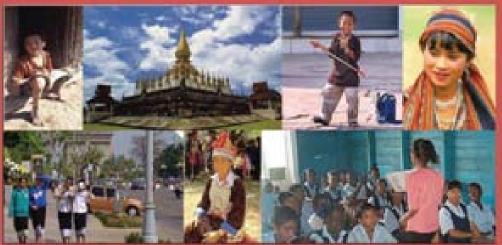
LAO PEOPLE'S DEMOCRATIC REPUBLIC Peace Independence Democracy Unity Prosperity



Second Education Development Project (EDPII)



Technical Assistance and Capacity Building in Education Policy Analysis

Economic Relevance Study Report

MINISTRY OF EDUCATION
Strategic Research and Educational Analysis Center

March 2009

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List of Abbreviations

ADB Asian Development Bank

ASEAN Association of South East Asian Nations

BESDP Basic Education Sector Development Programme

CCA Common Country Assessment CLCs Community Learning Centres

DNFE Department of Non-Formal Education
DPC Department of Planning and Cooperation

EDP Education Development Plan

EFA Education for All EU European Union

GDP Gross Domestic Product
GER Gross Enrolment Ratio
GMS Greater Mekong Sub-Region

HD Higher Diploma

HDI Human Development Index

HE Higher Education

IIEP International Institute for Educational Planning

ILO International Labour Organisation

LECS Lao Expenditure and Consumption Survey

LDC Least Developed Country

LNTA Lao National Tourism Administration LPYRU Lao People's Revolutionary Youth Union

LS Lower Secondary
LWU Lao Women's Union

MAF Ministry of Agriculture and Forestry

MDA Mid Decade Assessment

MLSW Ministry of Labour and Social Welfare

MOE Ministry of Education

MW Megawatts

NAP National Action Plan

NESRS National Education System Reform Strategy

NFE Non-Formal Education

NGO Non-Government Organisation

NGPES National Growth and Poverty Eradication Strategy

NEW New Economic Mechanism NFE Non-Formal Education **NSC National Statistics Centre** NTFP Non-Timber Forest Products NTC **National Training Council** NUOL National University of Laos Official Development Assistance ODA People's Democratic Republic PDR PIP **Public Investment Programme**

List of Abbreviations (cont'd)

SEA South East Asia

SOEs State Owned Enterprises
TA Technical Assistance
TCs Teachers Colleges
TFR Total Fertility Rate
TT Teacher Training

TVET Technical and Vocational Education and Training

UNDP United Nations Development Project

US Upper Secondary

VET Vocational Education and Training

WB World Bank

WDI World Development Indicators WTO World Tourism Organization

Exchange rate: Kip 9,100 = US\$1.0

Executive Summary

Lao PDR is a Least Developed Country" (LDC) and as such is widely considered to be one of the poorest countries in the world. For the UNDP's Global Human Development Index (HDI), Lao PDR is currently ranked 131 out of 177 countries. Given the difficult background conditions, the country has recorded remarkably successful economic progress in recent years. An estimated very high figure of 40 percent of children were recorded as being malnourished. Malnutrition not only reduces school enrolment and performance but it can permanently reduce cognitive ability. There are serious concerns relating to the approximately 58,000 children (35,000 girls) who do not enrol in primary schools, and the approximately 50,000 (30,000 girls) who drop out of primary school each year. Province by province variations in education enrolments and achievements are very significant, to the detriment of the poor rural areas.

A national Training Needs Analysis carried out in 2005 found that an additional nearly 70,000 human resources personnel, skilled at different levels, would be required by the manufacturing industry sector by 2010, but did not consider the needs of the government, service or agricultural sectors. The report concluded that there would be a significant shortage of training places to provide the necessary skills at this level, particularly for technician workers.

A National Baseline Tracer Study completed in 2006 found that, of vocational education students who graduated during the three years 2003-2005, 79 percent were employed, 4 percent had gone on to higher studies, and 17 percent were unemployed. Patterns of employment and the ratios of graduates successful in getting jobs varied significantly between provinces.

The education and labour market statistics available from MOE, MLSW (Ministry of Labour and Social Welfare) and elsewhere were found to be seriously deficient in a number of respects.

Visits and interviews during the course of the present study indicated that employers and potential employers are very disappointed with the overall quality of basic education received by young entrants to the labour market.

MOE published data relating to technical and vocational education show a total of over 25,000 students enrolled, but the data are questionable for a number of reasons including that at least some institutions directly or indirectly under MOE or under other government ministries are not included. With regard to TVET, visits and interviews during the course of the present study indicated that (i) there is very high demand from applicants to follow office-based courses, such as accounting or business administration, but many graduates from such courses have difficulty in finding suitable jobs, but (ii) there is much less demand for places on practical courses such as carpentry or plumbing for boys, or dressmaking or sewing for girls, whereas graduates from such courses are able to secure appropriate jobs relatively easily.

With regard to non-formal education, the largest service is the literacy programme, which each year enrols some 70,000 youth and adults in a 3-stage course, which leads to equivalency with completion of the 5-year primary school course. There are an estimated approximately 1.6m. people illiterate, of whom MOE DNFE gives priority in training courses

to women, rural groups, ethnic minority communities, and villages that have poor access to facilities for training and education. Visits and interviews during the course of the present study confirmed the low motivation of many potential learners to undertake such courses, which they saw as not directly related to their major concerns of food security and income generation for their often large families.

In higher education, a total of nearly 50,000 students are enrolled and each year there are far more applicants for university places than can be admitted. Even though NUOL has the choice of the most able secondary school graduates, students completing upper secondary school are not considered to be up to the standard required to undertake a bachelor degree and must either complete the Foundation Studies course or must enrol for the higher diploma.

In summary, there is a very wide range of skill learning opportunities offered by different institutions, ranging from:

- Training aimed primarily at increasing food security or generating supplementary income in villages in impoverished rural areas, in skills such as different types of small plant and livestock production, development or expansion of cottage or village industries and handicrafts production, and development of eco-tourism activities, to
- Training aimed primarily at needs in urban or relatively advantaged areas, in skills such as dress-making, hairdressing/beautician, using office computing software, hospitality/hotel services, general tourism services, foreign languages, plumbing, motorcycle repair, air conditioning/refrigeration, electricity, carpentry, welding and masonry.

The overall picture with regard to training for employment is not all negative. There has been some definite progress in this field in recent years and it is possible to cite a number of positive indicators, including significant increases in enrolments, significant increases in participation of females, significant increases in provision of new institutions and new courses, and attempts to make courses more practical, more related to needs of employers.

However, there remain a number of significant concerns relating to training and employment issues, including a complicated, confusing and overlapping pattern of availability, a mismatch between social demand and economic need, problems with data availability relating to total enrolments and other indicators, lack of coordination between different training suppliers, both public and private, lack of information with regard to labour market possibilities, needs and requirements, and a significant unmet demand for training.

Recommendations include the following:

- a) Within the MOE sector, at primary and secondary levels
 - o The MOE could initiate an information programme in primary; lower secondary and upper secondary schools, to be included in the school curriculum, in order to make available to young people positive information with regard to the many employment opportunities in sectors requiring practical training skills.
 - The MOE could initiate in primary, lower secondary and upper secondary schools a post-secondary education information programme aimed at Lao ethnic communities.

- o The MOE could initiate in primary, lower secondary and upper secondary schools a post-secondary education information programme aimed at girls.
- The MOE could investigate, jointly with the Ministry of Agriculture and Forestry, the proposal from the latter that basic agricultural skills training should already begin at primary and secondary schools.
- The MOE could undertake a large-scale phased programme to upgrade the level of competency in English language on the part of teachers in all education institutions.
- The MOE could review what steps can be taken to improve the quality of basic education.

b) Within the MOE sector, at post-secondary level

- The MOE could institute a much fuller, more reliable and more effective data base relating to technical and vocational education.
- The MOE could encourage both the provision of training courses in existing private sector schools and the foundation of additional private sector schools, including filling gaps in present provision, either by full-time or short-courses.
- The MOE could initiate a study to investigate the social and economic consequences of changing the present arrangements relating to fees and allowances for students in post-secondary education.
- The MOE could encourage technical and vocational schools to initiate or expand a series of income generating activities, including private sector contributions and income from selling services and products.
- o The MOE could investigate how more specialist teachers, workshops, equipment and raw materials, and other requirements, can be provided for the purpose of including more practical course content in secondary schools and technical and vocational schools.
- The MOE could undertake a large-scale phased programme to upgrade the level of competency in English language on the part of teachers in all Education institutions, including technical and vocational schools on both government and private sector.
- The MOE could request teacher colleges to include training for a significantly enhanced level of competency in English language in all their teacher training programmes.
- The MOE could initiate a study relating to what steps are needed to increase the efficient working of CLCs.
- o The MOE could initiate a national information programme aimed at increasing motivation to attend basic literacy courses on the part of illiterate adults.
- o In view of the fact that relatively far more skills training is provided in and around Vientiane than in other regions, the MOE could take steps to increase provision in both the north and south of the country.

c) Outside the MOE sector

- o The MOE could initiate increased contacts with the Ministry of Agriculture and Forestry with regard to the proposals from the latter for extensive reforms in the agricultural and forestry colleges.
- o The MOE, together with the Ministry of Labour and Social Welfare, could

- reconsider and could take steps to increase the role and effectiveness of the National Training Council, either within or outside of the MOE.
- The National Training Council could be requested to take the lead in achieving greater coordination of the availability of skills training provision.
- o The National Training Council could be requested to take steps to increase the involvement of employers in skills training courses.
- The MOE could institute, jointly with the Ministry of Labour and Social Welfare, a study of how the efficient working of the labour market can be increased.

1. Introduction and Methodology

1.1 The Mission, Objective and Methodology

In accordance with the terms of reference (Appendix A), for the first mission the consultant1 arrived in Lao PDR on 26 January 2008 and remained in country until 11 March 2008. The second mission took place from 23 November to 13 December 2008. Most of the time of the first mission was spent in and around the Vientiane Capital area, with one day spent travelling out to visit institutions in Vientiane Province. During the course of the first mission, the consultant was based in the Department of Planning and Cooperation (DPC) in the Ministry of Education (MOE) and there were frequent interactions with senior colleagues in that department and with the team leader. The second mission was mainly devoted to (i) analysis of the questionnaires completed by employers and by employers' associations, and (ii) preparation of presentations to two workshops;

In accordance with the Terms of Reference, the objective of this Study is to provide an analysis of the capacity of the education system to meet the needs of a Lao modern economy (in particular basic, upper secondary, tertiary, vocational, technical and professional education). As stated in the TOR, the Study has been carried out in accordance with education-employment economy studies which have been conducted in many other countries. Such studies have endeavoured to assess whether the graduates emerging from the education system, at all levels, are meeting, in both quantity and quality terms, the potential and actual needs of employers and thus of the Lao economy.

The TOR also specified that demand for trained manpower will be assessed, based on GOL development scenario and supply will be assessed in relation with demand in order to determine the extent to which the existing institutions, fields of training and curriculum they offer are responding to projected demand. Possible conclusions of the study would deal with: (a) fields of training to develop, cancel or downgrade; (b) curriculum and competencies to develop; (c) vocational schools to expand and/or close, and new schools to build.

The methodology followed consisted of:

- review of available previous literature and findings from previous reports both those available in MOE and elsewhere and the many relevant reports found on the internet;
- analysis of available education statistics and labour market statistics, to the extent available;
- meetings and interviews: much of the time of the first mission was devoted to
 meetings and interviews with a wide variety of stakeholders, including in the MOE,
 other relevant government ministries, other public sector bodies, education and
 training institutions at various levels, and private and public sector companies and
 other organisations;

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¹ Dr. James Hough. The Consultant wishes to record grateful thanks to the Team Leader, Mr Claude Tibi, and to many colleagues in the Ministry of Education and elsewhere who made valuable contributions to the work of the study.

questionnaires to employers and employers' organisations and groups: preparation, piloting (to 4 employers and 4 employers' organisations), post-piloting amendments, distribution, and consideration of initial responses received. The processing by MOE staff of the further responses received, with compilation of excel tables, continued subsequently and was completed before the start of the second mission, when the analysis of the questionnaire responses could take place.

A first draft of the conclusions and recommendations in the Interim Report was presented to internal and external stakeholders at a workshop organised by MOE on 7 March 2008 and a revised Draft Final Report was presented to workshops held on 10 and 11 November 2008.

