



Achieving a better future

**A NATIONAL PLAN FOR EDUCATION
2005 - 2014**



**Papua New Guinea
Department of Education**

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The National Education Plan, 2005 to 2014, was formulated with the support and commitment of many individuals.

The National Education Plan Steering Committee is acknowledged for the efforts that it has made in discussing the outcomes, strategies and activities required to achieve government objectives in education. The Committee, under the chairmanship of Sir Barry Holloway, consisted of the following: Dr. William Tagis – Deputy Chairman (Office of Higher Education), Dr. Isaac Ake, ISO, (Department of Health), Mr. David Conn, MBE, (Port Moresby Chamber of Commerce), Mr. Wayne Golding (Manufacturers Association), Mr. Martin Kase (Department of Labour and Industrial Relations), Mr. Andrew Kavana (UPNG), Mr. Jerry Kuhena (Teaching Services Commission), Mr. Mathias Lasia (Department of National Planning and Rural Development), Rev. Samson Lowa (Churches representative), Mr. John Maru (Department of Community Development), Mr. Peter Mays (Private Education), Mr. Alfred Mokae and Ms. Nancy Lelang (Department of Treasury), Mr. Paul Namono (Department of Oro), Mr. Damien Rapese and Mr. Luke Taita (Department of Education), and Mr. Chris Warrillow (Community).

Two sub committees were formed to support the working of the Steering Committee. The Vocational Education sub committee was chaired by Mr. Martin Kase and consisted of the following: Mr. David Conn, Mr. John Maru, Mr. Wolfgang Kubitzki (Employment Orientated Skills Development Project), Dr. Rob Crittenden (Community Development Scheme), Messrs. Lasa Karepa and Wini Leka, and Ms. Wali Bai (Department of Education). The Distance Education sub committee was chaired Dr. William Tagis and comprised the following: Mr. Jerry Kuhena, Mr. Paraka Pena (University of Papua New Guinea Open College), Messrs. John Paul, Demas Tongogo and William Gari (College of Distance Education), Mr. Ouka Lavaki and Mr. Uke Kombra (Department of Education).

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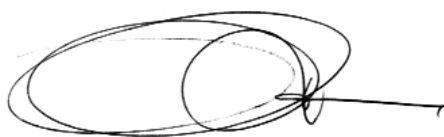
MINISTER'S MESSAGE

It gives me great pleasure to introduce this Plan to you. Children are the focus of our work in the education system. Parents with the support of the community, teachers and agencies strive to provide a better future for our children. From the outset I commend all those parents, communities, teachers and agencies who have contributed so much to the education system in our country. Without your continued support this Plan will not succeed.

The *National Education Plan, 2005 to 2014*, serves as a road map for education in Papua New Guinea and, as the title suggests, it points the way towards *Achieving a Better Future*. The prime objective of this Plan is to provide a basic education for all. This will mean that all of our people will be literate and numerate and be able to contribute towards an improved quality of life in their communities. This will lead to a better future for all. The Plan will also give the opportunity of further education or training for all completing nine years of basic education.

Since independence our country has made enormous progress in achieving government education objectives. Much has been achieved as a consequence of the *National Education Plan 1995-2004*. However, there is still much to be done to reach our targets, many of which we are obligated to achieve internationally. I believe that this Plan will help us to do this. The implementation of this Plan is achievable but will be demanding and will require the support and the commitment of all stakeholders. Traditionally, parents and communities have had the responsibility for the maintenance and upkeep of their schools. This must continue with the support of their elected representatives. It is critical that local-level governments are adequately funded in order to discharge their responsibilities in relation to basic education infrastructure and maintenance. Individual members of parliament must understand the priorities of government with respect to education. All of us must commit ourselves to providing a basic education for all of the children in our electorates.

Many representatives of all stakeholders have worked together to develop this Plan. This spirit of partnership and cooperation is commendable and has to be continued. I must thank Sir Barry Holloway for the leadership that he has shown as Chairman of the National Education Plan Steering Committee and the members of the planning team, ably led by Mr. Pala Wari, and the overall direction provided by the Secretary for Education, Mr. Peter Baki, CBE.



Hon Michael Laimo, CBE, MP

Minister for Education

December, 2004

FOREWORD

This plan builds on the progress made in the National Education Plan 1995-2004. It is guided by the National Goals and Directive Principles in the Constitution. The first priority is to provide the opportunity of nine years of basic education for all. This priority is the very least that needs to be achieved. In order to complete nine years of basic education every child will have the opportunity to be educated to Grade 8. We remain committed to teaching the first three years of Elementary education in the language of the community. This has the overwhelming support of the community. Papua New Guinea has one eighth of the world's languages. No other country has as many as 800 languages.

On completing nine years of basic education our young people will have a number of pathways available to them as they move through adolescence into adulthood. All students who complete their basic education will receive financial assistance for their future education or training. Some academically inclined students will be selected to receive special funding to enable them to progress as far as their ability allows. Those with different talents will have opportunities offered through revitalised vocational centres and a restructured distance education system. The vocational centres will extend their role and offer courses that are relevant to the community as a whole. Adults will be encouraged to enrol in short courses designed to improve the quality of life and to provide them with income generating opportunities.

In this troubled world our children will receive the type of education that will be the envy of many. The basic education curriculum will involve a strong recognition of custom that goes back many thousands of years, a strong grounding for accepted religious principles, a respect for elders, parents, brothers and sisters and a basic knowledge of the modern world. The Plan provides for this and procedures will be established to make it work. Let no one stop this happening.

The work of the vocational centres will be strengthened through stronger linkages with other Departments and building on the work of other projects. Initiatives currently being undertaken by the Department of Community Development are consistent with this Plan and will be followed with great interest. In addition, the private sector will be encouraged to take a more active role in the provision of vocational education.

When our young people have completed their education, from whatever type of institution, it is important that greater numbers of opportunities are available for them. Government is currently looking at a number of new initiatives to provide extra training, employment and income generating opportunities for our young people. These will include possible work visas overseas, to be related to training, for 18 to 30 year old Papua New Guineans and a reintroduction of a cadet ship program, as proposed in the Medium Term Development Strategy, to strengthen and support local level administration.

To be successful this plan needs the support of those people who we trust in our public service to do what is right and not capitulate to internal and external pressures. Our senior education officers will need to be strong in their pursuit of the admirable objectives set out in this plan. Community ownership of this plan is also essential for its success. The community must 'adopt' their teachers and assist in their appraisal and more importantly in how they develop in their career. The curriculum must be integrated with practical self-reliant teaching initiatives that utilise community support and participation.

This plan is affordable but national and local-level governments will be required to make the major input to costs. Our young people deserve the opportunity to take their place in the global community. To this end, the State will meet the expenses of teachers, curriculum and

school materials, and support the establishment and maintenance of infrastructure. Our elected representatives, parents and communities have an essential contribution to make to our education system. This Plan recognises that parents will always have to make some cash or in kind contribution and more particularly a commitment to their children's education through their own efforts. To be most effective this contribution should be reasonable, predictable and sustainable.

Parents must also contribute to the education of their children by assisting teachers with discipline. Parents must instil in their children self-discipline. They must develop their children's values and attitudes from an early age based on sound religious and Christian principles. They must assist in developing respect for the community and their heritage. Parental participation means more than just a casual involvement. It is the conscious act of sharing responsibilities with teachers for the development of the younger generation in order that they become a vibrant force in our nation's development.

Let no one say that this plan is neither achievable nor affordable. It is achievable and affordable if we give more responsibility to our communities and they will take up this challenge. Communities must see that the elected government and their leaders are playing their part to support them. Our nation's success is reliant upon recent Constitutional laws that empower local-level governments and the community to become self-reliant and contribute toward the nation's development. This plan is affordable and our Constitution grants every local-level government K20 per head of population. This Constitutional law provides for the basic necessities of life including infrastructure for education and health in rural areas. This money should be allocated directly to the community on the principle that if you give people responsibility they will respond and this will result in a valuable multiplier effect. Local governments must be allowed to account for themselves. We must build on the strengths of transparency and accountability in the rural community. Urban dwellers in our own country and those from other lands do not always understand the strength of this principle.

It has been a privilege to support the development of this plan with members of my Steering Committee. This plan has been developed after nationwide consultations with many individuals and representatives from all walks of life and their contributions have informed this plan.

We will only be able to implement this plan successfully if all stakeholders play their part. The responsibility starts with our elected representatives and involves our public servants, the churches, all local communities, parents and the students themselves.

I commend this plan to all as a way forward to achieving a better future for Papua New Guinea.



Barry Holloway, KBE

Chairman, National Education Plan Steering Committee

Section 1

INTRODUCTION

The Context of the Plan

Papua New Guinea – land and its people.

Papua New Guinea occupies the eastern half of the island of New Guinea, which is just south of the equator and 150 kilometres north of the tip of Australia. Papua New Guinea comprises over 600 islands but 85 per cent of its land area of 463,840 sq km is on the mainland. This is mostly covered by tropical rain forests and divided by massive mountain ranges. Sustainable use and protection of its natural resources, which are of global significance, have attracted worldwide interest in recent years particularly its large gold and copper deposits, oil and natural gas reserves, large areas of arable land for potential agricultural production, an abundant supply of fresh water, large tropical forests, and extensive maritime fisheries.

Papua New Guinea's population is about 5.2 million and 85 per cent live in rural areas. Over 800 different languages are spoken throughout the 20 provinces. As demonstrated by the heterogeneity of languages spoken, there is a diversity of physical characteristics and culture depending on the province of origin. The population that is growing at the rate of 2.7 per cent per annum is predicted to reach 7.5 million by 2020.

According to the 2000 census, 45 per cent of the population is estimated to be below the age of 15 years. The *Papua New Guinea Human Development Report, 1998* (Office of National Planning, 1999) has projected that by 2010 the school age population and the economically active population will have grown by 45 percent and 67 percent respectively.

Papua New Guinea has had a constitutional monarchy with a parliamentary democracy since it gained independence from Australia in 1975. The 1975 Constitution vests executive power in the National Executive Council, which is headed by a Prime Minister. A major post-independence political development was the creation in 1978 and reformation in 1995 of 19 provincial governments and the National Capital District and their associated bureaucracies.

Papua New Guinea – its education system

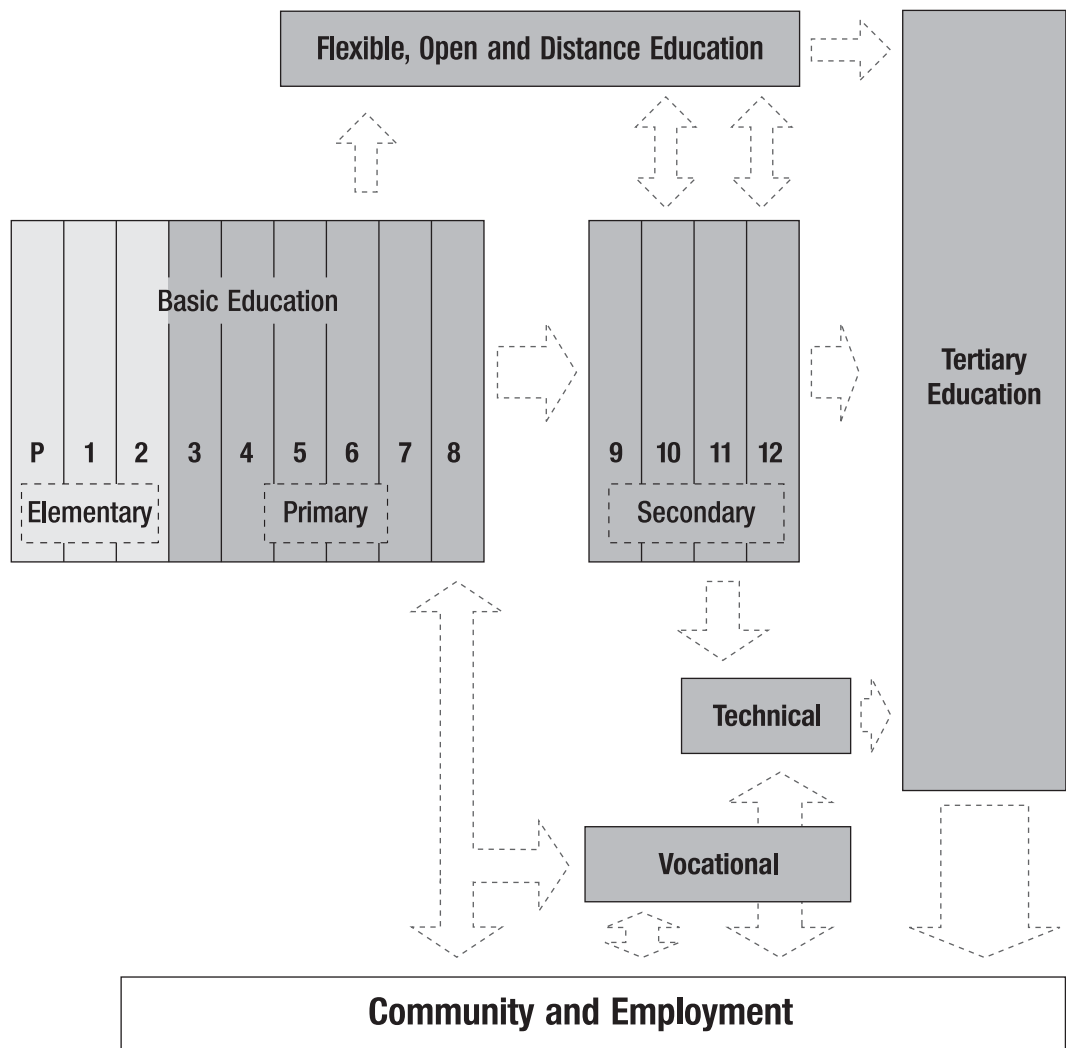
The colonial administration education system and a number of church run systems that started in the 1940s ran independently until the early 1970s when the current national education system was established.

In 1973 the Papua New Guinea education system had approximately 1,050 institutions, 9,060 teachers, and 254,000 students. By 2003, the system had grown to one employing around 33,000 teachers, and almost one million students in 4000 elementary schools, 3300 primary schools, 170 secondary schools and 140 vocational schools. Today there are six prominent church agencies apart from the government operating the schools, which are governed by 20 provincial education boards and managed by 20 provincial education divisions. There is also a small yet growing number of privately run autonomous schools throughout the country.

Papua New Guinea has a highly decentralised education system following the establishment of the provincial government system in 1978. The decentralization laws have given the provinces responsibilities including planning, financing, staffing and maintaining general education institutions up to Grade 12. This includes pre-school, elementary, primary, secondary and vocational schools.

The structure of the education system in this Plan is illustrated by the diagram below.

The Education Structure



Foundations for the Plan

This Plan, *Achieving a better future: A National Plan for Education 2005-2014*, presents the outcomes for education in Papua New Guinea and the main strategies for achieving them from 2005 to 2014. It builds on the progress made in the first *National Education Plan 1995-2004 volumes a and b*, (Department of Education, 1997).

This Plan will be implemented over a period of major public sector reform and expenditure control across the whole of the Government of Papua New Guinea. It is recognised that ten years is a long period for a plan to remain current in this environment. As such, this Plan will be reviewed and updated in five years time. It will also be subject to an annual planning process at the national and sub-national levels, and monitored nationally.

The overall objectives of the Plan are consistent with:

- the Papua New Guinea National Goals and Directive Principles
- international obligations, in particular the Millennium Development Goals and Education For All goals
- Government objectives in the education sector, as outlined in the mission statement and the *Medium Term Development Strategy*
- community demands as determined during provincial consultations.

National Goals and Directive Principles

The Plan is guided by the National Goals and Directive Principles as established in the Constitution.

- 1 Integral human development
We declare our first goal to be for every person to be dynamically involved in the process of freeing himself or herself from every form of domination or oppression so that each man or woman will have the opportunity to develop as a whole person in relationship with others.
- 2 Equality and participation
We declare our second goal to be for all citizens to have an equal opportunity to participate in, and benefit from, the development of our country.
- 3 National sovereignty and self-reliance
We declare our third goal to be for Papua New Guinea to be politically and economically independent, and our economy basically self-reliant.
- 4 Natural resources and environment
We declare our fourth goal to be for Papua New Guinea's natural resources and environment to be conserved and used for the collective benefit of us all, and be replenished for the benefit of future generations.
- 5 Papua New Guinea ways
We declare our fifth goal to be to achieve development primarily through the use of Papua New Guineans forms of social, political and economic organizations.

Millennium Development Goals

The eight Millennium Development Goals as developed by the United Nations and that Papua New Guinea has committed to are:

- | | |
|--------|---|
| Goal 1 | Eradicate extreme poverty and hunger |
| Goal 2 | Achieve universal primary education |
| Goal 3 | Promote gender equality and empower women |
| Goal 4 | Reduce child mortality |
| Goal 5 | Improve maternal health |
| Goal 6 | Combat HIV/AIDS and other diseases |
| Goal 7 | Ensure environmental sustainability |
| Goal 8 | Develop a global partnership for development. |

In the current economic climate it is difficult to see how the second of these goals can be achieved within the time frame. However, every effort is being made for children to achieve a primary education.

Education For All goals

The six Education For All goals that were agreed to by all nations at Jomtien, Thailand, in 1990 and reaffirmed in Dakar, Senegal, and that Papua New Guinea has committed to are:

- Expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children
- Ensuring that by 2015 all children have access to free and compulsory primary education of good quality
- The learning needs of all young people and adults are met through equitable access to appropriate learning and life skills programs
- Achieving a 50 per cent improvement in levels of adult literacy by 2015
- Eliminating gender disparities in education by 2005
- Improving all aspects of the quality and excellence of education with measurable learning outcomes.

In the current economic climate it is difficult to see how the second of these Education For All goals can be realised within the time frame. However, every effort is being made to give children the opportunity to achieve a primary education. The Plan aims to achieve the fifth of these goals within the timeframe of the Plan as opposed to that stipulated.

Medium Term Development Strategy

This Plan is in accord with the core development strategy of the *Medium Term Development Strategy, 2005 to 2010* (Department of National Planning and Rural Development, 2004) and consistent with the requirement to empower Papua New Guineans to mobilise their own resources for higher living standards. The *Medium Term Development Strategy* is the government's policy document for development and is a critical policy reference point.

The education sector is part of the mutually supporting sectoral expenditure priorities of the *Medium Term Development Strategy*. In the education sector basic education is the first priority, vocational and technical training is the second priority, with secondary and tertiary education as third and fourth priorities, respectively. The Strategy states that:

In Education, the focus of the Medium Term Development Strategy will be to support the implementation of reform aimed at achieving Universal Primary Education. Under the goal of Universal Primary Education all children will be able to complete nine years of basic education.

At the national level, priority resources will be directed towards basic education, including curriculum reforms, teacher training, infrastructure and rural education facilities, while also ensuring adequate funds are available to pay for the planned and managed increase in teachers salaries.

The Mission of the Department of Education

The Department of Education's mission, as defined by the National Executive Council, is fivefold:

- to facilitate and promote the integral development of every individual
- to develop and encourage an education system which satisfies the requirements of Papua New Guinea and its people
- to establish, preserve and improve standards of education throughout Papua New Guinea
- to make the benefits of such education available as widely as possible to all of the people
- to make education accessible to the poor and physically, mentally and socially handicapped as well as to those who are educationally disadvantaged.

In addition, the Department of Education's mission, as determined by the *Gender Equity in Education Policy* (Department of Education, 2003), is to improve educational opportunities for women and girls.

Consultative process

Deliberations on the Plan have been in a number of distinct phases. The first of these was the formation of a Steering Committee in July 2003, under the Chairmanship of Sir Barry Holloway. This committee comprised members representing government, the private sector and the broader community. In a series of meetings this committee considered the key issues facing the education system.

Initial deliberations were followed by a round of provincial consultations. All provinces were visited during a period of six weeks and views elicited from groups of public servants and stakeholders on identified issues. These consultations were followed by a further series of Steering Committee meetings to discuss and analyse the findings. A final report was then

presented to the National Education Board. The initial draft of the Plan was based upon this report to the National Education Board.

The Divisions of the Department of Education were then consulted and a second draft prepared for deliberation by the Steering Committee and the Combined Conference of Senior Education Officers and Council of Education Chairmen.

Major Social Issues

The following are major social issues affecting the welfare of our society. Education has an important role to play in addressing these. The Plan seeks to provide ways, with the support of the community and other stakeholders, of tackling these issues to ensure that we achieve a better future.

Healthy living

Citizens have a right to a healthy life which includes such aspects as clean water, a nutritious diet, immunisation programs, family planning, sanitation, shelter and local health services. Gains made in the health status of Papua New Guinea prior to independence have not been sustained. For instance, the infant and maternal mortality rates are among the worst in the Pacific region. Life expectancy of 54 years at birth is the worst of the Pacific region. Inadequate funding, inefficient management and lack of community support are contributing factors to the country's health problems despite Papua New Guinea having one of the best health service networks in the region. The *National Health Plan 2001-2010* states 'Health education programs will target health conditions and promote healthy behaviours'. There are many challenges for education in supporting the health sector to achieve better health outcomes for our nation's citizens. The Population Education and Personal Development curriculum have been developed in response to the need for a more relevant health curriculum at all levels.

The reform curriculum will provide students with the opportunity to take responsibility for their health using various preventative measures. Formal health education begins at the elementary level where children learn about such things as washing hands, cleaning teeth, healthy foods and safe behaviours. At the primary level the personal development curriculum enables students to consider personal and community health and concerns such as the effects of family size, use of drugs and making informed choices. Personal development is an essential aspect of the secondary school curriculum and students are engaged in a more in-depth study of health matters.

Currently, one of the greatest challenges to the health of the nation is HIV/AIDS. HIV/AIDS, first identified in Papua New Guinea in 1987, is rapidly spreading and is a major cause of admissions and deaths at the Port Moresby General Hospital. HIV/AIDS has major social and economic implications for our nation. It is mainly affecting young, sexually active adults of both sexes who belong to the most economically productive age groups. The prevention, control and treatment of HIV/AIDS are inadequate. The World Bank has estimated that there may be up to 50,000 people infected with HIV. The Health Department says more than 16,000 people in Papua New Guinea have been diagnosed with HIV/AIDS since 1987. There has been an eight per cent increase in HIV prevalence among people aged 15-24, and approximately one percent of women in the same age group who visited the antenatal clinic at the Port Moresby General Hospital were HIV positive. Port Moresby had the highest number of HIV/AIDS patients between 1987 and September last year with 4,983. There were 700 reported cases in the Western Highlands Province followed by several hundred in Morobe, Eastern Highlands and Enga Provinces.

An HIV/AIDS policy for education is an essential way of demonstrating the commitment education has to educating its employees and young people about this disease. This policy will be developed in the immediate future and implemented as a matter of urgency.

Another challenge to the health of our nation is the emergence of illegal drug use, particularly among young people. The United Nations Office on Drugs and Crime reports that drug abuse has significantly risen in Papua New Guinea with the main concern being cannabis. The use of cannabis is influenced by its fairly easy availability. Other reported drug use includes inhalants such as glue and paint thinner among youth. Cocaine is reported to be used to a small extent and there are also some instances of 'ecstasy' use.

Law and Order

The issues that underlie Papua New Guinea's law and order problems are very complex and cannot be attributed to any one factor. The main victims of crime and violence are the weakest and most vulnerable groups in our community. A disproportionate number of these victims are women and girls. Many young people feel excluded from participating particularly in urban communities through lack of qualifications and employment opportunities. In rural communities youths are no longer subject to traditional controls that have been eroded by rapid social and economic change. These problems are exacerbated by limited access to formal education and a curriculum that has not been particularly relevant to the practicalities of life. Problems such as inter-group fighting, sorcery and sexual abuse are experienced in many rural communities. Gangs receive much publicity in urban centres such as Port Moresby and white collar crime, corruption and fraud are on the increase. Improving law and order is a task for every sector including education.

Taking responsibility for your actions requires self-discipline. Learning how to be responsible for your behaviour is an important part of education at home and at school. Parents are responsible for their children's behaviour and this is an essential part of family life. Children need good role models and parents and teachers have an essential role to play with regard to discipline. When students are able to take responsibility for their actions they behave properly, show respect for others and live peacefully together.

At the elementary level the curriculum encourages children to learn about good and bad behaviour, how to demonstrate love and care for other people, and talk about customary laws and practices. In the subject Personal Development at the primary level, students learn about how to make informed decisions and the consequences of not observing rules and laws such as destroying property, illegal drug use and domestic violence. Students also discuss rules and laws of the community, families and schools and how these benefit our society as well as how our court system, including village courts, works. At secondary level, students are inclined to experiment, challenge and question conventional behaviour. This is normal but needs to be carefully managed. Parents and teachers need to ensure that peer group pressure and the changes associated with adolescence are understood. Students need to learn how to be discerning about appropriate behaviours, such as those associated with the occult, and their responsibility to others.

Gender Equity in Education

At every level of education more males are represented than females. In major studies, cultural factors have been found to be the major obstruction to increasing participation of females at all levels of education (*Gender Analysis in Papua New Guinea*, World Bank, 1998). Access to informal education and training programs is even more difficult for women who are illiterate and the illiteracy rate among women is estimated at around 60 per cent. Regional variations reflect differences in historical experience. Higher enrolments of girls exist in regions where single sex education was provided in the past by missions. The *Gender Equity in Education Policy* (Department of Education, 2003) provides a framework of principles and practices to improve the lives of all children and promotes gender equity between girls and boys. Implementation of this policy has been slow-moving with little or no resources being allocated to support it.

Population

Principal government objectives with regard to population are contained in the *National Population Policy, 2000 to 2010* (Department of Planning and Monitoring, 1999). The primary goal of this policy is to improve the quality of life through more effective planning of our development efforts. The policy is consistent with the rights and freedoms contained within the Papua New Guinea constitution and with international human rights covenants.

Policy goal 2 is, *To raise the level of general education and literacy to facilitate broad based social and economic development, to improve the status of women and to raise the quality of the labour force.* Specific objectives and strategies relate to targets of access, retention, transition and female participation. All are consistent with this Plan.

The National Department of Planning and Rural Development are working on Population Action Plans in each province. It is hoped that provinces will incorporate these into their own Education Plans.

The population projections for this Plan have been based upon the National Census conducted in 2000. Table 1 provides the school age population for selected years.

Table 1 School age population by age, selected years, 2005 to 2014

Age	2005	2008	2011	2014
6 years	165,185	179,196	194,460	211,033
7 years	160,775	174,391	189,230	205,357
8 years	156,489	169,722	184,141	199,834
9 years	152,324	165,185	179,196	194,460
10 years	153,224	160,775	174,391	189,230
11 years	149,116	156,489	169,722	184,141
12 years	145,123	152,324	165,185	179,196
13 years	141,244	153,224	160,775	174,391
14 years	137,474	149,116	156,489	169,722
15 years	130,941	145,123	152,324	165,185
16 years	127,407	141,244	153,224	160,775
17 years	123,974	137,474	149,116	156,489
18 years	120,639	130,941	145,123	152,324
Total	1,863,916	2,015,205	2,173,378	2,342,139

The rapid growth in our country's population is making demands on our finances and services which are difficult to satisfy. The role of education is to develop and acknowledge an understanding of the issues relating to this concern.

Overview of the Plan

Access

In line with the need to provide education for all, the principal objective in the elementary education sector will be to expand the system until such time that there is an available space in Elementary Prep for every 6-year old child. All children will be provided with the opportunity to enter the Elementary Preparatory Grade by 2012 at the age of 6 years and to complete three years of elementary education.

In primary education there will be space available for all children to complete an education through to Grade 8. By 2010 all primary schools will have phased out Grade 1 and 2 classes and all secondary schools will have phased out Grade 7 and 8 classes. Strategies to improve retention will be put in place in order to increase the retention rate to approaching 70 per cent between Grades 1 and 6 by 2014.

Basic education will be available for all including those with disabilities. Statistics from the World Health Organisation suggest that globally some 10 per cent of children in schools have some form of disability and that 2.5 per cent have severe disabilities. This translates into large numbers of children affected in Papua New Guinea.

Issues of equity in teacher deployment will be addressed by the establishment of a Position Allocation Committee that will determine criteria for the deployment of teachers and allocate the number of positions to each province. This committee will be made up of a wide range of stakeholders including representation from the provinces.

A range of initiatives will be taken in order to improve teacher deployment. These will include the introduction of return of service conditions for teaching students who have been funded by the government, the determination of minimum standards of housing for teachers, enhancement of allowances for teachers in remote schools and other non-financial incentives.

In secondary education there will be moderate expansion in order to maintain government objectives regarding transition between Grades 8 and 9, and then Grades 10 and 11. These are 50 per cent and 25 per cent respectively. Emphasis will be placed on quality, with the development of a new curriculum and the provision of teacher training. The bulk of the increase in Grade 9 and 10 places will be as a result of the relocation of the Grade 7 and 8 classes to the primary schools. Parents will be required to make a significant contribution towards the cost of education in this sector. This will be backed up by a scholarship scheme to ensure that no talented disadvantaged students are denied a full secondary education.

There will be minor increases in the number of Grade 11 places available. The necessary strategy to achieve this will be through the addition of classes to existing institutions, rather than the establishment of new secondary schools. The provincial governments will need to act responsibly to ensure that this strategy is implemented. The transition rate from Grade 10 to Grade 11 will be maintained at 25 per cent.

Major shifts in policy will be made in the vocational sector with the maximum length full-time course being set at one year. There will be greater emphasis placed on short courses designed for the community. The catalyst for such change will be a new form of subsidy for post primary students and initiatives that are already underway through the Employment Orientated Skills Development Project.

Opportunities for flexible, open and distance education will be enhanced to provide alternative and comparable pathways for students and adults to complete their education. There may be further opportunities for students beyond Grade 10 or 12 through working holiday arrangements for Papua New Guineans in Australia and other countries. This proposed scheme would be for 18 to 30-year olds and opportunities would be tied to training for these students either overseas or on return to Papua New Guinea.

