

# The use of indigenous languages in early early basic education in Papua New Guinea: A model for elsewhere?<sup>1</sup>

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## **Abstract**

*Papua New Guinea (PNG) is a small nation in the Pacific with a population of some five million people speaking over eight hundred languages. This paper is based on knowledge the author gained from working on education in Papua New Guinea over a period of six years (February 1995 to January 2001) and some 11 visits made to Papua New Guinea during that time.<sup>2</sup> The paper has not been endorsed by the Government of Papua New Guinea, and any mistakes or inaccuracies are solely mine.*

## **Introduction**

The small island nation of Papua New Guinea (PNG) in the South Pacific offers a little-known practical example of how a small, multilingual country with limited resources has developed a package of strategies for dealing with the challenges posed by multilingualism and is using its multiplicity of languages in education as a tool for improving teaching and learning, saving resources, and moving towards Education for All. This article is based on knowledge I gained from working on education in Papua New Guinea over a period of six years (February 1995 through January 2001) and some 11 visits made to Papua New Guinea during that time.

The island of New Guinea, north of Australia and south of the equator in the South Pacific, is said to have about one sixth of the 6,000-plus languages of the world. The eastern half of the island of New Guinea plus a number of smaller islands to the north and east comprise the independent state of Papua New Guinea. With well over 800 languages,<sup>3</sup> Papua New Guinea has the greatest number of languages of any country in the world. With a population of only about 5 million, Papua New Guinea also has a high degree of linguistic diversity.

In addition to the indigenous languages, there exists Papua New Guinean pidgin (*tok pisin*), a lingua franca which originally developed in the northern part of the country and which about half of the population can speak. Its grammar and syntax are borrowed from Melanesian. Much of its vocabulary is derived from English, but there are also words taken from German, Spanish, Malay/Indonesian, and Papua New Guinea's own languages. Another lingua franca, Hiri Motu, developed along the southern coast and is spoken by about one tenth of the population. In addition, formally educated Papua New Guineans use English. There is no one dominant indigenous language, which lessens tensions considerably.

Papua New Guinea is classified by the World Bank as a middle-income country. Its economy is highly dualistic, with a large part of the national income deriving from the exploitation of natural resources--copper, gold, petroleum, natural gas, palm oil, coffee, forestry, and fishing. The greatest proportion of government revenues goes to pay civil-service salaries. Most civil servants live in Port Moresby, the capital and only city of any size, where they aspire to Australian standards of living. Some 85% of the population live in rural areas and have standards of living little removed from hunting and gathering and subsistence agriculture, sometimes supplemented with limited cash-cropping (coffee, betelnut, oil palm). According to World Bank statistics, Papua New Guinea is the only country where for about 20 years, income per capita steadily grew (as revenues from mining, forestry, and other enclave industries increased dramatically) but indicators of social well-being (e.g., health and nutrition status) steadily declined.

Capacity in planning, policy-making, and managerial and higher-level technical skills is in very short supply.

In spite of declining provision of social services, the country is in its eleventh year of a major education reform. A key aspect of the Reform is the gradual introduction of local indigenous languages in the early years of basic education, in contrast to a system which in the past (official policy since 1955) used English as the only medium of instruction. At the end of 2000, Papua New Guinea's Department of Education reported that Papua New Guinea was providing kindergarten (called the "preparatory year") and Grades 1 and 2 in some 380 indigenous languages, plus Pidgin and English. There were plans to introduce a further 90 languages in 2001.<sup>4</sup> A large number of these are languages which had not previously been written.

There have been many problems and setbacks. The Reform has been misunderstood, and implementation has been mixed. Yet national and provincial education administrators, teachers, and parents agree that the general trend has been up. Although to my knowledge, no longitudinal studies of differing educational outcomes have been done, there is an overwhelming amount of anecdotal evidence that children *become literate* more quickly and easily in their mother tongues than they did in English. They also appear to *learn English* more quickly and easily than their older brothers and sisters did under the old system. The word-attack and decoding strategies children acquire when learning to read and write their mother tongues are applied to learning English: students come into Grade 3 classes with word recognition, reading, and writing skills, which they then apply to English. In areas where Pidgin is spoken but where children learn to read in an indigenous language, the children are said to have learned to read Pidgin as well, although it was not part of the curriculum. At the end of 1998, the results of the Grade 6 examination in the three provinces which began the Reform first, in 1993, were much higher than the results of students from provinces where students were immersed in English from Day One of Grade One.<sup>5</sup>

Access is increasing because many parents now appear more willing to send their children to school and to make the sacrifices necessary to keep them in school. Dropout has decreased.<sup>6</sup> In particular, a higher proportion of girls are in school than was previously the case.