1.2 Data Sources

The education and labour market statistics available from MOE, MLSW (Ministry of Labour and Social Welfare) and elsewhere were found to be seriously deficient in a number of respects, as will be shown throughout this report, including:

- Some statistics required do not seem to exist (e.g., a complete budget for any one school or college or other training institution);
- Some statistics published by MOE are incomplete (e.g., enrolment data for only 3 out of the 5 agricultural colleges under the Ministry of Agriculture and Forestry);
- Some statistics published by MOE are misleading (e.g., enrolment data include students on courses full-time for one year, full-time for less than one year, part-time, with no attempt to distinguish between these or to calculate full-time equivalents);
- Other useful statistics are collected by MOE, but are not published, do not seem to be used in any way, and could only be traced with some difficulty (e.g., breakdown of technical and vocational school enrolments by subject area);
- Accurate and systematic data relating to labour force supply and demand, employment, underemployment and unemployment appear to be lacking 2.

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² As noted in previous reports, e.g., IIEP (2004).

2. Country and Social Background

2.1 Country and Population

Lao PDR is a Least Developed Country" (LLDC) and as such is widely considered by the international community to be one of the poorest countries in the world. For the UNDP's Global Human Development Index (HDI), Lao PDR is currently ranked 131 out of 177 countries.

Lao PDR has an ethnically diverse population with 49 different recognised ethnic groups, estimated to total 5.62 m. people at the time of the 2005 National Census. With a continuing high rate of growth (2.1 percent and falling only slowly), by 2008 the population must have reached over 6m. people, in addition to an estimated 2.0m. Lao people living abroad, including in the USA (1m.) and Thailand (perhaps 0.5m3).

2.2 Social and Gender Issues

Currently, Lao women have on average 4.8 children (= TFR or Total Fertility Rate), as compared to the TFR in each of Thailand and Vietnam of only 1.9 and 2.3 children respectively, although the Lao birth rate is now falling slowly, especially in urban areas. In Lao PDR the maternal mortality rate, currently 350 per 100,000 live births4, is still far too high, although it has been falling significantly in recent years.

Over the period 2000-2005, the infant mortality rate fell to an estimated 145 per 1,000 live births and the under-five mortality rate fell to 87 per live births, from previously much higher figures. It is estimated that over two-thirds of the population speaks the Lao language at home, with the remainder speaking various ethnic minority languages.

An estimated very high figure of 40 percent of children were recorded as being malnourished5. Malnutrition not only reduces school enrolment and performance but it can permanently reduce cognitive ability. The high incidence of low nutritional status for pregnant women, low birth weights, and poor breast-feeding and weaning practices all contributed to this situation.

It is estimated that over 82 percent of the Lao people live in rural and remote areas6 without access to basic infrastructure and services and that some 80 percent are employed in agriculture, either directly or indirectly, with an estimated 60 percent of farms still producing mainly forsubsistence, not for the market7.

³ Estimates of the number of Lao people living in Thailand vary widely, from 200,000 up to 2m.

⁴ Source: CPI (Committee for Planning and Investment), 2005. By contrast, internationally, a leading gynaecologist recently said that, for developed countries at least, the target rate should be zero. 5 In 2000.

^{6 77} percent are classified as rural and ethnically diverse.

⁷ Source: MAF (Ministry of Agriculture and Forestry), 2005.

There has been significant internal migration to border districts in order to benefit from cross border trade and an estimated 50 percent of the Lao population now live in border districts following the long-term migration trends, which will be considered further below. Apart from Cambodia, all Lao's neighbours have large populations and high densities and apart from Myanmar they are all experiencing rapid economic growth, so the prospects are good for rapid increases in cross-border trade, for the foreseeable future

3. Economic Development

Given the difficult background conditions, the country has recorded remarkably successful economic progress in recent years. In 1986 the Government introduced the New Economic Mechanism (NEM) which officially abandoned the central planning system and introduced near total price liberalization, exchange rate unification, removal of the government's trade monopoly, the opening up of foreign and inter-provincial trade, the acceptance of private firms in various markets and the reduction of the number of State-Owned Enterprises (SOEs) by 75 percent. The Government's Sixth Five Year Development Plan (2006-2010) places special emphasis on increasing international trade, and particularly exports, in line with the National Growth and Poverty Eradication Strategy (NGPES).

It is reported that in the first six months of 2007, GDP growth reached 7.6 percent, as compared with the Government's target of 7.5 percent, and GDP per capita reached US\$678 (against the target of US \$ 591). Inflation was at 4.4 percent, which was the lowest level for some years8. The Government's 2007-2008 Plan includes the aims that GDP will be increased by 8 percent as compared to 2006-2007, GDP per capita will raise to US \$ 7289, inflation will be 6 percent, the trade deficit 5 percent, and the deficit on the state budget will be 5.4 percent of GDP10.

Ongoing concerns include that the national income accounts show large deficit balances on both the balance of payments 11 and the Government's fiscal accounts. The official statistics show a continuing large balance of payments deficit, although the latter is probably more than offset by the unofficial inward flows of currency from informal cross-border trading and the significant payments home from Lao people living abroad. Lao exports are now increasing significantly faster than imports and it is anticipated that there may soon be a balance for the first time between the official data for imports and exports.

A recent report12 estimated that the critical shortage of the expertise required for development will pose one of the most serious constraints on economic development in the Lao PDR and that strengthening human resource capacity will represent one of the country's major challenges over the foreseeable future. A map of Lao PDR showing literacy rates by province is given in Appendix E. This map makes apparent the much lower literacy rates in the poorer northern provinces, as low as 56.2 percent for males and only 37.2 percent for females in the province of Phongsaly in the far north.

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⁸ Source: Reports to 3rd Session of VIth legislature of the National Assembly by Prime Minister and Minister of Finance, quoted in Target Magazine, August 2007.

⁹ The Vientiane Times of 4.12.2008 included an estimate that income per head had already reached US\$810 but we have not been able to verify this high figure.

¹⁰ Source: Socio-economic Development Plan and State Budget for FY 2007/08, quoted in Target Magazine, September 2007.

¹¹ An interesting example of the problems of data collection and availability relates to the fact that the most complete information on Lao trade is obtained from the export and import data recorded by the Lao trading partner countries. On this basis, for 2004 Lao exports were officially recorded as totalling US \$ 1,022.5m and imports as US\$727.4m. (including \$ 140.8 m. for tourism and over-flight revenues), with growth rates over 2000-2004 of 8.6 percent and 9.1 percent respectively.

¹² United Nations Common Country Assessment (CCA) for Lao PDR, 2006.

Due to the rapid economic progress, the demand for qualified, skilled and appropriately trained personnel is ever increasing. A recent press statement by the Ministry of Education stated that: "One major aim will be to enhance vocational training schemes to meet the growing needs of the labour market" *13*. Hence it is hoped that the present study will make a timely and significant contribution to this major and growing area of concern.

Fuller details relating to the national economy and economic development are given in Appendix B.

13 Source: Ministry pursues education reform, Vientiane Times, 9.2.2008

4. The Labour Force and Labour Markets

A recent report14 commented that in Lao PDR adequate detailed data relating to the labour force, employment, under-employment and unemployment are lacking. The surprisingly very brief reference to the labour force in the National Socio-Economic Development Plan (2006-2010) notes that the skill level of the labour force is developing only slowly when compared to the improvements in the economic components in each sector and area. The capacity development of the labour force is characterised by self-improvement, with only relatively occasional opportunities for training, resulting in casual labour. The Plan comments that without proper institutional arrangements and training programmes, it would be difficult to achieve the object of appropriately redistributing the labour force and population to meet the requirements of industrialization and modernization.

Migration, both internal and external, is a significant factor relating to employment. External migration mainly refers to movements to Thailand, the majority of which take place through illegal channels along the long border of over 1,800 km., and by their very nature are unrecorded. As noted above, previous estimates of the numbers of Lao nationals working in Thailand have varied widely. There has been increasing concern at the numbers of young females who are illiterate or poorly educated and cross the border looking for work in Thailand.

It was recently estimated 15 that growing export trade in certain specified sectors contributes more directly to human development in Lao PDR than that in other sectors. The former sectors include labour-intensive exports of garments, wood products, processed foods, handicrafts, international tourism, agricultural exports and labour "exports" to Thailand. These sectors create substantial additional employment, especially for women, directly increase the incomes of rural families and rural women and may lead to rural communities benefitting from remittances sent back home.

Fuller details relating to the labour force are given in Appendix C.

14 Source. HEI , 2004.

¹⁴ Source: IIEP, 2004.

¹⁵ In UNDP, International Trade and Human Development, Lao PDR, 2006

5. The Labour Force and Employment Growth

5.1 Increases in Employment

The economically active population comprises 67 percent of the population aged 10 years and older (58 percent in urban areas, 69 percent in rural areas with roads, 73 percent without roads). Agriculture accounts for 80 percent of the labour force, 70 percent of all hours worked and 44 percent of GDP ¹⁶.

The Ministry of Labour and Social Welfare estimates that there has been a continuous gradual increase in the number of the economically active population (aged 15 years and over), with overall more females employed than males (1.22m. males against 1.32m. females). Officially, unemployment was recorded as being only 5.1 percent of the economically active population17, although the data are liable to be incomplete. Labour force participation rates were higher in rural areas than in urban areas. Eighty percent of employed persons were working in agriculture, hunting, forestry and fishing, although the percentage was declining slowly over time. The percentages employed in industry and services had risen slowly over time to reach 9.3 percent and 8.6 percent respectively.

5.2 Employment and Trade

In recent years there have been large increases in direct employment in exports and in small scale retail trade due to increased imports. Employment in garment factories, mainly of rural women from the northern provinces, increased from 17,200 in 1998 to 26,000 in 2004, i.e., by more than 50 percent. Direct employment in international tourism increased from an estimated 10,000 jobs in 1998 to 18,000 in 2004, by 80 percent. Tourist expenditures in rural areas directly reduce poverty and expand income opportunities for rural families. The number of labour migrants to Thailand (mainly from rural areas) increased from an estimated 120,000 in 1999 to 250,000 in 2005, by more than 100 percent. The number of women and men producing for export in 2005 is estimated at 277,000, about 12 percent of the rural labour. They are better-off and their local expenditures have important multiplier effects as well.

The LNTA (Lao National Tourism Administration) has estimated, based on a provincial survey, that the number of farmers producing at least some products consumed by international tourists totals 231,000. UNDP (2006) comments that it is important for human development that most of the estimated direct employment in exports is located in or stems from rural areas - farmers, handicraft producers and labour migrants to Thailand - and that more than half of the direct employment in exports is of women, mainly due to garment exports, handicrafts and labour migration to Thailand.:

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¹⁶ Source: various, including 2005 Census. The percentage figures for agriculture have been steadily declining over the last decade. It should be noted that the employment of children aged under 15 years is illegal but persists in rural areas.

¹⁷ For 2003. Source: Ministry of Labour and National Statistics Centre, 2005.

A recent report gave a striking table of the level of investments needed to create one job in the export field, indicating very wide variations, as shown in Table 5.1.

*Table 5-1 Comparison of Investments needed to create one export job, 2005*18

Category	Investment needed per each export job created (US\$)
Four Hydro Projects	142,400
The Sepon Mine	113,000
Tin Mine (ROK JV)	19,400
Food Processing	7,134
Wood Products	4,134
Garments	3,344
Migrant to Thailand	<100
Handicraft Weaver	<30
Contract Farmer	<20
Farmer	<20
NTFPs* Collector	0

Source: UNDP (2006)

Due to the disparity between education and training of job seekers and the opportunities available, it was reported that young people are having difficulty entering the labour market. Apart from the lack of the specific skills required, they have to compete with older people who are more experienced. There are indications that unemployment rates are particularly high among educated youth in urban areas. It was reported that there were criticisms and concern among young adults from both rural and urban areas with regard to the usefulness or applicability of the formal and non-formal education offered in the country, particularly relating to the lack of suitable jobs available to them after having completed schooling ¹⁹.

A national Training Needs Analysis20 carried out in 2005 found that an additional nearly 70,000 human resources personnel, skilled at different levels, would be required by the manufacturing industry sector by 2010, but did not consider the needs of the government, service or agricultural sectors. The report concluded that there would be a significant shortage of training places to provide the necessary skills at this level, particularly for technician workers.

A National Baseline Tracer Study21 completed in 2006 found that, of vocational education students who graduated during the three years 2003-2005, 79 percent were employed, 4 percent had gone on to higher studies, and 17 percent were unemployed. Patterns of employment and the ratios of graduates successful in getting jobs varied significantly between provinces. Both

18 Source: various, as quoted in UNDP, 2006.

19 Source: UNESCO, BKK, Lao PDR Country Profile, 2006.

20 GTZ Lao-German Programme (2005)

21 GTZ Lao-German Programme (2006)

^{*} NTFP = Non-Timber Forest Products

graduates and their employers generally recorded high appreciation of the quality of the vocational education received. It is, however, difficult to evaluate the significance of, or to place much confidence in, these findings, since:

- it appears probable that the more successful of the former graduates were the ones who responded to the survey, and
- it is not clear how long after graduation students had to wait to secure suitable jobs.