Quality

Issues of curriculum and teacher education and training are critical to the quality of education provided. The basic education curriculum will be reviewed on a regular basis to ensure gender sensitivity and updated materials supplied to schools. School communities will be supported to develop locally relevant curriculum materials and programs based on the reform curriculum. They will also be supported by the provision of basic literacy and numeracy courses. Oversight for these will be undertaken by the National Literacy and Awareness Secretariat and through institutions such as the vocational centres.

In the post primary sector, the secondary curriculum will be revised to build on the reform basic education curriculum. This will be completed by 2006. There will be much greater cooperation between curriculum developers in the vocational and secondary sectors to

ensure that there is a greater skills component in the reform secondary curriculum. A standards monitoring instrument has been developed for primary schools and will be modified to help the Department monitor standards at the secondary level.

The vocational curriculum will be reviewed to reflect the need for one year courses. Technical and vocational courses will be modularised and accreditation will be available where appropriate under a National Qualifications Framework. Linkages between local communities, private providers and secondary, vocational and technical schools will be encouraged and strengthened. This process will be completed by 2008.

A review of the College of Distance Education in 2005 will allow for better articulation into the formal system.

Teacher education will be reviewed on an ongoing basis and improved to ensure teachers are trained to teach the reform curriculum. A national standards framework for teacher training will be established to provide quality and consistency across the teachers colleges. In-service training of teachers on an ongoing basis will support curriculum reform initiatives. A National Accreditation Policy will be developed that will apply, where appropriate, for courses offered both to teachers and to administrative staff.

The Inspections service has been hampered in recent years by a lack of operating funds and has been unable to carry out its functions fully. A review of the inspections system will be completed in early 2005.

Management

The functions and structures of the Department of Education will be reviewed and improved to ensure that the Department is more responsive to change and has the organisational capacity to administer this Plan.

Amendments to the *Organic Law on Provincial Governments and Local-level Governments* will be encouraged to allow for more efficient delivery of education services between the national and sub-national levels.

At the basic education level greater responsibility will be given to community representatives in the appraisal of teachers. In particular they will be in a position to be able to assess the suitability and the acceptability of the teacher to the community that they serve.

Church agencies will be given the opportunity to exert a greater degree of control over the vocational institutions that they operate.

The Department will provide support throughout the Plan period to the provinces and districts in the preparation of strategic plans.

Financing

The financing of the Plan will come from the different levels of government, parents and the communities. The difficult government financial situation dictates that parents and the schools themselves, through increased self-reliance activities, will have to take a greater responsibility for education. This will be the case, most particularly, in post primary education. Provincial governments, for example, will be required to provide budgetary support for maintenance in all secondary schools. The implementation of the Plan will be supported by contributions from donor agencies.

The payment of teacher salaries is the largest component of the education budget. The Plan includes major cost-effectiveness measures to ensure the most efficient use of staffing resources. Criteria will be determined for the equitable allocation of teachers to provinces.

Teachers will be allocated at a rate of one per class in the upper primary grades, with a corresponding increase in student teacher ratios, and the teacher-to-class allocation will be revised at the upper secondary level. There will also be a considerable improvement in

localisation in the technical sector. These three measures will result in savings of about K300m over the Plan period. Vocational institution staffing will be based on a student-instructor ratio of 1 to 18. In technical education the student-lecturer ratio will rise and there will be renewed efforts to improve localisation.

Government will support parents in the provision of education largely through the payment of all teacher salaries, the provision of subsidies, teacher education and curriculum development. There is also a widespread view that parents should make a contribution, either financial or in kind, towards the education of their children. At the elementary level the government will provide basic school supplies for all schools. In the primary sector parents will play an increasingly greater role in the support of their children, particularly financing the upper primary grades.

There will be significant changes in the system of subsidies in post primary education. This is to ensure that every child who completes Grade 8 is provided with some support by the government. This will be called the Grade 8 Graduate Incentive Scheme. All Grade 8 graduates will be entitled to support in furthering their education and training at any approved institution. These will include secondary schools, distance education, vocational centres and approved private providers. It will replace the current subsidy scheme for Grade 9, the vocational centres and distance education.

The present cash subsidy system will continue for Grades 10, 11 and 12. There will be no special subsidies for boarding students. As a cost recovery measure the cost of examinations in Grades 10 and 12 will be deducted at source from the Grades 10 and 12 subsidies. It is also proposed to investigate whether all future teacher pre-service and some teacher in-service training could be offered on a cost recovery basis.

Organisation of the Plan

The Plan is organised in a number of sections as outlined below.

Section 1: Introduction

This section provides background information and an overview of the Plan.

Section 2: Our vision 2005-2014

This section outlines the visions for education by sector.

Section 3: Situational analysis

This section outlines the progress made since the first National Education Plan and identifies the key challenges still ahead in each sector. The section considers the following sectors of education: elementary education, primary education, secondary education, distance education, vocational education, technical education and administration. Each of these sectors is first defined and then an analysis follows using the following strategic problem areas as organisational headings: access, quality and management.

Section 4: The Plan for education 2005-2014

This is the main section of the Plan. The sectors – elementary education, primary education, secondary education, flexible, open and distance education, vocational education and training and technical education and training - are described using the same four components. These components are access, quality curriculum and monitoring, quality teacher education and training, and management. Each sector has its own vision and its own major outcome. Each of the components has its own minor outcome, and the key strategies and activities for achieving these outcomes. In the text, the minor outcomes are referred to using the first letter of the sector (E for Elementary, P for Primary and so on) and the minor outcomes are numbered in sequence. E3, then, refers to Elementary Quality Teacher Education and Training, minor outcome number 3.

An **outcome** identifies in broad terms the planned destination or end points that the system aims to achieve.

A **major outcome** is the end point to be achieved at the end of this ten year Plan.

A **minor outcome** is a point that has to be achieved on the way to accomplishing the major outcome.

The **strategies** describe the broad means of how the minor outcome will be achieved.

The **activities** will collectively contribute to the successful implementation of the strategy.

The responsibilities of the major stakeholders are outlined at the end of each sector.

Targets to be achieved during the life of the Plan are identified in the boxes in the margin as close as possible to the corresponding text for each sector. Performance measures for each of these targets are identified in Section 7: Monitoring and Evaluating the Plan.

Section 5: Implementing the Plan

This section outlines how the Plan will be implemented and provides an implementation timeline of the strategies and activities.

Section 6: Financing the Plan

This section considers the financial implications of the Plan.

Section 7: Monitoring and evaluating the Plan

This section describes the monitoring and evaluation framework for the Plan. It collates the targets identified in Section 4 and for each target a measure or set of measures are identified that will be used to monitor and evaluate the performance of the Plan. Data collected during the first five years of the Plan will be used to support a review of progress made.

Other support documents and awareness materials will supplement this Plan.

Section 2

**OUR VISION
2005 - 2014**

OUR VISION

Our vision is integral human development achieved through an affordable education system that appreciates Christian and traditional values, and that prepares literate, skilled and healthy citizens by concentrating on the growth and development of each individual's personal viability and character formation, while ensuring all can contribute to the peace and prosperity of the nation.

BASIC EDUCATION

At 6 years of age all children begin their basic education in an elementary school in a language that they speak. For the next three years they develop the basis for sound literacy and numeracy skills, family and community values including discipline, personal health care, and respect for others.

At 9 years of age children continue their basic education in a primary school. After six years of primary education that begins with a bilingual program, children have the skills to live happily and productively, contribute to their traditional communities and use English to understand basic social, scientific, technological, and personal concepts and value learning after Grade 8.

Secondary education

Students in Grades 9 to 12 achieve their individual potential to lead productive lives as members of the local, national and international community and partake of further quality education and training, having undertaken a broad range of subject and work related activities that can be used in everyday life.

Flexible, open and distance education

Papua New Guineans harness all appropriate and affordable technologies to pursue flexible, open and distance education opportunities.

Vocational education

The education and training needs of the immediate community are catered for by vocational education institutions offering appropriate and relevant courses of varying lengths and giving priority to those students who have completed Grade 8.

Technical education and training

A system of self-sustaining institutions, under an independent regulatory authority designed to train an appropriate workforce for employment in the formal and informal sectors, including self employment, with linkages to National Apprenticeship and Trade Testing Board and other recognised training providers.

Section 3

SITUATIONAL ANALYSIS

Introduction

An extensive analysis was undertaken to support the development of this Plan. In particular, the *PNG Education Sector Affordability Studies* (AusAID, 2003), conducted by an independent researcher, highlighted financial issues and identified policy options. Data from the *State of Education in Papua New Guinea* (Department of Education, 2002 and 2003) and the annual enrolment and staffing statistics bulletins were used to determine areas that needed attention. Furthermore, consultations in all provinces and with other key stakeholders were used to discuss key policy issues and trends and to explore appropriate courses of action. The above mentioned documents are not referenced in the text but should be referred to for further detailed information. Other documents and major research studies, including various government commissioned reports were used and are referred to in the text.

Summary

The national education reform has been in place for a decade under the *National Education Plan 1995-2004* (Department of Education, 1997) and the *National Education Plan Update Number 1* (Department of Education, 1999). The reform aimed to increase access and participation at all levels of education and to support the Education For All goals of Universal Primary Education. The reform also aimed to revise the curriculum to be more relevant to village life, through the introduction of vernacular education and the focus on life skills in the curriculum, and to allow students to pursue a range of post Grade 8 pathways.

There have been many successes after ten years of the reform and there still remain challenges ahead. The successes include: increases in enrolments by 68 per cent by 2002; increases in transition rates from Grade 6 to Grade 7 and Grade 8 to Grade 9; community support for elementary education; and the lowering of unit costs due to the introduction of elementary schools and the transferring of Grades 7 and 8 from secondary to primary schools.

The challenges include: improving retention through the years of basic education; improving delivery of education services in rural and remote areas; strengthening the vocational education and training sector to support appropriate courses and to make better use of partnerships with the private sector and community agencies; and securing adequate government budget support for the reform to manage the enrolment growth.

The rapid expansion of the education system since 1995 has also created new problems for the system. While access to education has been improved significantly, the quality of that education becomes a concern as the school population increases and the system struggles to adequately plan for, fund and administer those increases. This Plan will commence in an environment where there is considerable pressure in areas such as infrastructure and teacher numbers, teacher training, materials development and distribution, and the capacity of all levels of the system to monitor and administer the education reform, as well as greater community and parental demands for access to education.

In addition, this Plan has to confront the issue that financing the expansion of the education system has become increasingly difficult because of the economic turbulence in Papua New Guinea's recent past. Schools are under-resourced, there is poor management of resources provided centrally by provincial governments and the Department relies on donor assistance to fund some of its core activities.

Nevertheless, over the period of the last Plan overall National Government expenditure on education increased in real terms, broadly in line with the increase in the government's total budget. That increase in public spending was underpinned by excessive borrowing and was not sustainable. The present government's fiscal strategy aims to bring the budget back into

balance over the medium term. The strategy required prioritisation and control of spending on public services, including education. It is already delivering benefits in terms of lower interest rates and inflation, so creating conditions more favourable to economic growth. Economic growth will make spending on education more affordable and more necessary over the medium term; Papua New Guinea needs a better educated workforce to succeed in export markets. That is the basic scenario which underlies the present Plan. It will need strong management to get the best value from every kina spent on education.

The *Public Expenditure Review and Rationalisation* exercise was carried out in 2003. This was a collaborative effort between the Government of Papua New Guinea and a multi-donor team led and coordinated by the World Bank. This Review resulted in six discussion papers. One of the discussion papers was entitled '*Improved Education Spending*'. It is instructive, when considering the financial implications of the Plan, to look at the specific recommendations in this paper that have been acted upon. The following highlights the strategic responses made to each of the recommendations.

Public Expenditure Review and Rationalisation - Recasting Goals

- Revisit the National Education Plan and its enrolment targets for elementary, primary and secondary education in light of resource availability.
 - Strategic response This new Plan will include targets for elementary, primary and secondary education taking into consideration available resources.
- Initiate development of a medium term budgeting framework for education at the earliest opportunity.
 - Strategic response Work on this will commence in 2005 – see outcome A3.

Public Expenditure Review and Rationalisation - Controlling Spending

Teachers' salaries and benefits

- Establish central policy and administrative control over the creation of teaching positions and the enforcement of staff ceilings in the teaching system, and over the establishment of new schools to account for costs and resource availability.
 - Strategic response The Plan proposes the establishment of a Position Allocation Committee to allocate the number of positions to each province based upon agreed criteria – see outcomes E4, P4, S4, V4 and T4. Provinces will be allocated numbers of new elementary prep classes in the elementary sector and Grade 7 classes in the primary sector – see E1 and P1. New Grade 11 classes will be allocated according to need – see S1.
- Rectify discrepancies between actual and approved number of teachers on payroll, including the removal of "ghost" teachers.
 - Strategic response This is currently in train under the auspices of Project Maoro.
- Enact a system for teacher deployment based on agreed national criteria, with annual determination of teacher numbers and additional appointments requiring central approval. Within this system, deploy teachers to schools according to the number of students rather than the number of classes.
 - Strategic response See notes on the Position Allocation Committee as to how positions will be allocated to each province based upon agreed criteria.
- Reduce the growth of enrolments in secondary, especially in Grades 11 and 12.
 - Strategic response The number of new Grade 11 classes will be limited to eight per year and will be determined by need – see S1.
- Increase student teacher ratios and mandate greater use of multi-grade classes.
 - Strategic response Teacher class ratios have been adapted for the upper primary and upper secondary sectors – see P4 and S4. Recommended average class sizes have been set at the highest level deemed possible whilst bearing in mind the demography of Papua New Guinea and the need not to compromise standards.

- Examine the scope for and implications of converting national high schools to secondary schools under provincial management.
 - Strategic response A review of the national high schools will be carried out – see S1.

School subsidies

- Phase out subsidies to post primary schools.
 - Strategic response This was discussed exhaustively during the provincial consultations undertaken in the preparation of this plan. The feeling during these consultations was that parents continued to need financial support in paying secondary school fees. The percentage of subsidies going to the post primary will be reduced and parents will be required to pay an increasingly higher percentage of the fees.
- Reduce administrative costs of the school subsidy by, for example, discontinuing hand delivery of cheques.
 - Strategic response Alternative strategies for the distribution of school fee subsidies are being considered.

Administrative and operational costs.

- Restrict the role of the inspectorate to teacher assessments, reduce the staffing complement and reallocate staffing to teaching positions.
 - Strategic response A review of the role of the Inspectorate will be undertaken as a part of this Plan – see E2, P2 and S2. This is in addition to moves taken to involve school managers to a much greater extent in the appraisal of teachers.
- Review the structure of management cadre of the National Department of Education to explore the possibility for further reductions.
 - Strategic response A review of the organisational capacity of the Department, including its structure will be undertaken as a part of this Plan – see A1.
- Establish a mechanism for the Department of Personnel Management and the Department of Education to collaborate in establishing more efficient staffing structures for Provincial Divisions of Education.
 - Strategic response This has initially been addressed through discussions regarding the appointment of the Provincial Education Advisors – A1.
- Transfer the National Capital District's Division of Education from the Department of Education to the district's own administration.
 - Strategic response This is currently being considered with some reservations from the Department particularly regarding legal implications.
- Extend the current program of out-sourcing non-core Department of Education activities.
 - Strategic response A review of the structure of the Department and a review of the current practices relating to the procurement, printing and distribution for all equipment and materials will be undertaken as a part of this Plan – see A1 and A4.

Grants to statutory authorities

These recommendations relate to higher education.

Cost recovery and resource mobilisation – cost recovery

- Charge user fees to cover the provincial costs associated with national examinations.
 - Strategic response This is included in the Plan – see S2.
- Increase rental rates on teacher housing.
 - Strategic response This is an extremely complex issue given the variety of agencies that actually own houses.
- Introduce a user pays contribution for recipients of the National Scholarship Scheme for tertiary students.
 - Strategic response This is a higher education issue.

Provincial budgets

- Embed into the budget preparation process a mechanism for the Department of Education and the Budget Screening Committee to examine adequacy of allocations for education.
 - Strategic response Mechanisms will be investigated and training provided for provincial education officials to link the budget and planning processes – see A2.
- Enable and require Department of Education and the Teaching Services Commission to condition the approval of new schools and creation of new teaching positions on meeting the centrally prescribed guidelines for budgetary allocations to and within the education sector.
 - Strategic response The opening of new schools is a provincial government responsibility. Provincial governments will need to ensure that the recent rapid expansion of secondary education is contained and affordable. See notes on the proposed committee for allocating teaching positions.

The lack of major increases in the provision of public education may, in part, explain the increase of private education and training providers, as parents and students seek alternatives. As this new Plan emerges over the next ten years, the process of registering, supporting with school fee subsidies and monitoring private education providers will need to be reviewed. There will also be a need to collaborate more closely with and encourage strategic partnerships with not only private education providers, but community organisations, church groups, other government organisations and private enterprise such as mining companies.

Organic Law on Provincial Governments and Local-level Governments

The *Organic Law on Provincial Governments and Local-level Governments, 1995*, has caused problems in administering the education reform over the last ten years, and these will need to be addressed if this new Plan is to succeed. The interface between national and sub-national levels of education is weak with the Department of Education having no oversight or quality assurance function over responsibilities decentralised to provinces, districts and local-level governments. The Department itself continues to face the challenge of having the organisational capacity to administer and monitor the education reform.

Gender

In 2002 the Department of Education introduced a *Gender Equity in Education Policy*. This policy recognises that, for historical and cultural reasons, females in Papua New Guinea have been disadvantaged in education. This Plan endorses the policy and acknowledges the need for strategies for implementation. Within the Plan appropriate strategies and activities for achieving education for all are identified.

A Gender Mainstreaming Policy for the Department of Education needs to be formulated and adopted to ensure that equal opportunities are provided for women and men at all levels of education including the executive level.

HIV/AIDS

Finally, this Plan sees itself commencing at a time when Papua New Guinea faces a major health crisis in managing and preventing the transmission of HIV/AIDS. The spread of HIV/AIDS is uncontrolled across Papua New Guinea. This is particularly so in rural areas and in young active adults in the most economically productive years, which if not contained, will have major socio-economic implications for the nation. Prevention and management requires a multi-sectoral approach. Education has an important role to play in responding to the HIV/AIDS crisis through its curriculum and teacher education and training responsibilities.

Elementary education

Definition

Elementary education is the first stage of formal education. It consists of an Elementary Preparatory Grade, Elementary Grade 1 and Elementary Grade 2 in the language of the child's community. These three years of education prepare a child for entry into primary school at Grade 3.

Access

The first elementary schools were established in 1994 and by 1998 all provinces had a number of elementary schools. Enrolments have since risen to more than 300,000 and there are now more children enrolling into the elementary school system than there are into the community schools. Female participation is 46 per cent of total enrolment. This is close to being consistent with the percentage of girls in the population at large. More than 9,000 teachers are employed in these schools.

These figures do hide some significant differences between provinces and regions. Enrolment rates in the preparatory grade are much higher in the islands and southern regions, even when discounting the National Capital District from calculations, than they are in the Momase and Highlands regions.

Communities have made a significant contribution to the growth in elementary education through the provision of land, although acquisition of land has proved problematic in some places, and classrooms.

Special education and the education of girls are integral parts of the teacher training program to support the provision of an inclusive education.

Quality

A mixed mode teacher training program has been designed and implemented. This program leads to the Certificate in Elementary Teaching awarded by the Papua New Guinea Education Institute. The three year program has three distinct components: trainer-directed training in residential workshops; home study with self-instructional units; and supervised teaching.

One hundred and seventy district-based elementary trainers, with a Certificate of Elementary Teacher Training from the Papua New Guinea Education Institute, deliver this training program.

Communities have taken up the responsibility for selecting the teacher, using guidelines established by the Department of Education. This has resulted in a large number of very young teachers being selected in some areas.

A vernacular language chosen by the community is the language of instruction. Orthographies have been developed in about 400 language groups. A reformed curriculum has replaced the Elementary Scope and Sequence with approved new syllabuses and teacher guides for culture and community, cultural mathematics and language. Three teacher guides and an implementation support booklet for head teachers support these syllabuses. The reform curriculum is inclusive and has taken account of the gender policy. The community calendar is an essential focus for the curriculum and teachers develop programs with their school communities to ensure relevance. Elementary teachers use self-paced, in-service units that give them background knowledge and strategies to support their teaching. Elementary teachers are being in-serviced about the reform curriculum.

The introduction of a whole new level of schooling takes time and there remain some challenges ahead. These include: lack of adequate supervision of trainee teachers by some trainers; the introduction of the user pay system, whereby trainee teachers and trainers are required to pay training fees, has resulted in fewer teachers being trained than is needed; the development of orthographies cannot keep pace with the opening of new elementary schools; and there is a lack of learning materials available in the local languages.

An inspections system has been established with inspectors in each province. Ratings of teachers are carried out regionally and the community are already involved in the teacher appraisal process. The trainers in each province support the work of the inspectors. The inspections system has been based on the primary model and it has not yet been determined whether this is an appropriate model for the first three years of school.

Management

Elementary schools are planned and established by the districts and provinces, with the support of technical officers from the Department of Education. Elementary schools are organised around the primary schools that will accept their children into Grade 3. These are known as clusters of schools.

Poor planning by some provinces has caused the rapid uncontrolled expansion in the number of elementary schools. This has resulted in problems with the registration of schools and teachers causing a number of elementary teachers to be unpaid for long periods of time.

The present system of subsidies per capita benefits the large schools in the urban centres because of their greater buying power and their low transport costs.

Primary education

Definition

Primary education begins at Grade 3 and finishes in Grade 8 and caters for the 9 to 14 year age group. Lower primary education comprises Grades 3 to 5, and upper primary Grades 6 to 8.

Access

Developments at the primary level have focused on the restructuring of the primary cycle. This has involved the relocation of Grade 1 and 2 classes from community schools to elementary schools, and the establishment of Grade 7 and 8 classes in primary schools. The effective introduction of Grades 7 and 8 is dependent upon the establishment of elementary schools in order to make the most efficient use of scarce teaching and infrastructure resources. Grade 1 and 2 enrolments in the community schools did not decline as rapidly as expected following the introduction of elementary schools. This has led, in part, to shortages of teachers in some parts of the country.

Overall enrolments in the primary sector have risen by 16 per cent between 1995 and 2003. The relocation of Grades 7 and 8 started in 1993 and all provinces had upper primary school classes by 1995. Only about ten per cent of Grade 7 students are now in the secondary school system. As a consequence of the reform the percentage of children passing from Grade 6 to Grade 7 has risen from 48 per cent in 1995 to 79.5 per cent in 2003. The rate for boys and girls was exactly the same. These rises in enrolment have seen slight increases in access for girls in the upper primary who now make up some 45 per cent of enrolments in primary schools compared to 43 in 1995. This improvement in access has not been reflected evenly around the country. There is still considerable inequity both between provinces and between districts within provinces. Gulf Province, for example,

has a transition rate of only just over 50 per cent compared with figures well above 90 per cent in the National Capital District and West New Britain Province.

Provision has been made for children with special needs through the establishment of Special Education Resource Centres. There are currently 14 of these catering for around 2,500 clients.

The retention of children between Grades 1 and 6 has not improved and this is a major area of concern that needs to be addressed. Indeed, it has got considerably worse. Only 53 per cent of children who enrolled in Grade 1 in 1998 completed Grade 6 in 2003. This compares with a figure of 61 per cent for those who completed Grade 6 in 1995. In addition to those who have dropped out of school there is also the large group who have never had the opportunity to enrol in school. These problems are complex and there are many contributing factors, some of which have been investigated.

Findings from the National Research Institute study, *Mi Lusim Skul*, (National Research Institute, 2003), confirm these figures. Equally disturbing, and probably a key contributing factor to the poor retention statistics, is the very high rates of teacher absenteeism reported. This is of particular concern in remote, rural schools. The *Public Expenditure and Service Delivery Report* (World Bank, 2004) suggests that schools in the sample closed for an average of 15 days a year during 2001 due to a variety of problems. The major reasons were a shortage of water and sewage and toilet problems which, between them, accounted for almost half the closures. Teacher absenteeism and shortages were also cited as key issues. This affected the rural and remote schools to a much greater extent than it did urban schools. More intensive research is still required.

Teachers should have been allocated to Grade 7 and 8 classes at the rate of 1.5 teachers per class. However, more teachers have been appointed in many cases and this is one of the causes of the teacher shortages reported in some parts of the country. This is an example of provinces disregarding national policy.

Small, remote schools face considerable hardship and the children from these areas are severely disadvantaged in their access to education services. Attracting teachers to remote areas is a continual problem. Consultations revealed that a lack of teacher housing and incentives are considered primary reasons for teachers not wishing to serve in such areas. Broader issues include the declining law and order situation in some parts of the country, declining provision of basic services and the deteriorating infrastructure in many rural areas.

Infrastructure development in this sector has been characterised by a substantial degree of support from local communities. There have been mixed degrees of support from local-level governments following passage of the *Organic Law on Provincial Government and Local-Level Governments*. The problem in recent years has been one of a lack of funding received by local-level governments to allow them to properly maintain and develop new infrastructure for their schools. Prior to this, the Department of Education provided grants, called Establishment Grants, to all new primary schools offering upper primary grades. These funds were allocated based upon the number of streams and the money sent directly to the Boards of Management on approval by the Department of the proposed work program.

The *Public Expenditure and Service Delivery Report* (World Bank, 2004) found that many schools do not have an adequate number of classrooms in a satisfactory condition. Less than two thirds of classrooms covered in the study were of permanent materials. Of possibly greater concern was the finding that almost 40 per cent of these were in need of maintenance. In addition, classroom furniture and secure storage areas were at a premium in many schools. The schools in the rural and remote categories were found to be worse off than those in the urban areas in all measures. The report also pointed to other deficiencies in that few schools had an administration block, a multi-purpose building for the the teaching of science and basic technology or a library facility.

There is a lack of information regarding the number and state of school buildings in the country.

Quality

Pre-service teacher education is a Grade 12 entry course. This is now a two year course following the introduction of a trimester system in the colleges in 2001. This was introduced to increase teacher output with a substantial reduction in unit costs as a result. Graduates are qualified to teach all primary school grades, including students with special needs.

The *National Special Education Plan* (Department of Education, 2003), endorsed by government in 2003, and the National Special Education Policy provide guidelines for meeting the requirements of children with special needs.

Links between the teachers colleges and the universities, for example between Madang Teachers College and the University of Goroka, have been significantly strengthened providing accreditation for those wishing to further their professional development.

Serving teachers have been given the opportunity to upgrade their qualifications from a certificate to a diploma through the Papua New Guinea Education Institute and other teachers colleges. Similar opportunities have been afforded to inspectors to equip them to deal with the upper primary grades. Efforts are currently being undertaken to regionalise the program to improve completion rates.

The upper primary curriculum has been reformed and seven new syllabuses, seven teacher guides and an implementation support booklet for head teachers were distributed to schools in 2003 for implementation in 2004. Self-paced, in-service units give teachers background knowledge and strategies to support them to teach the new syllabuses. The reform curriculum is inclusive and has taken account of the gender policy. The subjects taught in primary schools are shown in the table below. Lower primary refers to Grades 3, 4 and 5 and upper primary Grades 6, 7 and 8. These are extracted from the *National Curriculum Statement* (Department of Education, 2002).

Table 2: Lower and upper primary teaching subjects

Lower primary	Upper primary
Language	Language
Mathematics	Mathematics
Community Living	Social Science
Health	Personal Development
Physical Education	Making a Living
Environmental Studies	Science
Arts	Arts

The social science component includes aspects of civics, nation building, ethics and values. The health and personal development components consider discipline, relationships, nutrition and personal and community health.

All teachers in the country have received an in-service package consisting of self-paced modules. Participants, on successful completion of the in-service units, gain accreditation toward qualifications awarded by the Papua New Guinea Education Institute.

The lower primary reform curriculum is currently being finalised and new syllabuses and support materials will be distributed to schools in 2005 for implementation in 2006. A *National Policy for the Procurement, Distribution and Storage of Curriculum Materials* (Department of Education, 2003) has been developed but the distribution of curriculum materials remains an area of concern.

New ways of teaching and learning, the lack of local language teachers and the lack of articulation of curriculum content have caused problems in bridging from vernacular languages to English at Grade 3. A large in-service program commenced in 2003 to support the primary school reform curriculum with particular emphasis on the bridging year.

A lack of funds, as well as geographical isolation, has made it difficult for inspectors to make regular visits to many schools.

A national Certificate of Basic Education Examination is conducted for all Grade 8 students in primary and secondary schools. This examination is set nationally and administered provincially. Results are used by provinces for determining entry into Grade 9.

A Curriculum Standards Monitoring Test, which will sample performance for literacy and numeracy, is being piloted in Grades 3, 5 and 8. Results will be used to monitor national levels of literacy and numeracy every two years.

Management

Planning for the primary grades has been a complex operation undertaken by the provincial education authorities with technical assistance from the Department of Education. Implementation schedules have been developed to manage the introduction of Grade 7 and 8 classes. This is planned to happen at the same time as the removal of the Grade 1 and 2 classes.

Management at the school level is proving to be an increasing concern during the recent period of rapid change. Particular challenges have been faced in the area of financial management, largely as a result of the school fee subsidy program and the management of the reform curriculum implementation. The *Public Expenditure and Service Delivery Report* (World Bank, 2004) found that only about thirty per cent of primary schools could provide records of both income and expenditure for the years under consideration, suggesting that many school Boards of Management and administrators do not have the capacity to adequately administer funds.

Secondary education

Definition

Secondary education covers Grades 9 to 12, with lower secondary being Grades 9 and 10 and upper secondary, Grades 11 and 12.

Access

The process of phasing Grade 7 and 8 classes out of the secondary schools has meant that enrolments in Grades 9 and 10 have risen significantly. Enrolments in Grade 10 have risen from 14,205 in 1995 to 26,994 in 2003. Over-crowding has been experienced in lower secondary classes due to the increasing demand for this level of schooling and bad management decisions.

