not hesitate to mix objectivist and subjectivist methods as the occasion requires. Personally, I see this as radical in the early adjectival sense of the word as going to the root of things, wherever that may lead methodologically. While mixed method research is now common, my own underpinning remains a slightly maverick mixture of old and new paradigms, maintaining a path between extreme positivist troglodytes and post-positivist trendoids, as the two schools tend to perceive each another.

As I delved into the teacher education research, I still had an attitudinal set about educational authority. So it was somewhat to my own surprise that I started to take seriously a suggestion from the secondary school Superintendent of Inspections, Ivor Lopes, that I should use inspection reports as the basis of my evaluation of teacher effectiveness. My study of the teacher training graduates from various programmes in Papua New Guinea in the mid-1970s and the way in which their performance was evaluated by inspectors in schools led me to a position far removed from my value set at the beginning of the study. To base the evaluation of teachers and the teacher training system on the inspection system and to write what became a sympathetic analysis of the inspectorate required, in later jargon, radical reflection. Incremental improvements to formalism, I soon concluded, were the way forward rather than ill-founded attempts to change teachers to other styles.

In 1979, I commenced work in the Educational Research Unit in the Education Faculty of the University in Port Moresby, fitting my doctoral research around a range of research projects on formal education with the support of the Director, Sheldon Weeks. The newly arrived Professor of Education, Cyril Rogers, also an expatriate New Zealander and formerly Vice Chancellor of the University of Botswana, Lesotho and Swaziland, was interested in my analysis of Beeby's stages and put us in touch. When I submitted the analysis to the *International Review of Education*, the editor persuaded Beeby to write a response, and we also used our correspondence as part of the exchange published in 1980. Beeby, who preceded Popper by a few years at the University of Canterbury in the 1930s, was also familiar with Popper's work and introduced Popperian principles of falsification into his defence, which leads to some symmetry in structuring this book around Popper's conjectures and refutations.

Later, Cyril arranged for Beeby to be an external consultant to the Education Faculty, so I met him for the first time in 1982. We got on very well, he volunteered his services as a referee and, after leaving Papua New Guinea in 1983 to work again in Australia, my partner and I used to call on him with a bottle of whisky during visits to my family in Wellington. In 1984, he wryly inscribed my copy of his book, "Gerard Guthrie, who has studied this book more thoroughly

than any other person – including the author." I well remember Beeb, as he was known to all his friends, over 80 years old, rolling around on the floor playing with our little daughter. Nor, despite being over twice my age, was there ever any question that his intellect was entirely fit for the task of defending his stages.

Comparative education, in which Beeby's work and mine are broadly located, partly originated as a field of study in attempts by 19<sup>th</sup> century Europeans to learn from each other's educational systems and partly in their curiosity about the rest of the world. Imperialism was at its peak and growing awareness of other continents saw people travelling widely and writing about what they saw. This arose in Europe from interest in learning ideas from other education systems that might be useful to educational reformers and also as part of a broader role in liberal education about the world at large. More than any other 'disciplinary' perspective, it seems to me that comparative education is about the geography of education.

Beeby, born in 1902, was an adolescent and adult during the period encompassing World Wars I and II, during which time well-meaning intellectuals looked for ways of preventing war. Educationalists turned to international education, which gained prominence in the aftermath of World War II. Beeby was part of a coterie of educators who established UNESCO in the late 1940s and who had a worldview, written into the founding articles, that its educational purpose was to contribute to peace and security by promoting collaboration among nations. For some decades, UNESCO provided leadership in international education and, indeed, the International Review of Education was published by the UNESCO Institute of Education. In the main, Beeby's stages model was embedded in a philosophy of education that he was responsible for implementing as Director of Education in New Zealand from 1940 to 1960. The philosophy related to the equalisation and democratisation of schooling in the sense of opening up opportunity to all individuals. A natural extension of this idea and of Beeby's administrative role (his responsibilities included education in Western Samoa and other New Zealand dependencies in the South Pacific) was an interest in improving the quality of schooling in 'developing' countries. After his retirement he systematised his thoughts in a book published in 1966 as The Quality of Education in Developing Countries, which generalised from his practical experience as a high-level educational administrator in an attempt to develop educational theory that would provide justification for progressive educationalists' efforts to improve the quality of education in developing countries. Nowadays, of course, 'international education' is also code for university marketing.

World War II also marked a watershed in imperialism. From then on, pressure mounted on the colonial powers to grant independence, which resulted in increasing focus on the needs of the colonies themselves and on the role of education in them. The 1960s and 1970s saw the growth of a third field, development education, which focussed on educational problems in developing countries. In contrast to Beeby's international education interest in promoting a commonality of international goodwill through enlightened educational philosophies, my approach was as a development educator interested in problem-solving in newly independent nations. This was and is my framework, coming to education from a primary interest in development issues. My approaches to development education in this book are, more than any other subject areas, from the cultural side of educational sociology and from comparative education as educational geography.