6. The Education System

The Government of Lao PDR has identified education as a critical sector for national development. Increasing equitable access, improving the quality and relevance of education and strengthening its management and efficiency are some of the Government's major goals. In an effort to achieve EFA and in line with the Millennium Development Goal, NGPES and the EFA National Action Plan, the Government aims to have all primary-age children enrolled in school and to have all children complete a full primary education by 2015, although there must be serious doubts as to whether this can be achieved.

There are serious concerns relating to the approximately 58,000 children (35,000 girls) who do not enrol in primary schools, and the approximately 50,000 (30,000 girls) who drop out of primary school each year. Considering the group of children aged 10-18, around 8-9 percent of the boys and 14-18 percent of the girls (depending on varying estimates) have never been to school, with the proportion being much higher in the poorest districts and for non Lao-Tai children. Province by province variations in education enrolments and achievements are very significant, to the detriment of the poor rural areas.

Fuller details relating to the education system are given in Appendix D.

From the perspective of the present study, there is particular interest in estimating the numbers of young people leaving the education at different levels, which may be summarized as in Table 6.1.

Table 6-1 Estimated Numbers of Young People leaving the Education System by level, 2005-2006

Estimated Numbers of Young People	Males	Females	Total
leaving education at each level			
Left primary school without completing grades 1 - 4	37,883	34,092	71,975
Left primary school during grade 5 or after completing Grade 5	4,790	3,249	8,039
Left lower secondary without completing grades 6-8	16,017	11,128	27,145
Graduated from grade 8 but not admitted to grade 9	2,643	4,499	7,142
Left upper secondary without completing grades 9-11	8,389	5,003	13,392
Graduated from grade 11 but not admitted to post-secondary education	6,266	3,736	10,002
Graduated from vocational school	563	339	902
Graduated from technical school	1,087	772	1,859
Graduated from university	4,100	3,555	7,655
TOTAL left Education System	81,738	66,373	148,111

Source: Cambridge/ADB EDP team data

Note 1: Not including graduates from teacher training (total 2,457 in 2005/06), on the assumption that the latter find

employment within the education system.

Note 2: The above total of 148,111 may be compared with the total of approximately 140,000 using 2004 data

estimated by UNDP (2006).

The data given in Table 6.1 may be compared to those given in Table 6.2, showing actual and projected rates of transition from grade levels, from 2005/06 to 2019/20. Thus it is apparent that the MOE is anticipating steady and significant increases in the proportions of students successfully continuing their studies to higher levels of education. This has significant implications for expected future progression in major skill levels and is therefore very relevant to the present study.

Table 6-2 Actual and Projected Rates of Transition from Grade levels, 2005-2006 - 2019-202022

	2005/06	2009/10	2014/15	2019/20
TRANSITION MATRIX	(Actual)	(Projected)	(Projected)	(Projected)
Grade 5 to 6, Females	74.8%	79.3%	85.0%	95.0%
Grade 5 to 6, Males	78.8%	81.6%	85.0%	95.0%
Grade 5 to 6, M+F	77.0%	80.5%	85.0%	95.0%
Grade 5 to TT 5 + 4, M+F	0.1%	0.1%	0.1%	0.1%
Grade 5 to further studies, M+F	77.1%	80.6%	85.1%	95.1%
Grade 8 to 9, Females	77.4%	77.0%	76.5%	68.0%
Grade 8 to 9, Males	75.8%	76.1%	76.5%	68.0%
Grade 8 to 9, M+F	76.5%	76.5%	72.2%	63.4%
Grade 8 to TT 8 + 3, M+F	0.4%	0.7%	1.0%	1.0%
Grade 8 to Voctec, M+F	0.8%	4.2%	8.5%	17.0%
Grade 8 to further studies, M+F	77.6%	81.4%	81.7%	81.4%
Grade 11 to Technical Schools 11+3, VET, F+M	14.5%	14.3%	14.0%	14.0%
Grade 11 to TT 11+1 PS, F+M	0.9%	1.0%	1.0%	1.0%
Grade 11 to TT 11+2 PS, F+M	0.1%	0.3%	0.5%	0.5%
Grade 11 to TT 11+1 PR, F+M	4.6%	4.4%	5.0%	5.0%
Grade 11 to TT 11+2 PR, F+M	0.1%	0.6%	1.0%	1.0%
Grade 11 to TT 11+3 LS, F+M	8.1%	12.2%	12.0%	12.0%
Grade 11 to Private Technical Institutes, 11+3 to 11+5, F+M	17.0%	17.0%	17.0%	17.0%
Grade 11 to School of Foundation Studies, F+M	9.0%	9.4%	10.0%	10.0%
Grade 11 to all Faculties except engineering & medicine, F+M	11.3%	11.6%	12.0%	12.0%
Grade 11 to Faculty of engineering, F+M	3.7%	4.1%	4.5%	4.5%
Grade 11 to Faculty of medicine, F+M	0.4%	0.7%	1.0%	1.0%
Grade 11 to Luang Prabang University	2.1%	4.3%	6.0%	6.0%
Grade 11 to Champasak University	2.8%	4.8%	6.0%	6.0%
Grade 11 to further studies, M+F	74.6%	84.5%	90.0%	90.0%

22 Source: Cambridge ADB/EDP team data and projections

Obviously, the above two tables must involve a degree of approximation 23, especially when projecting forwards as far as 2019/20, but nevertheless they are useful and relevant for the purposes of the present study.

Visits and interviews during the course of the present study indicated that:

- Employers and potential employers are very disappointed with the overall quality of basic education received by young entrants to the labour market. Whatever might be the specific skills required for specific labour market situations, employers were unanimous in saying that even more important for their purposes was for young job applicants to have achieved good levels of basic education, which all too frequently they found to be lacking24;
- Some primary schools are lacking basic physical facilities, such as a sound classroom with a dry roof which will not let in rain during the wet season;
- Secondary schools are concerned that the young students entering lower secondary
 after having completed primary school have not received a good grounding in basic
 education and often need significant remedial teaching in order to bring them up to
 the required standard;
- Secondary schools often lack adequate specialist teachers, resources, facilities and equipment for important subjects in the school curriculum so that, for example, chemistry has to be taught solely as a classroom subject, without the possibility of conducting any practical experiments, or carpentry cannot be taught at all;
- It was striking that some secondary schools may have 75 pupils in one class; and
- Students who have completed the full six years of secondary education are not up to the required standard for them to be able to undertake a bachelor's degree course, as is the norm in many countries and as will be mentioned further below.

23 For example, (i) some newly trained teachers may decide to seek employment in other economic sectors, (ii)

some new university students may have graduated from upper secondary schools in previous years, or (iii) some

young people may have gone to, or returned from, other countries.

24 E.g., during the course of the present mission, two separate travel agency assistants needing to multiply 12 x 3were apparently unable to do so without the use of a calculator.

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7. Technical and Vocational Education and Training

7.1 Enrolment Data for TVET

The Ministry of Education is placing strong emphasis on the development and expansion of technical and vocational education, partly by expanding provision in the public sector and partly by encouraging the development of private sector schools25. All provinces now have higher technical and vocational schools, following new schools opened in the Saravan and Xekong provinces in 2007.

A recent press article suggested there are now 55 private technical schools around the country offering certificate courses in computer skills, business administration and English, and a total of 85 colleges offering bachelor degrees in the same areas. MOE aims to gradually widen the array of subjects on offer, to include hairdressing, carpentry, civil engineering, jewellery making and many others ²⁶.

In vocational and technical education, teacher training, and higher education, two parallel programmes are offered:

- a) Daytime "regular" courses, followed by both quota students (admitted in limited numbers based on their scores), and competition students (admitted on the basis of acompetitive exam), and
- b) Evening "special" courses accessible to all students who have graduated from the relevant level of education.

Broadly, technical education is defined as courses followed after completion of upper secondary school, i.e., typically on an 11+2 or 11+3 basis, while vocational education is defined as courses followed after completion of lower secondary school, i.e., typically on an 8+3 basis. However, it appears that there is at least some degree of overlap, since MOE published data include some 11+2 courses under Vocational and some 8+3 courses under Technical. Both technical and vocational courses are frequently offered within the same institution.

Technical and Vocational institutions have three types of students by status:

- "Quota students": allocated by the competent authorities (MOE and provincial education offices) according to their selection procedures, on the basis of either the students' good examination scores or other special characteristics;
- "Non-quota students": typically have slightly less good examination scores and are selected by the respective training institutions according to established selection criteria:

25 MOE has produced a "Policy and Strategy Development of Technical and Vocational Education and Training 2005-2020", but as yet implementation is still pending.

26 Source: Interview with Deputy Minister of Education, quoted in Vientiane Times, 16 February 2008.

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• "Paying students", who typically have lower scores from school level examinations and come from less poor families, are admitted against payment of annual tuition fees covering the cost of training and instruction.

MOE published data of enrolments in technical and vocational education institutions in 2005-2006 are as shown in Table 7.1.

Table 7-1 MOE Published Data of Enrolments in Technical and Vocational Institutions, 2001-2002 – 2005-2006

Authority		Vocation	al	Technical						
	Total	Females	% Females	Total Females		% Females				
2001/2002										
• MOE	2,859	838	29	4,850	2,134	44				
• Other	655	437	67	2,169	449	21				
• Private	0	0	_	4,882	2,159	44				
Total	3,514	1,275	36	11,901	4,742	40				
			2005/2006			_				
• MOE	2,375	701	30	10,219	3,403	33				
• Other	300	220	73	8,413	3,832	46				
• Private	0	0	_	4,020	1,731	43				
Total	2,675	921	34	22,652	8,966	40				

Source: MOE/ESITC, as reproduced in EFA MDA, 2007.

Note: Not including teacher training but including nursing: neither of these will be considered for the purposes of the present study.

According to the above published data, over this period, whereas total enrolments on vocational

courses declined significantly (from 3,514 to 2,675, by 23.9 percent), the much larger total enrolments on technical courses mushroomed, increasing from 11,901 to 22,652, i.e. by 90.3 percent. Over the same period the number of technical schools more than doubled, from 22 to 47.

Unpublished data for 2006/07 supplied by the MOE Department of Private Education (DPE) indicate much higher enrolments figures for private schools, as shown in Table 7.2.

Table 7-2 Unpublished MOE Data of Enrolments in Private Post-secondary Schools, 2006-2007

Level	Total	Females	%
			Females
• TVET Centre (= vocational level)	11,056	5,106	46.2
• Technical (middle level)	1,504	643	42.7
• Technical (higher level)	18,329	8,192	44.7
• College (including Bachelor's degree)	8,215	3,967	48.3
Total	39,104	17,908	45.8

Source: Annual survey of private schools conducted by MOE Department of Private Education.

Although it was not possible to reconcile these differences, it seems likely that (i) the published MOE data relating to private post-secondary schools are incomplete, but (ii) the unpublished data from DPE are on a "head count" basis and include part-time, short course, and other occasional students, some of whom may only attend for perhaps one day.

MOE published data relating to technical education institutions falling under other government ministries may be summarised as in Table 7.3.

Table 7-3 MOE data of Technical Education Institutions under other Ministries. 2005-2006

Ministry	No.of	Programme	Total	Females	% Females
	Insts.		Enrolment		
Forestry & Agriculture	3	11+3	1,734	516	29.8
Information & Culture*	4	8+4	504	83	16.5
Health	5	11+3	2,495	1,740	69.7
Finance	4	11+3 and 11+2	3,680	1,493	40.6

Source: MOE/ESITC, as reproduced in EFA MDA, 2007.

Note: In addition, the Ministry of Industries and Handicraft, the Ministry of Labour and Social Welfare (MLSW) and the Ministry of Transport, Roads and Communications all have substantial involvement with skills development among various population groups. MLSW has three substantial vocational training centres (two in Vientiane and one in the north at Oudomxay) which closely resemble vocational training schools, and MLSW is currently planning to open a fourth one in the south at Champasak.

The data given in Tables 7.2 and 7.3 are the latest and apparently the most accurate published obtainable from MOE but there must be significant reservations with regard to the extent to which they may be considered reliable or authentic, for a number of reasons:

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^{*}For courses relating to art.

- At least some institutions directly or indirectly under MOE are not included 27;
- A number of training institutions under other government ministries are not included28;
- Vocational courses at other levels, e.g., those in Community Learning Centres (classified as Non-Formal Education) are not included;
- At least some of the students included are either on short-courses (of less than one year) or are studying part-time29;
- There may be some duplication, to the extent that a student on a short course or parttime course might enrol at more than one institution (or might re-enrol at the same institution) during the course of the year; and
- The very large discrepancies between the published enrolment data for private schools and the unpublished data as shown in Table 7.3.

It is apparent from the published data given in Tables 7.1 and 7.3 that technical and vocational education, and particularly the latter, shows significant gender inequality, with the sole exception of health training programmes, mainly for nurses (to which may be added teacher training), as shown in Table 7.3.