The transition rate from Grade 8 to Grade 9 has dropped due to the increasing number of children completing Grade 8 in the primary schools. However, this still remains above the national objective of 50 per cent. The actual national figure for 2003 was 73 per cent.

At the upper secondary level there is now at least one secondary school in each province in addition to the six national high schools.

Enrolments in Grade 12 have risen dramatically since 1995 from around 2,000 to 6,615 in 2003. This rate of expansion far exceeds the targets set in the *National Education Plan 1995 – 2004*, (Department of Education, 1997). There have been instances of class sizes rising well above the recommended figure of 30, reflecting the enormous demand for this level of education and poor control measures put in place. Transition rates from Grade 10 to Grade 11 have increased from ten per cent in the early 1990s to about 25 per cent today.

Girls' participation in secondary education is improving in Grades 9 and 10 where the figure was 41 per cent in 2001. In Grades 11 and 12 the figure was 35 per cent. This shows little progress since 1995 when the figures were 40 per cent and 34 per cent respectively.

Retention is emerging as a problem at the secondary level with eight per cent of students dropping out between Grades 9 and 10. A certain part of this can be attributed to rises in school fees. Four per cent of students leave between Grades 11 and 12.

Quality

The secondary school curriculum has remained largely unchanged since the 1980s. A number of schools have initiated school-based curriculum development in both the lower and upper secondary school grades. The Department of Education has established a process to approve such curricula. The secondary curriculum has been reviewed recently and a reform curriculum for lower secondary will be developed and completed by 2006.

The rapid increase in enrolments in Grades 11 and 12 has resulted in a serious shortage of qualified Papua New Guinean teachers, particularly in science, agriculture and the various technologies currently on offer. This has resulted in an increasing number of graduates being employed without teaching qualifications.

The University of Goroka continues to be the major source for the supply of secondary school teachers. The four year pre-service degree course graduates approximately 125 teachers each year. The University has also introduced a Post Graduate Diploma of Education for teachers without a teaching qualification, delivered through mixed mode.

A number of secondary schools have received donor assistance for maintenance and new infrastructure development when establishing Grade 11 and 12 classes. Much of this support came in the early years of the implementation of the education reform and was consistent with targets set. Provincial government support for maintenance and new buildings has been inconsistent. This has led to a number of schools not being adequately prepared for teaching Grade 11 and 12 classes. Urgent maintenance work is required in many schools around the country.

The Department of Education is implementing the recommendations of the *Tololo Report* (Department of Education, 1997), carried out by an Inspection Review Committee chaired by the late Sir Alkan Tololo, and is moving towards a greater reliance on school-based teacher appraisal. The Department has also put in place initiatives to train teacher counsellors to provide counselling services in every school.

Management

The unplanned expansion of secondary schooling has created problems in teacher supply, provision of textbooks and infrastructure. This is particularly pronounced in the upper grades. The costs of upgrading a school in preparation for accepting upper secondary grades, including infrastructure and school materials, is approximately six to eight million kina. This figure is beyond the capacity of most provincial governments.

The six national high schools continue to be the responsibility of the Department of Education, although there has been pressure for some to become provincial or regional institutions.

Selection of Grade 9 students is the responsibility of the provinces, while that of Grade 11 is carried out nationally. However, the actual number of students enrolled in Grade 11 frequently exceeds the numbers selected nationally.

The continual changing of policies regarding the school fee subsidies has caused fluctuating levels of school fees. This, in turn, has caused considerable problems for parents.

Flexible, open and distance education

Definition

Distance education is a means of delivering education to people who cannot attend an educational institution. Currently, it is offered primarily through the College of Distance Education to students wishing to complete their Grades 7 to 10 education.

Access

Many private institutions and some universities provide distance courses, but the College of Distance Education is the main recipient of government funding for the provision of distance education. The College of Distance Education through its twenty provincial centres caters for two types of students:

- those who wish to upgrade their level of attainment in individual subjects in Grade 10 and receive a letter of attainment
- those who successfully complete all subjects for a grade and receive a certificate.

Study centres, including some vocational centres, use College of Distance Education materials.

Since 1995 there has been an increase in the number of school leavers and this has been coupled with a lack of access to secondary and higher education. It was expected that this would result in an expansion of distance education to provide equivalent educational opportunities for these out-of-school groups. However, actual student enrolment in the College of Distance Education has remained at about 10,600 between 1997 and 2001. The number of new subject enrolments has not risen greatly during recent years, although significant rises have been seen in the years when there have been generous subsidy allowances. The number of girls has risen between 1993 and 2001, but is still below 40 per cent of the total enrolment.

The public perception of the College of Distance Education is that of being an institution for school leavers, rather than as a comparable pathway leading to Grade 10.

Quality

The current curriculum of the College of Distance Education is limited to general education in Grades 7 to 10. Students start and complete courses at any time of the year. Students have a maximum of nine months to complete a course, meaning a student can take up to three years to complete a grade. The absence of a policy on articulation means that students from the distance education system have only limited opportunities to move into the conventional stream.

A Certificate of Business Studies was developed as a part of the Education Development Project. This was designed for Grade 10 and 12 graduates and for those already in the work place. It has not proved particularly successful and few students have completed the certificate.

The current mode of instruction of the College of Distance Education is through print material only. A large part of college expenditure is related to the printing and distribution of student materials which is carried out centrally. Student materials do not reach College of Distance Education provincial centres in sufficient quantities or in a timely enough fashion to cater for the demand.

Secondary school inspectors provide professional advice to provincial education centre coordinators.

Management

There has been a rapid expansion in the number of College of Distance Education centres throughout the country. There are now 20 provincial centres, 50 registered study centres and 42 correspondence study centres. Registered study centres provide face-to-face teaching with College of Distance Education courses being offered, while correspondence study centres only coordinate and supervise student studies.

While there is a range of issues to explain student attrition, some of these are related to management issues such as the poor administration of marking student work and the delivery of materials.

Overall authority and decision-making is highly centralised as the college is part of the Department of Education organisational structure. Concerns have been expressed that the present management structure is unable to provide an efficient service. A review of the structure and functions of the College of Distance Education is necessary, and will be undertaken during the Plan period, to achieve cost-effectiveness and increase its capacity to meet the demands of its students.

Vocational education

Definition

Vocational education is a skills-oriented education offered primarily to students completing Grade 8, and the community at large, in a variety of institutions.

Access

The education reform process has resulted in a growing number of students exiting following Grade 8 and Grade 10. There is a growing demand from these graduates for further training opportunities. In addition, there is an increasing awareness of the need for relevant skills training for the wider population. The vocational centres are only providing limited provision for these needs.

There are a number of different types of vocational centres operating in the country. These range from large institutions to small centres catering to just a few students. A number of vocational secondary schools have been established but these have proved difficult to implement in a cost and educationally effective manner.

Vocational education has only seen gradual growth in enrolment during recent years, and any rises in enrolment are often related to the level of subsidy. The number of students in vocational centres rose by 43 per cent between 1995 and 2003. Of those enrolled, 60 per cent were in Year 1, 30 per cent in Year 2 and the remainder in Year 3 or beyond. There has been little significant increase in female enrolment, which was only 26 per cent of the total in 2003. There is no set length of course and not all students enter in Year 1.

Students entering vocational centres are largely Grade 8 graduates, but there are also those who have graduated from Grades 6 and 10. Enrolments in relevant short courses - those

with a duration of one day to four weeks, designed for the community - are very low. There are increasing numbers of private providers, largely in the urban areas, who are offering programs that are attractive to many students.

The instructor-student ratio has remained at about 1 to 15 overall, but this hides a wide range of differences. Some of the smaller centres only have a few students for every instructor, while others have unmanageably large numbers of students for each instructor.

Vocational centres are characterised by poor standards of maintenance and a lack of suitable facilities. There has been little support from provincial and local-level governments who are responsible for infrastructure. However, there are a number of centres that have been well maintained and operate very successfully. Many of these are administered by mission agencies.

Quality

A common curriculum is available to all centres, but little consideration is given to the demands of individual communities. There are few links between the centres and other departments, such as Agriculture and Livestock and Community Development, and little use made of potentially beneficial links with private enterprise such as mining, agriculture and fisheries companies.

There is no national accreditation policy in place and individual centres award their own certificates. There is no articulation with other programs. A lack of formal recognition and national accreditation has caused some provinces to move to establish vocational secondary schools, or technical high schools as they are sometimes known. Some of these have been approved, many have not. It is also not clear exactly what curriculum some of these schools are following, despite the Board of Studies endorsement of a curriculum that requires that 60 per cent of the curriculum be devoted to the trade areas and 40 per cent on traditional academic subjects. Vocational secondary schools, then, have proved difficult to implement in a cost and educationally effective manner. They have achieved extremely poor results in the School Certificate Examination and there are issues to be resolved as to whether institutions offering this type of curriculum should be in the secondary or the vocational sector.

The curriculum has been revised in seven core trade areas based on a competency-based approach. A Skills Training Resource Unit is developing short-term courses to meet the needs of local communities.

In addition to the trade courses, a number of centres also offer the opportunity for students to take up College of Distance Education courses to upgrade their academic qualifications.

A large number of vocational centre instructors do not have formal teaching qualifications. There is little pre-service teacher education offered aside from a three year diploma program in Hospitality and Tourism offered at the Papua New Guinea Education Institute. In addition, there is the Post Vocational Technical Clerical and Secretarial course offered at the University of Goroka.

Trade instructors are required to have five years of trade experience before becoming an instructor. A Diploma in Vocational Education and Training has been designed to allow those instructors already working in the field to be able to get a teaching qualification through mixed mode delivery. Unfortunately, there are very few instructors enrolling in the course due to the costs of the residential component at the Papua New Guinea Education Institute. The other components are an agriculture course and further work in their trade areas leading to trade testing qualifications.

Vocational centre inspectors are part of the Technical and Vocational Education Training Division, but have not had adequate resources to visit centres. It remains unclear whether vocational or secondary school inspectors are responsible for inspecting the newly established vocational secondary schools.

Management

Provincial vocational centres are considered a low priority by most provincial authorities. This is apparent in the allocation of funds to these centres. At the institution level there is a shortage of entrepreneurial skills. In the past many centres have been able to rely on income generating programs to survive.

Centres are now becoming increasingly dependent upon cash subsidies provided by the Department of Education and the fees charged to students. Government subsidies are at present provided to all centres, based on enrolment, at the same level as that of the secondary schools.

At present the centres are not making use of potentially beneficial links with local business, other government departments, educational institutions and training providers.

Technical education and training

Definition

Technical education aims to provide skills training for students in technical areas at post secondary level and to provide further opportunities for those already in the work force.

Access

Technical education is provided by four technical and three business colleges around the country. Training is designed to develop broad-based analytical and creative skills and involves industries in program planning and teaching. The colleges have been restructured as a result of successful implementation of the Home Colleges Project and each is now specialised in a particular trade area.

Courses are offered at both certificate and diploma levels. In addition, extension courses are offered that provide advanced skills training, required by industry, to obtain trade certification issued by the Department of Labour and Industrial Relations. Steps are being taken towards the accreditation of the diploma programs to institutions of higher education.

Full-time enrolments at technical institutions have doubled over the last ten years. Approximately half of the students are sponsored by the Office of Higher Education through its Tertiary Education Student Assistance Scholarship program. The majority of the remainder are self-sponsored with about ten per cent company sponsored. Part-time enrolments have risen, but not to the same degree as full-time enrolments. There is still poor gender equity with approximately 30 per cent of students being female. This figure is only as high as 30 per cent because of the large number of females enrolled at the business colleges.

A number of colleges are now running short courses out of college hours, but there have been problems with the payment of lecturers who teach these courses. Currently the teachers of these courses are being paid by the governing councils from fees collected because of the inflexibility of Teaching Service Commission regulations.

Since 1995 there has also been a rapid expansion in the number of private providers offering technical courses. These are largely in the urban areas and predominantly in the computer training and business studies sectors.

There continues to be very low student-lecturer ratios and little progress has been made in the area of localisation, resulting in very high unit costs. Efforts to improve this situation have been hampered by the inability to offer attractive salaries to suitably qualified Papua New Guineans.

Quality

Current staffing problems are, in part, related to changes made to the curriculum since the late 1990s. There have been significant advances in the development of much broader-based Technical Training Certificate courses in twelve trade areas. These are two year courses, introduced gradually since 1994, and have been designed to replace the one year Pre-Employment Technical Training courses. They were introduced as a means of allaying employer concerns and provide a much greater degree of multi-skilling. While they were initially designed for Grade 10 students, increasingly Grade 12 graduates have taken up places. The mix of courses offered has been hindered by the lack of any labour market forecasting for many years.

Problems with the Technical Training Certificates have revolved around the lack of time spent on trade specialisation. There have been concerns that too much time has been allocated to general studies, much of which is repetition for Grade 12 students. The lack of specialist laboratories, computer facilities and the funds to purchase adequate teaching materials, as well as a shortage of general studies teachers, have all impeded progress.

In addition to the Technical Training Certificates, there have been a number of diploma courses designed for those already in the workforce. All colleges are now recognised as trade testing centres to assist the National Apprenticeship and Trade Testing Board in assessing industry competency standards in seven core trade areas and work is underway to extend this initiative to further curriculum areas.

The bulk of teacher training continues to be offered by the University of Goroka, although there are not enough students graduating to satisfy demand and to localise the teaching force.

A number of technical college lecturers have achieved their teacher training qualifications through the Post Graduate Diploma of Education offered in a mixed mode by the University of Goroka. However, the upgrading of courses has not been met with an upgrading of lecturer qualifications, with many only having a Grade 10 academic qualification allied to their trade skills.

Management

The technical colleges are administered from the Department of Education in Port Moresby. Lecturers are appointed under Teaching Service Commission terms and conditions, which make it difficult to attract suitably qualified Papua New Guinean candidates.

Standardised financial management systems have been put in place in all colleges.

Funding for both college and divisional operations has been dropping in real terms. There is little funding available beyond that for the payment of salaries. This is severely affecting further development of curriculum and the inspection of the institutions.

Administration of education

Definition

Administration of education encompasses all of the systems, people and processes that support the delivery of education and training at the national, provincial, district and school levels.

Organisational improvement

The education reform process started in 1993, but has not always been supported by the required management and institutional strengthening reforms. Since the development and publication of the *National Education Plan 1995 – 2004* (Department of Education, 1997), the Department has made efforts to strengthen system-wide planning and management capacity.

The most important outcome of this has been the development and subsequent implementation of provincial education plans. All provincial education plans were written by 2000, but there have been varying degrees of successes in the planning processes, the phases of preparation of these plans, their implementation and subsequent evaluation. The Facilitating and Monitoring Unit of the Department supported the provinces in these planning activities.

A number of management challenges facing the education sector in this Plan period include:

- Ensuring sustainability of reforms and initiatives in a time of financial hardship, and, in particular, ensuring that the planning processes take account of the costs of new initiatives.
- Establishing organisation systems within the Department of Education that can meet the demands of government and society.
- Planning at all levels, but especially at the provincial and district levels, for the big increases in numbers of teachers and classes necessary to achieve targets.
- The lack of planning expertise and commitment from provincial governments that is evidenced by the unplanned implementation of plans. This has had ramifications for provinces and overall national planning and development. It has also contributed to slow progress in the promotion of bottom up planning.
- Strengthening the capacity of the national and sub-national levels to conduct, monitor and evaluate the reform in order to inform strategic planning.

The Department of Education underwent a restructure in mid 1999 to comply with government policy to rationalise the public service. The structure was designed to reflect the needs of the *Organic Law on Provincial Governments and Local-level Governments*, as well as that of the education reform agenda. Five years later, there is general recognition of the need for a review and further restructure of the functions and structure of the Department to strengthen its capacity for organisational self-improvement.

Passage of the *Organic Law on Provincial Governments and Local-level Governments* has caused a number of problems for the Department of Education in the implementation of the reform agenda. In particular, the provincial education advisers are responsible to the Provincial Administrator rather than to the Secretary for Education. This has resulted in provinces being able to establish schools without necessarily gaining approval from the Department of Education.

Human resources management

The Department of Education has had a Staff Development Policy since the late eighties. This is currently in the process of being reviewed and updated. Despite limited resources, the Department has made a concerted effort to provide opportunities for departmental officers to upgrade their qualifications to masters and doctoral levels.

The Institutional Strengthening Project facilitated a number of dedicated management courses for national and provincial education managers. A few of these courses have been adapted for District Education Administrators, a program developed as a part of the Education Development Project. In addition to these, there have been opportunities made available through various other projects including the placement of provincial education planners within the Facilitating and Monitoring Unit on an attachment basis.

These programs have on occasions been extended to provincial personnel and a number of inspectors have been able to gain degrees. A number of provinces, although by no means all, have their own staff development programs and have utilised the Institute of Public Administration and the universities.

The high turn over of education personnel at the provincial and district levels is a major concern. This has adversely affected the continuity of the management and planning of education services.

There is a serious shortage of women working in middle and senior management positions both in the Department of Education and in the provincial education divisions.

Strenuous efforts have been made to improve the payroll system since 1995. The first initiative was that of decentralising some of the payroll functions to the provinces. This involved a considerable degree of training for provincial officers. This exercise met with a mixed degree of success. The second, more significant, initiative was the introduction of a new payroll system that went on line in late 2003. This has involved a major data cleansing exercise and teacher audit process. Work will need to continue in this area to support workforce planning and to ensure cost savings in teacher salaries.

Financial management

Financial management processes within the Department of Education are well established and coordinated by the Division of Finance and Budgets. However, budgeting skills remain weak in the Department with budget preparation often carried out by officers who do not have either the necessary qualifications or experience. There is also little or no budget forecasting capacity within the Department.

Provincial and local-level government budgets are approved by the Department of Treasury. The Department of Education has little involvement in the preparation of these budgets.

The procurement of goods and services, varying from office supplies to large volume materials for schools, is carried out at the divisional level. Major procurements have to go through the Central Supply and Tenders Board. A number of provinces have their own supply and tenders boards. There is no central printing, production or distribution system to cater for the needs of education institutions or for the Department of Education.

Information communications technology

The Corporate Data Unit in the Department was established to improve data collection which was deemed critical to the planning and management of the education system. An Education Management Information System has been developed but, to date has not proved a success. The collection of data continues to be a problem and, unless resolved, will continue to be an impediment to planning and the effective monitoring and implementation of this Plan.

Computer hardware and software is out-of-date and in some cases non-existent at national and sub-national levels, making communication and the collection and sharing of data extremely difficult. The national and sub-national levels of education have tended to rely on donor assistance for the purchase of computers, but this has been done without in many cases the resources and capacity to maintain them. Maintenance and replacement policies and procedures should be put in place before any future computer upgrades are supported.

Communication systems

Although there has been widespread community acceptance of the education reform initiatives, it is also true to say that community awareness programs since 1995 have not been particularly extensive. The lack of proactive and consistent community awareness led to some early resistance to the education reforms in some sectors of the community. This was initially alleviated by the work of the Institutional Strengthening Project that produced and distributed awareness packages to all schools. Other projects have also produced their own awareness materials.

The extent of education awareness has been severely limited by inadequate financial, logistic and staff support and partly because of the absence of a communication policy. As a result of these deficiencies, the principal awareness strategies able to be supported have been media releases and the limited production and distribution of awareness handbooks for teachers.

Communication between the national, provincial, district and school levels is poor not only because of lack of resources, but also because of lack of systems. Improvements will need to be made in this area during this Plan period.

Section 4

**THE PLAN FOR EDUCATION
2005 - 2014**

BASIC EDUCATION

ELEMENTARY EDUCATION

Major outcome

Every 6-year old child enters the Elementary Preparatory Grade by 2012 and completes three years of basic relevant education.

Access

Minor outcome E1:

Elementary schools established at the community level in order that all children in Papua New Guinea enrol at age of six years.

All children enter Elementary Preparatory Grade at the age of 6 years by 2012.

All children will be provided with the opportunity to enter the Elementary Preparatory Grade by 2012 at the age of six years and to complete three years of elementary education. There will be annual enrolments in all schools. In a very few circumstances repetition will be permitted on agreed criteria.

Table 3 shows projected enrolment figures. These figures assume that all 6-year old children will enrol in the Elementary Preparatory Grade from 2012.

Table 3: Projected elementary school enrolments, 2005 to 2014, selected years

	2005	2008	2011	2014
Preparatory	123,522	156,228	188,933	211,033
Elementary 1	110,368	142,419	174,470	201,250
Elementary 2	97,691	129,101	160,511	191,921
Total	331,582	427,748	523,914	604,204

An average of 360 Elementary Preparatory classes established each year until 2012.

The number of new Elementary Preparatory classes required will be determined by the Department of Education and a quota allocated each year to provinces in accordance with approved plans. The number of new classes to be established each year in order to achieve full enrolment by 2012 is set out below.

Table 4: New elementary preparatory classes required, 2005 to 2014, selected years

	2005	2008	2011	2014
New preparatory classes	363	363	330	172

The following table shows the number of 6-year old children and the projected number of children enrolled in the preparatory grade.

Table 5: Preparatory enrolment and 6-year old population, 2005 to 2014, selected years

	2005	2008	2011	2014
Preparatory enrolment	123,522	156,228	188,933	211,033
6-yr old population	165,185	179,196	194,460	211,033

Staffing projections are shown in Table 6. They are based on an average pupil-teacher ratio of 30. This will rise to 33 by 2014. Enrolment increases due to population growth will be accommodated in existing classes rather than through the formation of new classes.

A pupil teacher ratio of 32.4:1 by 2014.

Except under exceptional circumstances, class sizes should not exceed 45 children. Multi-grade classes will become institutionalised and techniques for multi-grade teaching will continue to be a key part of teacher training programs.

Table 6: Elementary school teacher requirements, 2005 to 2014, selected years

	2005	2008	2011	2014
Preparatory	4,117	5,208	5,725	6,395
Elementary 1	3,754	4,844	5,563	6,223
Elementary 2	3,391	4,481	5,391	6,056
Total	11,262	14,533	16,680	18,673
Pupil teacher ratio	29.4	29.4	31.4	32.4

An elementary enrolment rate of 98% by 2014.

To ensure that all children complete three years of education with desired outcomes, they must first be enrolled and then problems of attrition addressed. Different strategies will be researched and explored with particular emphasis being placed on areas that suffer from high drop out rates. It is hoped that strategies to increase community involvement in the schools and the strengthening of the Boards of Management will have a positive impact on enrolments and retention. In particular, issues regarding the value of schooling will be included in the community awareness program at the elementary level of education.

Table 7: Elementary enrolment rates¹, 2005 to 2014, selected years

	2005	2008	2011	2014
Elementary enrolment rate	89.4%	93.0%	95.8%	98.0%

A major planning exercise will need to be undertaken at all levels. The Department of Education will be responsible for ensuring that suitable numbers of teachers are prepared and that there is equity between provinces. The provincial and district authorities will prepare plans and implementation schedules, while the schools themselves, with the support of the District Education Administrator, will complete individual school plans.

The building of schools, and the provision and acquisition of suitable blocks of land, are the responsibility of individual communities with support from local-level governments. The local-level governments will budget for and then provide grants to support communities in providing suitable school buildings. Guidelines will be developed for all elementary school buildings, in particular classrooms, which will include minimum recommended dimensions and take into account lighting and other health and safety related considerations.

All elementary schools have classrooms constructed in accord with guidelines by 2014.

The structure of elementary schools and the process for the registration of schools and teachers will be reviewed.

Strategies and Activities

- Establish and maintain a sufficient number of schools.
 - Complete provincial and district plans for the implementation of elementary education.
 - Determine quotas for the number of schools to be established annually in each province and district.
 - Develop guidelines for communities and local-level governments to use for the establishment of elementary schools.

¹ Calculated as the number in the first three years of schooling as a percentage of the 6 to 8 year old population. Figures include Grades 1 and 2 in the primary sector.

- Develop guidelines, to include building dimensions, for elementary school classrooms and other buildings.
- Develop an efficient process for the registration of schools and teachers.
- Conduct a review of elementary school structures.
- Improve retention
 - Review the enrolment policy to include issues of enrolment, attendance and repetition.
 - Conduct awareness on the value of schooling, especially the importance of sending girls to school.

Quality curriculum and monitoring

Minor outcome E2:

A relevant elementary curriculum is developed, implemented and monitored.

Curriculum materials reviewed, developed and distributed annually.

The elementary reform curriculum has been completed, but will continue to be reviewed and further support materials developed. Series of workshops will be conducted around the country in order to achieve this.

Locally based curriculum support materials are produced in all districts by 2012.

There has, however, been little progress made in the development of locally-based curriculum materials to support the curriculum. The Department of Education will support the provinces and districts, in terms of both technical assistance and financing, with the development of locally-based curriculum materials. This may include the establishment of district curriculum committees. This will support the relevant recommendations from the *National Skills Plan – Enhancing our Futures* (Department of Education and National Research Institute, 2000).

150 new orthographies are developed by 2012.

The language of instruction will remain as the language of the community and will be selected by the community. Orthographies must be completed before enrolment can commence. There are still a large number of languages that need orthography development. Many of these only have a small number of speakers and criteria will be established to identify those that will receive support from the Department of Education.

All Boards of Management contribute to teachers appraisal by 2008.

The Department of Education will provide supervisory services to all elementary schools. The role of the supervisors will be reviewed to allow it to become more advisory in nature as community and school-based teacher appraisal is extended. A monitoring and evaluation mechanism will be put in place to ensure that standards are maintained and enhanced.

Communities, through Boards of Management, will be provided with the opportunity to have a greater say in the appraisal of the teachers working in their schools. Teacher attendance, acceptability to and relationships with the community will be monitored by representatives of the community.

Strategies and Activities

- Develop locally relevant programs in accord with the national curriculum.
 - Support the formation and define the role of district curriculum committees as required.
 - Provide support for elementary schools in the development and use of community-based support materials.
- Review, develop, produce and distribute curriculum and support materials for all subjects at the elementary level.
 - Develop student materials and resources.
 - Develop teacher materials and resources.
 - Develop locally based materials in the vernacular.

- Complete orthographies as required.
 - Determine criteria and identify orthographies to be developed.
 - Establish an implementation process for orthography development.
- Monitor and evaluate teaching and learning to enhance standards.
 - Develop and trial a qualitative means of monitoring and evaluating teaching and learning.
- Provide supervisory services to all elementary schools and teachers.
 - Review and redefine the elementary supervisory service.
- Community involvement in the appraisal of teachers.
 - Determine a system of community involvement in the appraisal of teachers.

Quality teacher education and training

Minor outcome E3:

A sufficient number of appropriately trained and qualified elementary teachers are available.

Teacher training will continue to play a critical role in determining the quality of elementary education provided. The mixed mode delivery system that has been developed will continue, although the current training model will be reviewed as a part of the review of the Papua New Guinea Education Institute. Necessary changes will be instituted to ensure that the teacher education curriculum for teachers and trainers remains in tune with the changing nature of the work of the teacher in the classroom.

Multi-grade teaching will be institutionalised in elementary schools and will be a key component of teacher training programs.

A review will be conducted into the process of funding for the costs of training that are currently borne by the trainee. Possibilities include the recoupment of costs directly from salaries in the years following the registration of the teacher. The teacher training program will equip teachers with the skills to teach all children including those with disabilities.

An average of 1100 teachers enrol in elementary teacher courses each year.

Table 8 shows the number of teacher trainees required.

Table 8: Projected number of new elementary teachers required for training, 2005 to 2014, selected years

	2005	2008	2011	2014
New teachers	1,153	1,359	841	1,030

The selection of a teacher is the responsibility of the community and the school Board of Management. Continued efforts will be made to encourage the selection of female trainees. The criteria used to make this selection will be reviewed. The existing guidelines will be reviewed to include the proviso that selected trainees should have lived for at least three years, following completion of their schooling, in the community that they are going to serve. They should be able to speak the language of instruction selected by the community. In addition, they should be knowledgeable about the customs, values and traditions of the community. At the discretion of the Secretary for Education, trainee teachers without a Grade 10 education will be able to enrol in the Certificate of Elementary Teaching program. This will continue to allow for the establishment of schools in remote areas.

A flexible system of delivering teacher in-service is implemented by 2006.

Opportunities will be provided for serving teachers, both women and men, to further increase their professional knowledge and skills. In particular, teachers-in-charge will receive support to enhance their school leadership in areas of curriculum, professional learning and financial management. Women teachers will be given the opportunity to develop their leadership skills.

Strategies and Activities

- Provide the required number of appropriately trained teachers.
 - Review guidelines for communities to use for the selection of teachers.
 - Review the system for the funding of elementary teacher training fees.
- Provide professional development opportunities for elementary school teachers and trainers.
 - Review the roles and provide support for those associated with elementary teacher training.
 - Enhance teachers' knowledge of the reform curriculum and multi-grade teaching and improve their ability to monitor and assess pupils learning.
 - Provide leadership, management and finance training for teachers-in-charge.
 - Provide leadership training opportunities for women teachers.

Management

Minor outcome E4:

Elementary education is cost-effective and affordable for parents and government.

In order to achieve the major outcome of making elementary education available for all from 2012, no child can be denied access for reasons of financial hardship. At the elementary level the National Government will provide appropriate basic school supplies for all schools from 2012. Minimum needs will be determined for both children and teachers. Existing systems will be strengthened to procure and distribute these materials on an annual basis. A review will be conducted to consider the feasibility of a centrally administered procurement and distribution system to ensure that materials are delivered, in a timely fashion, as close to the school as possible.

Minimum basic school supplies needed for elementary schools are determined by 2006.

The table below shows elementary school subsidy costs. The very large increase in costs over the period of the Plan reflects both the rapid rise in enrolments to reach targets and the rise in the subsidy allocation per child required to provide all basic school supplies.

Table 9: Elementary school subsidies (K'000s), 2005 to 2014, selected years

	2005	2008	2011	2014
Elementary subsidies	11,605.4	21,387.4	39,293.5	54,378.3

Some contribution will still be expected from parents for the education of their children. Schools will continue to be able to levy fees, where appropriate, in accordance with National and Provincial Education Board directives.

A formula for an equitable supply of teachers will be determined by 2006.