In the 1970s and 1980s, to a considerable extent under the influence of returnees from Papua New Guinea, Australian academic interests in education in developing countries focussed pragmatically on development education, but it was a minute field in universities there in the 1980s. Leaving Papua New Guinea in 1983, I spent a couple of years back at the University of Newcastle as Director of its Curriculum Resources & Research Centre. My academic environment was heavily locked into the publish or perish syndrome, so loosely recalling the dictum that the point is not to study the world but to change it, in 1985 I took up a very professionally rewarding management position at the International Training Institute in Sydney, mainly overseeing short courses for middle level teacher educators and public servants from all over the developing world as part of the Australian aid programme. By now an Australian, the following years from 1988 to 1990 were a fascinating period for me in Beijing as Counsellor for Technical Cooperation at the Australian Embassy; China remaining an interest from my studies in Wellington. The subsequent decade or so was spent mainly as an administrator in the head office of the Australian Agency for International Development in Canberra

During this period, my contact with academic research was sporadic, but I was able to carry on with applied development work, including involvement in a number of training projects, the NGO programme, and writing AusAID's incomegeneration rural development strategy. One benefit of working in government was that good public service writing turned out to be much tighter than academic writing. Rarely in the public service did I find the luxury of 5,000 words; more likely fewer than 500 were required, especially for ministerials. I adapted to these professional requirements readily enough, having already clarified my writing for second language users of English.

Other learning experiences were valuable as well. The Embassy in Beijing and the foreign affairs environment in Canberra were heavily focussed on Australian national interests, an approach to diplomacy that reflects philosophical pragmatism. Pragmatism – found in education through the work of John Dewey, in particular – is basically concerned with following actions that can arrive at chosen

outcomes. This turns conventional causal thinking on its head because in essence one works backwards from the desired outcome to plan the steps required to achieve it, which in the real world is much more effective and flexible than the normal academic focus on the primacy of causes. A relevant if broad example was the classical Hobson-Lenin thesis that capitalism was fundamentally responsible for the economic ills of the international world. However, attempts to destroy capitalism, whether through liberation wars or terrorism, did not remedy the problem, and the communist cure usually became worse than the capitalist disease. In any case, the collapse of communism in the USSR and Eastern Europe in the late 1980s destroyed any credibility held by the underlying Marxist economics. It was also clear that China's already astounding economic growth had arisen because it had been ditching those economics following its 1978 open door policy. Later, during the 1990s, influential World Bank reports showed that economic growth, the growth of international trade, and regulation of capitalism were the most effective means of achieving a poverty reduction outcome. As part of this approach, the conventional social science wisdom about lack of education and health as causes of poverty was quite unpersuasive. Much more focussed remains the economics approach, which carries the basic semantic meaning of 'poverty' as lack of money: lower educational and health levels are thus social correlates of financial poverty not causes. These insights reinforced my prior view that schooling in developing countries is essentially a means not of directly changing conditions of poverty, but of helping escape them by increasing employment prospects.

All this still plays out academically in post-colonial analyses that build on dependency theory to point out how the period of imperialism, which is conventionally and conveniently forgotten (at least in the West), still influences developing countries. As a statement of historical fact, I have no problem with the post-colonial position, but it offers little in the way of practical solutions. In practice, it often seems to provide an excuse for many developing countries' leaders even now to blame the colonial powers, assert an endless entitlement to foreign aid and, insofar as they take remedial responsibility, to deny that their policy decisions should be open to outside scrutiny. A half century or so after Independence for most developing countries, blaming colonialism is a thin excuse for those leaders who appear not to know whether they are leading their nations into Independence or the 21st century.

Despite the interesting exposure to the international diplomatic environment, working in AusAID was an increasingly depressing experience given the excrescent culture that seeped over the years from the top of the organisation. Fed up with its bureaucratic nastiness, another lucky escape saw me back at Goroka in 2002 and 2003 for two academic years. Returning after 25 years, some 15 of them

as an aid bureaucrat with little direct involvement in universities, I was determined to maintain the advantages of an open educational mind and was concerned not to assume that my previous theories about formalism might still hold sway. In treating these theories hypothetically, I deliberately used a range of teaching styles in a quasi-experimental action research approach to my own teaching. My approaches ranged from formalistic teaching in two undergraduate and postgraduate courses to an andragogic, student-directed undergraduate course. In particular, a postgraduate tutorial course on teaching styles and a formalistic undergraduate one on education and society in Papua New Guinea provided opportunities to revisit my earlier work and to expose it to the questioning of the postgraduate students, in particular.

While I did not have time to replicate my earlier empirical research, what I saw, heard and experienced led me not away from formalism but further towards its cultural roots and their continuities in the present. One result was a symposium in 2003 with very restricted circulation in the *Papua New Guinea Journal of Education*, which contained an analysis of the roots of formalism in traditional, precolonial epistemology (revised in Chapter 8). The previous tendency in the literature, still current in much informal educational discussion in the country, had been to see formalism as an unwanted impost from the colonial period and, implicitly, one prone to remediation through curriculum change and teacher education as a relatively recent import. Most of the commentators in the symposium agreed with my view that cultural continuities traced back to the pre-contact role of formal teaching in tribal societies, and were not very susceptible to change.

My return as an educationalist to Papua New Guinea initially gave me an opportunity to revisit and update on its educational issues, and later encouraged me to read again the international literature in between consulting assignments for AusAID and the World Bank. I was slightly appalled to find that debate about formalistic and progressive teaching styles remained relevant decades after my original interest: hence this book. And now spending much time again in China, I have had the incentive to investigate the relevance of formalism to its Confucian educational traditions, which provides an extra test of some of the propositions herein.