A breakdown of technical and vocational enrolments broken down by level and by subject areas is given in Table 7.4. The principal differences between the totals in Table 7.3 and those in tables 7.1 - 7.3 relate to the inclusion in the former of teacher training courses.

A tabulation of the individual MOE technical and vocational schools with indication of the programme subjects offered is given in Appendix H.

7.1.1 The Future of TVET

An interesting report prepared by VEDC, MOE, in November 200830 included the following information relating to the future of TVET, Vision, Indicative Targets, and TVET Master Plan.

In light of the government's development projects on education, the Department of Technical and Vocational Education has adopted the strategic development plan on TVET sector from 2006 to 2020. This long term plan was approved by the government in May 2007. The content of the plan includes (i) background information of TVET development, (ii) strengths & weaknesses (iii) vision, (iv) indicative targets, (v) strategies used to achieve targets and (vi) implementation modalities. TVET vision, targets to be achieved and strategies to be employed are summarized below.

27 E.g., one institution visited during the course of the present mission, the Lao-Japan Vocational School. 28 E.g., of the total of 5 agriculture and forestry colleges, data for only 3 are included, or the 3 Vocational Training

Centres under MLSW are not included.

29 Thus there is apparently no attempt to calculate "Full Time Equivalent" students, as in common in many other

countries.

30 Country Paper prepared by VEDC, MOE and presented to International Conference on Corporate HRD and Skills Development for employment: Scope and Strategies, UNEVOC / INWENT, Bali Indonesia, November 2008.

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7.1.2 Vision

The Vision of TVET of Lao PDR is as the following:

- Develop labour forces to be a good citizen equipped with knowledge and skills that able for self employment, be creative and motivated towards the development of the country as well as him/her, and have good health and delighted moral in order to meet the need for the development of the country.
- Develop labour forces to meet the need and strengths of regions, areas and related to
 living conditions of the populations and related to the structure of economic
 development of the country based on the capacity and strengths of the country in
 order to meet the labour demands of national and overseas as well as the need for
 regional and international integration.
- Develop new trades to meet the strength of economic development and region focusing on agro forestry sector, processing industry, electrical specifically hydropower, cross border services, tourism and mining in order to develop the economic structure that links the agro-forestry with industry and services.

7.1.3 Indicative Targets

The strategy paper sets nine indicative targets as follows:

- 1. Set up technical & vocational schools and training centers in every province and in some districts; improve and expand the existing technical & vocational schools, training centers and skills development centers; upgrade some technical schools to be technical colleges in order to provide different types of training such as: short term, long term, day time, evening classes, full and part time basis.
- 2. Improve access to vocational education and training to reach up to 60% of school leavers nation wide. In addition, special attentions will be put on the marginalized groups such as: the poorest, woman, ethnic minority and handicapped people.
- 3. Develop and adapt the technical and vocational education to meet the national education reform strategy through developing vocational profiles, occupational standards and curricula; utilizing modular and credit collectible system to facilitate in transferring prior knowledge or skills, in laddering to higher levels; include ICT, entrepreneurial know-how, environment into the newly developed curricula.
- 4. Include vocational training into the secondary education curriculum and pilot test in some secondary schools that meet the set conditions.
- 5. Organize the vocational guidance systematically in order to motivate school leavers in selecting vocational education stream and provide occupational consultation of TVET graduates to better prepare them for future work.
- 6. Develop technical and vocational teachers of different fields and levels both in country
- and overseas to meet the basic need of TVE institutions nation wide; provide training both professional and pedagogical fields to the exiting teachers, and systematically develop school managers and staff to cope with changing world and technologies.

- 7. Set up the quality assurance and evaluation system of TVET to ensure its internal and external efficiency.
- 8. Improve the administrative mechanism at macro and micro levels.
- 9. Improve legal framework and promote all sector to actively involve in preparing Lao labour forces; promote marginalized group to participate in TVE more and more; improve the income generating regulation and other regulations.

7.1.4 TVET Master Plan

The Plan consists of three programs (i) equitable access, (ii) relevance & quality improvement

and (iii) management improvement with 7 projects and 30 outcomes that make totally 130 main

activities each with its own indicators. The full cost of the Master Plan from 2008 to 2015 is USD 172.42 m with the main part to be spent on the improvement of schools.

Enrolment by fields of education (public and private), Full-time and Part-time, 2004/05

	ISCED97 Level 2 Lower Secondary level (technical & vocational)		ISCED97 Level 3			TOTAL Levels 2 & 3 ISCED97 Levels 2+3			ISCED97 Level 4 Post-secondary nontertiary (technical & vocational)			TOTAL All Levels			
			Upper Secondary level (technical & vocational)		All Post-sec. non-tertiary (technical & vocational)							•			
	Total	Female	% Fem.	Total	Female	% Fem.	Total	Female	% Fem.	Total	Female	% Fem.	Total	Female	% Fem.
141 Teacher training	486	304	62.6	1,561	760	48.7	2,047	1,064	52.0	1,963	1,075	54.8	4,010	2,139	53.3
21 Arts	134	81	60.4	510	82	16.1	644	163	25.3	-	-	-	644	163	25.3
34 Business and administration	-	-	-	468	276	59.0	468	276	59.0	11,197	5,686	50.8	11,665	5,962	51.1
42-46 Life sciences, physical sciences, maths. & statistics	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 Computing	-	-	-	-	-	-	-	-	-	233	109	46.8	233	109	46.8
Engineering, Manufacturing & Construction	-	-	-	2,145	189	8.8	2,145	189	8.8	3,750	377	10.1	5,895	566	9.6
52 Engineering & engineer. trades	-	-	-	1,510	15	1.0	1,510	15	1.0	3,179	334	10.5	4,689	349	7.4
54 Manufacturing and processing	-	-	-	180	174	96.7	180	174	96.7	49	-	-	229	174	76.0
58 Architecture and building	-	-	-	455	-	-	455	-	-	522	43	8.2	977	43	4.4
62 Agriculture, forestry & fishery	-	-	-	-	-	-	-	-	-	3,244	1,001	30.9	3,244	1,001	30.9
72 Health	-	-	-	-	-	-	-	-	-	2,212	1,492	67.5	2,212	1,492	67.5
81 Personal services	-	-	-	508	461	90.7	508	461	90.7	-	-	-	508	461	90.7
Not known or unspecified	-	-	-	-	-	-	-	-	-	1,338	934	69.8	1,338	934	69.8
TOTAL	620	385	62.1	5,192	1,768	34.1	5,812	2,153	37.0	23,937	10,674	44.6	29,749	12,827	43.1

Source: MOE: data not published but as supplied annually to UNESCO, with data given by UNESCO categories. Data for later years not yet available.

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7.2 TVET Demand and Supply

The NESRS states that for technical education and vocational training its aim is to improve the quality of the education and training received and to see that it is closely related to the modern world of work, with an emphasis that the training should be relevant to the needs of the economy and the labour market.

Visits and interviews during the course of the present study indicated that:

- There is very high demand from applicants to follow office-based courses, such as accounting or business administration, but many graduates from such courses have difficulty in finding suitable jobs;
- There is much less demand for places on practical courses such as carpentry or plumbing for boys, or dressmaking or sewing for girls, whereas graduates from such courses are able to secure appropriate jobs relatively easily;
- In providing courses, technical and vocational schools cater more for the social needs and wishes of the students and their families than for the needs of the labour market in an economic sense;
- Technical schools aim that their courses should be 40% theory, 60% practical, but often they are not able to achieve this;
- Many courses in a variety of different subject areas have recently been adapted to include classes in:
 - i) reinforcement of basic education in literacy and numeracy,
 - ii) English language,
 - iii) computing;
- Technical and vocational schools endeavour to develop small income-generating activities in order to supplement their inadequate budgets; and
- There are only very few students in technical and vocational schools from Lao ethnic communities.

GTZ have published, in conjunction with the MOE, several useful reports relating to vocational and technical education, as listed below, UNESCO Bangkok has studied education/employment relationships, and IIEP/UNESCO have published the series of relevant studies indicated later in this report, but most other donors have preferred to concentrate most of their education support efforts in the area of basic education, plus more recently in higher education.

8. Non-Formal Education

8.1 Structure of Non-Formal Education

The largest service provided by the DNFE (Department of Non-Formal Education) of MOE is the literacy programme, which each year enrols some 70,000 youth and adults in a 3-stage course, which leads to equivalency with completion of the 5-year primary school course. DNFE also organises non-formal skills development, but the two programmes are not systematically linked or mutually supportive. There are an estimated approximately 1.6 m people illiterate, of whom MOE DNFE (Department of Non-Formal Education) gives priority in training courses to women, rural groups, ethnic minority communities, and villages that have poor access to facilities for training and education.

For the development of livelihood skills, DNFE and the district education bureaux currently train some 4,000 people per year on a standard range of vocational courses, whereas it is estimated that the huge potential available clientele for such courses could be over 1.3 m. people31. The main vocational courses currently relate to sewing, weaving, carpentry, cooking, planting mushrooms, small animals and fishing, and tree growth.

Literacy courses are organised by three levels:

- Level 1 course: total of 340 hours, leads to equivalency with primary school grade 2,
- Level 2 course: total of 180 hours, leads to equivalency with primary school grade 3, and
- Level 3 course: total of 120 hours, leads to equivalency with primary school grade 5.

To complete the full programme should require a total of 8 months, at the rate of approximately 4 hours per school day.

Non-Formal Education (NFE) is based in some 300 Community Learning Centres (CLCs) and can provide vocational training, literacy and basic education equivalency programmes, but currently lacks the adequate human and financial resources required to be fully effective. These 300 CLCs appear inadequate to serve the needs of the country's estimated 10,700 villages. The three regional NFE centres can supply or train trainers for the CLCs but are unable to cover the whole country.

Since the CLCs tend to be located close to roads, they tend to serve the needs of the better off villages, and not the poorer ones which are more remote. It is even more worrying that an assessment of the CLCs suggested that only five were assessed as being "excellent", while another 30 were assessed as "active", leaving around 265 as only intermittently active or even inactive. School teachers are increasingly unwilling to work as training facilitators due to the very low rate of remuneration, which may only be paid after long delays ³².

31 Source: IIEP, 2004.

32 Source: IIEP, Contribution to the skills development component of a Master Plan for non-formal education, 2004.

The MOE strategy is to concentrate the development of NFE on young adults, especially school drop-outs and ethnic group women and girls in the poorest districts who are motivated to acquire skills for income generating activities. One of the related activities is specified as to:

"Provide quality training to build confidence among the trainees, enterprises, and funding agencies in the ability of the trainer provider to develop skills that are in high demand on the labour market" ³³.

There are no data available relating to the numbers of persons trained by skill areas in different provinces. It is reported that basic skills learned do not necessarily contribute to income generation, partly due to lack of access to credit facilities, since almost all new activities require at least some cash investment, however small, to start with. Therefore at least part of the training provided has not had a sufficient impact on poverty reduction ³⁴.

For DNFE courses, the target population has related primarily to rural people, mainly farmers of one crop or another. The intention was that for courses relating to mushroom production, poultry, small livestock and fish culture, such people would be likely to have the land and capacity to undertake additional part-time vocational work to supplement either their food security or incomes, or both. On the other hand, the crafts of food processing, weaving, tailoring, carpentry and construction could fill gaps in the services readily available to rural residents and at the same time enable members of rural households to diversify their sources of income.

8.2 Reconsideration of NFE

The current transformation of the economy is leading to the reconsideration of these and other possibilities, including relating to the skills needed to start and run a micro business for the market economy. As examples, and building on experiences in other countries, DNFE is exploring with appropriate agencies how to convert mobile telephones, CD-ROM, computers, solar energy and satellite connections into income-earning opportunities for at least some villages ³⁵.

Experience from other countries is that NFE courses can have very economic high rates of return to the country, often higher than from any other form of education, but that for basic literacy courses to be successful and appropriate to the needs and aspirations of learners, and so lead to high motivation and attendance, the curriculum content must not be too theoretical and needs to be directly linked to potential income-earning opportunities. ³⁶

33 Source, MOE, EFA/MDA, 2007.

34 Source: IIEP, 2004.

35 Lao PDR might wish to note the example of the small and relatively cheap solar-powered cooking stoves now inuse in many villages in India, which have led to better food preparation and positive health effects. Once a family has been able to acquire such a stove with the aid of micro-credit facilities, the use of it can be rented out to other villagers.

36 Perhaps Lao PDR could usefully learn from the English language courses given to taxi drivers in Beijing in late 2007/early 2008, in preparation for the 2008 Olympic Games.