The major cost of elementary education is teacher salaries as shown by Table 10 below. The number of teachers allocated to each province will be based on the number of children enrolled and approved plans.

The number of teachers allocated to each province will be overseen by the Department of Education and the Teaching Service Commission following the formation of a Position Allocation Committee to determine the allocation of positions. This group will determine criteria for the deployment of teachers to be based primarily on enrolments.

All schools staffed according to an agreed formula by 2009.

Table 10: Elementary school teacher salaries and emoluments (K'000s), 2005 to 2014, selected years²

	2005	2008	2011	2014
Salaries	67,286.6	90,281.3	109,931.4	123,727.6
Allowances	3,364.3	4,514.1	5,496.6	6,186.4
Leave fares	0.0	0.0	0.0	0.0
Total	70,650.9	94,795.4	115,427.9	129,914.0

² Allowances are calculated at 5% of salary

Strategies and Activities

- Develop and implement a sustainable, affordable and appropriate school fee subsidy policy.
 - Determine minimum basic supplies for elementary school needs.
 - Review and administer the system of procurement and distribution of basic school supplies.
- Make efficient and rational use of teachers.
 - Establish Position Allocation Committee.
 - Apply agreed criteria, including multi-grade teaching, for the allocation of teachers to each province.

Responsibilities

Parents and the community will be responsible for:

- ensuring that all boys and girls enrol and attend school
- infrastructure and maintenance
- participating in Parents and Citizens activities
- the recommendation of teachers for training.

School Boards of Management will be responsible for:

- the completion of the School Planner
- planning for infrastructure requirements in close consultation with the Ward Councillor
- the development of locally-based curriculum materials and the implementation of a locally-based curriculum.

Local-level governments will be responsible for:

- budgeting for establishment grants for all new elementary schools.

District administrations will be responsible for:

- the completion and endorsement of District Education Plans and implementation schedules
- liaising with local-level governments to ensure budget provision is made for establishment grants.

Provincial governments will be responsible for:

- the completion and endorsement of Provincial Education Plans
- the allocation of elementary establishments between districts
- the appointment of teachers.

The National Government will be responsible for:

- the payment of teacher salaries
- the training of elementary school teachers
- curriculum development and development of orthographies
- the provision of supervisory services
- the provision of opportunities for the professional development of teachers
- the allocation of new classes to each province
- the provision and distribution of basic school supplies
- providing technical assistance in areas of planning, management and legal matters.

PRIMARY EDUCATION

Major outcome

All children have the opportunity to complete a full, quality primary education of six years to Grade 8.

Access

Minor outcome P1:

Sufficient primary school classes established to achieve access and retention targets.

All children completing Grade 6 can be accommodated in Grade 7 by 2012.

Grade 1 and 2 classes will be phased out of primary schools by 2012. Facilities that become available will be used to accommodate the newly established Grade 7 and 8 classes. All children completing Grade 6 will be given the opportunity to enter Grade 7 from 2012.

A 70% Grade 1 to 6 retention rate achieved by 2014.

It is anticipated that the majority of primary school-aged children will complete primary education without imposing compulsion. Attrition remains a priority issue. Programs such as child-friendly schools, improved community awareness, the training of Board of Management members and further solutions will be tested out. For example, a further trigger for this improvement will be the replacement of subsidies by an incentives scheme for all Grade 8 graduates. Almost 70 per cent of both boys and girls enrolled in Grade 1, either in the elementary or the primary sectors, will complete Grade 6 by the end of the Plan period. A review will be undertaken of the policy relating to enrolment to include issues of enrolment, attendance and repetition. The Special Education Resource Centres will continue to provide an opportunity for education for those children who cannot be accommodated in the main stream schools.

In order to move closer to achieving universal education at this level, the problems of attrition, particularly that of girls, will have to be addressed. Initially, the introduction of the Grade 8 Graduate Incentive Scheme to replace post primary education subsidies should encourage students to complete Grade 8. Other strategies in the Plan will look to increase community involvement, provide Board of Management training and to provide better counselling of students. Recent studies have indicated that the degree of community support and the strength of the Board of Management impacts positively on teacher and student attendance, which will also have a positive impact on the retention of students.

In addition, the awareness program will include elements to demonstrate the value of schooling, for both boys and girls, to be delivered at the district and local levels. There will be trials conducted at targeted schools to determine the effectiveness of a number of initiatives. Included among these will be a school lunch program. Consideration should be given to enhancing the Health Promoting Schools program.

Table 11 shows projected enrolments and Table 12 projected goals for rises in retention.

Table 11: Projected primary school enrolments – 2005 to 2014, selected years

	2005	2008	2011	2014
Grade 1	50,407	28,279	7,646	0
Grade 2	49,224	30,780	12,523	0
Grade 3	125,345	139,968	152,113	168,301
Grade 4	110,292	124,837	137,984	154,197
Grade 5	93,792	106,607	119,692	133,793
Grade 6	82,005	91,799	103,787	114,585
Grade 7	62,618	78,235	93,853	104,078
Grade 8	52,048	66,152	80,265	90,703
Total	625,731	666,658	707,863	765,657

Table 12: Primary school retention rates, 2005 to 2014, selected years

	2005	2008	2011	2014
Grade 1 to 6	56.2%	61.1%	62.8%	66.0%
Grade 1 to 8	38.8%	52.2%	52.1%	54.3%

It is anticipated that the primary school Grades 3 to 8 enrolment rate will rise as shown in Table 13 below.

Table 13: Primary school enrolment rates³, 2005 to 2014, selected years

	2005	2008	2011	2014
Primary enrolment rate	61.2%	65.6%	68.6%	70.2%

Table 14 shows the number of 14-year old children and the projected number of children enrolled in Grade 8.

Table 14: Grade 8 enrolment and the 14-year old population, 2005 to 2014, selected years

	2005	2008	2011	2014
Grade 8 enrolment	57,966	69,743	81,694	90,703
14-yr old population	137,474	149,116	156,489	169,722

An average 150 new Grade 7 classes established each year.

Achieving this projected enrolment rate will require the establishment of approximately 150 new primary school Grade 7 classes each year, as shown in Table 15.

The Department of Education will determine the number of new Grade 7 classes that will have to be established each year and quotas will be allocated to each province. Planning for the increasing of access to Grades 7 and 8 will be the responsibility of the provincial and district authorities in accord with Departmental quotas. Provincial and district education plans will be developed with support from the Department of Education. The District Education Administrators, in consultation with the provincial authorities, will prepare an implementation schedule that will be consistent with that prepared for the elementary schools.

Individual schools will produce their own development plans, with support from the District Education Administrator, to allow for medium-term planning for staffing and infrastructure needs. School plans will also include measures to improve the quality of education provided.

³ Calculated as the enrolment in Grades 3 to 8 as a percentage of the 9 to 14-year old population.

This should include the provision of library facilities and resources. Schools should ensure that there are sufficient good quality toilets and enough drinking water and encourage children and parents to participate in the learning experience.

Table 15: New Grade 7 classes required to meet targets, 2005 to 2014, selected years

	2005	2008	2011	2014
New Grade 7 classes	149	149	141	105

Staffing projections for the primary sector during the Plan period are shown in Table 16 below. They have been based upon the following assumptions regarding average class size:

- 45 in Grade 1 classes, based upon recent historical data.
- 40 in Grade 3 based upon historical data rising to 42 after 2012.
- 35 in Grade 7 rising to 37 after 2012.

Teachers allocated at a ratio of one per class by 2009.

Multi-grade teaching will become institutionalised using set criteria. The criteria for multi-grade classes will be determined by the group formed to allocate teaching positions and be consistent with the performance based duty statements approved in 2002.

A teacher pupil ratio of 1:37 achieved by 2014.

Teacher-to-class ratios in Grades 7 to 8 will be reduced from 1.5 to 1 by 2009 due to the implementation of the reform primary curriculum. This will result in a reduction of about 3,000 in the demand for teachers and salary savings will be in the region of K240m over the Plan period. Larger schools requiring an administrative head with only a minor teaching role will be determined by the group allocating positions. The structure of schools with large enrolments will also be reviewed.

The effect of these changes will result in a teacher-pupil ratio of 1:37 by the end of the Plan period. Teacher requirements for the Plan period are shown in Table 16.

Table 16: Primary school teacher requirements, 2005 to 2014, selected years

	2005	2008	2011	2014
Grade 1	1,120	628	170	0
Grade 2	1,269	782	320	0
Grade 3	3,134	3,499	3,622	4,007
Grade 4	3,028	3,390	3,604	3,867
Grade 5	2,920	3,239	3,576	3,745
Grade 6	2,800	3,134	3,499	3,622
Grade 7/8	4,587	4,538	4,975	5,565
Total	18,858	19,211	19,765	20,805
Pupil teacher ratio	33.2	34.7	35.8	36.8

A formula for an equitable supply of teachers determined by 2006.

The problems being faced by remote rural communities will be addressed and all schools will be staffed according to an agreed formula. There will be enhanced incentives to attract teachers to serve in remote areas. A determination will be made as to what constitutes a remote and disadvantaged school for the purposes of attracting a disadvantaged school allowance. In addition, there will be a package of non-monetary inducements.

All schools staffed according to an agreed formula by 2009.

It is not unreasonable for a teacher to expect a minimum standard of housing, to be determined on the basis of agreed criteria, if required to teach in a remote community. This standard of housing should be used as a basis for a teacher taking up a position. Communities and Boards of Management will be made aware of their obligations regarding the provision of teacher housing.

At the upper primary level the problem of access for children from remote communities will be addressed through a variety of strategies. Both boys and girls in remote areas will be given the opportunity to remain in their local schools for Grades 7 and 8. This can be achieved through the use of multi-grade teaching and the provision of additional teacher resource materials that would include the newly developed flexible, open and distance

education materials. While the provision of boarding facilities in a small number of institutions may be one acceptable strategy, this is neither a cheap nor a recommended alternative and will be solely the responsibility of the community, relevant agency and the local-level governments.

A system of return of service applied by 2007.

A system of return of service will be introduced and applied for all new graduates from the teachers colleges, who have been sponsored by government. Teachers will be required to make a commitment to serve in specified schools in return for their sponsorship.

Local-level governments are required to contribute to the maintenance of schools and new developments at the primary level. The Department of Education will arrange for the assistance of donors to support infrastructure and maintenance over the Plan period. Guidelines will be developed for all primary school buildings, in particular classrooms, which will include minimum recommended dimensions and take into account lighting and other health and safety related considerations.

Strategies and Activities

- Provide and maintain a sufficient number of schools.
 - Completion and implementation of provincial and district plans for primary education.
 - Completion of school plans to include both infrastructure and quality components.
 - Determine quotas for the number of Grade 7 classes to be established annually in each province.
 - Local-level governments to budget grants for infrastructure and maintenance.
 - Review the structure of primary schools.
 - Develop guidelines, to include building dimensions, for primary school classrooms and other buildings.
- Provide support to remote schools.
 - Review the criteria for a disadvantaged school and classify primary schools accordingly.
 - Encourage teachers to take up positions in remote schools by providing agreed allowances and non-financial incentives, such as minimum standards of housing.
 - Develop and implement a system of return of service for teachers college students.
- Improve retention rates.
 - Conduct an awareness program on the value of schooling.
 - Develop guidelines, with specific strategies, to improve retention.
 - Review the enrolment policy to include issues of enrolment, attendance and repetition.
 - Conduct trials at selected, targeted schools building on existing initiatives.
 - Commission further research as necessary.

Quality curriculum and monitoring

Minor outcome P2:

A relevant primary curriculum is developed, implemented and monitored.

The lower primary reform curriculum will be completed and distributed to schools. There will be a regular review of all syllabuses and teachers guides prepared for the primary curriculum on a five year cycle. Updated syllabuses and teachers guides will be provided for all primary schools as necessary. Text books will be supplied at the approved ratio of 1 to 2 students in lower primary and 1 to 1 in upper primary as outlined in the *National Policy for the Procurement, Distribution and Storage of Curriculum Materials* (Department of Education, 2003) to support the reform curriculum. This will be the responsibility of the Department of Education with support from donor agencies. The *National Policy for the Procurement,*

A curriculum completed and distributed to all schools by 2005.

Curriculum materials reviewed, developed and distributed annually.

Distribution and Storage of Curriculum Materials will be implemented as the basis for major curriculum materials distribution and will be reviewed in 2007.

The Department will support the development of locally-based programs and support materials, which will include school journals, linked to the reform curriculum. This support will include the provision of training. Schools will also be given access to distance education materials to support their teaching in the upper primary grades. The Department will ensure that appropriate student and teacher materials are produced and supplied to support the HIV/AIDS policy.

The Department acknowledges the critical role that libraries have to play in education. Schools will be encouraged to develop their libraries and to stock them with materials that both support and complement the school curriculum.

Literacy and numeracy standards reported biennially from 2007.

Standards monitoring will be strengthened and at Grades 3, 5 and 8 a Curriculum Standards Monitoring Test will be administered by the Department. Literacy and numeracy performance at these grades will be reported on biennially. The Grade 8 Certificate of Basic Education Examination will be reviewed to ensure that it remains consistent with the reform curriculum.

Head teachers contribute to the appraisal of teachers by 2008.

Inspectors will visit and provide written reports on schools visited in order to monitor the implementation of the curriculum, teaching standards and other aspects of schooling such as head teacher and student performance. There will be greater community and head teacher involvement in the appraisal of teachers. This will allow inspectors to take on a much greater advisory role.

All Boards of Management contribute to appraisal by 2008.

Local communities, through the Board of Management, will be given greater authority in the appraisal of teachers with the monitoring of teacher attendance and teacher acceptability to the community in which they serve. Research evidence suggests that this will have a beneficial effect on teacher attendance.

Strategies and Activities

- Review and produce curriculum and support materials for all subjects at the primary level on a regular basis.
 - Develop student materials and resources.
 - Develop teacher materials and resources.
- Support the implementation of the primary reform curriculum.
 - Train district and school officials.
 - Develop, produce and distribute locally-based curriculum support materials in the vernacular.
 - Improve access to quality distance education materials in the upper primary grades.
- Support the implementation of the HIV/AIDS policy.
 - Develop and provide appropriate teacher and student materials.
- Measure and monitor education standards at the primary level of education.
 - Review the Certificate of Basic Education Examination to ensure consistency with the reform curriculum.
 - Implement the Curriculum Standards Monitoring Test.
 - Develop and trial a qualitative means of monitoring and evaluating teaching and learning.
- Provide advisory and appraisal services to all primary schools.
 - Ensure all schools are visited on a regular basis by inspectors.
 - Train, and then monitor, head teachers in teacher appraisal techniques.
- Greater community involvement in the management of schools.
 - Determine a system of community involvement in the appraisal of teachers.
 - Endeavour to achieve a more equal representation of genders on Boards of Management.

Quality teacher education and training

Minor outcome P3:

Sufficient appropriately trained and qualified teachers prepared for primary schooling.

An average of 1200 students enrol each year from 2005.

Pre-service teacher education is a two year trimester diploma program suitable for Grade 12 graduates. The demand for teachers will rise following the relocation of all the Grade 1 and 2 classes to the elementary schools. This will necessitate the establishment of further places for teacher trainees which should be preceded by a teacher supply and demand study to be carried out in 2009. Table 17 below shows the number of graduates expected from the teachers colleges. Taking into account historical rates of attrition, currently at around 4 per cent, and anticipated needs, about 1200 new students will need to be enrolled in the colleges each year.

Table 17: Primary school teacher college intakes, 2005 to 2014, selected years

	2005	2008	2011	2014
Teachers College intake	1,200	1,200	1,200	1,200

All schools will have access to fully qualified teachers.

The Department of Education will identify the number of teachers required on an annual basis. Grade 10 graduates from areas with a demonstrated teacher shortage will be allowed access to colleges at the discretion of the Secretary for Education. A specified percentage of these places will be made available for women. Foundation courses will be required for those students who have not upgraded their qualifications through distance education.

The work of teachers has changed as a result of the reform process. The demands of the curriculum in terms of relevant content, the resources required, teaching approaches and levels of training are impacting on the teacher education curriculum. The curriculum and pedagogy practiced at the Primary Teachers Colleges will continually be reviewed to take into account these and other issues, such as outcomes-based curriculum, inclusive teaching practice and cultural relevance, to ensure consistency with the reform curriculum. Due consideration will be given to issues related to gender and children with special needs.

A flexible system for delivering teacher in-services implemented by 2006.

Professional development programs for primary school teachers will be conducted at regional and provincial levels by the Department of Education and the provincial divisions. Teachers will be encouraged to have a greater input in decisions regarding the implementation of curriculum at the school level. In particular, teachers will be encouraged to solve common problems through the establishment of professional learning teams in schools. Provision of information about HIV/AIDS will be made available to all participants at professional development workshops.

All schools will have access to a trained teacher counsellor by 2007.

Current programs and the role of the Papua New Guinea Education Institute will be reviewed and strengthened with a view to putting in place a more flexible delivery mechanism for teacher in-service programs. Teacher education programs will concentrate on the preparation of all teachers to teach the new primary school curriculum and to deal with the acknowledged problems being faced in Grade 3 and beyond. This will include multi-grade teaching and bridging at Grade 3. Teachers will be provided with opportunities to increase their proficiency in dealing with learning areas concerned with children with special needs. There will also be an increasing emphasis on school leadership training for all head teachers and Boards of Management, including school, financial and asset management training.

The increasing importance of guidance and counselling at primary schools, particularly in the upper grades, will be provided through the continuing training of teacher counsellors. This training will be facilitated by the Guidance Officers from the Department.

Increasing linkages between the teachers colleges and the universities will require the establishment of a national framework for standards in teacher training. This will ensure that standards of teacher training are maintained, the curriculum supports the reform curriculum and changes to teaching approaches, such as multi-grade teaching, are taught. The responsibilities of the Teacher Education Board of Studies that deals with standards and practises in the colleges will be reviewed having particular regard to how this role can be taken over by institutions and be monitored by the National Framework.

The administrative practices within the Primary Teachers Colleges will be standardised and training opportunities will be available for both the teaching staff and the managers of the colleges. The training of staff will include the introduction of an institutionally-based system of professional appraisal. The upgrading of qualifications will be encouraged for all teacher educators.

Individual college plans will be developed, which will be integrated into the divisional annual plans. This will help improve the coordination of the colleges by the Department of Education.

Strategies and Activities

- Provide the required number of appropriately trained teachers.
 - Identify teacher demand on an annual basis, particularly from areas with demonstrated teacher shortages, and establish further places as required.
 - Conduct teacher supply and demand study in 2009.
- Continually review and update the Primary Teachers College curriculum.
 - Review and strengthen inclusive teaching practices in the colleges and in the curriculum.
 - Train teachers as curriculum developers.
 - Develop and provide appropriate HIV/AIDS, substance abuse and gender equity materials for trainee teachers.
- Provide professional development opportunities for primary school teachers.
 - Review and strengthen the role of the Papua New Guinea Education Institute.
 - Develop suitable staff development programs to include student counselling.
 - Provide leadership training opportunities for women teachers.
- Provide professional development opportunities for primary school managers.
 - Provide supervision, planning and management workshops for head teachers and senior teachers.
 - Provide training for school asset management to include the storage and care of textbooks and procurement of basic school materials.
- Provide professional development opportunities for male and female Primary Teachers College staff.
 - Increase teacher educators' knowledge of gender equity and children with special needs, bilingual teaching and assessment processes.
 - Provide teacher educators with professional development in targeted areas.
 - Improve linkages and coordination between the Primary Teachers Colleges and the divisions in the Department responsible for curriculum development and inspections.
- Support the effective operation of Primary Teachers Colleges.
 - Establish a national framework for standards in teacher training.
 - Review the role of the Teacher Education Board of Studies
 - Develop and implement individual college plans.
 - Standardise administrative and financial practices across all colleges.
 - Improve coordination between the Department of Education and the Primary Teachers Colleges.
 - Introduce college-based staff appraisal.

Management

Minor outcome P4:

Primary education is cost-effective and affordable for parents and government.

The level of parental contributions to primary education determined on an annual basis.

Consistent with government objectives there will be increases in the level of subsidy to the primary grades. The total subsidies in this sector will rise in accord with the rise in enrolments. There will be a need for parental contributions, in cash or kind, for all children in Grades 3 to 8. Boards of Management will determine the level of these contributions in line with guidelines set by the National and Provincial Education Boards. Parental contributions will be reviewed on an annual basis taking into account the levels of subsidies provided by government. Table 18 shows the subsidy requirements for primary education.

Table 18: Primary school subsidies by grade (K'000s), 2005 to 2014, selected years

	2005	2008	2011	2014
Grade 1 to 2	3,487.1	2,067.1	705.9	0.0
Grade 3 to 5	16,471.5	18,570.6	20,489.5	22,814.6
Grade 6 to 8	11,800.3	14,171.2	16,674.3	18,561.9
Total	31,758.8	34,808.9	37,869.7	41,376.5

Schools will be encouraged to embark on self-reliance initiatives in order to reduce the burden on parents. Wherever possible these activities should be linked to the national curriculum.

The major cost of primary education is in teacher salaries as shown in Table 19 below. The problem of teacher deployment will be addressed through the Plan period to make for an efficient and equitable use of teachers. A Position Allocation Committee will be established to determine criteria for the deployment of teachers to provinces on an annual basis. Teaching positions will be allocated to provinces annually based on the agreed criteria. The deployment of teachers to upper primary classes will be reduced from 1.5 to 1 teacher per class leading to a teacher pupil ratio of 1:35. This will result in a significant reduction in the number of teachers needed and savings in salaries.

A teacher pupil ratio of 1:35 achieved in the upper primary grades by 2009.

Vernacular language speakers and writers will be appointed to teach the bridging classes in Grade 3 and training will be provided for them. Multi-grade teaching will be institutionalised.

Table 19: Primary school teacher salaries and emoluments (K'000s), 2005 to 2014, selected years⁴

	2005	2008	2011	2014
Salaries	231,218.5	235,543.0	242,344.7	255,095.3
Allowances	11,560.9	11,777.2	12,117.2	12,754.8
Leave fares	9,248.7	9,421.7	9,693.8	10,203.8
Total	252,028.2	256,741.9	264,155.8	278,053.9

Strategies and Activities

- Develop and implement a sustainable, affordable and appropriate school fee subsidy policy.
 - Develop a formula to redistribute subsidies from post primary to basic education.
 - Ascertain realistic and affordable levels of parental contributions.
 - Reduce the burden of school fees on parents through schools undertaking self-reliance activities.

⁴ Allowances are calculated at 5% and leave fares at 4% of salary.

- Make efficient and rational use of teachers.
 - Establish Position Allocation Committee
 - Develop and apply a set of criteria for teacher deployment and allocation to provinces.
 - Ensure that local language teachers are appointed to Grade 3 classes.

Responsibilities

Parents and the community will be responsible for:

- the payment of parental contributions in cash or kind
- infrastructure and maintenance
- participating in Parents and Citizens activities

School Boards of Management will be responsible for:

- the completion of school plans
- planning for infrastructure requirements.
- playing a role in the appraisal of teachers

Local-level governments will be responsible for:

- budgeting for maintenance and new infrastructure as per endorsed plans.

District administrations will be responsible for:

- the completion and endorsement of District Education Plans and implementation schedules
- liaising with local-level governments to ensure budget provision is made for maintenance and infrastructure.

Provincial governments will be responsible for:

- the completion and endorsement of Provincial Education Plans
- the creation of necessary teaching positions
- the appointment of teachers.

The National Government will be responsible for:

- the payment of teacher salaries
- pre-service training of primary school teachers
- curriculum development
- provision of inspectorial services
- the provision of opportunities for teacher development
- the allocation of teachers and new classes to provinces
- the development of policy relating to school subsidies.
- providing technical assistance in areas of planning and management.

POST PRIMARY EDUCATION

SECONDARY EDUCATION

Major outcome

A relevant, affordable and quality secondary education provided to selected Grade 8 and Grade 10 graduates.

Access

Minor outcome S1:

An appropriate number of well-equipped and resourced secondary schools established within budget to provide a quality education.

In line with government priorities in education, there will not be a significant increase in access to secondary education during the Plan period. Agreed transition rate targets between Grades 8 and 9, and Grades 10 and 11, must be met by 2014. The expansion of existing schools, rather than the establishment of new schools, will be the principal strategy for improving access to secondary education. Provinces will make plans for the development of their own secondary schools, which could include schools that have an emphasis on skills training. In some instances these might be existing vocational centres redesignated as secondary schools. A further strategy might be to amalgamate a secondary school with a nearby vocational centre.

Any increase in the current secondary transition rates as a result of provincial government's lack of constraints in the expansion of new places will result in severe problems for the provision of basic education. Other strategies for meeting demands for post primary education and training will be available through the vocational centres and distance education.

The transition rate between Grades 8 and 9 reduced to no less than 50% by 2014.

The target for transition between the primary and lower secondary sectors will be 50 per cent. The continued relocation of Grade 7 and 8 classes to primary schools means that there should be minimal expansion required before 2010. The transition rate of 25 per cent from lower to upper secondary will require a small marginal increase in the number of Grade 11 places each year. A restructured flexible, open and distance education college will provide an attractive alternative pathway for students who are unable to gain a place in the formal school system.

The transition rate between Grades 10 and 11 maintained at 25%.

The rapid and largely ad hoc expansion in the number of schools offering Grade 11 and 12 classes must slow down. Selection to Grade 11 will be carried out by the Department of Education on the basis of the number of places available, but will be no more than 25 per cent of the number of Grade 10 students. This will require a review of the criteria for selection to Grade 11 and a formula to be developed and applied rigorously that will determine the location of new classes. This slow down of the expansion in access at this level will be dependent upon the support and understanding of the provincial governments and the members of parliament.

Secondary schools offering Grade 11 and 12 classes must be properly planned and have all necessary buildings, equipment and teaching materials in place before teachers are allocated and Grade 11 classes enrolled.

A review into the role of the national high schools will be conducted in late 2004. This review will consider aspects of funding, responsibility, and look at options for specialisation

and schools of excellence. The findings of this review will be considered and then implemented in the early years of the Plan.

The school boards of governors, provincial education authorities and the provincial governments will be responsible for the maintenance of school buildings and grounds. The maintenance and the upgrading of existing schools, rather than the construction of new schools, will be the priority of provincial and school boards.

Girls occupy 48% of places in lower secondary and 45% in upper secondary by 2014.

On this basis, Table 20 shows the projected student enrolments in secondary education over the Plan period. These figures include those for the national high schools. The percentage of girls in lower secondary will rise from the present 41 percent to 48 percent and in upper secondary from 37 percent to 45 percent over the Plan period.

Table 20: Projected secondary school enrolments, 2005 to 2014, selected years

	2005	2008	2011	2014
Grade 7	5,621	3,212	803	0
Grade 8	5,918	3,590	1,429	0
Grade 9	31,080	33,489	38,830	44,837
Grade 10	27,071	29,186	32,893	38,247
Grade 11	8,345	9,065	9,786	10,509
Grade 12	7,715	8,415	9,095	9,777
Total	85,750	86,958	92,837	103,370

Tables 21 and 22 show the number of 15 and 17-year old students and the projected numbers enrolled in Grades 9 and 11 respectively.

Table 21: Grade 9 enrolment and the 15-year old population, 2005 to 2014, selected years

	2005	2008	2011	2014
Grade 9 enrolment	31,080	33,489	38,830	44,837
15-yr old population	130,941	145,123	152,324	165,185

Table 22: Grade 11 enrolment and the 17-year old population, 2005 to 2014, selected years

	2005	2008	2011	2014
Grade 11 enrolment	8,345	9,065	9,786	10,509
17-yr old population	123,974	137,474	149,116	156,489

The number of new Grade 9 and Grade 11 classes to be established is shown in Table 23 below.

Table 23: New secondary school classes required, 2005 to 2014, selected years

	2005	2008	2011	2014
New Grade 9 classes	19	19	47	48
New Grade 11 classes	8	8	8	8

Despite an increase of more than 40 per cent in the number of Grade 9 and 10 students during the Plan period, the lower secondary enrolment rate will only rise to 26.2 per cent. This is due to the very high rate of population growth and the government objective of focusing on the provision of basic education. The enrolment rate in the upper secondary grades will remain constant at about 6.6 per cent as a result of the minimal expansion

An average of eight new Grade 11 classes established each year.

planned in the sector. The expansion planned in the sector is eight new classes per year. Alternative pathways will be provided in distance education and vocational education. Tables 24 and 25 show the transition and enrolment rates.

Table 24: Secondary transition rates, 2005 to 2014, selected years

	2005	2008	2011	2014
Grade 8 to 9	60.7%	51.1%	50.0%	50.0%
Grade 10 to 11	29.4%	31.8%	31.4%	28.8%

Table 25: Secondary enrolment rates, 2005 to 2014, selected years

	2005	2008	2011	2014
Lower secondary enrolment rate ⁵	22.5%	21.9%	23.5%	25.5%
Upper secondary enrolment rate ⁶	6.6%	6.5%	6.4%	6.6%

Teachers allocated at a rate of 1.5 per class by 2009.

Staffing at the secondary level will be based upon 1.5 teachers per class in both upper and lower secondary classes. This is a reduction from 1.75 teachers per class currently allocated in the higher grades. It will result in salary savings of more than K20 million over the Plan period. It is further assumed that expatriate contract officers will be phased out by 2008.

Table 26: Secondary school staffing requirements, 2005 to 2014, selected years

	2005	2008	2011	2014
Lower secondary	2,489	2,481	2,641	2,967
Upper secondary	803	874	944	1,014
Total	3,292	3,355	3,585	3,982
Pupil teacher ratio	26.0	25.9	25.9	26.0

Strategies and Activities

- Establish and maintain a sufficient number of secondary schools.
 - Complete provincial plans for the implementation of secondary education.
 - Redesignate existing vocational institutions offering a lower secondary education as secondary schools.
 - Maintain and rehabilitate all schools rather than construct new schools.
 - Review the role of the national high schools.
- Review procedures for approving the expansion of secondary schools.
 - Determine the number of new classes required on an annual basis and allocate these classes to provinces.
 - Establish and enforce agreements with provincial governments concerning guidelines for the expansion of secondary schools.