Children also appear to be more excited, pro-active, self-confident, and inquisitive about learning. They ask more questions. Teachers often recount their own memories of feeling confused and frightened when they began school and the teacher spoke to them in a language they could not understand. They are relieved that their students do not face the same handicap. Some teachers report mixed feelings: they feel they had better control of their students when they were meek and passive, yet they are excited that children learn faster since the Reform was introduced.

What strategies were used to introduce, apparently successfully, such a widespread reform in such a small, relatively poor country with such a multiplicity of languages?

- (1) Widespread consultation. A National Debate on the appropriateness, relevance, and coverage of the existing education system took place in the mid-1980s. The system's weaknesses and failings were identified, and alternative solutions were discussed. The use of indigenous languages in primary education was discussed for at least 20 years before 1993. Many pilots were carried out. International influences played their part, but a great deal of the currents reflected national thinking and experience as well. This widespread consultation has ensured that once the Reform is introduced into a new school, language area, district, or province, people at all levels (classroom, school, community, district, province, nation) are optimistic and are willing to deal with problems in a pragmatic, constructive, and cooperative manner.

- (2) Planning. The Reform built on the experience of mission kindergartens in local languages. The National Department of Education provided a general framework for the Reform<sup>7</sup> and also provided technical assistance to each province to plan the Reform, district by district, language by language, school by school. Teacher and resource requirements were carefully calculated. A few provinces had virtually no capacity to prepare such a plan; in these cases, the National Department wrote most of the provincial plan, but provincial education officials were kept constantly involved in every step of the process.
- (3) Gradualism. The Reform was begun in 1993 in parts of three provinces. It has now been introduced into all provinces, but in each province, the Reform has begun in some districts but not yet in others: the English-only system continues in full force in those parts of the country where the Reform has not yet been introduced. The Reform is being phased in through 2004, according to the plan; I suspect that it will take somewhat longer than that. The Reform is introduced only as fast as teachers are trained and teaching materials are developed in the various languages and, in particular, only as fast as writing systems are developed for languages which previously haven't been written.<sup>8</sup>
- (4) Relevance to national and local needs and realities. From the beginning, the link was made between identity, cultural conservation, and pedagogical effectiveness. There was an explicit emphasis on the preservation and enhancement of national identity, culture, traditions, and languages, in reaction to the widespread fear that Papua New Guinean identity was being lost as the international economy and the use of English became progressively more widespread. Although national guidelines for the syllabus and curriculum are established, teachers have wide latitude and are expected to use local content in delivering the syllabus. Examples are taken from local life.
- (5) Local option and community participation and ownership. Nowadays, once teaching materials are available in a language, the Reform is introduced into all communities of at least 300 people in the area where that language is spoken. Originally, however, each community was consulted individually. The proposed Reform was discussed in detail, as were the contributions expected from the community. Parents had their chance to voice their fears about whether schools using the mother tongue would offer their children fewer chances at modern-sector employment than would English-only schools. If a community exhibited a consensus of opposition to the Reform, it was not introduced in that community. If the community wanted the Reform, it had to agree to build new facilities for the classes to be offered in the local language. Parents, elders, and the community in general also had to agree that they would assist in the life of the school, occasionally providing resources and time to share their own lives and culture with the students. Over time, parental opposition to the use of indigenous languages has virtually disappeared. In areas where the Reform has been introduced, community and parental support is, in general, overwhelmingly positive, mainly because parents and communities and the public at large perceive that education is relevant to their reality and needs and because the new system preserves and gives value and official status to their language, traditions, and cultural identity. The initial fear of some parents and communities that their children would receive a "second class" education has given way to demands that the Government speed up the program of development of learning materials in those language areas where the Reform has not yet been introduced. In communities where more than one language is spoken, the parents decide which indigenous language or Pidgin is to be used in initial basic education.