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The evaluation report of the MOE (DNFE) of NFE for 2004-2006 is given in Appendix I and gives a great deal of useful and relevant information with regard to problems arising, together with recommendations. In particular, the report highlights major concerns relating to:

- the relatively small numbers enrolling for vocational courses in NFE centres,
- the levels of performance on primary school level courses are disappointing,
- student absenteeism is a recurring problem,
- courses are mainly theoretical, with students have few if any opportunities to do any practical work, and
- products made during the courses are typically of low quality and cannot be resold.

Visits and interviews during the course of the present study confirmed the above impressions given in the MOE's latest evaluation report and especially highlighted the low motivation of many potential learners to undertake such courses, which they saw as not directly related to their major concerns of food security and income generation for their often large families.

9. Higher Education

9.1 Higher Education Enrolments

The latest available enrolment data relating to higher education may be summarised as in Table 9.1.

Table 9-1 Total Enrolments in Higher Education, 2004-2005

Institute or Faculty	Type of Course	Males	Females	Total	Females %
Institutes:					
Teacher Colleges	11+3	5,121	4,458	9,579	46.5
Public Technical Institutes by Subject	-				
Area:					
• NUOL: Engineering and Architecture*	11+4	2,012	293	2,305	12.7
• NUOL: Irrigation*	-	190	14	204	6.9
• NUOL: Forestry*	11+3	956	205	1,161	17.7
NUOL: Agriculture*	11+3	465	152	617	24.6
• Banking	-	311	340	651	52.2
• Telecommunications	-	138	142	280	50.7
• Art	-	30	0	30	0.0
• Champasak*	11+3	411	150	561	26.7
Total Public Technical Institutes		4,323	1,282	5,605	22.9
Total Public Institutes (incl.T.C.)	-	9,444	5,740	15,184	37.8
Private Technical Institutes	-	5,904	4,837	10,741	45.0
Total Institutes		15,348	10,577	25,925	40.8
Public University by Faculty**:					
National University of Laos:		9,750	6,646	16,396	40.5
• Foundation Studies	11+2	1,293	863	2,156	40.0
• Sciences	11+5	434	272	706	38.5
• Education	11+5.6	1,810	1,468	3,278	44.5
• Engineering & Architecture	11+5	770	76	846	9.9
Agriculture	11+5	169	79	248	31.9
• Social Sciences	11+5	171	141	312	45.2
• Literature	11+5.6	1,683	1,337	3,020	44.3
• Economics & Management	11+5	,678	11,260	2,938	42.9
•Law	11+5	1,140	494	1,634	30.2
• Forestry	11+5	159	62	221	28.1
• Medical Sciences***	11+5.7	443	594	1,037	57.3
• Art	11+5	93	12	105	11.4

Institute or Faculty	Type of Course	Males	Females	Total	Females
	Course				%
 Champasak University 	-	1,250	785	2,035	38.6
• Souphanouvong University	-	751	475	1,226	38.7
• Total Public University	-	11,844	7,918	19,762	40.1
Private University Colleges****	-	2,002	1,891	3,893	48.6
Total University	-	13,846	9,809	23,655	41.5
TOTAL	-	29,194	20,386	49,580	41.1

Source: Derived from data published by MOE, Education Statistics and Information Technology Centre, in Annual

Bulletin 2004-2005.

Note: Breakdown by Faculty not available for Champasak University or Souphanouvong University.

In the case of the above data, as published by MOE, some degree of approximation must be involved, although this appears to be relatively small.

However, in attempting to calculate the numbers of students completing their courses and graduating successfully, as shown in Table 9.2, a greater degree of approximation must be involved due to the varying lengths of different courses (e.g., 11+3, 11+4 or 11+5), and the consequent difficulty of determining which students are or are not graduating during any one year.

Table 9-2 Approximate Numbers Graduating from Higher Education, 2004-2005

Institute or Faculty	Type of Course	Males	Females	Total	Females %
Institutes:	•	•	1	•	
Teacher Colleges	11+3	1,316	1,005	2,321	43.3
Public Technical Institutes by Subject	-				
Area:					
• NUOL: Engineering and Architecture*	11+4	950	133	1,083	12.3
• NUOL: Irrigation*	-	125	9	134	6.7
• NUOL: Forestry*	11+3	317	54	371	14.6
•NUOL: Agriculture*	11+3	123	34	157	21.7
• Banking	-	311	340	651	52.2
• Telecommunications	-	90	84	174	48.3
• Art	-	30	0	30	0
• Champasak*	11+3	214	72	286	25.2
Total Public Technical Institutes		2,160	726	2,886	25.2

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^{*}Courses taught in universities at Higher Diploma level.

^{**} At Bachelor level or above.

^{***} Subsequently became separate University of Health Sciences.

^{****} For example, the Bachelor's Degree in Management at Rattana Business Administration College.

Institute or Faculty	Type of	Males	Females	Total	Females				
	Course				%				
Total Public Institutes(incl.T.C.)	-	3,476	1,731	5,207	33.2				
Private Technical Institutes	-	525	441	966	45.7				
Total Institutes		4,001	2,172	6,173	35.2				
Public University by Faculty**:									
• National University of Laos:		1,085							
• Foundation Studies	11+2	-	-	-	-				
• Sciences	11+5	48	33	81	40.1				
• Education	11+5.6	131	100	231	43.3				
• Social Sciences	11+5	42	36	78	46.2				
• Literature	11+5.6	79	54	133	40.6				
• Economics & Management	11+5	290	234	524	44.7				
• Engineering & Architecture	11+5	178	12	190	13.3				
• Agriculture	11+5	45	15	60	25.0				
• Law	11+5	127	62	189	32.8				
• Forestry	11+5	37	17	54	31.5				
• Medical Sciences***	11+5.7	73	76	149	51.0				
• Art	-	35	3	38	7.9				
• Champasak University	11+5	223	158	381	41.5				
• Souphanouvong University	-	338	203	541	37.5				
• Total Public University	-	1,646	1,003	2,649	38.9				
Private University Colleges	-	268	225	493	45.6				
Total University	-	1,914	1,228	3,142	39.1				
TOTAL	-	5,915	3,400	9,315	36.5				

Source: Derived from data published by MOE, Education Statistics and Information Technology Centre, in Annual Bulletin 2004-05.

Note: Breakdown by Faculty not available for Champasak University or Souphanouvong University. *Courses taught in universities at Higher Diploma level.

The total of 9,315 graduates for 2004/05 shown in Table 9.2 approximately corresponds to the figures given in Table 6.1 of 7,655 + 2,457 (teacher colleges) = 10,112, for the year 2005-2006

The country's premier university, The National University of Laos (NUOL) is a multi-campus university, created in 1995/96, with the various campuses all located in or not far from Vientiane. The newer Champasak University is located in Champasak Province, some 600 kilometres south of Vientiane, and Souphanouvong University is at Luang Phabang, some 300 kilometres north of the capital. The new University of Health Sciences was created in 2007 from the Faculty of Medical Sciences at NUOL.

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^{**} Enrolments at Bachelor level or above. Include enrolments on Master's degree courses, which are located in the Faculties of Medical Sciences, Economics and Business Management, Sciences, Letters, Forestry and Engineering.

^{***} Subsequently became separate University of Health Sciences.

Total Enrolments at NUOL have grown remarkably in recent years, as shown in Table 9.3, with total enrolments nearly multiplied four times over these years. There was a slow trend towards less gender inequality until 2005/06 but apparently any such trend has not been continued subsequently.

Table 9-3 Total Enrolments at NUOL, 2000-2001 – 2007-2008

Year	Males	Females	Total	Females, %
2000-01	6,844	2,845	9,689	29.4
2001-02	11,196	4,717	15,913	29.6
2002-03	12,461	5,757	18,218	31.6
2003-04	13,096	6,539	19,635	33.3
2004-05	15,289	7,335	22,624	32.4
2005-06	17,258	9,415	26,673	35.3
2006-07	21,255	10,054	31,309	32.1
2007-08	25,169	11,943	37,112	32.2
Increased, no. of	3.7	4.2	3.8	-
times				

Source: Data from NUOL.

9.2 Higher Education Faculties and Students

At NUOL, the Faculties include the various teaching Departments shown in Table 9.4:

Table 9-4 Faculties and Departments at National University of Laos, 2007-2008

Faculty	Departments		
• Education	Psychology and Education, Languages, Science,		
	Social Science, Education Management		
• Social Sciences	History, Geography, Political Sciences, Tourism and		
	Hotel Management		
• Science	Biology, Chemistry, Computer Science, Mathematics,		
	Physics		
• Economics and Business Management	Economics, Business Management		
• Letters (Literature)	Lao Language & Mass Communications, English,		
	French, Japanese, Chinese Vietnamese, German,		
	Korean		
• Forestry	Forest Utilization and Forest Policy, Forest		
	Management, Watershed Management & Land Use		
	Planning		
Agriculture	Agriculture, Husbandry & Fishery, Rural Economic &		
	Agro-processing		
• Law and Political Science	Law, Political Science, International Relations		
• Medical Sciences*	Medicine, Pharmacy, Dentistry		
• Engineering	Civil Engineering, Mechanical Engineering, Electrical		
	Engineering, Electronic Engineering, Communication		
	& Transportation Engineering, Water Resources		
	Engineering		
• Architecture	Architecture, Urban Environment		

Source: NUOL (2006), the 10th Anniversary of the National University of Laos 1996-2006.

Students are selected for admission to universities by three processes:

- 1. Quota Selection: by provincial education services: students selected based on their High School achievement and a quota fixed by MOE,
- 2 . Entrance examination: organized simultaneously in all provinces, and
- 3. Special course students, studying outside usual course teaching hours ³⁷.

Students may be admitted for either:

• Bachelor degree programme: one year of Foundation Studies followed by four or more years of specialised studies in the various faculties, or

37 Source: National University of Laos pamphlet, 2006.

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^{*}Now designated as separate University of Health Sciences.

• Higher diploma programme: three or four years of studies in one of four faculties: engineering, architecture, forestry, or agriculture. Students completing the higher diploma may continue their studies towards a bachelor degree via enrolling for a bridging course for one semester.

Visits and interviews during the course of the present study indicated that:

- Each year there are far more applicants for university places than can be admitted;
- Even though NUOL has the choice of the most able secondary school graduates, students completing upper secondary school are not considered to be up to the standard required to undertake a bachelor degree and must either complete the Foundation Studies course or must enrol for the higher diploma;
- NUOL has been developing arrangements to have increased involvement with employers and employers' organisations and to enable students to have increased practical work experience;
- NUOL estimates that perhaps 50 percent of graduates are able to get relevant jobs in Lao PDR; and
- There are only very few students at NUOL from Lao ethnic communities.

10. Skills Development Generally

10.1 National Training Council

Some provinces have a standing committee for skills development, but as yet these committees have little in the way of resources or authority to introduce major changes. The National Training Council (NTC) was established by the Government in 2002, to pursue an active policy on the education-work relationship. The permanent members of the NTC include representatives from the public sector, the private sector, and grassroots organizations. The main objectives of the NTC are as follows:

- To help create trade associations to specify standards for each trade and the corresponding training frameworks; and
- To introduce sandwich training courses.

The NTC has participated in the development of school factories, attached to vocational schools, where students can gain practical work-related experience. Provincial training councils are planned, and it would be desirable for them to be linked to the provincial standing committees for skills development. However, to date, it appears that NTC has not been fully effective, especially in that it has little or no authority to introduce any major innovations.

Vocational and skills training programmes may be linked to particular employment or subsistence activities. Such courses are limited in number and tend to promote gender stereotypes (e.g., mechanical skills for men, weaving for women). The National Socio-Economic Development Plan (2006-2010) notes that a vocational training centre was set up in Vientiane but that from 2002-2005 in total on vocational training courses only about 100,000 people received training, as compared with the previous plan target of 300,000. MOE plans that each province shall have a technical school by 2010 ³⁸.

A major recent report:

- Described the development of vocational and technical education and training as a significant "success story",
- Said that "the challenge to get the labour market connection right has now been met",
 and
- Cited the establishment of the tripartite NTC in 2002 as "a major advance and will enable the development of appropriate training programmes" ³⁹.

It is necessary to serious reservations with regard to the above conclusions. On the one hand, there has undoubtedly been significant expansion and growth of technical education, but on the other hand, it is necessary to take into account:

38 Source: NESRS.

39 Source: MOE EFA MDA, 2007.

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- The apparent decline in enrolments in vocational schools, and
- It appears that the NTC has not been able to have much in the way of real impact on the present confusing and overlapping pattern of different training courses provided by different suppliers coming under different Ministries and other public and private organisations.