⁵ Calculated as enrolment in Grades 9 and 10 as a percentage of the 15 and 16-year age groups.

⁶ Calculated as enrolment in Grades 11 and 12 as a percentage of the 17 and 18-year age groups.

Quality curriculum and monitoring

Minor outcome S2:

A relevant secondary curriculum is developed, implemented and monitored.

All lower secondary reform curriculum materials distributed to schools by 2007.

The reform curriculum will be developed in consultation with all stakeholders and with reference to the government's export-driven economic strategy. Advances in technology will be harnessed to increase access to teacher support materials.

Curriculum materials reviewed, developed and distributed annually.

The Department of Education will develop, publish and distribute new reform curriculum materials for secondary schools. It will be the responsibility of the Department of Education to procure and distribute any new curriculum materials in accordance with the *National Policy for the Procurement, Distribution and Storage of Curriculum Materials* (Department of Education, 2003). Books will be distributed to students in the approved ratio of one to one.

Locally based projects developed at all schools by 2014.

The development of locally-based projects linked to the national curriculum will be encouraged. The Department of Education will provide technical assistance and advice to schools taking this initiative and monitor school-based curriculum development to ensure consistency. There will be increased emphasis on skills development in the development of the lower secondary curriculum, taking into account the *National Skills Plan – Enhancing our Futures*, (Department of Education and National Research Institute, 2000) and the work being carried out in the vocational sector. This change in emphasis will cater for the existing and proposed institutions currently designated as Vocational Secondary Schools.

Inspectors will report on schools annually.

Assessment, reporting and examinations will be reviewed and new procedures implemented to support the reform curriculum.

Secondary school inspectors will visit schools on a regular basis for advisory and inspection purposes. An increased reliance on school-based teacher appraisal will mean that inspectors will be able to place a greater emphasis on their advisory functions and concentrate on financial and management issues.

All secondary schools have a trained teacher counsellor by 2007.

Guidance officers will visit all schools on a regular basis to advise students on future opportunities and to conduct academic aptitude tests for Grade 9 students and differential aptitude tests for those in Grade 11.

The Department of Education acknowledges the growing importance of counselling for secondary students. Of particular importance is the countering of more recent problems such as that of drug taking. The training of trainers for school-based teacher counselling will be a key strategy. Teacher counsellors will provide counselling services to students while performing teaching duties. Every secondary school will have a teacher counsellor by the end of 2007 and school Boards of Governors will be encouraged to engage locally available expertise to support teachers in the counselling of students. It is expected that these initiatives will have a significant impact on both student retention and student attendance at schools.

The deterioration in the standards of discipline of students is causing concern across the whole system, but is particularly felt in the secondary sector. There is an increasing awareness that discipline should begin at home and that parents should participate more fully in their children's education. They should be encouraged to become more involved in the school. This should be achieved through structured, regular activities such as parent teacher consultations. Schools in rural areas will be expected to develop innovative solutions as to how to involve the parents of those students who are boarders.

Strategies and Activities

- Design, develop and produce inclusive curriculum and assessment support materials for all subjects at the secondary level.
 - Review all current secondary curriculum and assessment materials.
 - Liaise with vocational curriculum officers in the development of practical units for the lower secondary curriculum.
 - Develop curriculum and assessment materials.
 - Design and develop multimedia support materials for students and teachers.
- Revise assessment and reporting procedures and examinations to match the reform curriculum.
 - Review assessment and examination procedures for the School Certificate and Higher School Certificate Examinations.
- Provide inspectorial services to all secondary schools.
 - Visit schools on a regular basis.
 - Develop a relevant and effective training program for secondary inspectors.
 - Train and then monitor principals in teacher appraisal techniques.
- Monitor and evaluate teaching and learning to enhance standards.
 - Develop and trial a qualitative means of monitoring and evaluating teaching and learning.
- Support counselling and guidance services for secondary school students.
 - Train school-based counsellors and guidance officers.
 - Consult with the social welfare division of the Department of Community Development.
 - Support the provision of counselling services by consulting outside agencies and by engaging local personnel and parents.
 - Schools involve parents to a much greater degree in the education of their children.

Quality teacher education and training

Minor outcome S3:

A sufficient number of appropriately trained and qualified teachers and guidance officers prepared for secondary schooling.

An average of 150 graduate secondary teachers trained each year from 2005.

While the University of Goroka will continue to be the major institution for training secondary teachers, other institutions may also contribute towards these numbers.

Upper secondary teachers will be degree holders who have gained a Postgraduate Diploma of Education. Provided that targets regarding access can be adhered to, the demand for lower secondary teachers will increase markedly in the latter years of the Plan period. This is because the increase in Grade 9 enrolment will be through the establishment of extra classes, rather than through replacing Grade 7 and 8 classes relocated to the primary schools.

All schools have access to fully qualified teachers.

The major avenue for teachers wishing to upgrade their qualifications will be through in-service courses using a mixed delivery mode. In-service training will be focused on the implementation of the new curriculum. Self-paced, in-service units will be developed to support this process. There will continue to be opportunities available for serving teachers without a teaching qualification to gain a Post Graduate Diploma of Education. This will be offered by a mixed mode of delivery.

In-service available on the reform curriculum by 2006.

School and financial management is a concern and school managers will be provided with training to strengthen, in particular, financial management and leadership. Table 27 shows the requirements for the number of new secondary school teachers.

Table 27: Projected secondary school teacher training requirements, 2005 to 2014, selected years

	2005	2008	2011	2014
Lower secondary	102	98	182	248
Upper secondary	53	58	60	63
Total	156	157	242	311

Strategies and Activities

- Provide the required number of appropriately trained teachers.
 - Review and update the pre-service curriculum to be consistent with the secondary reform curriculum.
 - Establish required further places for teacher trainees.
- Develop a program of professional development for all teachers.
 - Conduct in-service training courses to develop knowledge and understanding of the reform curriculum and new assessment and examination requirements.
 - Develop courses using mixed modes of delivery.
- Provide school management training.
 - Develop courses on key issues such as planning, financial and asset management.

Management

Minor outcome S4:

Secondary education is cost-effective and affordable for parents and government.

Grade 8 Graduate Incentives Scheme introduced by 2009.

Parents will continue to pay a significant percentage of the school fees, while government will support secondary schools with small cash subsidies in the form of the Grade 8 Graduate Incentive Scheme. These will take the place of the school subsidies and be of the same value, although there will be no increase in real terms. In light of this, secondary schools will be encouraged to become more self-reliant and undertake activities to reduce the burden on parents. These activities should be integrated into the school curriculum wherever possible.

All schools have self-reliance projects by 2014.

A scholarship scheme will be developed to ensure that no talented, disadvantaged students miss out on further education. This will be administered by provinces following guidelines established by the Department of Education. These guidelines should ensure that there is positive discrimination in favour of those students from the remote areas. Table 28 shows subsidy costs over the Plan period. Students in Grade 9 will not attract a subsidy. They will, instead, benefit from the Grade 8 Incentive Scheme.

A scholarship system implemented by 2008.

Table 28: Secondary school subsidies (K'000s), 2005 to 2014, selected years

	2005	2008	2011	2014
Lower secondary	8,362.7	4,318.6	4,215.0	4,589.7
Upper secondary	1,927.3	2,097.6	2,265.8	2,434.3
Scholarships	0.0	2,193.6	2,510.3	2,907.9
Total	10,290.0	8,609.9	8,991.0	9,931.9

A cost recovery mechanism for school examinations in place by 2006.

The cost of the development, printing and distribution of the School Certificate and Higher School Certificate examinations will be largely borne by those who benefit from it. These costs will be deducted at source from school fee subsidies.

All schools staffed according to an agreed formula by 2014.

A more equitable deployment of teachers will be achieved through an annual teacher audit. A group will be established that will allocate teachers to schools based upon agreed criteria determined by the number of classes and number of students. 1.5 teachers per class will

be allocated throughout the secondary school system. Table 29 shows secondary school teacher emoluments for the Plan period.

Table 29: Secondary school teacher salary and emolument costs (K'000s), 2005 to 2014, selected years

	2005	2008	2011	2014
Salaries	51,665.4	51,159.0	54,710.2	60,886.2
Allowances	2,583.3	2,557.9	2,735.5	3,044.3
Leave fares	2,066.6	2,046.4	2,188.4	2,435.4
Total	56,315.3	55,763.3	59,634.1	66,365.9

Strategies and Activities

- Develop and implement a sustainable, appropriate school fee subsidy policy.
 - Establish a scholarship scheme for talented students.
 - Reduce the burden of school fees on parents through schools undertaking self-reliance activities.
 - Deduct the cost of examinations from school fee subsidy allocations.
- Make efficient and rational use of teachers.
 - Establish Position Allocation Committee
 - Establish criteria for the allocation of positions to achieve a more equitable distribution of teachers.

Responsibilities

Parents and the community will be responsible for:

- the payment of parental contributions
- participating in Parents and Citizen activities.

School Boards of Governors will be responsible for:

- the recommendation of teachers for appointment
- planning for infrastructure requirements.

Provincial governments will be responsible for:

- the completion and endorsement of Provincial Education Plans
- the maintenance of schools
- the creation of necessary teaching positions
- the appointment of teachers
- the selection of students for Grade 9
- the administration of the scholarship scheme.

The National Government will be responsible for:

- the payment of teacher salaries in an efficient and timely fashion
- the selection of students for Grade 11
- the determination of criteria for entry to Grade 11
- the preparation and administration of the School Certificate and the Higher School Certificate Examinations
- pre-service training of secondary school teachers
- curriculum development
- the administration of the national high schools
- provision of inspectorial services
- provision of opportunities for teacher development
- the allocation of teachers to provinces
- the allocation of new Grade 11 and 12 classes to each province
- the development of policy relating to school subsidies and the scholarship program.

Major outcome

The provision of a flexible, open and distance education gives alternative opportunities to students to pursue other pathways of formal education.

Access

Minor outcome F1:

A significant growth in enrolment achieved by offering a number of demand driven programs.

Review of the college completed by 2005.

Distance education has the potential to reach a broader audience at lower cost to the client. In addition, it has the potential to address the difficulties of distance and terrain in the delivery of education services to all Papua New Guineans. This will be achieved by reviewing and revitalising the existing college, its provincial centres and accredited study centres, such as those operating in the vocational centres and by private providers. Remote rural primary schools will also benefit from the development of distance programs.

The principal target groups will be:

- Grades 6 to 8 students in remote schools
- students who choose to complete their Grades 9 and 10 education through the flexible, open and distance education mode and then articulate into the formal system following graduation from Grade 10
- students who want to complete programs to progress into tertiary education institutions
- people undertaking technical and vocational training courses.

Twenty five per cent of Grade 8 and 10% of Grade 10 graduates choose to enrol in distance education by 2014.

The restructured college will initially target Grade 6 to 8 students, although this group will decrease over the Plan period. Enrolment in Grades 9 to 10 will cater for 25 per cent of the students who are not offered a place or do not wish to take up a place in a secondary school. The college also aims to attract ten percent of the students who complete Grade 10 and are not offered a place in Grade 11. The number of Grade 10 graduates who currently enrol to upgrade their qualifications is expected to drop once the Grades 11 and 12 matriculation program is developed. Projected enrolment is shown in Table 30 for those who exit the formal system following Grade 8 and Grade 10.

Table 30: Projected distance education college enrolment, selected years, 2005 to 2014

	2005	2008	2011	2014
New Grade 9	1,559	2,871	3,377	3,880
New Grade 11	2,006	1,941	2,135	2,596

Strategies and Activities

- Provide an institution with flexible, open and distance modes of delivery that has the facilities to enrol 25 per cent of Grade 10 graduates and 10 per cent of Grade 12 graduates who are unable, or do not wish to continue in the formal education system.
 - Conduct a needs assessment of the current college facilities.
 - Prepare a plan to progressively implement changes to facilities.

- Increase the number of distance education providers.
 - Provide flexible, open and distance modes of deliver using vocational centres and private providers.

Quality curriculum and monitoring

Minor Outcome F2:

The curriculum and assessment programs offered will be based on and articulate with the mainstream education system.

The curriculum and assessment programs offered by the institution will be based on the national curriculum, although the institution will be free to include value-added programs. This can be defined as being “one system, many pathways and the same outcomes”. As a result, students who choose to do any part of their secondary education through distance education will be able to transfer to and from education system schools.

Appropriate assessment, examination and certification system established by 2008.

In order to achieve this, the examinations sat by students will be the same ones as those sat by the students in the formal education system. The process of assessment of distance education students will be reviewed to ensure consistency with that of the formal education system. Links between the provincial centres and headquarters will be further strengthened.

The institution will provide relevant demand driven options for students. Recognition of prior learning through work and life experiences will enable students to gain credit towards their course program. Flexible, open and distance education courses will be reviewed, restructured and upgraded to provide pathways for students to:

- enrol at any time of the year
- study at their own pace
- study at a time and place convenient to them
- complete assignments and sit for examinations as and when they are ready.

The institution will also develop further adult education, adult literacy and short technical and vocationally oriented courses. These will take advantage of advances currently being made in the field of information communications technology.

Materials production and distribution systems will be included in the review of the CODE and take into account the *National Policy for the Procurement, Distribution and Storage of Curriculum Materials*.

Strategies and Activities

- Review and redesign current curriculum and college practices.
 - Review the current curriculum.
 - Identify points of articulation between the college and the school system and develop an appropriate policy.
 - Adapt the reform curriculum in the upper primary, lower secondary and upper secondary grades for use in distance education mode.
 - Develop and deliver other programs such as adult literacy and other short modular courses.
 - Utilise information communications technology as it becomes feasible.
- Develop an appropriate assessment, examination and certification system.
 - Review the current examination and assessment policies in light of the reform curriculum in secondary education.
 - Review assessment processes to be consistent with national requirements.
 - Rationalise the central academic records system to be linked to all provincial distance education centres.

- Establish a materials production and procurement system that is cost-effective and efficient.
 - Review current materials production and distribution systems for distance education.
 - Rationalise the production and distribution systems consistent with the *National Policy for the Procurement, Distribution and Storage of Curriculum Materials*.

Quality teacher education and training

Minor Outcome F3:

The provision of well-trained and qualified staff and support personnel.

The employment of national staff will be accelerated through enhanced training opportunities. Sufficient incentives will be needed to attract qualified Papua New Guineans, while large provincial centres will require additional teaching and guidance staff to provide special support to students.

College staffed by appropriately trained staff by 2009.

The reformed curriculum and assessment procedures will necessitate training for teachers and staff in curriculum design and assessment. Harnessing new technologies will also mean that college staff will need training in the development and production of curriculum materials for a range of delivery mechanisms.

Strategies and Activities

- Increase the rate of localisation.
 - Upgrade the technical capacity of Papua New Guinean staff through training programs.
- Improve the capacity of college staff to produce curriculum and assessment materials for distance education.
 - Upgrade the skills of college staff in curriculum design and assessment.
 - Train college staff in specialist areas such as the design, preparation and printing of non-print distance education materials.

Management

Minor Outcome F4:

An institution offering flexible, open and distance education.

College to be restructured by 2006.

The concept of distance education will be changed to flexible, open and distance education reflecting current and expected future trends and technological advances. The College of Distance Education will be reviewed and restructured. This will take place in 2005.

A flexible, open and distance education curriculum has to be one that is relevant and innovative and one that students will wish to enrol in because they see it as being useful and relevant.

The new institution will offer educational programs that maximise choice and flexibility in study pathways using the national curriculum through a number of practical and affordable modes. It will participate in innovative course program designs tailored for those in both the formal and informal sectors of the economy.

Students will be able to access nationally recognised qualifications regardless of their geographical location or situation. The quality of the programs will be achieved through a continuous monitoring process and improvements in management processes consistent with the national education system.

Strategies and Activities

- Restructure the College of Distance Education.
 - Review the College of Distance Education to enhance the capacity to meet projected enrolment targets.
- Monitor improvements consistent with national education system prerequisites.
 - Establish a standards and monitoring system.
 - Strengthen the capacity of the Board of Studies for flexible, open and distance education.

Major outcome

A variety of institutions offering courses of varying lengths to students completing primary education and to the wider population to gain appropriate skills to satisfy both personal and community demands.

Access

Minor outcome V1:

An appropriate number of vocational centres provided in public and private sectors.

Vocational courses will be conducted in different types of institutions. These will range from large centres offering full-time accredited courses to small centres that provide short courses of up to three months in duration, targeted at the wider population. All will subscribe to a philosophy of education for life and prepare the vast majority of their students for a life in the informal sector. Vocational centres that offer full-time, one year courses may conduct trade testing.

Re-register all vocational centres by 2007.

The status of all centres will be reviewed by provinces, a process that will be overseen by the Department of Education, with a view to the closure of some uneconomic institutions and the rationalisation of others. Vocational centres that are no longer considered viable will be offered to interested groups or individuals to manage and maintain. In the process of these changes, all vocational centres will need to be re-registered.

Vocational education components of provincial plans developed by 2007.

Provinces will be required to prepare their own plans for the development of vocational education. These plans should include provision for required new infrastructure, where appropriate, and the maintenance of existing assets. Each institution will also produce plans for their own development. Provinces will be provided with support from the Department of Education in this task.

The 'average' centre will be one offering a core course of up to one year in duration targeted primarily, although not exclusively, at Grade 8 graduates. Adult enrolment will be permissible so long as they meet all entry requirements. A significant portion of a centre's resources will be used for providing short courses for adults and youth in the community. Some programs will be targeted at Grade 10 school leavers. The responsibility for the enrolment of students in full-time courses will rest with the provincial governments in close consultation with the individual Boards of Management.

The range of programs offered by vocational centres is shown in Table 31. All institutions will be registered as vocational centres although provinces themselves may choose to call them by other names to denote their special emphasis. Such names could include Skills Developments and Community Development Centres.

Table 31: Range of programs offered by vocational centres

Length and type of program	Intake/ Target group	Accreditation possible	Articulation possible
One year full-time vocational skills development course.	Grade 8 up to two years out of school.	Yes	Yes
One week to one month individual and industry driven Modular Block Courses.	Individual and industry	Yes	Yes
One day to three months community demand driven short courses offered in the institutions.	Local community	No	No
One day to four weeks community demand driven short courses offered through outreach and community extension activities.	Out of school youth in communities	No	No

Closer linkages with the Department of Community Development will be developed to support the vocational centres that are specialising in the provision of courses for the community. In particular, the concept of communities themselves being the principal agents for change will be supported through the establishment of community learning centres by the Department of Community Development.

The Department of Community Development envisages that these will not be stand alone institutions, but will use existing facilities, like vocational centres, for conducting community development and community training activities. The District Community Development Officers will play a key role in these initiatives.

Some community development programs offered by the vocational centres will be delivered in the communities themselves rather than in the centres. Courses such as these will be coordinated and conducted by staff from vocational centres. The potential for strong linkages with the Community Development Scheme will be fully explored in this regard.

All vocational centres offer short term community orientated programs by 2009.

All vocational centres, including those specialising in the one year program, will be expected to offer short-term community oriented programs. These will be of varying lengths and offered at a time and venue appropriate to the communities and the availability of instructors. These may run alongside longer courses, be offered as stand alone modules and credit given to students who complete accredited courses.

Private providers will be encouraged to provide skills training both in the field of business and trade areas. Their involvement will encourage competition between themselves and government administered institutions.

Gr 8 Graduate Incentive Scheme introduced in 2008.

A major shift in subsidy policy through the provision of an incentive scheme for all Grade 8 graduates will help to encourage such competition. This will commence in 2008 and be preceded by a study to determine guidelines and ensure that it is consistent with local needs.

Table 32 below shows projected enrolments assuming that there will be small rises in overall enrolment. The enrolment patterns will alter, over a period of four years, to reflect the one year maximum length courses. The percentage of girls in vocational centres will rise from about 30 per cent to 45 per cent by 2014.

Table 32: Projected full-time equivalent vocational centre enrolments, 2005 to 2014, selected years

	2005	2008	2011	2014
Year 1	13,857	20,615	25,324	29,315
Year 2	3,418	855	0	0
Year 3	1,622	405	0	0
Total	18,897	21,875	25,324	29,315

It is assumed that a very high proportion of all full-time places will be taken up by Grade 8 graduates and vocational institutions will need to provide places for more than 25 per cent of Grade 8 graduates.

Table 33: Projected transition rates from primary school to vocational institutions and enrolment rates, 2005 to 2014, selected years

	2005	2008	2011	2014
Vocational transition rate	27.1%	31.4%	32.6%	32.7%
Vocational enrolment rate	10.6%	14.2%	16.6%	17.7%

Strategies and Activities

- Review the status of vocational institutions in all provinces.
 - Determine criteria for the registration of vocational centres.
 - Complete vocational education component of provincial education plans.
 - Liaise with other providers and the Department of Community Development.
- Facilitate and monitor the implementation of provincial vocational education system reform.
 - Rationalise provincial vocational training centres.
 - Develop criteria for the registration of centres.
- Provide infrastructure to meet training program needs.
 - Upgrade and renovate existing infrastructure based on training program specifications.
 - Provide new infrastructure as required by vocational program specifications.
- Provide opportunities for private providers to become registered.
 - Establish and strengthen linkages with other training providers and establishments.

Quality curriculum and monitoring

Minor outcome V2:

A quality vocational skills training program provides clients with skills that are relevant and required by the community.

Changes to the curriculum must reflect the reclassification and redesignation of vocational institutions. To this end, the curriculum will be reviewed by 2006 and developed in such a way that both the formal and informal sector development needs of individual provinces and districts are reflected in the programs offered. The major thrust will be to redirect the curriculum towards providing appropriate and broadly based skills and knowledge, while preparing students to continue on to further training where such opportunities exist.

Vocational curriculum reviewed by 2006.

The curriculum development process will be streamlined to respond to different needs. The content of all vocational education and training courses, regardless of the nature of the institutions, will be competency-based and enterprise-driven.

The type of programs offered will be determined during the rationalisation process. The full-time programs offered in vocational centres will be for a maximum one year duration. These courses will be modularised to allow students to attend and complete modules at a time of their choosing. New courses that are developed will be in response to needs identified in particular communities. Recognition of prior learning will be available once the appropriate policy is developed.

It is anticipated that these courses will be appropriate for Grade 8 and Grade 10 graduates. Some of these courses will be accredited through established National Apprenticeship and Trade Testing Board guidelines. All full-time courses will be required to include further development of literacy and numeracy skills. Where appropriate, these could be accredited distance education courses.

Short course materials distributed to all vocational centres by 2007.

In many centres, there will be a shift towards short-term community development programs. These will be offered alongside the one year modularised courses in some vocational centres. The programs produced by the Skills Training Resource Unit will be distributed to all centres and used as a basis for these short courses. They will be offered both in the centres themselves and as outreach, or extension, activities. They will target skills that are of immediate need by the community. Locally-based curriculum development will be supported by the Department of Education. Where appropriate, credit will be available for short courses within the parameters of the yet to be established National Qualifications Framework.

The target groups for these courses will be, primarily, the local communities. There will be a well publicised, and widely available, bank of short courses available for centres to access. These courses will be written in such a form that they can be used for groups with varying academic and work backgrounds. The course content will be such that it can be delivered by people with no formal teaching qualifications.

Awareness campaign in place by 2006.

The main catalysts for change will be the initiation of the Grade 8 Graduate Incentive Scheme to replace the existing school subsidy arrangement and incentives for centres through the provision of 'incentives fund' type awards for those meeting strict criteria. There will be increased cooperation between the Department of Education and the Department of Community Development at all levels. An awareness campaign will be put in place by 2006 in order to change the public perception of vocational education.

Vocational centres, while focused on their core business of providing courses for people with a Grade 8 education, will also provide courses that are suitable for others including Grades 9 and 10 and the wider community. At the same time, centres should be building links with other organisations and institutions to reach a wider community, offering courses such as basic literacy and numeracy, and basic health training. There will be greater consultation with other government departments with a view to a greater use of vocational institution facilities.

In addition to greater linkages with other government departments and non-government organisations there is also much to be gained through learning from initiatives taken by a number of major resource developers. Specific examples of these are Porgera, New Britain Palm Oil and Ok Tedi Mining.

There will be a review of the role of the vocational education inspectors to include greater monitoring of the management and operation of the centres and their finances. The inspectors will be trained to deal with the changing role of the centres.

Strategies and Activities

- Review curriculum in vocational centres. Curriculum will be broadened and based on the economic and employment needs of provinces, districts and individual communities.
 - Adapt existing full-time courses for maximum one year duration.
 - Identify, develop and modularise new courses.
 - Review and adapt existing short courses including Skills Training Resource Unit materials.
 - Establish skills units in all provinces.
 - Support the production of locally-based curriculum.
 - Conduct community development programs in and out of schools.
- Provide adequate tools and equipment to service training programs.
 - Procure relevant tools and equipment for conducting training programs based on course specifications.
- Provide advisory and appraisal services to all vocational institutions.
 - Conduct a review of the vocational education inspections system.
 - Strengthen the operational functions of the inspectors.
- Develop a greater understanding between the vocational institutions and other departments and agencies.
 - Conduct inter-departmental meetings at the national, provincial and district levels to foster greater understanding of, and strengthen links with, the vocational centres.
 - Increase and strengthen links between community and industry.
 - Establish a database of courses, providers and instructors from various agencies, communities and other departments.
 - Develop an awareness program to change public perception of vocational education.
- Provide incentives for institutions to offer short courses for the community at large.
 - Allocate start up capital for institutions meeting agreed criteria.

Quality teacher education and training

Minor outcome V3:

The provision of a sufficient number of appropriately trained and qualified vocational centre instructors and managers.

The successful implementation of a much wider range of vocational courses will require programs to prepare appropriately qualified teachers and supervisors, as well as proactive and entrepreneurial management.

Convert Diploma of Vocational Education and Training into distance mode by 2007.

The residential component of the Diploma of Vocational Education and Training, currently offered by the Papua New Guinea Education Institute, will be turned into distance mode using a similar model to that of the elementary teacher education program. This will allow greater numbers of instructors to graduate from the program. The University of Goroka will be approached to provide accreditation for this course. Further opportunities for vocational staff may be made available through the Don Bosco Institute of Technology in Port Moresby with management training at the Institute of Public Administration. Further opportunities may also be available through bilateral arrangements. The table below shows vocational centre staffing requirements.

Table 34: Vocational centre staffing requirements, 2005 to 2014, selected years

	2005	2008	2011	2014
Vocational instructors	1,050	1,215	1,407	1,629
Student instructor ratio	18.0	18.0	18.0	18.0

Conduct skills audit for vocational centre staff by 2006.

The capacity of short course centre managers and teachers will be enhanced through further entrepreneurial and management training. This training program will build upon initiatives already undertaken.

The shift towards the provision of short courses directed at the community means that instructors are going to have to be re-skilled to prepare them to teach adults. There will also be courses that can be taught by local people with demonstrated skills. A skills audit will be carried out for all institutional staff and in the communities to identify the resources available to deliver a wide range of courses.

Strategies and Activities

- Provide the required number of appropriately trained instructors.
 - Review delivery mode and accreditation of the Diploma in Vocational Education and Training.
 - Articulate this to the Diploma in Technical Education and Training
 - Adapt the residential program into distance mode.
- Provide professional development opportunities for vocational centre instructors.
 - Conduct skills audit of instructors.
 - Identify, develop and deliver courses to include entrepreneurial and adult education skills.
 - Develop bilateral training arrangements.
- Provide professional development opportunities for vocational centre managers.
 - Conduct skills audits of managers.
 - Identify, develop and deliver courses to include planning, financial and asset management and entrepreneurial skills.

Management

Minor outcome V4:

A vocational education system that is both cost-effective for government and affordable for all.

Principles of good governance will be critical if the directional shifts proposed are to be realised. The transparent management of finances and assets is an essential component of this. Board of Management guidelines will be reviewed to effect the sound management of institutions.

A greater autonomy will be granted to major church agencies and other capable organisations. This could include the appointment, management and discipline of vocational education instructors. It is expected that this will provide a further catalyst for the shift towards a more community orientated role for the vocational institutions. The role of the vocational centre coordinator will be reviewed in order that this office can play a greater role in the promotion of vocational education.

The system of subsidies for the vocational institutions will be reviewed and the feasibility of introducing the Grade 8 Graduate Incentives Scheme investigated. This scheme is designed to encourage competition and a shift towards a needs driven system. This support would only be available for Grade 8 graduates. All these graduates will be provided with an incentive for them to enrol at an institution of their choice. This could be an approved private provider. This will act as a major catalyst to encourage the vocational centres to make the shift towards offering one year modularised courses and to offer relevant courses for the local communities. Table 35 below shows the subsidies that are expected to go to the vocational centres either from subsidies or from the Grade 8 Graduate Incentive Scheme system that will be introduced from 2008. This will be preceded by a study to establish guidelines, to consider all implications, financial and otherwise, and to ensure consistency with individual provincial needs.

Develop a process to grant increased autonomy to church and other agencies by 2009.

Review the role of the vocational centre coordinators by 2008.

Table 35: Vocational centre subsidies (K'000s), 2005 to 2014, selected years

	2005	2008	2011	2014
Voc subsidies	2,834.5	0.0	0.0	0.0
Gr 8 Inc Scheme	0.0	3,092.3	3,798.5	4,397.3

Review duty statements by 2007.

The duty statements of the vocational centre staff will be amended to reflect the need for innovative, business minded leadership, as well as enterprise education.

The number of full-time permanent teachers in vocational centres will be based upon the number of full-time equivalent students at a rate of one instructor for 18 students. Further positions will only be approved in accordance with strict criteria as determined by a Position Allocation Committee. Table 36 shows vocational centre teacher emoluments for the Plan period.