- (6) Local teachers. A barrier to the use of several languages in formal education in many countries has been the difficulty of training teachers to teach in the various languages and then deploying them throughout the country. Under the previous system in Papua New Guinea, teachers for primary schools were trained at Teacher Training Colleges and then deployed nationwide. Since the language of instruction was English, any individual teacher could be deployed anywhere, thus solving the problem of deployment. This solution meant, however, that more often than not, the teacher did not speak the language of the community. Since most parents in rural areas didn't speak English, teachers were often isolated and could not communicate with parents about their children's progress and with the community about the needs of the school. Under the Reform, the community chooses local people to be teachers.<sup>9</sup> These are generally people in their 30s or 40s who have completed Grade 10 and are known by everyone and speak the local indigenous language as a mother tongue. They are trained in about ten modules, interspersed with teaching, to teach the community's children in their mother tongue. Since they are native speakers of the language in which they are teaching, they can communicate easily with parents and the community. Most of them are people who were unsuccessful in going past Grade 10 and in obtaining jobs in the modern sector. Most are pleased to have an opportunity to earn a steady, reliable cash income.<sup>10</sup> Most do not have an alternative way of earning cash; the opportunity cost is therefore minimal or zero. Since they are not certified as teachers with certificates from a Teacher Training College, they are not civil servants and do not have to be paid as civil servants. Their remuneration is typically 25% to 60% of that received by certified primary-school teachers (the pay scale is sliding, increasing as the teachers acquire additional training, which provides them with a substantial incentive to receive additional training).<sup>11</sup> The use of these people who are paid less than the certified teachers/civil servants results in substantial savings which help offset the costs of producing materials in languages other than English. The savings on teachers (and buildings, since the community builds the facilities for kindergarten and Grades 1 and 2) has allowed the Government to add Grades 7 and 8 to the primary-education cycle,<sup>12</sup> a substantial inducement to parents to participate in the Reform.<sup>13</sup>
- (7) Limit to the number of grades in which indigenous languages are used. A widespread barrier to the use of several languages in formal education in many countries, particularly poor countries, has been the recognition that it very quickly becomes very expensive to produce books and other learning materials in more than one language, particularly when the number of native speakers is limited and print runs are correspondingly small. Therefore, the transition to a common language in education must come early, for financial reasons. With so many indigenous languages, Papua New Guinea was particularly conscious of the cost implications of trying to produce the full panoply of learning materials in many languages. One solution was to use local people as teachers and pay them less, as described above. A second was to limit teaching in indigenous languages to kindergarten and Grades 1 and 2. By Grade 3, children are expected to have transited to English such that teaching throughout the country can be in English and learning materials for Grade 3 and beyond can be mass-produced only in English. The ideal might be to use both the mother tongue and English throughout primary and secondary education, but the number of languages and the associated costs make the ideal impossible. The use of mother tongues for at least two grades, however, appears to be providing basic literacy and to be equipping children, both cognitively and emotionally, to acquire the second language (English) successfully enough to use it for learning.
- (8) Simple materials. Papua New Guinea has deliberately made the learning materials used in kindergarten and Grades 1 and 2 very simple. In Grades 1 and 2, the vocabulary needed to

acquire literacy is limited to a few hundred words, and initial readers are not very thick books. In some cases, a prototype reader is prepared with pictures and a text in English and then multiple copies of the same book with the same pictures but blank lines instead of text are produced; at the provincial, district, or school level, the text can be filled in with the local language. Arithmetic books in Grades 1 and 2 consist mainly of pictures and numbers and have limited texts. Physically, the books do not have hard covers and ordinarily do not use colors. These deliberate policies help contain costs and make the production of learning materials in many languages possible.

- (9) Cooperation with churches and other NGOs. There was widespread recognition that the success of the Reform would depend on the cooperation, support, and participation of the whole society. In particular, the National Department of Education recognized that it did not have the staff to produce curriculum materials in a multiplicity of languages. NGOs experienced in the use of indigenous languages in literacy, many but not all of them with religious affiliations, receive grants from the National Department of Education to prepare materials (if the language is already written) or to develop a writing system (if the language is not written). In the latter case, they work with local people, linguists, education staff, and local teachers over a period of about six months to develop an orthography based on the Roman alphabet, a dictionary with a basic vocabulary, and a basic grammar. A pragmatic approach is used: although everyone recognizes that the vocabulary may be expanded and refinements made in the writing approach over the next 20 years or so, everyone also accepts that a start can be made in teaching children with a less-than-perfect-and-complete written language and materials.
- (10) Reliance on donors. Papua New Guinea recognizes and accepts that the investment costs in a program of this magnitude are beyond its own financial capacity and that continued donor support will be necessary to complete the introduction of the Reform throughout the country. It has sought and received enormous financial and technical assistance from Australia (and, to a far lesser extent, from the World Bank) in support of the Reform. Although these *investment* costs are donor-financed, cost-saving measures (in particular, the savings in teacher salaries in Grades 1 and 2 and the overall increased efficiency/flow-through in the system) are expected to make the system's *recurrent* costs sustainable with national resources in the longer term.