10.2 Reports by IIEP/UNESCO

In December 2004, a TA mission from IIEP40 produced four separate reports relating to skills development, technical and vocational education, and non-formal education in Lao PDR41, which have subsequently been adopted as basic working documents in this field. The diverse findings from this very useful project included the following relevant points:

- There is a very wide range of skill learning opportunities offered by different institutions, ranging from:
 - i) training aimed primarily at increasing food security or generating supplementary income in villages in impoverished rural areas, in skills such as different types of small plant and livestock production, development or expansion of cottage or village industries and handicrafts production, and development of eco-tourism activities, to
 - ii) training aimed primarily at needs in urban or relatively advantaged areas, in skills such as dress-making, hairdressing/beautician, using office computing software, hospitality/hotel services, general tourism services, foreign languages, plumbing, motorcycle repair, air conditioning/refrigeration, electricity, carpentry, welding and masonry;
- The location of training varies, with a majority of the longer courses taking place at skills development centres usually located in or near provincial capitals, but with a gradual trend over time towards more effective community-based training, which targets the disadvantaged rural poor;
- Ethnic minorities have only a very low level of participation in skills development activities, estimated at only 3-4 percent of enrolments in some locations;
- The quality of vocational skills development activities is reported to vary widely, with, frequently, the curriculum not adapted to the actual and potential incomegeneration needs of the participants and therefore not relevant to actual market or community needs;
- Vocational schools were found to have a basically academic mode of operation little different to that of general secondary schools, had little flexibility to adapt training courses to local and national labour markets, and had few or no relations with local businesses or farms students say that they tend to spend too much time on
- 40 International Institute for Education Planning, UNESCO, Paris.
- 41 (i) Skills development to meet the learning needs of the disadvantaged groups in Lao PDR,
- (ii) Reorienting of technical and vocational education towards local needs in rural communities,
- (iii) Contribution to the skills development component of a Master Plan for non-formal education,
- (iv) A strategy for training of trainers/facilitators.

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- classroom theory and too little time on practical application of the skills being learned:
- The isolation of the poorest people living in the poorest remote villages does not allow for easy access to existing formal and non-formal skills development facilities, the vast majority of which are provided in or near provincial capitals;
- The disadvantaged poor are preoccupied with food security issues and the need to supplement incomes in the remote areas where they live, rather than looking for new occupations or training;
- For entry to technical schools or vocational schools, whatever may be the nominal entrance requirements, in practice, because of the high demand for places at these institutions, the vast majority of students need to have completed the full six years of secondary schooling;
- According to the Decree on Development of Vocational Education of 1993, it is the Ministry of Labour and Social Welfare that has responsibility for skills development and training – so there needs to be clearer articulation between the different Ministries and other public sector providers;
- There are a large number of international NGOs, estimated at over 100, which undertake activities relating to non-formal education or training in various ways.

11. Agriculture and Forestry

11.1 Employment in Agriculture and Forestry

In view of the continuing predominant role of the agriculture and forestry sectors in the Lao economy, these sectors are dealt with in this section as a special case.

The low-productivity and very inefficient agriculture sector is by far the largest employment sector in Lao PDR and has very large potential for more productive development and increasing exports, with currently only 40 percent of Lao farms producing for the market and with the great majority of agricultural land currently not exploited at all.

Almost all production takes place within small family farms, much of the routine work is done by women, and agricultural productivity is very low (estimated at only US \$ 0.13 per hour worked). The total agricultural labour force is huge, estimated at around 2.3 million people but there do not exist adequate training programmes for this large number of people, other than onthe job training within the family.

The Government's plan is that under future expanded relevant training programmes, at least 50 percent of the beneficiaries will be women, but it would seem that substantial additional funding will be needed. Evidence from other countries is that achieving increased productivity in agriculture is strongly associated with literacy, since the productivity gains may come as a result of reading and of applying new techniques.

The forestry sector also reports a lack of highly-skilled workers. This sector employed a total of 22,000 workers in 2001, with firms poaching skilled workers from each other, with migrant Vietnamese holding many of the skilled positions and often being preferred by employers, and with additional vocational training and apprenticeship programmes being needed. The wood products industry has only one vocational training programme, located at Pakpasak. Managers interviewed in 2005 said that Lao workers were not as productive as either Vietnamese or Chinese workers. The labour productivity gap between these groups of workers is reported to be as high as 20 percent ⁴².

Education and training for employment in agriculture and forestry is provided by a wide variety of different institutions, as follows:

- The Faculty of Agriculture at NUOL: produces graduates at both Bachelor degree and Higher Diploma levels, with many of the graduates becoming employed in provinces and districts as agriculture extension workers;
- The five specialist agriculture and forestry colleges coming under the Ministry of Agriculture and Forestry (MAF);
- One specialist agriculture technical school under MOE (at Dong Kham);

42 Source: ITC (Industrial Training Centre), 2005, and Industry Associations, including LWPEG (Lao Wood and Products Export Group).

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- Eight generalist MOE vocational schools which offer training courses in planting (agronomy) and livestock (as shown in Appendix H)43;
- One generalist MOE vocational school (in Vientiane Province) which offers training courses in forestry; and
- Agriculture-related skills training provided as part of NFE courses.

Despite this complex supply situation with many different institutions involved, it is widely agreed that in total provision is still inadequate to meet the needs of the 80 percent of the labour force who continue to work in agriculture. One estimate is that the proportion of the labour force engaged in agriculture will steadily fall to 50 percent, in which case to continue to provide adequate food for the growing Lao population will require a much better qualified and equipped agricultural workforce ⁴⁴.

11.2 The Agriculture and Forestry Colleges

The 5 specialist agriculture and forestry colleges 45 under MAF had in 2006-2007 total enrolments as summarised in Table 11.1.

Name of Agriculture and	Enrolments				
Forestry Colleges	Males	Females	Total	% Females	
Louang Prabang	475	196	671	29.2	
Champasak	579	298	877	33.9	
Thangone*	290	49	339	14.5	
Borikhamxay**	310	87	397	21.9	
Nakae	111	29	140	20.7	
TOTAL	1.765	659	2.424	27.2	

Table 11-1 Enrolment in Agriculture and Forestry Colleges, 2006-2007

Source: Interview at MAF

The specialism and locations of the staff employed by MAF are summarised in Table 11.2. This table shows that the great majority of MAF staff have specialism's relating to particular aspects of agriculture and forestry and are located not in the central ministry but in the provinces and districts (= 2,276+3,639 = 5,915 / 6,997 = 84.5 percent).

^{*} Thangone is a specialist irrigation college

^{**} Bolikhamxay specialises in lowland agriculture

⁴³ The 8+1 = 9 MOE schools are located at: Attapu (in the south), Dongkhamxang (in the central area), and Bokeo, Xaignabouli, Xiangkhouang, Louangnamtha, Phongsali, Houaphan, Oudomxai (all in the north). 44 Source: GTZ Lao-German Programme (2005).

⁴⁵ Only 3 of these schools are included in the MOE data (for 2005-2006) shown above in Table 10, for reasons which we were not able to ascertain.

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Table 11-2 Specialism and locations of staff of Ministry of Agriculture and Forestry, 2008

Specialisms	Ministry	Schools	Provinces	Districts	Total	%
	Departments					Females
Plants	149	70	445	866	1,530	21.8
Livestock	86	36	329	678	1,129	25.0
Veterinary	33	2	44	78	157	27.4
Fisheries	22	3	14	4	43	13.9
Forestry	198	27	764	1,346	2,335	14.9
Irrigation	73	16	323	430	842	6.8
Other	306	61	357	237	961	28.2
Total	867	215	2,276	3,639	6,997	19.2

Source: Interview at Ministry of Agriculture and Forestry

Table 11.3 summarises the available evidence relating to employment prospects from Agricultural and Forestry Colleges. This evidence is clearly incomplete and includes estimates on the part of the college lecturing staff, but it does include one of the very few tracer studies available relating to the employment experiences of graduates.

Table 11-3 Employment Prospects for Graduates from Agriculture and Forestry Colleges

Name of Agriculture and Forestry	Available evidence re Employment Prospects for
College	Graduates
• Louang Prabang	Tracer study showed (i) 20% get paid jobs, mostly as district staff, with one year and 80% get jobs by end of second year, and (ii)students do not have the skills and means to start their own business to reduce these long periods of unemployment. The major challenge for new agricultural extension workers was to learn how to work with farmers, as extension skills were not taught at the college.
• Champasak	College staff estimated that perhaps 30% could get paid jobs
• Thangone*	College staff estimated that 20% find paid work in irrigation and construction
•Borikhamxay**	College staff estimated that perhaps 10% get paid jobs in districts + 20% elsewhere
• Nakae	College staff estimated that all graduates return to their original farmer group

Source: Ministry of Agriculture and Forestry (2008)

A separate tracer study46 of graduates from the NUOL Faculty of Agriculture in 2005 found that 93 percent were employed in some way or other, with only 7 percent declaring themselves to be 46 Source: NUOL (2005)

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unemployed. However, it appeared that many of the former, perhaps as many as 25 percent, were not in paid employment but were working on their families' farms.

A recent external consultancy47 with MAF has completed a *Strategy for Reform* report which appears to be very thorough with regard to its review and analysis of the agriculture and forestry colleges but which apparently did not consider and did not have any contact with the agriculture and forestry programmes taught in the various MOE vocational schools as cited above, not even when it was estimating the total numbers of graduates required and currently being supplied for the sector as a whole. Therefore, in that respect, this must be considered a very incomplete report.

This *Strategy for Reform* report identifies a number of serious concerns relating to the agriculture and forestry colleges, which may be quoted as follows:

- "Training is too theoretical, not linked to farmer or extension practice, there is no chance to develop skills/experience through learning by doing";
- "Students only start doing practical work with farmers in the third year of their study";
- "Practical skills needed in future jobs are not defined, no attempts are made to identify training needs among future employers, the curriculum is not based on skills training";
- "There is little interest to apply skills learned to join a company or to set up one's own business";
- "There is a general lack of funds, no incentives to earn revenue, complicated financial management, and few mechanisms to raise more money";
- "None of the colleges have any mechanisms to coordinate with and get direction from their clients in the labour market, e.g., farmers, districts, companies, etc.";
- "There is no strategic training needs analysis to give direction to the agricultural technical colleges in the wider context of the education system";
- "There is little focus on sustainable upland farming 48, which occupies most of the country's population, especially the poor";
- "More women and ethnic minorities should enter these colleges";
- "The curriculum is seen as a series of books, not to be changed easily";
- "The college teachers have no impact on farming practices, no links to extension workers";
- "It is difficult to reconcile the numbers of colleges, students and teachers with the small number of employment opportunities on the one hand and the huge social need for more basic agricultural skills training on the other hand. Training centres are not really being used, they do not provide training for which there is a demand";
- "Many more skilled persons are needed to work in agriculture, not only at district level but also at sub-district level... (but) the demand for technical agricultural education on the paid labour market will remain limited over the next ten years or so

48 The 7 MOE schools offering agricultural programmes and located in the north would seem to be better placed to meet this need.

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⁴⁷ From SDC (Swiss Development Cooperation).

- the paid labour market will continue to be too small to absorb all agricultural college graduates";
- "The relation with the Ministry of Education needs to be clarified, in terms of quality control of teaching and upgrading of students from one institution to another."

Taken together, this list of concerns amounts to a very serious criticism of these colleges, which are presented as being content to "do their own thing", to be resistant to change, and to operate largely in isolation from the needs of the real world of the agriculture sector in Lao PDR.

The report goes on to give a long list of proposals for reform of the colleges but at present it is not clear to what extent MAF will be in a position to implement these proposals, largely on account of the significant additional resources that would be required.

12. Evidence from Questionnaires to Employers' Association and Employers

a) Questionnaires to employers' association

Preliminary visits were made to 5 employers' associations. Of the 25 questionnaires distributed to employers' associations, 10 completed responses were received, i.e., a response rate of 40%.

Of the 10 responses received, 5 (= 50%) indicated that their member companies would need to employ additional staff in the foreseeable future, in a variety of fields, mainly relating to management, supervision and marketing.

With regard to new staff engaged by their member companies over the last 5 years, although 8 (= 80%) said that they had been able to engage the numbers of new staff required, 8 (= 80%) indicated that they lacked the skills required, and 5 (= 50%) indicated that they were displeased with the quality of the education and training that the new staff had received before being appointed.

General comments included that the quality of the education that the new staff had received was low, that private schools produced better quality graduates than government schools, and that students needed greater motivation to study hard, improve their qualifications, and gain additional practical work experience.

b) Questionnaires to individual employers

Visits were made to a total of 103 employing companies, by three teams of staff who between them covered 6 provinces, i.e., 2 provinces each. All the requested companies agreed to complete the questionnaire, by face-to-face contact, so that the response rate was 100%. The employing companies included had a recorded total of 10,151 employed staff (females 40.0%), with an average of 98.6 staff per company. However, the companies varied significantly by both sector coverage and size, with 4 companies having over 1,000 staff each, but with 24 companies having fewer than 10 staff each.