The Progressive Education Fallacy in Developing Countries: In Favour of Formalism is intended as a contribution to the theory, methodology and practice of education in developing countries. The focus is on the merits of formalism in countries in which it is appropriate and on the on-going risks associated with what I identify as the Progressive Education Fallacy, which is the false premise that progressive, enquiry teaching styles are necessary to promote intellectual enquiry skills among primary and secondary students, in this case in non-Western, espe-

cially non-Anglophone cultures. While conceptualised for the first time in this book, the Fallacy was embedded in Beeby's stages model, which is an influential example of the progressive position. Beeby's model is used here as a coat-hanger on which to array a formal analysis of ideas inherent in the Fallacy, using progressive as a label to encapsulate teaching styles that have been variously called 'meaning', 'student-centred', 'enquiry', 'problem-solving', 'constructivist', 'liberal' and 'democratic', and which are often associated with 'integrated curricula'. 'school-based innovation' and the like. The assumption that development of the enquiring mind needs enquiry teaching methods in primary and secondary schools has rarely been treated as a proposition to be systematically debated or as an hypothesis to be tested experimentally in non-Western cultures. The contrary case put in this book is that formalistic ('teacher-centred', 'traditional', 'didactic', 'instructional') pedagogy is appropriate in many countries, unpopular and oldfashioned though these methods may be in some Western ones. My long-standing conclusion from theoretical analysis and empirical evidence is that progress is not necessarily a case of moving to a progressive style but can well be a case of improvement within a style (e.g. upgrading formalistic teaching). This view was put first in Papua New Guinea in 1981, in presenting the model of teaching styles used in Chapter 10, and in 1983 in reporting on my inspectorial research in Chapter 6. Later, it was put for a wider international audience in a 1986 paper entitled "To the defense of traditional teaching in lesser developed countries", published eventually in 1990. Additionally, and regardless of its merits in the abstract, the evidence strongly suggests that progressive education reforms will generally fail in countries with revelatory cultures, which adds a reality check to the ethical argument against progressive education.

Despite the preceding intellectual history and despite the fact that four chapters are devoted to analyses of issues raised by Beeby's stages and another three to education in Papua New Guinea, this is neither a book about Beeby or his stages model as such, nor is it a book about education in Papua New Guinea. The analysis herein applies beyond Beeby's stages to other progressive cases that rely on similar arguments. Structuring the book around Popper's conjectures and refutations means that the country case studies are used in what I trust is a methodologically elegant refutation provided by the failure of progressive education reforms in Papua New Guinea. Perhaps more than in any other developing country, Beeby's progressive ideas were put into official practice by the Department of Education from the late 1960s as part of many curricular efforts to change formalism. My own research experience there also allows me to draw heavily on its domestic educational literature to provide the single country example necessary to refute (in the Popperian sense) any universal claim for the progressive approach. Those not methodologically inclined might ask whether this matters very much, given that

Papua New Guinea is a small country, so some generalisability is added with the very much larger case of China, which also has a revelatory epistemology going back millennia.

The Progressive Education Fallacy recalls Philip Foster's famous Vocational School Fallacy from 1965, which instigated much debate about the roles of academic and vocational education. Foster argued, in essence, that it was fallacious to assume that vocational schooling was more likely to generate employment for its graduates, the evidence being that the community used a conventional academic education as a path to employment. Similarly conservative, my Progressive Education Fallacy puts the view that it is fallacious to assume that a progressive enquiry-based education is more likely to develop higher level enquiry skills than a formalistic one building on memorisation. The contrary position is that a traditional formalistic education can provide the intellectual foundations on which enquiry can later rest. Indeed, the fact that Western universities traditionally used formalistic methods to teach formal research skills seems to question the necessity for enquiry methods at all, although I would not go that far myself.

One purpose of this preface is to highlight an important aspect of the Fallacy. The analysis is based in the cognitive realm, with issues treated as intellectual concerns, but the reason for their persistence is found in the affective domain. Ultimately this book is about educational values, and values are hard to change. Beeby exemplified this – the zeal of the international educationalists of his period was his own. Beeby understood this clearly and never questioned it. After all, the progressive premise was an important part of his life's work, as his 1992 autobiographical book, The Biography of an Idea, made clear. Indeed, there was a quasi-religious element to his unquestioning faith in the revealed truth of progressive education. Other than his responses in the International Review of Education, Beeby himself ignored the criticisms of his approach in his later formal writing, and in *The Biog*raphy of an Idea mentioned only that the thesis of stages had sometimes been criticised by academics. I intuit from this that Beeb could be a cunning old administrator. My experience was that he set strategic objectives and thought about his ideas, but did not deviate from their essentials. Others were free to disagree and he was very willing to engage with them, up to a point, but he was not open to changing his core ideas or to publicising contrary views more than he had to. In his 80s, he was delighted that his ideas were taken seriously, but he was not about to reject the affective values that were a central tenet of a widely respected life's work.

Of course, having accused Beeby of failing properly to justify his value judgements, I should at least briefly indicate my own. To add another convolution to the argument, I actually do share many of the progressive educational values within my own cultural context. In that context, my scepticism relates to the timing of the

introduction of enquiry methods into schooling. What I do not share is the value position that progressive values should be transferred to other cultures and that developing countries should attempt to follow Western, predominantly Anglophone, educational paths regardless of the evidence that progressive educational reforms are widely prone to failure in the developing world. In short, do not do unto others as you would have them do unto you: their tastes may be different.

In attempting in this book to separate value-laden ethical issues (such as Beeby's belief in progressive education) from empirical ones (such as the evidence that progressive education does not work in many countries), I am in no way attempting to side with the traditional positivist view that science should be value-free. The purpose of separating the two issues is more properly to select those features amenable to empirical and/or ethical analysis and to improve the quality of such analysis so that any social action that may be based on it can itself be as sound as possible. Nor, by separating empiricism from ethics, am I trying to imply that empirical methodology itself is value-free or ethically neutral. The type of intellectually tough philosophical and scientific rationalism in my analysis is derived from a Western academic sub-culture, the members of which have influence, derived from their knowledge, disproportionate to their numbers. This knowledge is neither complete nor ever likely to be, and in cross-cultural situations may be badly distorted by its mode of rationalism, hence one need for caution.