Table 36: Vocational centre instructor salaries and emoluments (K'000s), 2005 to 2014, selected years

	2005	2008	2011	2014
Salaries	12,223.1	14,149.8	16,380.1	18,962.1
Allowances	611.2	707.5	819.0	948.1
Leave fares	488.9	566.0	655.2	758.5
Total	13,323.2	15,423.3	17,854.4	20,668.6

Provision will be made for the employment of sessional staff, where appropriate, to allow centres the flexibility to be able to offer a wide range of courses. Provincial governments will be expected to support the infrastructural development and maintenance of the centres. Centres will be required to play a major role in this by undertaking self-reliance activities, the nature of which will be determined during the rationalisation process.

Strategies and Activities

- Develop a system of greater agency involvement in the administration of vocational education.
 - Grant greater responsibility to agencies for the management of centres to include the management of teachers.
- Develop and implement a sustainable, affordable and appropriate school fee policy.
 - Conduct a review to ascertain the viability of a Grade 8 Graduate Incentive Scheme allowing them to enrol at any approved institution.
 - Determine, on an annual basis, the costs of delivering vocational education programs.
- Make efficient and rational use of vocational institution staff.
 - Establish Position Allocation Committee.
 - Conduct an annual teacher audit.
- Develop a culture of self-reliance in vocational centres.
 - Include entrepreneurial skills in all training programs.
 - Ensure vocational programs in all vocational institutions are enterprise driven.
- Promote the principles of good governance in the administration of vocational institutions.
 - Develop appropriate systems for financial, inventory and asset management.
 - Review guidelines for vocational centre Boards of Management.
 - Strengthen the role of the vocational centre coordinator in provinces.
 - Develop institution plans.

Responsibilities

Parents and the community will be responsible for:

- the payment of parental contributions
- participating in Parents and Citizen activities.

Centre Boards of Management will be responsible for:

- the recommendation of instructors for appointment
- planning for infrastructure requirements
- the administration of short courses.

Provincial governments will be responsible for:

- the completion and endorsement of Provincial Education Plans
- the maintenance of centres
- the enrolment of students
- the creation of necessary teaching positions
- the appointment of instructors
- identifying the types of courses to be offered in centres
- the development of local curricula.

The National Government will be responsible for:

- the payment of instructor salaries in an efficient and timely fashion
- pre-service training of vocational centre instructors
- curriculum development and accreditation
- provision of inspectoral services
- the development of criteria for the registration of centres.
- provision of opportunities for teacher development
- the allocation of instructors to provinces
- the development of policy relating to school subsidies.

Major outcome

A cost-effective technical education system, both public and private, that is responsive to change and offers a wide range of courses appropriate to, and accredited by, industry.

Access

Minor outcome T1:

A technical and business education and training system which will increase opportunities for all.

Access, to include the disabled and increased opportunities for women, will be broadened through the establishment of a national system encompassing both public and private providers. Better access for persons from disadvantaged groups, specially designed programs and more flexible delivery will ensure that the institutions more readily meet the needs of all. A priority will be given to the further development of distance education initiatives.

A regulatory system established by 2007.

The three key players in the provision of technical education and training are the National Apprentice and Trade Testing Board and the National Training Council, both of the Department of Labour and Industrial Relations, and the Department of Education through the Division of Technical Vocational Education and Training. It is the responsibility of the Department of Labour and Industrial Relations to ensure that there are no duplication of functions and that all regulatory functions are carried out. This will be achieved through improving coordination, either by strengthening the capacity of existing bodies or by forming an overall regulatory body. Advice will be taken from industry, business and community leaders in order to provide a policy framework. The Department of Labour and Industrial Relations would be responsible for policy, planning, curriculum and regulation across the system. It would produce a National Training Plan in order to establish and prioritise training needs. A National Qualifications Framework will be established for both public and private institutions that will define and monitor curriculum content and standards.

The body will require the registration and licensing of all providers. It will establish the process, criteria and standards for the registration of providers that seek to offer approved qualifications as defined in the National Qualifications Framework. Providers will be registered for a range of training products and services within defined areas of expertise. The process of registration will commence with the authority conducting a compliance audit prior to registration being awarded.

Table 37 shows projected full-time equivalent enrolment assuming a conservative five per cent annual increase.

Table 37: Projected full-time equivalent enrolments, 2005 to 2014, selected years.

	2005	2008	2011	2014
Enrolment	2,605	3,015	3,490	4,041

Strategies and Activities

- Develop National Training Plan.
 - Conduct workforce needs analysis.
- Ensure a suitable number of student places at registered providers to satisfy the needs of industry and business.
- - Relate the training places at registered providers to the National Training Plan.
 - Enrol students from disadvantaged groups.
 - Provide adequate infrastructure and materials.
- Register public and private providers
 - Develop criteria for the registration of providers.

Quality curriculum and monitoring

Minor outcome T2:

High quality technical and business education and training programs that are cost-effective, flexible and responsive to changing trends.

All courses modularised by 2007.

Programs will be developed which are driven by industry and business with support from other stakeholders including teachers, education policy makers, non-government organisations and the community. It is important that as well as being suitable for industry and business needs, courses should also be orientated to rural and village development. All courses should be modularised with flexible entry and exit points and, where possible, recognition of prior learning should be available. The Technical Training Certificate courses will be reviewed to ensure that they meet industry and business needs.

In order for the courses offered in public vocational education and training colleges to be able to meet technological and industry trends there will be a significant upgrading of existing tools, equipment and facilities.

National Qualifications framework established by 2007.

The curriculum section of the Technical Vocational and Education Training Division will establish a National Qualifications Framework. This framework will recognise that the schools, including the vocational centres and the higher education sector, have different industry and institutional linkages to those of technical education and training. The framework will link schools and initial skills qualifications through to those of higher education. The vocational and education training qualifications are based upon competency-based training in the seven core trade training areas, which will be extended to other areas.

The framework will recognise and support the need for specialised curriculum orientated towards rural and village development. These curricula will be underpinned by short courses in relevant areas such as building, conservation and maintenance.

Certain courses will be accredited allowing for articulation into higher education and training. Accreditation is the formal recognition of an institution or an activity by an authoritative body. Criteria will be developed for the accreditation of courses which will include content, standards and relevance. There will be much closer relationships between the registered providers and the universities.

There will be a review of the role of the technical education inspectors. The inspectors will be trained to deal with the changing role of the colleges.

Strategies and Activities

- Establish a National Qualifications Framework.
 - Discuss articulation with other education sectors.
 - Develop and approve curriculum.
 - Accredite courses

- Develop relevant teaching programs.
 - Review the Technical Training Certificate courses.
 - Develop new courses as prioritised in the National Training Plan.
 - Modularise all courses.
 - Liaise closely with industry and business.
 - Provide suitable tools and equipment.
- Provide advisory and appraisal services to all vocational education and training providers.
 - Conduct a review of the technical education inspections system.

Quality teacher education and training

Minor outcome T3:

A sufficient number of appropriately trained and qualified technical education and training lecturers and managers are provided.

Ninety five percent localisation by 2014.

The present, very high dependence upon expatriate contract lecturers will be reduced by the development of a meaningful staff development program both for college lecturers and headquarter staff. A localisation program will produce significant savings. Industry will be involved in providing opportunities for lecturers to gain experience with changes in technology. The establishment of a provision for specialist sessional staff would further enhance the capacity of an institution to provide more relevant and up-to-date courses.

Increased priority will be given to staff development in both headquarters and institutions with the updating of lecturer knowledge and skills of critical importance. Lecturers will be encouraged and supported to spend time in business or industry so as to further develop their capacities. The development of partnerships with business or industry will further extend staff. The technical colleges will increasingly provide professional development opportunities for vocational centre instructors to broaden their teaching capacity.

The University of Goroka will provide a flexible, mixed mode pre-service course for vocational and education training lecturers. A program will be developed for managers. Training programs will include leadership development as well as finance and entrepreneurial skills development.

Table 38 shows the staffing required to reach targets of 95 per cent localisation and a lecturer-student ratio of 1:15 during the Plan period.

Table 38: Projected Technical College staffing by status, 2005 to 2014, selected years

	2005	2008	2011	2014
Staffing	211	201	233	269
Student lecturer ratio	12.3	13.2	14.1	15.0
PNG lecturers	181	184	221	256
Non PNG lecturers	30	18	12	13
Localisation rate	85.7%	91.3%	95.0%	95.0%

If these targets can be achieved they will result in savings of about K65 million over the Plan period in lecturer salaries.

Strategies and Activities

- Reduce dependence on overseas contract labour.
 - Provide a mixed mode pre-service course.
 - Provide for specialist sessional staff.
 - Provide opportunities for staff to gain further industrial experience.
- Provide opportunities for vocational centre instructors to broaden their skills base.
 - Develop flexible courses suitable for vocational centre instructors.

Management

Minor outcome T4:

A technical education training system that is cost-effective for government

An increased role for business, industry and community will result in increased effectiveness at the institutional and program levels. Directions from the national training plan will ensure that program activity more readily meets the country's needs and, in particular, its economic directions. A range of approaches will be developed so as to measure student and employer satisfaction with the programs.

A lecturer student ratio of 1:15 by 2014.

There is a very wide range of student lecturer ratios and many lecturers do not have full teaching loads. Benchmark class sizes will be determined and teaching resources allocated accordingly. The target is a ratio of 15 to 1.

The Office of Higher Education will continue to support the colleges through the provision of scholarships to vocational education and training institutions. Colleges will, however, still be required to generate a considerable amount of income themselves through attracting self-sponsored students and undertaking other self-reliance activities. Over the period the possibilities of further cooperation between technical and business colleges and the universities will be explored.

The Department of Education will remain responsible for the operations of the Technical Vocational Education and Training colleges. This will include the deployment and management of all human, physical and financial resources in the colleges and the development of college infrastructure.

Efficiencies will be gained by greater accountability at the institutional level. Principals, with advice from their governing councils, will have greater responsibility for performance and output. This level of responsibility will include planning, and the leadership and management of staff and resources. Each of the colleges will have a philosophy and policy of continuous improvement and strategies for this will be built into college plans.

Principals will also encourage entrepreneurial activities that are related to the core business of the provider. This will principally be through the development of partnerships with business, industry and community so as to build capacity and resources, and to offset public cost and exposure. New financial management arrangements will be developed which will again give principals more autonomy, accountability and responsibility.

Strategies and Activities

- Technical education and training providers to become more self-sustaining.
 - Establish partnerships with businesses and other organisations.
 - Provide entrepreneurial training for college managers.
- Improve student lecturer ratios
 - Establish a group to determine the allocation of positions.
 - Determine benchmark class sizes.
- Give greater accountability to college managers.
 - Provide financial and management training to vocational education and training leaders.

ADMINISTRATION OF EDUCATION

Major outcome

The organisation at the national, provincial, district and school levels and its organisational systems and human resources provide an efficient and effective education system.

Changes and improvements to the administration of education by the Department of Education, Provincial Education Divisions and District Education Administrations are required to achieve the outcomes of the Plan.

Areas to be addressed will include structure and organisation, staffing problems, the establishment of efficient human resources management and other organisational systems at all levels. Attention will also be given to the ongoing training of planners and leader managers at all levels and to career planning including improved opportunities for women. Further provision will be made for the establishment of district education boards, where appropriate and in accordance with Provincial Education Acts, and the strengthening of Provincial Education Boards to oversee the implementation of this plan at the district and provincial levels.

Organisational improvement

Minor outcome A1:

The Department of Education has the capacity to strategically respond to changing conditions and government priorities.

The Department structure and functions reviewed by 2005.

The Department will be restructured to better reflect its core responsibilities under this Plan. This is in line with government objectives to rationalise the public service. The Department structure will be flexible enough to respond to change and will be reviewed as and when appropriate. Divisions within the Department will be required to produce annual plans and will be provided with support to complete them.

Links with provinces will be strengthened during the restructure with further staff being allocated to provide support to provincial and district officers. Further work will be consistent with the Services Improvement Program. This program has identified education as being one of the core government functions that requires improvements in service delivery.

The Education Act, the Teaching Services Act and provincial education acts will be reviewed where appropriate to reflect changes in the organisations functions and structure.

Private education institutions will be encouraged at all levels of the system. The process of registering permitted schools and their ability to access school fee subsidy and funds from a Grade 8 Graduate Incentive Scheme will be reviewed. All private education institutions will be monitored by the respective inspectors on a regular basis to ensure that standards are being upheld.

The Department of Education will look to more effectively implement the *Organic Law on Provincial Governments and Local-level Governments* with a view to making the delivery of education services more efficient. It is proposed that provincial education advisers become directly answerable to the Secretary for Education.

The process of policy development within the Department of Education will be reviewed with clear guidelines established to assign responsibility. The planning and research capacity of the Department will be strengthened to ensure that the Department has the evaluative information to inform its policy development, the ability to conduct studies to support the monitoring and evaluating of the Plan, and the capacity to central and provincial planning and decision making functions.

Provincial education plans produced and endorsed by end of 2006.

Provincial Education Boards will need to play a more significant role in managing education at the provincial level. Provincial and district plans will be produced with technical assistance from officers of the Department of Education which will be consistent with this Plan. The financial model produced as a part of the *Papua New Guinea Education Sector Affordability Studies* (AusAID, 2003) will be refined for use by the Department and use in the provinces will be investigated and appropriate adaptations made

Annual forums established with churches, donors and NGOs by 2005.

A more coordinated approach, to include regular dialogue, will be taken to donor assistance to ensure that there is minimal duplication and that correct procedures are followed in the feasibility process, and in the design and the development of projects. Department staff will support those in the provinces, districts and institutions in their efforts to provide education development.

The major stakeholders in education will be consulted by the Department on a regular basis. Annual forums will be held with the church agencies involved with the administration of schools, other government departments and non-government organisations.

HIV/AIDS policy and plan completed and implemented by 2007.

The Department will take a proactive role towards the sensitive issue of HIV/AIDS. A Department wide policy will be developed following consultation with relevant agencies.

Being able to read and write and to have basic numeracy skills is a fundamental educational requirement for all. To this end, the Department will continue to support the work of the National Literacy and Awareness Secretariat and to improve linkages with the Department of Community Development and non-government organisations to raise literacy and numeracy levels from the present 56 per cent to 70 per cent.

Strategies and Activities

- Restructure the Department and improve its systems to make it more efficient and effective in the delivery of its core functions.
 - Conduct a review of the organisational capacity of the Department, including its structure.
 - Build the capacity of the Department by improving its key organisational systems and practices.
- Amend all education related legislations.
 - Review the Education and Teaching Service Acts.
 - Review the status of provincial education acts.
- Develop annual Department of Education plans.
 - Develop annual divisional plans.
 - Provide training opportunities for divisional planning staff.
- Provide an efficient system for the registration and monitoring of private education institutions.
 - Review existing process and practices.
 - Monitor all private education institutions.
- Review the guidelines and processes to ensure research-driven policy development.
 - Establish a well-resourced and equipped policy capacity.
 - Provide training opportunities for Departmental policy staff.
- Establish a well-resourced and equipped planning and research capacity
 - Provide advice on policy development.

- Conduct long and short studies to support policy development and the monitoring and evaluation of the Plan.
- Provide training opportunities for Departmental research staff.
- Cooperate with outside research organisations in the undertaking of major studies.
- Develop a coordinated approach to donor assistance.
 - Develop an effective system for the monitoring and reporting of donor-funded projects.
 - Provide support to provincial and district authorities in the development of project proposals.
- Support effective implementation of the Organic Law on Provincial Governments and Local-level Governments by strengthening the integration of administrative processes.
 - Regularly review service delivery processes in the provinces and districts.
 - Provide guidelines for the establishment of district education boards.
 - Monitor and evaluate the implementation of delivery of services at the district level.
 - Enforce procedures for the appointment of provincial education advisers.
- Develop provincial and district education plans consistent with National Government policies and priorities.
 - Adopt and adapt the Affordability Study financing model as a planning tool for the development of plans at all levels.
 - Conduct planning workshops and training for provincial and district leader managers.
- Develop, communicate and implement an HIV/AIDS policy for the Department of Education.
 - Liaise with other appropriate government bodies and non-government organisations in developing and implementing a plan.
 - Provide awareness to all education officials at the national, provincial and district levels.
 - Monitor implementation of the Plan.
- Strengthen relationships with major stakeholders
 - Facilitate regular forums with relevant government bodies, church agencies and non-government organisations.
- Develop an implementation plan at all levels for the Gender Equity in Education Policy.
 - Provide training for officers at all levels.
 - Monitor the implementation of the policy.
- Support improved literacy and numeracy
 - Manage the delivery of literacy and numeracy services through NLAS.
 - Support program delivery in collaboration with other government departments and agencies.

Human resources management

Minor outcome A2:

Human resource systems and programs established for all levels of staff in the national education system.

Human Resource Development Policy completed by 2005.

Increase the percentage of executive positions at Grade 16 and above occupied by women.

A Human Resources Development Policy will be developed following a review of existing practices in the Department. Linked to this will be a Human Resources Development Plan for the Department. The policy and plan will include strategies for succession planning and targeted career development to identify talented officers, female and male, and provide them with support for accelerated progress. Particular emphasis will be placed on identifying women capable of taking up senior positions with the Department of Education and to ensure that they are given consideration in appointment to executive positions at Grade 16 and above in order to address the current gender imbalance. An equal opportunities policy will be developed.

Human Resource Development plan completed by 2005.

Training opportunities and courses will be tailored to provide officers in the Department of Education with the specific skills required to undertake their day-to-day core responsibilities. To strengthen the Department's ability to lead the implementation of the Plan, priority will be given to the development of an integrated, work-based Senior Executive Development Program. This could include opportunity for selected senior executives to gain higher academic qualifications.

Where possible, courses will offer accreditation to the major universities. However, increasingly the focus of training will be on short development programs embedded in the immediate challenges of the workplace, with the object of improving organisational capacity through building key work-related capabilities. Apart from affordability reasons, there is a strong body of research demonstrating that the most effective development programs are those which are workplace based and integrated with current work challenges.

Training programs will be developed and delivered for provincial and district education personnel. These will build on earlier initiatives and include key planning and management skills and will address the need to train a cadre of suitable officers at these levels. They will also be consistent with the Capacity Building and Structural Improvement Program, an initiative of the Public Service Reform Management Unit.

Human Resources Management Procedures manuals in place by 2006.

Development will continue with the payroll system to ensure that it is responsive to change and becomes a fully-fledged human resources management system. This will be consistent with the main government payroll and human resources system. New procedures manuals, allied to a staff training program, will be in place by 2006 following the full implementation of the Human Resource Management payroll system. A critical part of the process will be the conduct of teacher audits annually from 2006. The current practice of decentralising some aspects of the payroll system will be reviewed.

Annual teachers audits conducted from 2006.

Teacher absenteeism is acknowledged as being a major problem that impacts on student learning and retention. A review will be conducted with a view to improving the monitoring of student and teacher attendance.

Strategies and Activities

- Develop and implement an appropriate Human Resource Development Policy and Plan for the Department.
 - Provide work-based training for all public servants in the Department.
 - Provide senior managers of the Department with targeted training in order to improve their capacity to lead the organisation.
 - Develop a National Accreditation Policy to be articulated throughout all institutions and agencies.
 - Carry out regular assessments of training needs.
- Develop and implement a program for the training of education staff at the sub-national level.
 - Provide training for district and provincial staff.
 - Carry out regular assessments of training needs at the national, provincial and local levels.
- Develop an equal opportunities policy.
 - Develop an implementation plan for the policy.
 - Identify and support officers and teachers from disadvantaged groups suitably qualified for rapid promotion.
- Improve the payroll system.
 - Conduct annual teacher audits.
 - Continue to develop the Human Resource Management payroll system.
 - Develop procedures manuals by 2006.
 - Review the decentralisation of the salaries function.

- Improve the appointments system.
 - Review existing procedures and processes.
 - Improve the data management system.
- Improve procedures for monitoring student, teacher and education official attendance.
 - Review current processes and practices.

Financial management

Minor outcome A3:

Budgeting and financial systems and processes are managed and sustainable.

Effective budget and planning processes integrated and implemented at national and local-levels by 2007.

Planning and budgeting processes will be integrated. Divisional budgets will be linked to divisional annual plans and made consistent with this National Education Plan. Relevant divisions will be strengthened in order to effectively monitor disbursement and receipt of funds. The Department will play a greater role in the preparation and approval of provincial and local-level government education budgets to ensure consistency with national objectives.

Financial and procurement systems reviewed and strengthened by end of 2005.

Present financial control systems, to include those of the trust accounts, will be reviewed and strengthened to ensure that best practice is followed. Specialised training will be provided as necessary.

A budget forecasting capacity will be developed within the Department through the establishment of a section within the division responsible for budgeting. This will allow the Department to prepare a medium term budgeting framework.

Master assets and management register designed and in place by 2006.

There will be a coordinated centralised system of procurement established and the distribution of school and awareness materials will be rationalised. Running alongside this will be a master assets management register that will improve the process of maintaining the assets of the Department. A review will be carried out into the printing requirements of the Department of Education with a view to rationalisation.

Cost recovery and income generating activities will be encouraged and systems put in place to ensure that all monies collected are suitably accounted for. Affordability for the clients should be ensured. Sales outlets will be established for Department of Education publications.

Strategies and Activities

- Integrate planning and budgeting processes at all levels of education
 - Review of procedures manuals and budget reporting systems.
 - Provide a relevant training program for finance and budgeting officers.
 - Establish a budget forecasting section within the Department.
 - Provide support to provinces and district officials in the formulation of education budgets.
- Strengthen control systems to ensure disbursement and receipts of funds are as stipulated in the *Public Finance Management Act*.
 - Review financial processes.
 - Improve the effective management of trust accounts.
 - Strengthen the capacity of the accounts branch.
- Generate revenue from cost recovery activities.
 - Establish a process for income generation and cost recovery consistent with financial regulations and service delivery obligations.
 - Establish sales outlets for Department of Education publications.
- Establish an effective procurement, printing and distribution system for all equipment and materials.
 - Review of current practices and policies.

- Establish a system of coordinated centralised procurement and printing.
- Develop a master assets register.

Information communications technology

Minor outcome A4:

Information communications technology systems and processes developed to support the management of educational programs.

Information and communications systems at all levels of the system will be reviewed and strengthened in order to allow for ready retrieval, transmission and use of data. The Department will take a more strategic approach to the management of information communications technology so that it can be fully utilised in the delivery of information and education services.

Information communication technologies policies finalised by 2005.

An information technology policy and plan will be put in place that is consistent with best practice. This will include procedures for the maintenance and replacement of computer hardware and software and the setting of minimum standards and practices. Different options will be investigated to enable reliable communications, both electronic and otherwise, between the national, provincial and district levels of education.

Information communication technologies plan finalised and implementation begun by end of 2006.

Greater use will be made of the latest technologies, both communication and information, to provide additional resources to be used for teaching and learning in schools and for community awareness purposes. This will include an extension of the current use of television.

The Department will also centralise the collection and storage of its planning data. New census forms will be developed to ensure that data is collected in the form that is required for the Information System. This will cover among other things enrolments, age of students, staffing and infrastructure. All data will be disaggregated by gender.

A centralised system for collection and storage of data in place by 2006.

The Department will review its current processes and practices in records management and the archiving of both paper and electronic information. This will be carried out in 2005. A computerised records management system will be put in place that will allow for efficient access to and retrieval of documents and other information. A file audit will be conducted in all divisions to be accompanied by a training of filing clerks following an update and reprinting of the departmental file index.

The timely collection of data will be supported by a strong research capacity that will drive policy development and disseminate findings.

Strategies and activities

- Use appropriate information communications technology for flexible and effective dialogue between all levels of administration and stakeholders.
 - Develop an Information Technology Plan and Policy for the Department.
 - Liaise with appropriate authorities regarding future opportunities in communications technology to strengthen links between the national, provincial and local levels of education.
 - Strengthen all forms of electronic communication such as email and worldwide web access for schools and for district, provincial and national education offices.
- Investigate the use of ICT for delivering teaching programs and supporting learning and assessment in schools.
 - Support the national media centre and distance education modes using information communications technology as it becomes available and is affordable and sustainable.

- Establish a broadcasting system to support curriculum and more effective communications.
 - Train media centre personnel.
 - Establish broadcasting system and equipment.
- Enhance records management and archiving of information.
 - Review and enhance current practices and procedures.
- Establish a fully developed Education Management Information System unit at the national and local levels.
 - Review procedures and census forms for the accurate and timely collection of data disaggregated by gender and age.
 - Centralise data storage and access within the Department.
 - Rationalise the collection of data by the Department from schools, districts and provinces.

Communication systems

Minor Outcome A5:

Communication systems and processes are effective for producing and disseminating information and raising awareness.

Media and Communications Policy and Plan finalised and implemented by the end of 2005.

This Plan will be supported by a major awareness campaign designed to reach even the most remote parts of the country. The awareness program will be at many different levels ranging from the executive level to the school and local community. It will focus primarily on the obligation that all parents have to enrol their children at school and ensure that they attend. The program will also emphasise the responsibilities that communities have in relation to the operations and development of their schools.

Awareness strategy developed and implementation commenced by beginning of 2005.

A variety of forms of media will be utilised, bearing in mind that the most effective way of reaching remote rural communities remains through face-to-face contact. The capacity of the Department to be able to develop relevant awareness materials will be increased and supported. Existing materials will be reviewed. The review will bear in mind the fact that information has got to reach education professionals in the field as well as the community at large. An innovative campaign will be developed to include strategies such as the use of drama groups. The use of the public media to disseminate information will be maximised through the strengthening of relationships and regular production of media releases.

The Department of Education will write, produce and distribute news and information on a regular basis to disseminate and promote education policy and practices. This news and information will be distributed to education officers and schools, the public media and civil society. A policy will be developed to preserve copyright of all Department of Education publications.

Review of publication, printing and distribution functions completed by end of 2005.

The format and content of the annual bulletin providing enrolment and staffing statistics will be reviewed. It will become more analytical in nature, include graphical information, be available in both hard and soft copy and also provide enrolment and staffing projections. It will also be prepared in such a way that it can also be used as an awareness document.

A Department website will be established that will carry official Department notices, awareness publications and other information. Advances in information communications technology will be harnessed to provide community awareness materials in an increasing number of formats.

There will be a complete review of the publication, printing and distribution functions and capacity within the Department. This will be carried out with a view to rationalising the entire process and increasing capacity to realistic and sustainable levels.

Library and information services will be developed to support and complement the education process. Provinces will be encouraged to establish facilities at the provincial and district levels. These can then be used to support and complement the school curriculum. Existing school libraries should be used to serve as information centres for the local communities and distance education students.

Strategies and Activities

- Develop and implement an awareness policy for the Department.
 - Develop and implement an awareness strategy to support the implementation of the National Education Plan.
 - Identify target groups and appropriate strategies to cater for these.
 - Review existing awareness and information materials.
 - Expand the scope of the community awareness program.
 - Increase the capacity of the Department to undertake an effective awareness program.
 - Increase the capacity of education officers, teachers and community organisations at the provincial and district levels to deliver effective awareness.
- Disseminate news and information on a regular basis to disseminate and promote education policy and practices.
 - Write, produce and distribute news and information to education officials, schools, communities and the public media.
 - Develop copyright guidelines for Department of Education publications.
- Establish a Departmental website.
 - Design and manage the website.
 - Provide training on website development and management.
 - Develop, monitor and update website content.
- Develop a relevant and attractive annual statistical bulletin.
 - Strengthen the analytical capacity of the Department of Education.
- Rationalise all Department publication and print functions, storage facilities, and distribution networks.
 - Conduct review and identify cost-effectiveness measures.
- Review productions in all media.
 - Develop products such as CD ROMs, video and audiotapes for use as training, teaching and awareness resources.
- Incorporate library and archive plans into provincial education plans.
 - Review existing situation
 - Develop guidelines for plans.

Section 5

IMPLEMENTING THE PLAN

IMPLEMENTING THE PLAN

This section provides a timeline for the implementation of the Plan. Specific strategies and activities for each minor outcome in the Plan are listed, along with an indicative schedule for their implementation and completion. Detailed implementation plans will be provided each year through the annual plans of the Department of Education, provinces and districts.

Key:

-  indicates full implementation
-  indicates preparatory activities and reviews

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Elementary education										
Minor Outcome E1										
Establish and maintain a sufficient number of schools.										
Complete provincial and district plans for the implementation of elementary education.										
Determine quotas for the number of schools to be established annually in each province and district.										
Develop guidelines for communities and local-level governments to use for the establishment of elementary schools.										
Develop guidelines, to include building dimensions, for elementary school classrooms and other buildings.										
Develop an efficient process for the registration of schools and teachers.										
Conduct a review of elementary school structures.										
Improve retention.										
Review the enrolment policy to include issues of enrolment, attendance and repetition.										
Conduct awareness on the value of schooling, especially the importance of sending girls to school.										
Minor Outcome E2										
Develop locally relevant programs in accord with the national curriculum.										
Support the formation and define the role of district curriculum committees as required.										
Provide support for elementary schools in the development and use of community-based support materials.										
Review, develop, produce and distribute curriculum and support materials for all subjects at the elementary level.										
Develop student materials and resources.										
Develop teacher materials and resources.										
Develop locally based materials in the vernacular.										
Complete orthographies as required.										
Determine criteria and identify orthographies to be developed.										
Establish an implementation process for orthography development.										
Monitor and evaluate teaching and learning to enhance standards.										
Develop and trial a qualitative means of monitoring and evaluating teaching and learning.										
Provide supervisory services to all elementary schools and teachers.										
Review and redefine the elementary supervisory service.										
Community involvement in the appraisal of teachers.										
Determine a system of community involvement in the appraisal of teachers.										
Minor Outcome E3										
Provide supervisory services to all elementary schools and teachers.										
Review the system for the funding of elementary teacher training fees.										
Review guidelines for communities to use for the selection of teachers.										
Provide professional development opportunities for elementary school teacher and trainers										

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Review the roles and provide support for those associated with elementary teacher training.										
Enhance teachers' knowledge of the reform curriculum and multi-grade teaching and improve their ability to monitor and assess pupils learning.										
Provide leadership, management and finance training for teachers-in-charge.										
Provide leadership training opportunities for women teachers.										
Minor Outcome E4										
Develop and implement a sustainable, affordable and appropriate school fee subsidy policy.										
Determine minimum basic supplies for elementary school needs.										
Review and administer the system of procurement and distribution of basic school supplies.										
Make efficient and rational use of teachers.										
Establish Position Allocation Committee.										
Apply agreed criteria, including multi-grade teaching, for the allocation of teachers to each province.										
Primary education										
Minor Outcome P1										
Provide and maintain a sufficient number of schools.										
Completion and implementation of provincial and district plans for primary education.										
Completion of school plans to include both infrastructure and quality components.										
Determine quotas for the number of Grade 7 classes to be established annually in each province.										
Local-level governments to budget grants for infrastructure and maintenance.										
Review the structure of primary schools.										
Develop guidelines, to include building dimensions, for primary school classrooms and other buildings.										
Provide support to remote schools.										
Review the criteria for a disadvantaged school and classify primary schools accordingly.										
Encourage teachers to take up positions in remote schools by providing agreed allowances and non-financial incentives, such as minimum standards of housing.										
Develop and implement a system of return of service for teachers college students.										
Improve retention.										
Conduct an awareness program on the value of schooling.										
Develop guidelines, with specific strategies, to improve retention.										
Review the enrolment policy to include issues of enrolment, attendance and repetition.										
Conduct trials at selected, targeted schools building on existing initiatives.										
Commission further research as necessary.										
Minor Outcome P2										
Review and produce curriculum and support materials for all subjects at the primary level on a regular basis.										
Develop student materials and resources.										
Develop teacher materials and resources.										
Support the implementation of the primary reform curriculum.										
Train district and school officials.										
Develop, produce and distribute locally-based curriculum support materials in the vernacular.										
Improve access to quality distance education materials in the upper primary grades.										
Measure and monitor education standards at the primary level of education.										
Review the Certificate of Basic Education Examination to ensure consistency with the reform curriculum.										