Total new staff taken on by these companies during 2008 to date numbered 4,110 (65.0% females), including a total of 956 (53.3% females) young people who had just completed their education. Of these new staff, a total of 852 (48.7% females) had completed primary school, 603 (51.0% females) had completed lower secondary, 575 (44.9% females) had completed upper secondary, 398 (41.2% females) had completed vocational school, 162 (22.3% females) had completed technical school, and 352 (47.1% females) were university graduates. However, that left a balance of a further 1,168 new staff (= 28.4% of the total new staff) for whom similar information relating to completed level of education was not given: the latter would include, but need not be limited to, new staff who had not completed even primary schooling.

Of the 103 employers, a total of 87 (= 84.5%) indicated that they would need to employ additional new staff: taken together, the responses indicated that a total of close to 2,500 new *Page 12-1*

staff would be required during the year 2009, although obviously any such forecasts would have to depend on changing economic circumstances.

With regard to the qualities of the additional staff employed, in general, the responses from individual employers were more positive than those from the employers' associations, with the majority of the individual employers satisfied with the staff employed from the point of view of their literacy (88.3% satisfied), knowledge of Lao language (90.3%), specific skills (70.9%), and computer skills (64.1%). However, there was general dissatisfaction (66.0%) with the level of skills in the English language.

General comments added by many employers included some positive views but were predominantly negative, including that many employers indicated that (i) there was a need for more vocational school graduates, and (ii) young people needed to have received more practical work experiences

c) Summary of questionnaire responses

In summary, the responses received from the above questionnaires, although partially positive with regard to education and training; in the main confirm the predominantly negative impressions already received from employers interviewed in and around Vientiane earlier in 2008.

13. Conclusions and Recommendations

13.1 Conclusions

a) Overall Provision

The conclusions from this study are varied and wide ranging, resulting from bringing together a broad mass of subject matter which is complex and cannot easily be simplified.

As noted by the recent IIEP reports ⁴⁹,

- There is a very wide range of skill learning opportunities offered by different institutions, ranging from:
- Training aimed primarily at increasing food security or generating supplementary income in villages in impoverished rural areas, in skills such as different types of small plant and livestock production, development or expansion of cottage or village industries and handicrafts production, and development of eco-tourism activities, to
- Training aimed primarily at needs in urban or relatively advantaged areas, in skills such as dress-making, hairdressing/beautician, using office computing software, hospitality/hotel services, general tourism services, foreign languages, plumbing, motorcycle repair, air conditioning/refrigeration, electricity, carpentry, welding and masonry;
- *The location of training* varies, with a majority of the longer courses taking place at skills development centres usually located in or near provincial capitals, but with a gradual trend over time towards more effective community-based training, which targets the disadvantaged rural poor.

To the above we may add that training for specific skills takes place at a variety of levels and in a wide variety of different institutions, including:

- Levels: at all levels from university (both bachelor's degree and higher diploma), technical school (e.g. 11+3), vocational school (e.g. 8+3), down to the level of at least secondary schools and including NFE; and
- *Institutions:* technical and vocational schools under MOE direct, schools under provincial departments of education, schools under other ministries, training centres under MLSW, the LPRYU (Lao People's Revolutionary Youth Union, the LWU (Lao Women's Union), Community Learning Centres, private sector schools, company training centres, NGOs, and on-the-job training, including a wide variety of short courses and workshops, not forgetting training courses taking place in other countries.

49 IIEP / UNESCO (2004)

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b) Positive aspects

It should be emphasised that the overall picture is not all negative. There has been some definite progress in this field in recent years and it is possible to cite a number of positive indicators, including:

- Significant increases in enrolments, notably that:
 - Total enrolments at NUOL mushroomed from 9,689 in 2000/01 to 37,112 in 2007/08, i.e. multiplied by 3.8, and
 - Enrolments in technical schools increased by more than 90 percent over 2001/02 to 2005/06;
- Significant increases in participation of females, on at least some courses and especially on lower level courses, e.g. on courses run in Vientiane Capital CLCs female enrolments are 95 percent of the total (although generally enrolments of males still far outnumber females);
- Significant increases in provision of new institutions and new courses, including that:
 - Two new universities were created, one in the north at Luang Prabang (Souphanouvong University) and one in the south at Champasak, with both including, for example, faculties of agriculture and of engineering;
 - The number of technical schools recorded in MOE data increased from 15 in 2000/01 to 47 in 2005/06, i.e., more than trebled.
 - New courses were instituted or are now in the process of being instituted at NUOL in mining engineering, transport engineering, manufacturing engineering, water resources engineering and chemical engineering (with the latter having specific to links with agriculture and the needs of the growing food processing industry); and
 - Reportedly, there are now 55 private technical schools around the country offering certificate courses in computer skills, business administration and English50.
- Attempts to make courses more practical, more related to needs of employers: there are many examples of technical and vocational schools, and other institutions, making attempts to increase provision for students to spend more time outside schools on practical work placements, e.g. at Pakpasak Technical School, although still much more needs to be done in this respect;
- Attempts to achieve greater supply coordination: This is especially the case with the setting up of the National Training Council in 2002, to bring together representatives of all the different government ministries, public sector and private sector organizations involved in training in various ways, although as yet the NTC has not become fully effective;

50 Source: Vientiane Times, 15.2.2008 Page 13-2

- Attempts to achieve increased coordination with labour market: There are many examples of this, mostly small-scale, ranging from technical and vocational schools seeking increased involvement from employers in the design and provision of their courses to NUOL setting up a new council to bring together representatives of university professors, different government ministries and private sector employers, although more such initiatives are still needed;
- Agriculture: Significantly increased provision has been made for enhanced skills training in agriculture (which is still by far the country's major employment sector), by the wide variety of institutions involved, many of whose graduates seek to become agriculture extension workers in provinces and therefore work to introduce mainly informal training in new production methods and processes, with a view to increasing agricultural productivity and yields, but there has also been serious criticism of the agricultural courses provided;
- **English language:** The recent decision by MOE to commence the teaching of English in Grade 3 of primary schools, although this will take time to implement and significant retraining of teachers and other resource inputs will be needed; and
- **Computing:** Increased awareness of the importance of increased training in the use of computers, in all institutions visited.

c) Continuing concerns

However, there remain a number of significant concerns, relating to training and employment issues, including:

- A complicated, confusing and overlapping pattern of availability: The provision of different training opportunities at different levels by so many different suppliers, including MOE, provincial departments of education, other government ministries, other public bodies and private sector suppliers is very confusing and must be inefficient, both in terms of overlapping of provision and in terms of young applicants finding it very difficult if not impossible to obtain full information with regard to the many different training opportunities available;
- A mismatch between social demand and economic need: There is very high demand from young people to enrol on office-based courses and training programmes, whereas there is high economic need for more training in more practical skills which are in short supply;
- Problems with data availability, relating to total enrolments and other indicators: In the MOE and elsewhere, we were unable to locate data bringing together the whole of the national provision for technical education and vocational education and it is especially noticeable that the MOE does not publish data broken down by subject area of courses studied;
- Lack of coordination between different training suppliers, both public and private: It was difficult to avoid the conclusion that each supplier "does its own thing", without any or adequate consultation with other suppliers in the same field, and that this continues to be the case in spite of the setting up of the National Training Council, which does not yet seem to have become fully effective; Page 13-3

- Lack of information with regard to labour market possibilities, needs and requirements: There is a lack of systematic coordination of information with regard to labour market demand and supply, either in total or for different economic sectors, which makes it very difficult if not impossible to assess labour market needs and shortages. Young people applying for training courses at different levels do not have access to information with regard to employment possibilities after graduating from their chosen courses. There is a need for much wider and more systematic dissemination of such labour market information;
- A significant unmet demand for training: despite the large increases in the provision of courses and in enrolments in recent years, it seems clear that there are still many applicants to training courses at different levels who cannot be admitted to courses, with many schools and colleges reporting excessive numbers of applicants for admission in relation to the number of course places available;
- **Problems with certification:** Both employers and other government ministries feel that there is a significant and growing problem with the large number of certificates and diplomas of different types which are difficult to interpret and in which it is difficult to have confidence, especially with regard to the level of studies and degree of competence attained. There is also a lack of a clear progression path for students to be able to move on to further courses. Interviews suggested the need for a national coordination system, on the lines of the NQFs (National Qualifications Frameworks) that have been established in many other countries, which could be linked to a current proposal from ASEAN to set up common skills standards;
- Some specific skills are not catered for anywhere within the present education and training system: examples quoted to us included the techniques of wood processing from raw timber (including kiln drying) and those of coffee processing from the raw coffee bean to the finished product;
- Are courses still too theoretical, not sufficiently practical? In at least some instances, the responses received indicated Yes51, i.e., that the various attempts to make courses more practical, while very laudable, have not gone far enough. This seems to be particularly the case where schools lack the requisite practical workrooms or qualified specialist teachers or materials or equipment, as was the case in at least some secondary schools and technical and vocational schools visited;
- Students need more practical work experience: Similarly to the above, the various attempts to date to include in training courses more practical work experience have not yet gone far enough and significantly more practical work experience is needed52;
- **Budgeting and finance procedures:** budget and finance data seen in education and training institutions visited were unsatisfactory, including that no institution visited was able to make available a complete school budget;
- Locational differences: There is a significant difference between training opportunities available in the Vientiane and central areas on the one hand and the north and south of the country on the other hand, with the former offering many more possibilities but the latter being much more restricted;

51 As indicated by IIEP (2004). 52 A striking example seen was a group of 10 students in a vehicle all having a collective driving licence, with each of them driving the vehicle in turn in relays, i.e., for each of them only one-tenth of the lesson was practical, whilst the other nine-tenths was spent observing. Page 13-4

- Lao ethnic communities: There are only very few students on any post-secondary skills training courses from Lao ethnic communities;
- **Girls:** Overall, there is still significantly greater participation in post-secondary education by boys than by girls;
- Lack of motivation for basic literacy courses in NFE: The great majority of illiterate adults have little or no motivation or enthusiasm for basic literacy courses, which they see as not directly related to improvements in their incomes or their living standards:
- "We have both a shortage and a surplus": this comment53 may be said to sum up one of the most perplexing aspects of the present labour market and skills requirement situation. However, international evidence is that such a situation is not unusual when a country's economy is developing quite rapidly, as is the case with Lao PDR. Typically, job entry requirements change over time, as employment situations become more complex, at the same time as education institutions are producing an increased supply of graduates with varying educational backgrounds, skills and aptitudes. Experience from other countries is that labour market imbalances between supply and demand may continue for some considerable time, probably for some years, before eventually a situation of greater equilibrium is attained. According to economic theory, changes in relative market prices and wage rates should eventually attract applicants to those sectors where they are most needed, but this process may work only quite slowly.

A series of recent press interviews with a number of higher education students and recent graduates indicated that they were very pessimistic with regard to their chances of securing suitable jobs in Lao PDR. Most referred to their friends and contacts as having had great difficulty in getting jobs after graduation. Most cited their lack of practical work experience as being the main problem since they felt sure that potential employers would give preference to applicants, whether Lao or foreign nationals, who would have previous relevant business experience54. This impression was confirmed in various of our interviews.

d) The quality of basic education

During all our many interviews and meetings the point that was emphasised more than any other related to the quality of basic education that young people had received, partly in that it directly affected the quality of applicants for courses at various levels, and partly in that it related specifically to the education background of applicants for employment positions. Examples cited in interviews related primarily to proficiency in basic mathematics and basic language skills. Employers' views indicated that they had no doubt that the quality of basic education had declined significantly. Typically, they stated that twenty or more years ago those young people who had completed primary school (admittedly a minority) had at least received a good general grounding in basic education, but in their view this was no longer the case.

53 Made on behalf of one other government ministry.

54 Source: Vientiane Times, 8 February 2008.

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The question of the quality of basic education has been discussed extensively in previous reports and cannot be fully explored here but interviews and visits during the course of the present study emphasised:

- The need for upgrading and retraining of basic education teachers;
- The shortage of textbooks and other materials in primary schools;
- The lack of budgets for primary schools; and
- The poor quality of infrastructure in many primary schools.

13.2 Recommendations

a) Within the MOE sector, at primary and secondary levels

- The Ministry of Education could initiate an information programme in primary, lower secondary and upper secondary schools, to be included in the school curriculum, in order to make available to young people positive information with regard to the many employment opportunities in sectors requiring practical training skills (carpentry, plumbing, electricians, metal working, dressmaking, sewing, handicrafts, etc.).
- The Ministry of Education could initiate in primary, lower secondary and upper secondary schools a post-secondary education information programme aimed at Lao ethnic communities, since there are only very few students in post-secondary skills training courses from Lao ethnic communities.
- The Ministry of Education could initiate in primary, lower secondary and upper secondary schools a post-secondary education information programme aimed at girls, since there is a continuing gender inequality issue, with only a minority of enrolments on post-secondary skills training courses being girls.
- The Ministry of Education could investigate, jointly with the Ministry of Agriculture and Forestry, the proposal from the latter55 that basic agricultural skills training should already begin at primary and secondary schools, so that all students will have training in basic agricultural skills.
- The Ministry of Education could undertake a large-scale phased programme, over a period of some years, to upgrade the level of competency in English language on the part of teachers in all education institutions, including primary schools and secondary schools.
- The Ministry of Education could review what steps can be taken to improve the quality of basic education, which was frequently cited by employers and employers' associations as their main concern with the education graduates from different levels applying for employment positions.