Culturally-based educational choices may involve criteria of development not only different from those considered in Western contexts, but antithetical to many Western beliefs. Religious fundamentalists can argue (and this is not a view that I share personally) that religious values should be the basis for educational norms, e.g. to teach the literal truth of the Christian Bible or the Islamic Koran. Thus we may find both innovative change (i.e. attempts to achieve patterns new to a country, whether based on indigenous or foreign criteria) or, paradoxically, conservative change (i.e. attempts to reinforce previous patterns). The emphasis on national goals as criteria of judgement makes clear that models of education from other developing countries may be as irrelevant as those from developed ones.

However, I am not advocating uncritical acceptance of educational decision-making within other cultures. Many actions taken by decision-makers in both 'developing' and 'developed' countries could undoubtedly be made more humane and/or effective if based on sounder research and enlightened by rational analysis rather than political games. One reason why it is important to clarify the ethical and analytical issues in educational reforms is to ensure that the Western goals implicit in many of them are not uncritically accepted in ignorance, either of their existence or the ubiquity of their consequences in practice. If an educational re-

form is based on false premises, it does not matter much to the children negatively affected by it whether the decision-maker was indigenous or foreign.

The negative connotations that formalism developed in Western countries often mean that educators who go forth from them to multiply progressivism in developing countries are unable to view dispassionately the operation of formalism in these new and different contexts, where their often-misplaced educational philosophies influence indigenous professionals, scholars and students. My professional experience has included working with progressive educators who, like Beeby, did not exercise radical reflection. Many of my professional colleagues, both indigenous and foreign, have had a faith that Western styles of teaching represent educational progress in developing countries and have underestimated the significance of contextual cultural factors. For whatever reason – perhaps professional commitment, limited academic horizons, or notions of cultural superiority – they often did not even begin to question the revealed truth that progressive education in its various guises is the way forward for all educational systems. Even when notionally supportive of traditional cultural values, an element of cognitive dissonance sometimes remained and often they still felt obliged to promote progressive values. Rather than riding forth like white knights, my advice to 'educational experts' newly arriving in foreign countries (whether as consultants, advisers, aid officials, teacher trainers, curriculum specialists, managers, employees or volunteers) is to keep an open mind. At first, avoid the official plans. Instead, prior to departure, Google educational research on the country. As soon as possible after arrival, organise to spend a few days in an appropriate school before, during and after classroom hours attending meetings and visiting classes. Find out what teachers and pupils are doing in the classroom, what they think about it, how they think it can be improved (whether it is formalistic or not) and what is some of the cultural reasoning behind what they say. Then read official policy and see if it is grounded in classroom reality. If it is not, the problem is with the policy not the reality.

A key element in the widespread and persistent influence of the progressive paradigm has been the role of English language universities predominantly in the United States, United Kingdom, Canada, Australia and New Zealand. They continue to provide the bulk of overseas university study for developing-country teachers, researchers and aid professionals, who often imbibe modern educational theories as international students. These theories can be superficially attractive in that they implicitly attack old-fashioned Western educational values commonly associated with colonialism, but they seem to me to be just another culturally arrogant form of academic and professional neo-colonialism. Indeed, so irrelevant to developing countries do I consider research on education in Western countries that this book contains almost no examples of it.

A consequence of progressive influences is confused attempts at curriculum reform that often lack professional rigour because they treat the process of teaching as the end product rather than student learning. Such reform attempts are based on the usually untested assumption that progressive teaching in developing countries will accelerate higher-level cognitive learning. In the absence of experimental research systematically testing whether learning how to enquire needs enquiry teaching methods, the introduction of progressive teaching styles is wide open to the criticism that developing countries still have untried theories being foisted naïvely on them. Developing-country governments and aid donors alike often continue to waste considerable efforts on changing teaching styles on the unverified assumption that student learning will somehow improve as a result. In essence, they can get away with this because weak governance systems in many developing countries mean that institutionalised checks and balances are uncommon.

Such thoughts gave rise to the urge to revisit the issues by bringing together and updating the ideas in this book about the cultural relevance of formalism. While a-ha experiences are probably not going to change older educationalists' minds, the hope is that the book will sufficiently subvert the younger ones that they seriously consider the appropriateness of progressive innovations in developing countries. The book uses as starting points a number of papers in which I have written about these issues since the mid-1970s. The full list of my educationrelated publications and papers is given in the following bibliography, which indicates a range of relevant academic and professional experience. The key material incorporated herein has all been heavily edited, revised and updated to reflect current versions of the issues under discussion. While it is common practice to regard older academic material as outdated and therefore irrelevant, this book deals with continuities in progressive educational thought since the middle of the last century and with other educational traditions that date back centuries. I have therefore not hesitated to retain older material and citations where the approaches are seminal, the analyses remain valid, they provide research evidence that remains reliable (either by having established major empirical findings or where subsequent research has not updated or refuted it), and/or they demonstrate historical perspectives. Nor have I hesitated to use currently unpopular Popperian principles as a methodological framework because rigorous logic should be neither time nor fashion dependent. Some lessons from my work as an administrator are reflected in Chapter 11, where an effort is made to reduce over-intellectualised academic work to analysis practical for decision-making purposes.