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Implement the Curriculum Standards Monitoring Test.										
Develop and trial a qualitative means of monitoring and evaluating teaching and learning.										
Support the implementation of the HIV/AIDS policy.										
Develop and provide appropriate teacher and student materials.										
Provide advisory and appraisal services to all primary schools.										
Ensure all schools are visited on a regular basis by inspectors.										
Train, and then monitor, head teachers in teacher appraisal techniques.										
Greater community involvement in the management of schools.										
Determine a system of community involvement in the appraisal of teachers.										
Endeavour to achieve a more equal representation of genders on Boards of Management.										
Minor Outcome P3										
Provide the required number of appropriately trained teachers.										
Identify teacher demand on an annual basis, particularly from areas with demonstrated teacher shortages, and establish further places as required.										
Conduct teacher supply and demand study in 2009.										
Continually review and update the Primary Teachers College curriculum.										
Review and strengthen inclusive teaching practices in the colleges and in the curriculum.										
Train teachers as curriculum developers.										
Develop and provide appropriate HIV/AIDS, substance abuse and gender equity materials for trainee teachers.										
Provide professional development opportunities for primary school teachers.										
Review and strengthen the role of the Papua New Guinea Education Institute.										
Develop suitable staff development programs to include student counselling.										
Provide leadership training opportunities for women teachers.										
Provide professional development opportunities for primary school managers.										
Provide supervision, planning and management workshops for head teachers and senior teachers.										
Provide training for school asset management to include the storage and care of textbooks and procurement of basic school materials.										
Provide professional development opportunities for male and female Primary Teachers College staff.										
Increase teacher educators' knowledge of gender equity and children with special needs, bilingual teaching and assessment processes.										
Provide teacher educators with professional development in targeted areas.										
Improve linkages and coordination between the Primary Teachers Colleges and the divisions in the Department responsible for curriculum development and inspections.										
Support the effective operation of Primary Teachers Colleges.										
Establish a national framework for standards in teacher training.										
Review the role of the Teacher Education Board of Studies.										
Develop and implement individual college plans.										
Standardise administrative and financial practices across all colleges.										
Improve coordination between the Department of Education and the Primary Teachers Colleges.										
Introduce college-based staff appraisal.										
Minor Outcome P4										
Develop and implement a sustainable, affordable and appropriate school fee subsidy policy.										
Develop a formula to redistribute subsidies from post primary to basic education.										
Ascertain realistic and affordable levels of parental contributions.										
Reduce the burden of school fees on parents through schools undertaking self-reliance activities.										
Make efficient and rational use of teachers.										
Establish a Position Allocation Committee.										

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Develop and apply a set of criteria for teacher deployment and allocation to provinces.										
Ensure that local language teachers are appointed to Grade 3 classes.										
Secondary education										
Minor Outcome S1										
Establish and maintain a sufficient number of schools.										
Complete provincial and district plans for the implementation of elementary education.										
Redesignate existing vocational institutions offering a lower secondary education as secondary schools.										
Maintain and rehabilitate all schools rather than construct new schools.										
Consider and implement the findings of the review of the national high schools.										
Review procedures for approving the expansion of secondary schools.										
Determine the number of new classes required on an annual basis and allocate these classes to provinces.										
Establish and enforce agreements with provincial governments concerning guidelines for the expansion of secondary schools.										
Minor Outcome S2										
Design, develop and produce inclusive curriculum and assessment support materials for all subjects at the secondary level.										
Review all current secondary curriculum and assessment materials.										
Liaise with vocational curriculum officers in the development of practical units for the lower secondary curriculum.										
Develop curriculum and assessment materials.										
Design and develop multimedia support materials for students and teachers.										
Revise assessment and reporting procedures and examinations to match the reform curriculum.										
Review assessment and examination procedures for the School Certificate and Higher School Certificate Examinations.										
Provide inspectoral services to all secondary schools.										
Visit schools on a regular basis.										
Develop a relevant and effective training program for secondary inspectors.										
Train and then monitor principals in teacher appraisal techniques.										
Monitor and evaluate teaching and learning to enhance standards.										
Develop and trial a qualitative means of monitoring and evaluating teaching and learning.										
Support counselling and guidance services for secondary school students.										
Train school-based counsellors and guidance officers.										
Consult with the social welfare division of the Department of Community Development.										
Support the provision of counselling services by consulting outside agencies and by engaging local personnel and parents.										
Schools involve parents to a much greater degree in the education of their children.										
Minor Outcome S3										
Provide the required number of appropriately trained teachers.										
Review and update the pre-service curriculum to be consistent with the secondary reform curriculum.										
Establish required further places for teacher trainees.										
Provide opportunities for serving teachers without a teaching qualification to gain a Post Graduate Diploma in Education.										
Develop a program of professional development for all teachers.										
Conduct in-service training courses to develop knowledge and understanding of the reform curriculum and new assessment and examination requirements.										
Develop courses using mixed modes of delivery.										
Provide school management training.										
Develop courses on key issues such as planning, financial and asset management.										

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Minor Outcome S4										
Develop and implement a sustainable, appropriate school fee subsidy policy.										
Establish a scholarship scheme for talented students.										
Reduce the burden of school fees on parents through schools undertaking self-reliance activities.										
Deduct the cost of examinations from school fee subsidy allocations.										
Make efficient and rational use of teachers.										
Establish a Position Allocation Committee.										
Establish criteria for the allocation of teachers to achieve a more equitable distribution of teachers.										
Flexible, Open and Distance education										
Minor Outcome F1										
Provide an institution with flexible, open and distance modes of delivery that has the facilities to enrol 25 per cent of Grade 10 graduates and ten per cent of Grade 12 graduates who are unable, or do not wish, to continue in the formal education system.										
Conduct a needs assessment of the current college facilities.										
Prepare a plan to progressively implement changes to flexible, open and distance education facilities.										
Increase the number of providers of distance education.										
Provide flexible, open and distance modes of delivery using vocational centres and private providers.										
Minor Outcome F2										
Review and redesign current curriculum and college practices.										
Review the current curriculum.										
Identify points of articulation between the college and the school system and develop an appropriate policy.										
Adapt the reform curriculum in the upper primary, lower secondary and upper secondary grades for use in distance education mode.										
Develop and deliver other programs such as adult literacy and other short modular courses.										
Utilise information communications technology as it becomes feasible.										
Develop an appropriate assessment, examination and certification system.										
Review the current examination and assessment policies in light of the reform curriculum in secondary education.										
Review assessment processes to be consistent with national requirements.										
Rationalise the central academic records system to be linked to all provincial distance education centres.										
Establish a materials production and procurement system that is cost-effective and efficient.										
Review current materials production and distribution systems for distance education.										
Rationalise the production and distribution systems consistent with the National Policy for the Procurement, Distribution and Storage of Curriculum Materials.										
Minor Outcome F3										
Increase the rate of localisation.										
Upgrade the technical capacity of Papua New Guinean staff through training programs.										
Improve the capacity of college staff to produce curriculum and assessment materials for distance education.										
Upgrade the skills of college staff in curriculum design and assessment.										
Train college staff in specialist areas such as the design, preparation and production of non-print distance education materials.										
Minor Outcome F4										
Restructure the College of Distance Education.										

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Review the College of Distance Education to enhance the capacity to meet projected enrolment targets.										
Monitor improvements consistent with national education system prerequisites.										
Establish a standards and monitoring system.										
Strengthen the capacity of the Board of Studies for flexible, open and distance education.										
Vocational education and training										
Minor Outcome V1										
Establish and maintain a sufficient number of vocational training institutions.										
Determine criteria for the registration of vocational centres.										
Complete vocational education component of provincial education plans.										
Develop institution plans.										
Liaise with other providers and the Department of Community Development.										
Facilitate and monitor the implementation of provincial vocational education system reform.										
Rationalise provincial vocational training centres.										
Develop criteria for the registration of centres.										
Provide infrastructure to meet training program needs.										
Upgrade and renovate existing infrastructure based on training program specifications.										
Provide new infrastructure as required by vocational program specifications.										
Provide opportunities for private providers to become registered.										
Establish and strengthen linkages with other training providers and establishments.										
Minor Outcome V2										
Review and develop appropriate competency-based training programs for centres based on the economic and employment needs of provinces, districts and individual communities.										
Adapt existing full-time courses for maximum one year duration.										
Identify, develop and modularise new courses.										
Review and adapt existing short courses including Skills Training Resource Unit materials.										
Establish skills units in all provinces.										
Support the production of locally based curriculum.										
Conduct community development programs in and out of schools.										
Provide adequate tools and equipment to service training programs.										
Procure relevant tools and equipment for conducting training programs based on course specifications.										
Provide advisory and appraisal services to all vocational institutions.										
Conduct a review of the vocational education inspections system.										
Strengthen the operational functions of the inspectors.										
Develop a greater understanding between the vocational institutions and other departments and agencies.										
Conduct inter-departmental meetings at the national, provincial and district levels to foster greater understanding of, and strengthen links with, the vocational centres.										
Increase and strengthen links between community and industry.										
Establish a database of courses, providers and instructors from various agencies, communities and other departments.										
Develop an awareness program to change public perception of vocational education.										
Provide incentives for institutions to offer short courses for the community at large.										
Allocate start up capital for institutions meeting agreed criteria.										
Minor Outcome V3										
Provide the required number of appropriately trained instructors.										
Review delivery mode and accreditation of the Diploma in Vocational Education and Training.										

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Articulate this to the Diploma in Technical Education and Training.										
Adapt the residential program into distance mode.										
Provide professional development opportunities for vocational centre instructors.										
Conduct skills audit of instructors.										
Identify, develop and deliver courses to include entrepreneurial and adult education skills.										
Develop bilateral training arrangements.										
Provide professional development opportunities for vocational centre managers.										
Conduct skills audits of managers.										
Identify, develop and deliver courses to include planning, financial and asset management and entrepreneurial skills.										
Minor Outcome V4										
Develop a system of greater agency involvement in the administration of vocational education.										
Grant greater responsibility to agencies for the management of centres to include the management of teachers.										
Develop and implement a sustainable, affordable and appropriate school fee policy.										
Conduct a review to ascertain the viability of a Grade 8 Graduate Incentive Scheme allowing them to enrol at any approved institution.										
Determine, on an annual basis, the cost of delivering vocational education programs.										
Make efficient and rational use of vocational institution staff.										
Establish a Position Allocation Committee.										
Conduct an annual teacher audit.										
Develop a culture of self-reliance in vocational centres.										
Include entrepreneurial skills in all training programs.										
Ensure programs in all vocational institutions enterprise driven.										
Promote the principles of good governance in the administration of vocational institutions.										
Develop appropriate systems for financial, inventory and asset management.										
Review guidelines for vocational centre Boards of Management.										
Strengthen the role of the vocational centre coordinator in provinces.										
Develop institution plans.										
Technical education and training										
Minor Outcome T1										
Develop National Training Plan.										
Conduct workforce needs analysis.										
Ensure a suitable number of student places at registered providers to satisfy the needs of industry and business.										
Relate the training places at registered providers to the National Training Plan.										
Enrol students from disadvantaged groups.										
Provide adequate infrastructure and materials.										
Register public and private providers.										
Develop criteria for the registration of providers.										
Minor Outcome T2										
Develop relevant teaching programs.										
Review the Technical Training Certificate courses.										
Develop new courses as prioritised in the National Training Plan.										
Modularise all courses.										
Liaise closely with industry and business.										
Provide suitable tools and equipment.										
Establish a National Qualifications Framework.										
Discuss articulation with other education sectors.										
Develop and approve curriculum.										
Accredit courses.										

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Provide advisory and appraisal services to all vocational education and training providers.										
Conduct a review of the technical education inspections system.										
Minor Outcome T3										
Reduce dependence on overseas contract labour.										
Provide training for Papua New Guineans.										
Provide opportunities for specialist sessional staff.										
Provide opportunities for staff to gain further industrial experience.										
Provide opportunities for vocational centre instructors to broaden their skills base.										
Develop flexible courses suitable for vocational centre instructors.										
Minor Outcome T4										
Technical Education and Training providers to become more self-sustaining.										
Establish partnerships with businesses and other organisations.										
Provide entrepreneurial training for college managers.										
Improve student lecturer ratios.										
Establish a group to determine the allocation of positions.										
Determine benchmark class sizes.										
Give greater accountability to college managers.										
Monitor the performance and output of all colleges.										
Administration of education										
Minor Outcome A1										
Restructure the Department and improve its systems to make it more efficient and effective in the delivery of its core functions.										
Conduct a review of the organisational capacity of the Department, including its structure.										
Build the capacity of the Department by improving its key organisational systems and practices.										
Establish and appoint regional curriculum officers.										
Amend all education related legislations.										
Review the Education and Teaching Service Acts.										
Review the status of provincial education acts.										
Develop annual Department of Education plans.										
Develop annual divisional plans.										
Provide training opportunities for divisional planning staff.										
Provide an efficient system for the registration and monitoring of private education institutions.										
Review existing process and practices.										
Monitor all private education institutions.										
Review the guidelines and processes to ensure research-driven policy development.										
Establish a well-resourced and equipped policy capacity.										
Provide training opportunities for Departmental policy staff.										
Establish a well-resourced and equipped planning and research capacity.										
Provide advice on policy development.										
Conduct long and short studies to support policy development and the monitoring and evaluation of the Plan.										
Provide training opportunities for Departmental research staff.										
Cooperate with outside research organisations in the undertaking of major studies.										
Develop a coordinated approach to donor assistance.										
Develop an effective system for the monitoring and reporting of donor-funded projects.										
Provide support to provincial and district authorities in the development of project proposals.										
Support effective implementation of the Organic Law on Provincial Governments and Local-level Governments by strengthening the integration of administrative processes.										
Regularly review service delivery processes in the provinces and districts.										

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Provide guidelines for the establishment of district education boards.										
Monitor and evaluate the implementation of delivery of services at the district level.										
Enforce procedures for the appointment of provincial education advisers.										
Develop provincial and district education plans consistent with National Government policies and priorities.										
Adopt and adapt the Affordability Study financing model as a planning tool for the development of plans at all levels.										
Conduct planning workshops and training for provincial and district leader managers.										
Develop, communicate and implement an HIV/AIDS policy for the Department of Education.										
Liaise with other appropriate government bodies and non-government organisations in developing and implementing a plan.										
Provide awareness to all education officials at the national, provincial and district levels.										
Monitor implementation of the policy.										
Strengthen relationships with major stakeholders.										
Facilitate regular forums with relevant government bodies, church agencies and non-government organisations.										
Develop an implementation plan at all levels for the Gender Equity in Education Policy.										
Provide training for officers at all levels.										
Monitor the implementation of the policy.										
Support improved literacy and numeracy.										
Manage the delivery of literacy and numeracy services through NLAS.										
Support program delivery in collaboration with other government departments and agencies.										
Minor Outcome A2										
Develop and implement an appropriate Human Resource Development Policy and Plan for the Department.										
Provide work-based training for all public servants in the Department.										
Provide senior managers of the Department with targeted training in order to improve their capacity to lead the organisation.										
Develop a National Accreditation Policy to be articulated throughout all institutions and agencies.										
Carry out regular assessments of training needs.										
Develop and implement a program for the training of education staff at the sub-national level.										
Provide training for district and provincial staff.										
Carry out regular assessments of training needs at the national, provincial and local levels.										
Implement and monitor the Department's Gender Policy.										
Develop an implementation plan for the policy.										
Identify and support female officers and teachers suitably qualified for rapid promotion.										
Develop an equal opportunities policy.										
Develop an implementation plan for the policy.										
Identify and support officers and teachers from disadvantaged groups suitable for rapid promotion.										
Improve the payroll system.										
Conduct annual teacher audits.										
Continue to develop the Human Resource Management payroll system.										
Develop procedures manuals by 2006.										
Review the decentralisation of the salaries function.										
Improve the appointments system.										
Review existing procedures and processes.										
Improve the data management system.										
Improve procedures for monitoring student, teacher and education official attendance.										
Review current processes and practices.										

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Minor Outcome A3										
Integrate planning and budgeting processes at all levels of education.										
Review of procedures manuals and budget reporting systems.										
Provide a relevant training program for finance and budgeting officers.										
Establish a budget forecasting section within the Department.										
Provide support to provinces and district officials in the formulation of education budgets.										
Strengthen control systems to ensure disbursement and receipts of funds are as stipulated in the Public Finance Management Act.										
Review financial processes.										
Improve the effective management of trust accounts.										
Strengthen the capacity of the accounts branch.										
Generate revenue from cost recovery activities.										
Establish a process for income generation and cost recovery consistent with financial regulations and service delivery obligations.										
Establish sales outlets for Department of Education publications.										
Establish an effective procurement, printing and distribution system for all equipment and materials.										
Review of current practices and policies.										
Establish a system of coordinated centralised procurement and printing.										
Develop a master assets register.										
Minor Outcome A4										
Use appropriate information communications technology for flexible and effective dialogue between all levels of administration and stakeholders.										
Develop an Information Technology Plan and Policy for the Department.										
Liaise with appropriate authorities regarding future opportunities in communications technology to strengthen links between the national and sub-national education levels.										
Strengthen all forms of electronic communication such as email and worldwide web access and for district, provincial and national education offices.										
Investigate the use of ICT for delivering teaching programs and supporting learning and assessment in schools.										
Support the national media centre and distance education modes using information communications technology as it becomes available and is affordable and sustainable.										
Establish a broadcasting system to support curriculum and more effective communications.										
Train media centre personnel.										
Establish broadcasting system and equipment.										
Enhance records management and archiving of information.										
Review and enhance current practices and procedures.										
Establish a fully developed Education Management Information System unit at the national and sub-national levels.										
Review procedures and census forms for the accurate and timely collection of data disaggregated by gender and age.										
Centralise data storage and access within the Department.										
Rationalise the collection of data by the Department from schools, districts and provinces.										
Minor Outcome A5										
Develop and implement an awareness policy for the Department.										
Develop and implement an awareness strategy to support the implementation of the National Education Plan.										
Identify target groups and appropriate strategies to cater for these.										
Review existing awareness and information materials.										
Expand the scope of the community awareness program.										
Increase the capacity of the Department to undertake an effective awareness program.										
Increase the capacity of education officers, teachers and community organisations at the provincial and district levels to deliver effective awareness.										

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Disseminate news and information on a regular basis to promote education policy and practices.										
Write, produce and distribute news and information to education officials, schools, communities and the public media.										
Develop copyright guidelines for Department of Education publications.										
Establish a Departmental website.										
Design and manage the website.										
Provide training on website development and management.										
Develop, monitor and update website content.										
Develop a relevant and attractive annual statistical bulletin.										
Strengthen the analytical capacity of the Department of Education.										
Rationalise all Department publication and print functions, storage facilities and distribution networks.										
Conduct review and identify cost-effectiveness measures.										
Review productions in all media.										
Develop products such as CD ROMs, video and audiotapes for use as training, teaching and awareness resources.										
Incorporate library and archive plans into provincial education plans.										
Review existing situation.										
Develop guidelines for plans.										

Section 6

FINANCING THE PLAN

FINANCING THE PLAN

The education system has gone through a remarkable period of expansion since 1995. This has largely been achieved, despite only minimal increases in funding, through the introduction of the elementary schools. This sector of the system is the most cost-effective due to:

- the responsibility for the infrastructure in the elementary schools resting with the community
- teacher training being carried out at the district and local level
- the lower salary costs of elementary school teachers.

Despite the reduction in unit costs that have been achieved in this area, the budget has been put under considerable pressure by the rapid rise in the number of teaching positions necessary to accommodate the new elementary schools.

The Department of Education's recurrent budget has remained basically the same in real terms over the last ten years. Salaries and personal emoluments now take up approximately 85 per cent of the appropriation after school subsidies have been taken out. This has meant that the Department of Education has not been able to fund core activities in recent years, such as inspectors' visits to schools or teacher pre-service and in-service training.

There is a need to rebalance Departmental administration by reducing the number of public servants and by providing better support, consistently with the government's right sizing initiative. Work has already begun on the Review of Organisational Capacity which will underpin the necessary restructuring. The Plan's provision for the Department's administrative costs reflects the need to effect this change.

A number of cost-effectiveness and cost recovery measures have been put in place in recent years. These include:

- The switch from a three to two year primary teacher education program. This has resulted in an increase in output of 50 per cent and been achieved through moving to a trimester year within the Primary Teachers Colleges.
- The increasing use of multi-grade teaching in elementary and primary schools. Multi-grade teaching is now a key part of all pre-service teacher training programs.
- The imposition of in-service fees for teachers attending residential programs.

The Plan recognises the dangers of making financial projections as far forward as ten years. All of the financial figures will be fully reviewed, and adapted as necessary, in both 2007 and during the five year update of the Plan. The Department will continuously monitor performance.

Costs of the Plan

The financing of the Plan will come from a variety of sources:

- National Government
- Provincial governments
- Local-level governments
- Church agencies
- Communities
- Parents.

Donor funding will be used to complement the funding provided by these sources.

National Government costs

The National Government will have to fund three main areas – teacher salaries, school subsidies and the costs of administering the system by the Department of Education.

Cost-effectiveness measures

Significant cost-effectiveness measures will be implemented in this Plan period to offset these costs. Critical among these are in the area of teacher deployment. Three specific sectors are noteworthy. These are:

- allocating teachers at one per class in the upper primary grades
- the reduction of class-teacher ratios in upper secondary
- the raising of both the lecturer-student ratios and the localisation rate in the technical sector.

Average class sizes have been set at 30 for Elementary, 45 for Grade 1, 40 for Grade 3, 35 for Grade 7, 42 for Grade 9 and 30 for Grade 11. This takes account of cost-effectiveness, the feasibility of achieving such targets and concerns about compromising quality. The overall effect of these cost saving measures and the imposition of criteria for the allocation of teachers will be a reduction in unit salary costs of some ten per cent over the Plan period in the general education sector.

Collectively, these measures will result in savings of more than K300 million over the Plan period. The table below shows savings by sector for selected years in comparison with the existing situation:

Table 39: Teacher deployment cost- effectiveness savings by sector (K'000s), 2005 to 2014, selected years.

	2005	2008	2011	2014
Upper primary	4,017	20,232	30,498	34,117
Upper secondary	2040.6	2107.9	2159.1	2221.0
Technical	319.5	1189.5	2033.4	2861.8
Total	6377.0	12032.6	18305.7	25315.2

Teacher salaries

The largest part of the education budget is devoted to the payment of teacher salaries and emoluments.

Table 40 shows total teacher emoluments that include provision for allowances and leave fares where appropriate. Tables 41 and 42 show teacher emoluments by unit cost and sector respectively.

Table 40: Total projected teacher emoluments by level (K'000s), 2005 to 2014, selected years

	2005	2008	2011	2014
Elementary	70,650.9	94,795.4	115,427.9	129,914.0
Primary	252,028.2	256,741.9	264,155.8	278,053.9
Secondary	56,315.3	55,763.3	59,634.1	66,365.9
Vocational	13,323.2	15,423.3	17,854.4	20,668.6
Technical	7,318.4	5,980.0	6,154.9	7,125.1
Teacher Colleges	4,767.1	4,767.1	4,767.1	4,767.1
Distance Education	1,004.9	1,004.9	1,004.9	1,004.9
Special Education	637.5	637.5	637.5	637.5
Elementary teacher training	3,648.0	3,648.0	3,648.0	3,648.0
Total	409,693.5	438,761.3	473,284.5	512,185.0

Table 41: Projected teacher emolument cost per student by level, 2005 to 2014, selected years (Kina)

	2005	2008	2011	2014
Elementary	213.1	221.6	220.3	215.0
Primary	402.8	385.1	373.2	363.2
Secondary	656.7	641.3	642.4	642.0
Vocational	705.0	705.0	705.0	705.0
Technical	2809.7	1983.3	1763.3	1763.3

Table 42: Total projected teacher emoluments by sector (K'000s), 2005 to 201, selected years

	2005	2008	2011	2014
Basic education	322,679.1	351,537.2	379,583.7	407,967.9
Post primary education	87,014.4	87,224.1	93,700.9	104,217.1

The average elementary school salary will continue to rise as a greater proportion of teachers become registered. The Department of Education will impose greater control over the allocation of teaching resources through the formation of a Position Allocation Committee, with representation from the Department of Education, Department of Treasury, the Teaching Services Commission and the provinces. This group will be responsible for:

- determining criteria for the allocation of teachers
- annually allocating the number of positions for each province to be based on agreed criteria.

School subsidies

The allocation of school subsidies will reflect the government's priority for basic education. All subsidy allocations will be included in the Department of Education budget and the total provided will rise in accord with rises in enrolment. Accordingly, the figures in the tables below show fund currently available through the education function as well as those under Department of Education control.

There will be much greater support for children in the elementary schools. Parents will be required to make greater contributions for the education of their children in the secondary schools. The following summarises the shifts that will take place in this Plan period:

- An incremental increase in the allocation to children attending Prep to Grade 2 classes as a prerequisite to the availability of education for all 6-year olds from 2012.
- Constant subsidy levels for those in Grades 3 to 5.
- Reductions in allocations to Grade 6 to 8 students in recognition of the fact that these are primary school classes.
- Constant subsidies for secondary school students with no added subsidies for boarding students.
- The introduction of a Grade 8 Graduate Incentive Scheme for all Grade 8 graduates. The funding made available under this scheme will be redeemable at any approved post primary education or training institution. It will replace subsidies previously allocated to Grade 9 secondary school students, vocational centres and the College of Distance Education.
- The introduction of scholarships for ten per cent of students in lower secondary education.

Tables 43 to 45 below show the amounts required for school subsidies and percentage allocations by sector in order to achieve targets. These figures will be reviewed in light of developments during the period of the Plan.

Table 43: Projected subsidy requirements by type (K'000s), 2005 to 2014, selected years

	2005	2008	2011	2014
Prep to Grade 2	15,092.4	23,454.5	39,999.4	54,378.3
Grade 3 to 5	16,471.5	18,570.6	20,489.5	22,814.6
Grade 6 to 8	11,800.3	14,171.2	16,674.3	18,561.9
Secondary	10,290.0	6,416.2	6,480.7	7,024.0
Vocational	2,834.5	0.0	0.0	0.0
Grade 8 Graduate Incentive Scheme	0.0	10,461.4	12,254.2	13,605.5
Scholarships	0.0	2,193.6	2,510.3	2,907.9
Distance Education	1,000.0	0.0	0.0	0.0
Total	57,488.7	75,267.5	98,408.4	119,292.3

Table 44: Percentage subsidy allocations by type, 2005 to 2014, selected years

	2005	2008	2011	2014
Prep to Grade 2	26.3%	31.2%	40.6%	45.6%
Grade 3 to 5	28.7%	24.7%	20.8%	19.1%
Grade 6 to 8	20.5%	18.8%	16.9%	15.6%
Secondary	17.9%	8.5%	6.6%	5.9%
Vocational	4.9%	0.0%	0.0%	0.0%
Grade 8 Graduate Incentive Scheme	0.0%	13.9%	12.5%	11.4%
Scholarships	0.0%	2.9%	2.6%	2.4%
Distance Education	1.7%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%

Table 45: Percentage subsidy allocations by sector, 2005 to 2014, selected years

	2005	2008	2011	2014
Basic education	75.4%	74.7%	78.4%	80.3%
Post primary education	24.6%	25.3%	21.6%	19.7%

Department of Education administration

The costs shown in Table 46 are for the recurrent divisional requirements. These are shown in percentage terms in Table 47. All costs are based upon 2003 values and on the current Department structure. Rises in goods and services are related to enrolment and staffing increases. These are in the areas of curriculum, inspections and examinations.

Further to the significant cost-effectiveness measures taken in the area of teacher salaries, other economies in administration will be investigated. These include:

- decentralising the annual ratings conferences for registration reports to build upon the regionalised elementary teacher conferences
- the charging of fees, to be deducted at source from the school fee subsidies, for the School Certificate and Higher School Certificate Examinations

Table 46: Department of Education divisional costs by expenditure category (K'000s), 2005 to 2014, selected years.