Every country is unique and must find its own solutions to the problems of multilingualism. There is also ample evidence that importing solutions from one country may not work in the context of a different country. Nevertheless, the case of Papua New Guinea is compelling: a small, poor country with more languages than any other country of the world appears to be successfully implementing a reform which (a) uses a multiplicity of languages, (b) conserves local cultures, (c) results in superior pedagogical outcomes, including better acquisition of a language of wider communication, and (d) is financially sustainable. Other countries may wish to consider how they might adapt Papua New Guinea's solutions to their own unique problems and opportunities.

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<sup>1</sup> The original version of this paper was presented on March 17, 2001, at the Annual Conference of the Comparative and International Education Society. A slightly modified version is attached as an annex to a draft paper prepared for the World Bank (January 2002) on how the language of instruction is a critical issue in achieving Education for All. An updated version was published in *Language and Education: An International Journal*, Vol. 17: 2, 2003.

<sup>2</sup> Over the period February 1995 to January 2001, the author was responsible for the World Bank's work program in education in the Pacific, in general, and for an Education Development Project in Papua New Guinea (PNG), in particular, for which the World Bank had lent PNG US\$35 million. Supervising that project required that the author

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be in almost daily contact with education authorities in PNG via e-mail, facsimile, and letter and that he visit PNG at least twice a year for visits of about 3-4 weeks at a time (11 visits over the six-year period) . He also supervised a Public Sector Training Project in PNG, managed a massive household survey-cum-case studies for a Poverty Assessment, led an Education Sector Review jointly funded by Australia in PNG, and discussed a possible new World-Bank-assisted education project in PNG. He was received by government officials of all levels from the Minister on down of Education, Finance, Public Works and others; non-governmental organizations including the churches; the University of PNG; other donors active in PNG; and the public at large. Within the Ministry of Education he had long talks with the country's main education planner, curriculum developers, textbook writers, the school inspection service, the National Library, and others. Over the six years, he also visited about half of PNG's 20 provinces so that he could go out and see schools of all sorts, usually 10 or 15 per province. He talked to provincial administrators and education authorities, school inspectors, teachers, students, parents, community members and others. The World-Bank-assisted Education Project involved curriculum development, provision of textbooks (existing and new), provision of books for school libraries, training of regional education planners and other assistance to the education planning process, distance education, maintenance/construction at secondary-level schools, and assistance to the education inspectorate.

<sup>3</sup> The *Ethnologue: Languages of the World* published by SIL Inc. lists 823 living languages for PNG. See [http://www.ethnologue.com/show\\_country.asp?name=Papua+New+Guinea](http://www.ethnologue.com/show_country.asp?name=Papua+New+Guinea) .

<sup>4</sup>The figure of 380 may include some double-counting, since it includes all the languages used in all provinces. There are some schools in virtually all the provinces which use pidgin or English in the preparatory year. There are also languages used across provincial boundaries which are used in schools in more than one province. After having corrected for this double-counting, the figure number of languages being used in early basic education in Papua New Guinea in mid-2001 was 369.

<sup>5</sup> Students in the three provinces in question have generally performed better than students in other provinces, however, so in the absence of longitudinal studies with a control group, it is not clear how much of this difference can be attributed to the use of mother tongues.

<sup>6</sup> Repetition was not a problem because Papua New Guinea has long had a policy of virtually automatic promotion.

<sup>7</sup> In fact, the Reform was not officially approved by the National Government until 1995, two years after some provinces had started implementing it.

<sup>8</sup> Pidgin and the indigenous languages are all written phonetically using the Roman alphabet. This factor helps a great deal in enabling children to apply the strategies they learned while becoming literate in their mother tongues to the task of learning English.

<sup>9</sup> The teachers chosen by the community must be approved by the Department of Education.

<sup>10</sup> In many rural areas of Papua New Guinea, it is still the case that many people live from subsistence agriculture and don't see or use cash that often. They may practice some commercial agriculture (e.g., coffee-growing), but the income from that is seasonal. Receiving a fortnightly salary is, in such circumstances, very attractive.

<sup>11</sup> After completing all of the training modules, and after several years of experience, these individuals may acquire status as civil servants. In the interim, however, they are paid less than civil servants.

<sup>12</sup> The classrooms and teachers formerly used for Grades 1-6 are used for Grades 3-8. Obviously, this requires some upgrading of the teaching staff and some additional equipment and teaching materials. Occasionally it also requires some upgrading of school buildings.

<sup>13</sup> Under the old system, a selection examination was administered to all children completing Grade 6. About one third of them, those who scored highest on the examination, could continue on to Grade 7, where capacity was far more limited than in Grades 1-6. The other two thirds effectively ended their formal education at that point.