One major conclusion reached in this book is that formalistic teaching is not an intermediary step on the path to educational development, but is likely to remain central to many school systems because it is compatible with traditional and ongoing cultural practices. Formalism in many countries is symptomatic of age-old cultural preferences, not a problematic obstruction to modernisation. It should not be regarded as a classroom problem readily fixed, but as a deep-rooted cultural behaviour capable of playing an important role long into the future.

In all this, I am conscious that some will be inclined to view the book as a mirror image of their own progressive value sets, i.e. that it argues a formalistic case derived from a pre-set starting position. My view is that it presents conclusions that are based on systematic methodological and theoretical analysis, are evidence-based, have stood the test of time, and that are far removed from my original progressive views. Indeed, I am not wedded to formalism as such. My case is simply that formalism is appropriate in many cultures in many countries. There, improvements to primary and secondary schooling will come more rapidly from working with the existing styles of formalistic teaching in an attempt to improve them, rather than trying to work against or replace them.

Improving formalism does not require rocket science or another round of school effectiveness research. Plenty of teacher education textbooks, old and new, provide tips on techniques. For example, a 2001 text for Melanesia by Gabriel Kubul, *Practical Tips for Teachers in Melanesia*, abounds with constructive ideas that are neither overburdened with angst about the formalism of schools nor unapologetically accepting of it. Hopefully, current generations of teachers and teacher educators will continue to walk down the path of improving teaching in ways that are effective because they are culturally meaningful.

While the substantive case is limited to developing countries, Chapter 12 does speculate on the relevance of the argument to Western, especially English language, countries. Given that the cultural issues are embedded linguistically in various language groups, and that revelatory epistemologies are much more common worldwide than scientific ones, scientific enquiry values embedded in the English language may actually not be widely shared. Progressive education in Anglophone countries appears to be highly successful at helping school children to ask questions, but not so successful at helping them to answer questions. The reasons for this may have to do as much with biology as with teaching. An assumption inherent in progressivism was that the brain completes its growth by the early teens, and improvements in thinking subsequently would come from improved teaching to better use the brain's capacities. Recent neurobiological research has found that the prefrontal cortex, where higher intellectual operations are located, does not actually finish growing until the mid-20s. This suggests that the difficulty that adolescents have developing the formal operations necessary for higher level enquiry and analysis may be as much a function of biology as attitude or education. This indication could reinforce the proposition that the most effective level to concentrate on higher level cognitive skills is not primary or lower secondary education, but tertiary.

If physical maturation is a key issue, the underpinnings of the failure of progressive teaching innovations may be as much biological as educational, cultural and social, and therefore apply to youth in developed countries. If this book helps provoke further investigation into this matter, the results may raise the possibility that progressive education is as much a fallacy in developed countries as developing ones.

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#### References

- Beeby, C.E. (1966). *The quality of education in developing countries*. Cambridge: Harvard University Press.
- Beeby, C.E. (1980a). Reply to Gerard Guthrie. International Review of Education, 26(4), 439-444
- Beeby, C.E. (1980b). The thesis of stages fourteen years later. *International Review of Education*, 26(4), 451-474.
- Beeby, C.E. (1992). *The biography of an idea: Beeby on education*. Wellington: New Zealand Council for Educational Research.
- Guthrie, G. (1980a). Stages of educational development? Beeby revisited. *International Review of Education*, 26(4), 411-438.
- Guthrie, G. (1980b). Response [to C.E. Beeby] from Gerard Guthrie. *International Review of Education*, 26(4), 445-449.
- Guthrie, G. (1981). Teaching styles. In Smith, P., & Weeks, S. (Eds.), *Teachers and teaching:* Proceedings of the 1980 Extraordinary Meeting of the Faculty of Education (pp. 154-168). Port Moresby: University of Papua New Guinea.
- Guthrie, G. (1990). To the defense of traditional teaching in lesser developed countries. In Rust, V., & Dalin, P. (Eds.), *Teachers and teaching in the developing world* (pp. 219-232). New York: Garland.
- Guthrie, G. (2003). Cultural continuities in teaching styles. *Papua New Guinea Journal of Education* [Special Issue on Formalism]. 39(2), 57-78.
- Kubul, G. (2001). Practical tips for teachers in Melanesia: A survival guide for student teachers and beginner teachers. Sydney: Longman.
- Popper, K. (1979). *Objective knowledge: An evolutionary approach* (Rev. Ed.). Oxford: Oxford University Press.