	2005	2008	2011	2014
Salaries	15,475.8	14,411.5	14,411.5	14,411.5
Goods and Services	9,378.9	9,848.9	10,303.3	10,778.9
Total	24,854.7	24,260.3	24,714.7	25,190.4

Table 47: Percentage Department of Education costs by expenditure category, 2005 to 2014, selected years

	2005	2008	2011	2014
Salaries	62.3%	59.4%	58.3%	57.2%
Goods and Services	37.7%	40.6%	41.7%	42.8%

The figures for goods and services include both rental of property, which is largely housing for expatriate contract officers, and utilities. The recurrent budget appropriation in recent years has been significantly short of that required to enable the Department to carry out a number of its core activities. These include the development, production, distribution and marking of national examinations, the conducting of the National In-Service Training Week and the ability of inspectors to be able to visit schools. These shortfalls have been alleviated by use of the Quality Initiatives in Education Project, which is donor funded, and by redirecting some of the funds allocated to the national component of the education subsidies.

Table 48 shows how these costs are distributed between basic and post primary education.

Table 48: Department of Education costs by sector (K'000s), 2005 to 2014, selected years

	2005	2008	2011	2014
Basic education	19,883.8	19,408.3	19,771.8	20,152.3
Post primary education	4,970.9	4,852.1	4,942.9	5,038.1
Total	24,854.7	24,260.3	24,714.7	25,190.4

Total National Government costs

Table 49 provides the estimated total of costs to the National Government over the Plan period based on projected budget allocations.

Table 49: National Government costs (K'000s), 2005 to 2014 – selected years

	2005	2008	2011	2014
Teacher emoluments	409,693.5	438,761.3	473,284.5	512,185.0
School subsidies	57,488.7	75,267.5	98,408.4	119,292.3
Administration	24,854.7	24,260.3	24,714.7	25,190.4
Total	492,036.9	538,289.2	596,407.7	656,667.7

Table 50 to 52 shows total National Government costs, by type of education and also by sector – basic education and post primary. These figures are also shown as percentages.

Table 50: Percentage National Government costs, 2005 to 2014, selected years

	2005	2008	2011	2014
Teacher emoluments	83.3%	81.5%	79.4%	78.0%
School subsidies	11.7%	14.0%	16.5%	18.2%
Administration	5.1%	4.5%	4.1%	3.8%

Table 51: Total National Government costs by sector (K'000s), 2005 to 2014, selected years

	2005	2008	2011	2014
Basic education	394,979.6	436,194.4	485,571.3	532,927.6
Post primary education	97,057.2	102,094.8	110,836.4	123,740.0
Total	492,036.9	538,289.2	596,407.7	656,667.7

Table 52: National Government percentage costs by sector, 2005 to 2014, selected years

	2005	2008	2011	2014
Basic education	80.3%	81.0%	81.4%	81.2%
Post primary education	19.7%	19.0%	18.6%	18.8%

The trend in costs over time as shown in Table 51 approximates to an increase of three per cent a year in National Government expenditure on education, at constant prices. That represents a very substantial commitment. The National Government will regularly review the costs of the Plan, and the resources available to fund it, in order to ensure affordability over the ten year period.

Provincial government costs

Provincial governments are responsible for all aspects of post primary education. These include:

- the maintenance of secondary schools and vocational institutions
- new infrastructure requirements for secondary schools.

Table 53 below shows financial requirements for provincial governments to adequately maintain and develop their schools. The annual indicative cost of maintaining classrooms is about K5000 per class. The cost of establishing new Grade 9 and Grade 11 classes has been estimated at K0.5 million and K0.75 million respectively.

Table 53 Provincial government costs by sector (K'000s), 2005 to 2014, selected years

	2005	2008	2011	2014
New Grade 9 classes	9,559.5	9,559.5	23,665.1	23,763.1
New Grade 11 classes	6,000.0	6,000.0	6,000.0	6,000.0
Secondary school maintenance	10,973.1	11,184.5	11,951.1	13,271.9
Total	26,532.6	26,744.0	41,616.1	43,035.1

Provinces' resources are growing. Over time provinces should be able to make a greater commitment to education in their areas. When the National Government reviews the affordability of the Plan against its own resources, it will also consider the scope for assigning to provinces increased responsibility for the funding of education.

Local-level government costs

The local-level governments are responsible for supporting communities in the infrastructure and maintenance costs of elementary and primary schools. Infrastructure support will be in the form of establishment grants. Indicative figures are shown below in Table 54 and are based upon the following assumptions about costs:

- Elementary school establishment grant – K5000 per class
- Upper primary school establishment grant – K20000 per class
- Elementary school maintenance – K250 per class
- Primary school maintenance – K1000 per class

Table 54: Local-level government costs by sector (K'000s), 2005 to 2014, selected years

	2005	2008	2011	2014
Elementary school establishment	1,817.0	1,817.0	1,817.0	945.9
Primary school establishment	2,974.8	2,974.8	2,974.8	644.5
Elementary school maintenance	2,815.5	3,633.1	4,170.0	4,668.4
Primary school maintenance	18,858.0	19,210.8	19,765.5	20,805.4
Total	26,465.3	27,635.6	28,727.2	27,064.2

It is important that per capita funding, as legislated for under Section 93(2) of the *Organic Law on Provincial Government and Local-level Governments*, be provided direct to the local-level governments. The local-level governments will be assisted by both local members of parliament and the churches. Members of parliament will also be expected to support the establishment and maintenance of basic education facilities through the use of district support grants administered through the Joint District Budget and Planning Priorities Committee.

Summary costs to government

The total estimated costs to all sources of government funding of the Plan are in Table 55. These have been made on the assumptions and projections made in this chapter.

Table 55 Total costs to government (K'000s), selected years, 2005 to 2014

	2005	2008	2011	2014
National Government	492,036.9	538,289.2	596,407.7	656,667.7
Provincial Governments	26,532.6	26,744.0	41,616.1	43,035.1
Local-level Governments	26,465.3	27,635.6	28,727.2	27,064.2
Total	545,034.8	592,668.8	666,751.0	726,766.9

These costs are divided between basic and post primary education as shown below:

Table 56 Total costs to government by sector (K'000s), selected years, 2005 to 2014

	2005	2008	2011	2014
Basic education	421,444.9	463,830.0	514,298.5	559,991.8
Post primary education	123,589.9	128,838.8	152,452.5	166,775.1
Total	545,034.8	592,668.8	666,751.0	726,766.9

Agency contributions

This Plan recognises the significant contributions that have been made by the church agencies in the delivery of education services to the people of Papua New Guinea. It is expected that they will continue to provide support, both pastoral and otherwise, to the communities within which they work.

Community contributions

The contribution that communities make will largely be in the form of the construction and maintenance of infrastructure in the elementary and primary schools. This will be in kind rather than cash.

Parental contributions

Parents will continue to make significant cash contributions towards the education of their children. Table 57 shows indicative figures for the total cash parental contributions required. They are based on projected enrolments and findings from the *Papua New Guinea Education Sector Affordability Studies* (AusAID, 2003) for the fees actually paid in the different sectors of education. The Studies found that a proportion of fees remain unpaid each year and so these figures will not accurately reflect the needs of the schools.

Table 57: Projected parental contributions by sector, 2005 to 2014, selected years, (K000s)

	2005	2008	2011	2014
Elementary	8,468.6	10,924.7	0.0	0.0
Primary	33,057.4	35,219.5	37,396.4	40,449.7
Secondary	34,128.5	34,609.1	36,948.9	41,141.2
Vocational	4,913.2	5,687.6	6,584.1	7,622.0
Total	80,567.6	86,441.0	80,929.5	89,212.8

Donor agency contributions

These estimated costs only cover the elements described in this section – i.e. teacher salaries, school subsidies and recurrent administration expenses of the Department; provincial, district and local-level governments costs; and parent and community contributions.

Despite serious cost saving measures in the Plan, it cannot be implemented in full without support from donor agencies. Some of the activities in the Plan, for which the national budget allocation cannot cover, will need to be supported by donor agencies. This funding cannot be seen as a replacement for the Government's recurrent and development budgets but should provide additional funds and be a catalyst to further development. If this is not the case, then sustainability becomes a major issue. The Department of Education will work hard over the Plan period to strengthen its coordination of donor contributions to ensure they better link to the priorities of the Plan.

Section 7

**MONITORING AND EVALUATING
THE PLAN**

MONITORING AND EVALUATING THE PLAN

Definition

Monitoring is the process of routinely coordinating, collecting, processing and communicating information to assist managers to identify problem areas in order to devise practical solutions. Evaluation, on the other hand, is a systematic way of learning from experience and using the lessons learnt to improve.

Situation analysis

The designing of an appropriate monitoring and evaluation framework is an essential and integral part of the development and implementation of this Plan. Lack of funding and expertise in the past made it difficult to collect reliable data in order to monitor and evaluate the implementation of the previous National Education Plan. Other external organisations, including the National Research Institute, conducted monitoring, evaluation and research studies. The findings and reports from these studies have been made available to the Department.

While all major education service providers are potential sources for data and information relevant for analysis and projections, current systems in place at the provincial, district and school levels do not provide reliable and timely data. At the national level, the planned comprehensive Education Management Information System has yet to be established. This was designed to store, retrieve, analyse and evaluate raw data on student enrolment, staffing and school infrastructure and inventory at all levels.

Monitoring and Evaluation Framework

For this Plan to be monitored and evaluated, quality and reliable data needs to be collected from all levels of the system and key research areas need to be identified.

The main purposes of monitoring and evaluation under this Plan are:

- for the government to monitor the status and the performance of the education system
- for management to assess and take corrective measures when and where necessary
- for management to have the information necessary to improve on past performance
- for management to measure progress against established objectives, targets or outcomes
- for management to measure the cost-effectiveness of delivering education services.

The monitoring of the Plan's implementation will be aimed at two areas:

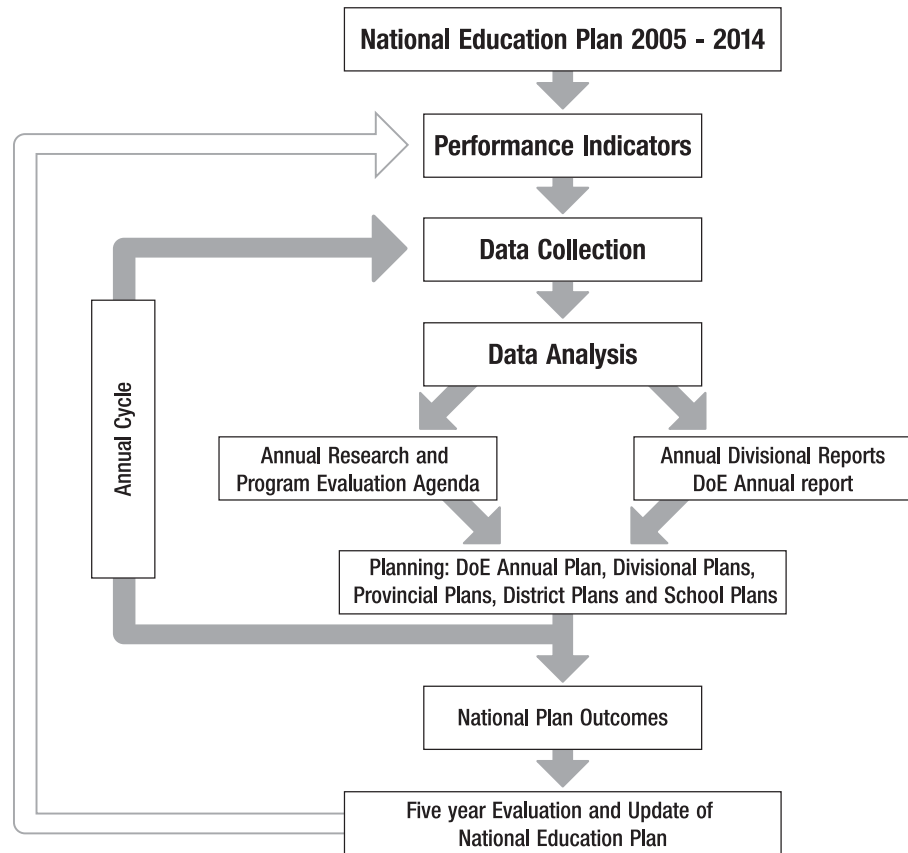
- progress in the implementation of the programs foreseen by the Plan with respect to time schedules, resources, inputs, costs and funding
- results and impact achieved.

Data collected from 2005 will provide benchmarks against which future progress can be measured and a data set to assist in the five year review of the Plan.

On the following pages, the targets and measures are shown for each minor outcome. As well as these, the qualitative indicators collected from teachers and students in primary schools as part of the Curriculum Standards Monitoring Test will be extended to elementary and secondary levels.

The diagram below illustrates how the components of monitoring and evaluation combine to assess the overall performance of the Plan.

Monitoring and Evaluating Framework for the National Education Plan.



Analysis and feedback about the data to those collecting it is necessary if data accuracy is to be enhanced. Data collectors will give more attention to their input if they see a use for the final product. Providing useful information to persons collecting data assists with generating more reliable data in future. Careful analysis is essential if accurate reporting against the Plan is to be achieved by divisions and nationally.

The data analysis and reporting processes will assist the Department to determine the research and evaluation program for the following year. As well as this, valuable information about issues to be reported in the divisional plans and the Department's Annual Report will be provided.

For effective monitoring to take place, appropriate information needs to be fed back into the management process of Plan implementation and into the policy review process.

Data is gathered as part of the reporting process and should influence the creation of the next cycle of annual plans. Failure to do so indicates that monitoring activities have not led to evaluative understanding. All monitoring has two components:

- firstly to provide an insight into actions that managers need to take during the implementation of strategies contained in an annual plan.
- secondly, monitoring along with evaluation activities provides information about the issues and strategies that need to be given due consideration in the development of the next set of annual plans.

The five year review of this Plan will produce an updated Plan and as such it might be necessary to modify the set of indicators used for reporting processes.

Elementary

Performance Area: Access		
Minor Outcome	Target	Measure(s)
E1 Elementary schools established at the community level in order that all children in Papua New Guinea enrol at the age of 6 years.	All children enter Elementary Preparatory Grade at the age of 6 years by 2012.	<ul style="list-style-type: none"> Total no. of 6-year old children. No. of 6-year old children in Elementary.
	An average of 360 Elementary Preparatory classes established each year until 2012.	<ul style="list-style-type: none"> No. of elementary prep classes established.
	A teacher pupil ratio of 1:32 by 2014.	<ul style="list-style-type: none"> No. of elementary teachers. No. of elementary students.
	An elementary enrolment rate of 98% by 2014.	<ul style="list-style-type: none"> No. of children in Prep, E1 and E2 as a percentage of 6 to 8-year olds.
	All elementary schools have classrooms constructed in accord with guidelines by 2014.	<ul style="list-style-type: none"> Total no. of elementary classrooms constructed according to the guidelines.

Performance Area: Quality Curriculum and Monitoring		
Minor Outcome	Target	Measure(s)
E2 A relevant elementary curriculum is developed, implemented and monitored.	Curriculum materials reviewed, developed and distributed annually.	<ul style="list-style-type: none"> No. of materials reviewed. No. of materials developed. No. of materials distributed.
	Locally based curriculum support materials produced in all districts by 2012.	<ul style="list-style-type: none"> No. of districts producing locally based curriculum materials.
	150 new orthographies developed by 2012.	<ul style="list-style-type: none"> No. of orthographies developed each year.
	All Boards of Management contribute to teacher appraisal by 2008.	<ul style="list-style-type: none"> No. of Boards of Management trained in teacher appraisals. No. of BOM contributing to teacher appraisal reports.

Performance Area: Quality Teacher Education and Training		
Minor Outcome	Target	Measure(s)
E3 A sufficient number of appropriately trained and qualified elementary teachers are available.	An average of 1100 teachers enrolled in elementary teacher courses each year.	<ul style="list-style-type: none"> No. of teacher trainees enrolled in elementary teacher training.
	A flexible system of delivering teacher in-service implemented by 2006.	<ul style="list-style-type: none"> No. of workshops conducted for serving teachers.

Performance Area: Quality Management		
Minor Outcome	Target	Measure(s)
E4 Elementary education is cost-effective and affordable for parents and government.	Minimum basic school supply needs for elementary schools are determined by 2006.	<ul style="list-style-type: none"> Minimum basic school supplies determined.
	A formula for an equitable supply of teachers determined by 2006.	<ul style="list-style-type: none"> Formula developed for equitable supply of teachers.
	All schools staffed according to an agreed formula by 2009.	<ul style="list-style-type: none"> No. of elementary schools staffed according to formula.

Primary

Performance Area: Access		
Minor Outcome	Target	Measure(s)
P1 Sufficient primary school classes established to achieve access and retention targets.	All children completing Grade 6 can be accommodated Grade 7 by 2012.	<ul style="list-style-type: none"> Total no. of children entering Grade 7. Total no. of children completing Grade 6.
	A 70% Grades 1 to 6 retention rate achieved by 2014.	<ul style="list-style-type: none"> No. of children completing Grade 6 as a % of same cohort of children that enrolled in Grade 1.
	An average 150 new Grade 7 classes established each year.	<ul style="list-style-type: none"> Total no. of new Grade 7 classes established each year.
	Teachers allocated at a rate of one per class by 2009.	<ul style="list-style-type: none"> No. of teachers teaching Grade 7 and 8 classes each year.
	A teacher pupil ratio of 1:37 by 2014.	<ul style="list-style-type: none"> No. of primary school teachers. No. of primary school children.
	A formula for an equitable supply of teachers determined by 2006.	<ul style="list-style-type: none"> Formula developed for equitable supply of teachers.
	All schools staffed according to an agreed formula by 2009.	<ul style="list-style-type: none"> No. of primary schools staffed according to formula.
	A system of return of service applied by 2007.	<ul style="list-style-type: none"> Return service program operating.

Performance Area: Quality Curriculum and Monitoring		
Minor Outcome	Target	Measure(s)
P2 A relevant primary curriculum is developed, implemented and monitored.	A curriculum completed and distributed to all schools by 2005.	<ul style="list-style-type: none"> No. of schools using reformed curriculum.
	Curriculum materials reviewed, developed and distributed annually.	<ul style="list-style-type: none"> No. of materials reviewed. No. of materials developed. No. of materials distributed.
	Literacy and numeracy standards reported biennially from 2007.	<ul style="list-style-type: none"> Literacy and numeracy standards reported biennially or sample of students Grades 3, 5 and 8.
	Head teachers contribute to the appraisal of teachers by 2008.	<ul style="list-style-type: none"> No. of head teachers trained in teacher appraisals. No. of head teachers contributing to teacher appraisal reports.
	All Boards of Management contribute to teacher appraisal by 2008.	<ul style="list-style-type: none"> No. of Boards of Management trained in teacher appraisals. No. of BOMs contributing to teacher appraisal reports.

Performance Area: Quality Teacher Education and Training		
Minor Outcome	Target	Measure(s)
P3 Sufficient appropriately trained and qualified teachers prepared for primary schooling.	An average of 1200 students enrol each year from 2005.	<ul style="list-style-type: none"> No. of enrolments at teachers colleges.
	All schools will have access to fully qualified teachers.	<ul style="list-style-type: none"> No. of teachers with a certificate. No. of teachers with a diploma No. of teachers with a degree.
	A flexible system for delivering teacher in-service implemented by 2006.	<ul style="list-style-type: none"> Flexible system used.
	All schools have access to a trained teacher counsellor by 2007.	<ul style="list-style-type: none"> No. of trained teacher counsellors in primary schools. No. of schools with counsellors.
	A national framework of standards established by 2008.	<ul style="list-style-type: none"> National standards framework published.

Performance Area: Quality Management		
Minor Outcome	Target	Measure(s)
P4 Primary education is cost-effective and affordable for parents and government.	The level of parental contributions to primary education determined on an annual basis.	<ul style="list-style-type: none"> Parental contributions determined annually.
	A teacher pupil ratio of 1:35 achieved in the upper primary grades by 2009.	<ul style="list-style-type: none"> No. of upper primary school teachers. No. of upper primary school children.

Secondary

Performance Area: Access		
Minor Outcome	Target	Measure(s)
S1 An appropriate number of well-equipped and resourced secondary schools established within budget to provide a quality education.	The transition rate between Grades 8 and 9 reduced to no less than 50% by 2014.	<ul style="list-style-type: none"> No. of children completing Grade 8. No. of Grade 9 students.
	The transition rate between Grades 10 and 11 maintained at 25%.	<ul style="list-style-type: none"> No. of students completing Grade 10. No. of Grade 11 students.
	Girls occupy 48% of places in lower secondary and 45% in upper secondary by 2014.	<ul style="list-style-type: none"> No. of girls enrolled in Grades 9 and 10 as a % of total students in Grades 9 and 10. No. of girls enrolled in Grades 11 and 12 as a % of total students in Grades 11 and 12.
	An average of eight new Grade 11 classes established each year.	<ul style="list-style-type: none"> No. of new Grade 11 classes established each year.
	Teachers allocated at a rate of 1.5 per class by 2009.	<ul style="list-style-type: none"> No. of secondary school teachers.

Performance Area: Quality Curriculum and Monitoring		
Minor Outcome	Target	Measure(s)
S2 A relevant secondary curriculum is developed, implemented and monitored.	All lower secondary reform curriculum materials distributed to schools by 2007.	<ul style="list-style-type: none"> No. of lower secondary schools using reformed curriculum.
	Curriculum materials reviewed, developed and distributed annually.	<ul style="list-style-type: none"> No. of materials reviewed. No. of materials developed. No. of materials distributed.
	Locally based projects developed at all schools by 2014.	<ul style="list-style-type: none"> No. of locally based projects developed at school level.
	Inspectors report on schools annually.	<ul style="list-style-type: none"> No. of school inspectors reports.
	All secondary schools have a trained teacher counsellor by 2007.	<ul style="list-style-type: none"> No. of trained counsellor teachers in schools No. of schools with trained counsellors.

Performance Area: Quality Teacher Education and Training		
Minor Outcome	Target	Measure(s)
S3 A sufficient number of appropriately trained and qualified teachers and guidance officers prepared for secondary schooling.	An average of 150 graduate secondary teachers trained each year from 2005.	<ul style="list-style-type: none"> No. of graduate secondary teachers trained.
	All schools have access to fully qualified teachers	<ul style="list-style-type: none"> No. of teachers with no qualifications. No. of teachers with a diploma. No. of teachers with a degree and teaching qualification. No. of teachers with a post graduate qualification.
	In service available on the reform curriculum by 2006.	<ul style="list-style-type: none"> No. of reformed curriculum in-services conducted annually.

Performance Area: Quality Management		
Minor Outcome	Target	Measure(s)
S4 Secondary education is cost-effective and affordable for parents and government.	Grade 8 Graduates Incentive Scheme introduced by 2009.	<ul style="list-style-type: none"> No. of Grade 8 graduates benefiting from the incentive scheme.
	All schools have self-reliance projects by 2014.	<ul style="list-style-type: none"> No. of schools initiating self-reliance projects.
	A scholarship system implemented by 2008.	<ul style="list-style-type: none"> No. of Grade 8 graduates assisted with scholarship.
	A cost recovery mechanism for school examinations in place by 2006.	<ul style="list-style-type: none"> Total cost of examination. Total cost recovered.
	All schools staffed according to an agreed formula by 2014.	<ul style="list-style-type: none"> No. of secondary schools staffed according to formula.

Flexible, Open and Distance Education

Performance Area: Access		
Minor Outcome	Target	Measure(s)
F1 A significant growth in enrolment achieved by offering a number of demand driven programs.	Review of the college completed by 2005. Twenty five percent of Grade 8 and 10% of Grade 10 graduates choose to enrol in distance education by 2014.	<ul style="list-style-type: none"> • Review completed. • No. of students completing Grade 10. • No. of Grade 11 students.

Performance Area: Quality Curriculum and Monitoring		
Minor Outcome	Target	Measure(s)
F2 The curriculum and assessment programs offered will be based on and articulate with the mainstream education system.	Appropriate assessment, examination and certification system established by 2008.	<ul style="list-style-type: none"> • Systems approved by appropriate Boards of Studies.

Performance Area: Quality Teacher Education and Training		
Minor Outcome	Target	Measure(s)
F3 The provision of well-trained and qualified staff and support personnel.	College staffed by appropriately trained staff by 2009.	<ul style="list-style-type: none"> • No. of staff with distance education qualifications. • Total no. of staff.

Performance Area: Quality Management		
Minor Outcome	Target	Measure(s)
F4 A An institution offering flexible, open and distance education.	College to be restructured by 2006.	<ul style="list-style-type: none"> • College restructure approved by 2006.

Vocational Education

Performance Area: Access		
Minor Outcome	Target	Measure(s)
V1 An appropriate number of vocational centres provided in public and private sectors.	Re-register all vocational centres by 2007.	• No. of vocational centres re-registered.
	Vocational education components of provincial plans developed by 2007.	• No. of provincial education plans completed with vocational education components.
	All vocational centres offer short term community orientated programs by 2009.	• No. of vocational centres offering short term community orientated courses.
	Gr 8 Graduate Incentive Scheme introduced in 2009.	• No. of Grade 8 graduates accessing incentive scheme funding.

Performance Area: Quality Curriculum and Monitoring		
Minor Outcome	Target	Measure(s)
V2 A quality vocational skills training program provides clients with skills that are relevant and required by the community.	Vocational curriculum reviewed by 2006.	• No. of vocational centres using reviewed curriculum.
	Short course materials distributed to all vocational centres by 2007.	• No. of vocational centres using short course materials.
	Awareness campaign in place by 2006.	• Awareness campaign plan and activities.

Performance Area: Quality Teacher Education and Training		
Minor Outcome	Target	Measure(s)
V3 The provision of a sufficient number of appropriately trained and committed vocational centre instructors and managers.	Convert Diploma of Vocational Education and Training into distance mode by 2007.	• No. of Diploma of Vocational Education and Training students enrolling through distance mode.
	Conduct skills audit for Vocational Centre staff by 2006.	• Vocational centre skills audit reported.

Performance Area: Quality Management		
Minor Outcome	Target	Measure(s)
V4 A vocational education system that is both cost-effective for government and affordable for all.	Develop a process to grant increased autonomy to church and other agencies by 2009.	• No. of vocational centres granted increased autonomy to church agencies.
	Review the role of the vocational centre coordinators by 2008.	• Role of vocational centre coordinators reviewed
	Review duty statements by 2007.	• Duty statements of vocational centre instructors reviewed.

Technical Education and Training

Performance Area: Access		
Minor Outcome	Target	Measure(s)
T1 A technical and business education and training system which will increase opportunities for all.	A regulatory system established by 2006.	<ul style="list-style-type: none"> Regulatory systems established.

Performance Area: Quality Curriculum and Monitoring		
Minor Outcome	Target	Measure(s)
T2 High quality technical and business education and training programs that are cost-effective, flexible and responsive to changing trends.	All courses modularised by 2007.	<ul style="list-style-type: none"> No. of modularised courses approved. No. of courses.
	National Qualifications Framework established by 2007.	<ul style="list-style-type: none"> National Qualifications Framework established.

Performance Area: Quality Teacher Education and Training		
Minor Outcome	Target	Measure(s)
T3 A sufficient number of appropriately trained and qualified technical education and training lecturers and managers are provided.	Ninety five per cent localisation by 2014.	<ul style="list-style-type: none"> No. of Papua New Guinean and expatriate lecturers.

Performance Area: Quality Management		
Minor Outcome	Target	Measure(s)
T4 A technical and business education training system that is cost-effective for government.	A lecturer student ratio of 1:15 by 2014.	<ul style="list-style-type: none"> No. of students. No. of staff.

Administration

Performance Area: Organisational Improvement		
Minor Outcome	Target	Measure(s)
A1 The Department of Education has the capacity to respond strategically to changing conditions and government priorities.	The Department structure and functions reviewed by 2005.	• Report and recommendations approved by Secretary for Education.
	Provincial education plans produced and endorsed by end of 2006.	• Endorsement of plans.
	Annual forums established with churches, donors and NGOs by 2005.	• Forums conducted.
	HIV/AIDS policy and plan completed and implemented by 2007.	• Plan implemented.

Performance Area: Human resources management		
Minor Outcome	Target	Measure(s)
A2 Human resource systems and programs established for all levels of staff in the national education system.	Human Resource Development Policy completed by 2005.	• HRD Policy published. • HRD Policy implemented.
	Increase the percentage of executive positions at Grade 16 and above occupied by women.	• No. of executive positions. • No. of executive positions occupied by women.
	Human Resource Development plan completed by 2005.	• HRD plan published. • No of development programs available for officers at all levels. • No of officers at all levels (women and men) attending development programs. • Total funds committed to development training.
	Human Resources procedures manuals in place by 2006.	• Procedures applied.
	Annual teacher audits conducted from 2006.	• Teacher audit reports received.

Performance Area: Financial Management		
Minor Outcome	Target	Measure(s)
A3 Budgeting and financial systems and processes are managed competently and are sustainable.	Effective budget and planning processes integrated and implemented at national and local levels by 2007.	• No. of integrated budget planning schedules at local levels. • Integrated budget and planning schedule at national level. • Planning and budgeting calendar implemented.
	Financial and procurement systems reviewed and strengthened by end of 2005.	• Acquittal reports available and completed. • Internal audit reports annually as stipulated in the Public Finance Management Act.
	Master assets and management register designed and in place by 2006.	• Register completed.

Performance Area: Information communications technology		
Minor Outcome	Target	Measure(s)
A4 Information communications technology systems and processes developed to support the management of educational programs.	Information communications technology policy finalised by 2005.	• Information communications technology policy published 2005.
	Information communications technology plan finalised and implementation begun by end of 2006.	• Information communications technology plan published 2006.
	A centralised system for collection and storage of data in place by 2006.	• Centralised system in place and operational by 2008.

Performance Area: Communications systems		
Minor Outcome	Target	Measure(s)
A5 Communication systems and processes are effective in the dissemination of information and the raising of awareness.	Media and Communications Policy and Plan finalised and implemented by end of 2005.	• Media and Communications Policy published 2005.
	Review of publication, printing and distribution functions completed by end of 2005.	• Review completed.
	Awareness strategy developed and implementation commenced by beginning of 2005.	• Awareness strategy published 2005. • Evidence of changes to increased level of awareness over time.

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