## **Educational Bibliography**

- 2010. Basic research methods: An entry to social science research. New Delhi: Sage.
- 2007. Regional Multidisciplinary Centre of Excellence, Mauritius, World Bank feasibility study. Canberra: Educo (with Rughooputh, S., Smith, A., Sobhee, S., Hutchinson, F., & Parahoo, S.).
- 2005. PNG Primary and Secondary Teacher Education Project: Independent completion report. Canberra: Educo.
- 2004a. Typology of educational knowledge. *Papua New Guinea Journal of Education*, 40(1), 1-11
- 2004b. Educational aids CRYSTAL 2.0. *CD-ROM Review No.19*. Tokyo: Asian Development Bank Institute.
- 2004c. Global Education Database, 2003 Edition. CD-ROM Review No.18. Tokyo: Asian Development Bank Institute.
- 2003a. Cultural continuities in teaching styles. *Papua New Guinea Journal of Education* [Special Issue on Formalism]. 39(2), 57-78.
- 2003b. Developing the Melanesian teaching style. *Papua New Guinea Journal of Education* [Special Issue on Formalism], 39(2), 101-107.
- 2003c. Comparative education in the South Pacific. *Papua New Guinea Journal of Education*, 39(1), 1-13.
- 2003d. 2004 Handbook of undergraduate studies in education. Goroka: University of Goroka (Ed. with Kata, J., & Kukari, A.).
- 2003e. *Handbook of postgraduate studies in education, 2004-2005.* Goroka: University of Goroka (Ed.).
- 2003f. Handbook of postgraduate studies in education, 2003-2004. Goroka: University of Goroka (Ed.).
- 2003g. English language programs for large scale training applications: 'Planet English'. *CD-ROM Review No.6.* Tokyo: Asian Development Bank Institute.
- 2003h. English language programs for large scale training applications: 'English Discoveries'. CD-ROM Review No.5. Tokyo: Asian Development Bank Institute.
- 2002. Crumbs from the table: The impact of globalization and internationalization on the poverty of Third World universities. In Ninnes, P., & Tamatea, L. (Eds.), *Internationalizing education in the Asia-Pacific Region: Proceedings of the 2002 ANZCIES conference* (pp. 325-338). Armidale: Australian and New Zealand Comparative & International Education Society.
- 2001a. Then and now: Secondary teacher education 20 years later. *Papua New Guinea Journal of Teacher Education*, 5(4) & 6(1), 1-8.
- 2001b. African Virtual University Initiative scoping study for design and delivery. Canberra: AusAID (with Ley, R., & Smith, A.).
- 2001c. PNG Agricultural Training Project final design document. Canberra: AusAID (with Ferraris, R.).
- 2001d. Book review: Practical tips for teachers in Melanesia: A survival guide for student teachers and beginner teachers, G. Kubul. *Papua New Guinea Journal of Teacher Education*, 5(2), 54-55.
- 1992. The Papua New Guinea Community Teachers' College Lecturers Professional Development Project: Report of the mid-term review team. Canberra: International Development Program (with Penias, W., & Toomey, R.).
- 1990 & 1991. The economics of distance education. *Papua New Guinea Journal of Education*, 26(2) & 27(1), 189-200.

- 1990. To the defense of traditional teaching in lesser developed countries. In Rust, V., & Dalin, P. (Eds.), *Teachers and teaching in the developing world* (pp. 219-232). New York: Garland.
- 1989. Higher degree theses and educational decision making in developing countries. *International Journal of Educational Development*, 9(1), 43-52.
- 1987a. Current research in developing countries: INSET and the impact of examinations on classroom practice. *Teaching and Teacher Education*, 3(1), 65-76 (with Crossley, M.).
- 1987b. Basic research techniques. *Report No.55*. Port Moresby: National Research Institute (Ed.).
- 1987c. Changing directions for Australian training assistance. Paper presented to the Association of Development Research & Training Institutes of Asia and the Pacific, New Delhi.
- 1987d. New directions for ITI. ITI Newsletter No.14 (p. 1). Sydney: International Training Institute.
- 1987e. Progress on the African Food Security Training Program. *African Food Security Training Program Newsletter No.1* (pp. 1-3). Sydney: International Training Institute.
- 1987f. Principal's report. *Development Report 1986-1987* (pp. 3-5). Sydney: International Training Institute.
- 1986a. Current research in developing countries: The impact of curriculum reform on teaching. *Teaching and Teacher Education*, 2(1), 81-89.
- 1986b. Technical assistance for education in Papua New Guinea, 1986 to 1990: Recommendations to the Australian Development Assistance Bureau. Sydney: International Training Institute (with Allaburton, R., Croft, J., & Hunter, R.).
- 1986c. Research literature on teacher education in developing countries: Report on South Pacific Association of Teacher Education Research Initiatives Grant. SPATE Newsletter, 9(1), 13-17.
- 1986d. The cost of education. Papua New Guinea Education Gazette, 20(1/2), 21-22.
- 1986e. Principal's report. *Development Report 1985-1986*. Sydney: International Training Institute, 4-5.
- 1985a. Current research in developing countries: Teacher credentialing and distance education. *Teaching and Teacher Education*, 1(1), 81-90.
- 1985b. The role of teachers in national development. *Papua New Guinea Journal of Education*, 21(2), 265-281.
- 1985c. Summary of recommendations for PATCOP program in education, 1986-1990. Report to ADAB and Department of Education, Port Moresby.
- 1985d. Summary of ADAB support for educational planning in Papua New Guinea, 1984-1985. Report to ADAB and Department of Education, Port Moresby.
- 1985e. The establishment of priorities in education and the implications for management training. Paper presented to Hanns Seidel Foundation Seminar, Port Moresby.
- 1984a. Papua New Guinea. In Thomas, R.M., & Postlethwaite, N. (Eds.), *Schooling in the Pacific Islands: Colonies in transition* (pp. 28-64). Oxford: Pergamon (with Weeks, S.).
- 1984b. Secondary teacher training effectiveness in Papua New Guinea. *Studies in Educational Evaluation*, 10(2), 205-208.
- 1984c. Education strategy 1986-1990: Sector report of the Education Sector Committee. Port Moresby: Ministry of Education (Roakeina, S.G., Chairman) (Advisor and Draftsman). Reprinted in National Planning Office (1984) Medium Term Development Strategy: Education strategy discussion papers (pp. 105-166). Port Moresby: NPO.
- 1984d. A statistical review of the education sector: Interim report of the Education Sector Committee. Port Moresby: Ministry of Education (Roakeina, S.G., Chairman) (Advisor and Draftsman). Reprinted in National Planning Office (1984) Medium Term Development Strategy: Education strategy discussion papers (pp. 15-104). Port Moresby: NPO. Abbreviated

- version published as NPO (1984). Education. *National Public Expenditure Plan 1985-1988* (pp. 127-144). Port Moresby: Government Printer.
- 1984e. Resource allocation between education sub-sectors. Policy paper for the Education Sector Committee, Port Moresby.
- 1984f. Resource implications of provincial high school expansion. Policy paper for the Education Sector Committee. Port Moresby.
- 1984g. Resource constraints and the attainment of universal primary education. Policy paper for the Education Sector Committee, Port Moresby.
- 1983a. The secondary inspectorate. *Report No.45*. Port Moresby: Educational Research Unit, University of Papua New Guinea.
- 1983b. An evaluation of the secondary teacher training system. *Report No.44*. Port Moresby: Educational Research Unit, University of Papua New Guinea.
- 1983c. Conflict and consensus in the development of the University of Papua New Guinea. *Papua New Guinea Journal of Education*, 19(2), 35-45.
- 1983d. Policy issues in planning secondary teacher training in Papua New Guinea. *South Pacific Journal of Teacher Education*, 11(1), 33-42.
- 1983e. Directions for education research: Proceedings of the 1982 Extraordinary Meeting of the Faculty of Education. Port Moresby: University of Papua New Guinea (Ed. with Martin, T.N.).
- 1983f. Policy outcomes for education research. In Guthrie, G., & Martin, T.N. (Eds.), *Directions for education research: Proceedings of the 1982 Extraordinary Meeting of the Faculty of Education* (pp. 192-202). Port Moresby: University of Papua New Guinea (with Currin, C.).
- 1982a. Reviews of teacher training and teacher performance in developing countries: Beeby revisited (2). *International Review of Education*, 28(3), 291-306.
- 1982b. Papua New Guinea Journal of Education, 18(2) (Ed.).
- 1982c. Papua New Guinea Journal of Education, 18(1) (Ed.).
- 1982d. First level education: Community schools. In King, D., & Ranck, S. (Eds.), *Papua New Guinea atlas: A nation in transition* (pp. 26-27). Port Moresby: Robert Brown (with Weeks, S.).
- 1982e. Second and third level education: High school and beyond. In King, D., & Ranck, S. (Eds.), *Papua New Guinea atlas: A nation in transition* (pp. 27-29). Port Moresby: Robert Brown, 27-29 (with Weeks, S.).
- 1982f. An evaluation of secondary teacher training in Papua New Guinea. Research thesis, Doctor of Philosophy in Education, University of Newcastle, Australia (University Microfilms International No. DA832824).
- 1981a. Teaching styles. In Smith, P., & Weeks, S. (Eds.), *Teachers and teaching: Proceedings of the 1980 Extraordinary Meeting of the Faculty of Education* (pp. 154-168). Port Moresby: University of Papua New Guinea.
- 1981b. Secondary teacher training output in the 1970s. *Papua New Guinea Journal of Education*, 17(1), 102-110.
- 1981c. Papua New Guinea Journal of Education, 17(2) (Ed.).
- 1981d. Papua New Guinea Journal of Education, 17(1) (Ed.).
- 1981e. Criterion-referenced measurement: Towards a new school assessment policy. *Research Report No.37*. Port Moresby: Educational Research Unit, University of Papua New Guinea (with Townsend, G., & O'Driscoll, M.).
- 1981f. Book review: Education bibliography 1979-80, D. Wormsley (Ed.). *Papua New Guinea Journal of Education*, 17(2), 243-244.
- 1981g. Book review: Planning the future of Goroka Teacher's College, C.A. Rogers (Chairman). *Papua New Guinea Journal of Education*, 17(2), 234-236.

- 1981h. Book review: Constructing test instruments for student evaluation, Colombo Plan Staff College. *Papua New Guinea Journal of Education*, 17(1), 119-121.
- 1981i. Foreword. In Tuppen, C., School and student differences: Grade 10 examination and assessment results. *Research Report No.39* (p. 6). Port Moresby: Educational Research Unit, University of Papua New Guinea.
- 1981j. Criterion-referenced testing. Papua New Guinea Education Gazette, 15(8), 245.
- 1980a. Stages of educational development? Beeby revisited. *International Review of Education*, 26(4), 411-438.
- 1980b. Response [to C.E. Beeby] from Gerard Guthrie. *International Review of Education*, 26(4), 445-449.
- 1980c. The education of the Papua New Guinea child: Proceedings of the 1979 Extraordinary Meeting of the Faculty of Education. Port Moresby: University of Papua New Guinea (Ed. with Smith, P.).
- 1980d. Day high schools. *Research Report No.34*. Port Moresby: Educational Research Unit, University of Papua New Guinea (Ed.).
- 1980e. Standards and quotas: High school selection in the North Solomons. *Research Report No.31*. Port Moresby: Educational Research Unit, University of Papua New Guinea (with Kemelfield, G.).
- 1980f. Adaptation: Grade 9 social science textbook, part 2. Port Moresby: Ministry of Education, Science & Culture (with Field, S., & Lornie, R.).
- 1980g. Adaptation: Grade 9 social science teachers' guide, part 2. Port Moresby: Ministry of Education, Science & Culture (with Field, S., & Lornie, R.).
- 1980h. Papua New Guinea Journal of Education, 16(2) (Ed.).
- 1980i. Papua New Guinea Journal of Education, 16(1) (Ed.).
- 1980j. Children, education and society. In Guthrie, G., & Smith, P. (Eds.), *The education of the Papua New Guinea child: Proceedings of the 1979 Extraordinary Meeting of the Faculty of Education* (pp. 5-21). Port Moresby: University of Papua New Guinea (with Smith, P.).
- 1980k. Current approaches in schools to education about urbanization. In Jackson, R. (Ed.), *Urbanization and its problems in Papua New Guinea: Papers presented to the 1979 Waigani Seminar* (pp. 37-47). Port Moresby: University of Papua New Guinea.
- 1980l. Towards a new social science syllabus for the 1980s. In Lornie, R. (Ed.), Introduction to the revised secondary social science course. *Occasional Paper No.3* (pp. 97-110). Port Moresby: Teaching Methods & Materials Centre, University of Papua New Guinea.
- 1980m. Criterion-referenced testing for Papua New Guinea. *Australian Journal of Education*, 24(3), 326-327 (with O'Driscoll, M., & Townsend, G.).
- 1980n. Book review: Jacaranda Papua New Guinea school atlas. *Papua New Guinea Journal of Education*, 16(2), 211-212.
- 1980o. Book review: A world catalogue of theses concerning the education of the people of the Pacific Islands ... and, Theses and dissertations on Papua New Guinea, W.G. Coppell. *Papua New Guinea Journal of Education*, 16(1), 77-78.
- 1980p. Book review: Academic success in Papua New Guinea high schools, J. Silvey. *Papua New Guinea Journal of Education*, 16(1), 87-89.
- 1980q. Foreword. In O'Hara, G., Boards of governors operations: Six highlands case studies. Research Report No.32 (pp. 6-7). Port Moresby: Educational Research Unit, University of Papua New Guinea.
- 1980r. High school selection in the North Solomons Province. *Papua New Guinea Education Gazette*, 14(9), 201-202 (with Kemelfield, G.).

- 1980s. Urbanization and the education system. *Papua New Guinea Education Gazette*, 14(1), 10-13.
- 1980t. Proposals for a criterion-referenced measurement system for community and provincial high schools. Report to the Secretary for Education, Department of Education, Port Moresby (with Townsend, G., & O'Driscoll, M.).
- 1980u. An evaluation of secondary teacher training in Papua New Guinea. Discussion paper for the APEID Regional Workshop on Educational Research, Tokyo.
- 1980v. The uses of criterion-reference tests in Papua New Guinea. Discussion paper for the APEID Regional Workshop on Educational Research, Tokyo.
- 1980w. Nutrition and education in the North Solomons Province, Papua New Guinea. Discussion paper for the APEID Regional Workshop on Educational Research, Tokyo.
- 1980x. Primary school standards and high school selection in the North Solomons Province, Papua New Guinea. Discussion paper for the APEID Regional Workshop on Educational Research, Tokyo.
- 1979a. How can we improve poor community schools in the North Solomons Province? *NSERP Research Report No.3*. Port Moresby: Educational Research Unit, University of Papua New Guinea & North Solomons Provincial Government (with Kemelfield, G.).
- 1979b. How should we select children for high school in the North Solomons Province? *NSERP Research Report No.2*. Port Moresby: Educational Research Unit, University of Papua New Guinea & North Solomons Provincial Government (with Kemelfield, G.).
- 1978a. Adaptation: Grade 9 social science textbook, part 1. Port Moresby: Ministry of Education, Science & Culture (with Field, S., & Lornie, R.).
- 1978b. Adaptation: Grade 9 social science teachers' guide, part 1. Port Moresby: Ministry of Education, Science & Culture (with Field, S., & Lornie, R.).
- 1978c. Equalization of secondary schooling in Papua New Guinea 1975-77. In Hanson, J. Agard J., & Smith, P. (Eds.), *Underway on a five year plan: Proceedings of the fourth Extraordinary Meeting of the Faculty of Education* (pp. 30-42). Port Moresby: University of Papua New Guinea.
- 1978d. Secondary teacher training in Papua New Guinea: Student readings. Goroka: Goroka Teacher's College, University of Papua New Guinea (Ed. with Wrightson, T.).
- 1978e. Suggestions for the new provincial high school syllabus. Report to the Social Science Syllabus Advisory Committee, Department of Education, Port Moresby.
- 1978f. Helping the student teacher. *Teacher* (Journal of the Papua New Guinea Teachers' Association), 2, 46-48.
- 1977a. Motivation and ability: selection of in-service trainees. *Papua New Guinea Journal of Education*, 13(2), 29-39 (with Robin, R.).
- 1977b. Basic research techniques: A handbook for fieldworkers in Papua New Guinea. *Working Paper No.2*. Port Moresby: Educational Research Unit, University of Papua New Guinea (Ed. with Field, S.).
- 1976. Rationalization of secondary teacher training in Papua New Guinea. In Weatherhead, J. (Ed.), Toward a philosophy of teacher education for University of Papua New Guinea: Proceedings of the Third Extraordinary Meeting of the Faculty of Education (pp. 24-32). Port Moresby: Teaching Methods & Materials Centre, University of Papua New Guinea.
- 1975. The success of the Cherbourg state school's program for Aboriginal students. *The Aboriginal Child at School: A Professional Journal for Teachers of Aboriginals*, 3(5), 48-53.
- 1975. Aboriginal migration: A survey amongst Cherbourg residents. *The Aboriginal Child at School: A Professional Journal for Teachers of Aboriginals*, 3(4), 49-59.
- 1974. Attitudes of Cherbourg Aborigines to education. Report to the Principal, Cherbourg State School, Queensland.