55 In Ministry of Agriculture and Forestry (2008), page 24.

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b) Within the MOE sector, at post-secondary level

- The Ministry of Education could institute a much fuller, more reliable and more
 effective data base relating to technical and vocational education. This would include
 data relating to enrolments and graduates broken down by:
 - Gender:
 - ·male.
 - •female.
 - •total:
 - · Mode:
 - •Full-time for year,
 - Full-time for shorter period,
 - Part-time;
 - •Supplier:
 - · MOE.
 - other ministries,
 - other public sector,
 - private sector
 - Level of study:
 - technical
 - vocational
 - · other.
 - Subject area of study,
 - % of students completing course successfully.
- In order to meet the present continuing significant unmet demand for skills training, which cannot be met in the public sector, the Ministry of Education could encourage both the provision of training courses in existing private sector schools and the foundation of additional private sector schools, including to fill gaps in present provision, either by full-time or short-courses.
- In order to overcome the present confusion relating to a wide variety of education and training certificates and diplomas at different levels, the Ministry of Education could institute an overarching National Qualifications Framework, as has happened successfully in many other countries in recent years.
- Drawing on experiences in other countries, the Ministry of Education could initiate a study to investigate the social and economic consequences, including consequences for the students from poor families, of changing the present arrangements relating to fees and allowances for students in post-secondary education.
- In view of the evident shortage of resources, equipment and facilities, the Ministry of Education could encourage technical and vocational schools to initiate or expand a series of income generating activities, including private sector contributions and income from selling services and products. Experience in other countries has been that it is advantageous to:
 - •collect from individual schools and circulate to all schools examples of best practice with regard to income generation, and

- issue clear guidelines with regard to how income generated should be shared and utilised.
- Since the plans of secondary schools and technical and vocational schools to include
 in their courses significantly more practical content are being hindered by lack of the
 necessary resources, the Ministry of Education could investigate how more specialist
 teachers, workshops, equipment and raw materials, and other requirements, can be
 provided for this purpose.
- The Ministry of Education could undertake a large-scale phased programme, over a period of some years, to upgrade the level of competency in particular in English language on the part of teachers in all education institutions, including technical and vocational schools.
- The Ministry of Education could request teacher colleges to include training for a significantly enhanced level of competency in English language in all their teacher training programmes.
- In view of the deficiencies highlighted in recent reports relating to Community Learning Centres, the Ministry of Education could initiate a study relating to what steps are needed to increase the efficient working of CLCs.
- The Ministry of Education could initiate a national information programme aimed at increasing motivation to attend basic literacy courses on the part of illiterate adults. This programme could be rolled out successively, province by province, over the next five years.
- In view of the fact that relatively far more skills training is provided in and around Vientiane than in other regions, the Ministry of Education could take steps to increase provision in both the north and south of the country.
- The Ministry of Education could initiate short-course training relating to budget and finance procedures, particularly with regard to the preparation of a complete school budget, for relevant senior staff in technical and vocational schools and other institutions.

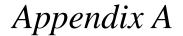
c) Outside the MOE sector

- The Ministry of Education could initiate increased contacts with the Ministry of Agriculture and Forestry with regard to the proposals from the latter for extensive reforms in the agricultural and forestry colleges, as detailed in the *Strategy for reform* report, particularly with regard to the need for the upskilling and retraining of teachers in technical and vocational schools. This model links schools and colleges both with teacher colleges and also with training institutions in other countries, including Vietnam and Thailand.
- The Ministry of Education, together with the Ministry of Labour and Social Welfare, could reconsider and should take steps to increase the role and effectiveness of the National Training Council, either within or outside of the Ministry of Education.
- The National Training Council could be requested to take the lead in achieving greater coordination of what is at present a complicated, confusing and overlapping pattern of availability of skills training provision. This would involve the National

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Training Council bringing together, and achieving greater communication between, all skills training providers, both public sector and private sector, at all levels.

- The National Training Council could be requested to take steps to increase the involvement of employers in skills training courses, in order that students may gain more practical and relevant work experience.
- Since the labour market in Lao PDR does not work well, primarily due to the lack of information with regard to both supply and demand, the Ministry of Education could institute, jointly with the Ministry of Labour and Social Welfare, a study of how the efficient working of the labour market can be increased.



Terms of Reference and Scope of Services

Terms of Reference and Scope of Services

Technical Assistance and Capacity Building in Education Policy Analysis Project

Economic Relevance Study:

"An Analysis of the Capacity of the Education System to Meet the Employment Needs of a Lao Modern Economy"

Background of the Project

The Lao Ministry of Education is responsible for the implementation of the Second Education Development Project (EDP II). The project contributes to the achievement of universal completion of primary education in the long term, and its specific objective is to increase primary school enrollment and completion in the 19 poorest districts of the six poorest provinces in Lao PDR (Attapeu, Houaphanh, Luangnamtha, Oudomxay, Phongsaly, and Xekong). The project is financed in part by a grant and credit from the International Development Agency of the World Bank Group.

The project has three components. The first component: Increases access to, and completion of, primary education in the poorest districts by financing (i) community-based contracting for classroom construction, (ii) community grants for schooling programs to lower the cost of education to communities, and (iii) in-service teacher training. The second component: Improves the quality of primary education by financing textbooks and teachers' guides, and strengthening the assessment of student learning outcomes. The third component: Strengthens capacities for policy analysis and management within the MOE. Whereas the first component targets resources in the poorest districts in the provinces of Phongsaly, Luangnamtha, Oudomxay, Houaphanh, Xekong, and Attapeu, the second and third components have a national coverage.

Objective of the Study

The Government of Lao PDR has identified education as a critical sector for national development. Increasing equitable access, improving the quality and relevance of education and strengthening its management and efficiency are some of the Government's major goals. In an effort to achieve EFA and in line with the Millennium Development Goal, NGPES and the EFA National Action Plan, the Government aims to have all primary-age children enrolled in school and to have all children complete a full primary education by 2015. To achieve this goal, the Government of Lao PDR faces many challenges. These include disparities between provinces and districts especially with regard to access, the shortage of trained teachers, the lack of management skills, gender or ethnic discrepancies, etc.

The outputs from the education system, whether they have successfully graduated from different levels of education or whether they have dropped out along the way, will form the country's future productive labour force. The level and development of that future productivity will depend crucially on the education and skills training that the young people will have received. Lao PDR has experienced successful levels of economic development and growth in recent years and looks set to be even more successful economically for the foreseeable future. At the same *Page A-1*

time, previous reports 56 have identified the lack of adequate human resources with adequate education and skills training as one of the major constraints, perhaps the major constraint, impeding the development of an even more successful economy.

It is therefore particularly timely that this Study will examine education/skills/employment/ economy linkages and will analyse to what extent the education system is aiding, or is impeding, the production of the increasingly skilled human resource base that the economy of Lao PDR will require in the future.

Methodology for the study

This Study will be carried out in accordance with education-employment-economy studies which have been conducted in many other countries. Such studies have endeavoured to assess whether the graduates emerging from the education system, at all levels (primary, secondary and tertiary), are meeting, in quantity and quality terms, the potential and actual needs of employers and thus of the national economy.

Demand for trained manpower will be assessed, based on GOL development scenarios, and supply will be assessed in relation with demand in order to determine the extent to which the existing institutions, fields of training and curriculum they offer are responding to projected demand. Possible conclusions of the study would deal with: (a) fields of training to develop, cancel or downgrade; (b) curriculum and competencies to develop; (c) levels/types of education to expand and/or reorientation; (d) broad governance, financing and quality assurance systems across the education sector. As for the studies on education finance and repetition, this third study would contribute both concrete and specific recommendations regarding the future development of the education system.

Typical questions raised, through collecting data and views of employers, of government, and of the schools and colleges would refer to:

- Subject areas and depth of the students' studies and how these are developing over time, in accordance with developing and changing economic needs;
- Regional factors and differentiation, as well as any available data relating to migration flows, both nationally and internationally;
- Gender balance and/or imbalance, both in terms of education received and in terms of potential employment differentiation;
- Language competencies, as well as consideration of any particular skills, e.g., with regard to IT.

Data and information gathering will take place via a four–stage process:

- Review of available previous literature and findings from previous reports,
- Analysis of available education statistics and labour market statistics (e.g. student achievement studies, graduate tracer surveys, investment climate studies, etc.);

56 For example, UNDP (2006), Lao PDR – International Trade and Human Development; United Nations (2006), Common Country Assessment – Lao PDR; GTZ (2005), National Training Needs Analysis; GTZ (2006), National Baseline Tracer Study; European Commission (2006), The EC-Lao PDR Country Strategy Paper. Page A-2

- Interviews with interested stakeholders,
- Questionnaire to employers.

The processing of the questionnaire responses will take place with the assistance of colleagues from the Ministry of Education.

Output of the study:

The Consultant's primary outputs will be as follows:

- A concept note, setting out the concept and method for the study;
- An interim report, summarizing to the extent possible the information and data collected to date;
- A final report, setting out more fully the questionnaire responses, the findings of the study, recommendations and time-bound action plan;
- A seminar, presenting the study findings, aimed at an audience comprising MOE senior managers and staff, other Government departments, civil society organizations, and development agencies.

At the end of this mandate, the outputs will include, among others:

- An analysis of the capacity of the education system to meet the needs of a Lao modern economy (in particular basic, upper secondary, tertiary, vocational, technical and professional education) with recommendations and an action plan for their implementation;
- PAD personnel strengthen in developing annual work plans and monitoring, short term consultant procurement and contract management, financial analysis of education, grade repetition analysis and economical relevance of education analysis.

The present Study will focus specifically on the first of the outputs cited above, and will also make an input into the second output cited.

Timing and Duration of Service:

This activity is being in charged by Tecsult International Limited / CRC Sogema, as mentioned in the contract No. 79/DPC.PMU/06 EDPII /QCBS003G/05. The activity will be carried out over a 12 months from January to December 2008, in line with the following broad schedule.

Activity	Timing	% age of Assignment
Economic Relevance	Jan-Dec 2008	25%

Study Schedule

Two separate missions to Lao PDR are envisaged, the first to take place in February/March 2008 and the second in November/December 2008.

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The interim report will be ready by the end of the first mission to Lao PDR, at end February / early March 2008.

During the second mission, the draft final report will be delivered by end November 2008 and the seminar presenting the study findings will be held in December 2008.

The processing of completed questionnaires may take place by MOE staff during the interval between the two missions.

Client's Contribution to Service delivery:

The MOE will provide, free of charge to the Consultant: appropriate office space at the MOE's main address, with suitable office furniture, office supplies, photocopying facilities, a telephone and internet access, a vehicle and a driver for collecting data from related ministries and the target companies.

The MOE will make available to the Consultant all available data, reports, legal documents and any other information considered necessary to carry out the assignment. All reference material shall be loaned to the Consultant and shall be returned at the completion of the assignment or earlier, as may be requested. The MOE will also facilitate, as necessary to carry out the assignment, the Consultant's access to MOE and other Government staff, at the central, provincial and district levels, as well as to village authorities and school communities in Lao PDR.

The MOE will ensure that the PAD IU has sufficient competence in English to enable the Consultant's day-to-day work to be conducted in English. The Consultant will assist the translation of the documents from English to Lao Languages to the MOE's staff to better understand the key ideas or concept of the document procedures without additional cost.

The MOE will meet, directly from Project funds, the non-consultant costs (i.e. facilities rental, materials printing/photocopying, interpretation, trainers' and participants' transportation, accommodation and subsistence) associated with delivering the capacity building activities.

Consultant's Contribution to Service Delivery

The Consultant is responsible for hiring and paying any personnel needed to: (i) collect data from sources (e.g. companies); (ii) conduct interviews as input into the studies; and (iii) translate or interpret between English, Lao and any other language beyond the translation/interpretation services that the MOE will provide (see the section on Client's Contribution to Service Delivery). The Consultant will also supply own computer hardware such as laptop and software.

Consultant's Qualifications and Experience

Subject to the terms and conditions of the contract in force, the Consultant will provide a team of international and national specialists, one of whom will be designated team leader. The team should include specialists with the following qualifications and experience:

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Economist:

- Advanced university degree in economics or a related discipline, with expertise in education economics and labor economics;
- Substantial international experience in conducting research and providing advice on labor market entry in particular, and on the interface between education and the economy in general, in a context of a developing country;
- Excellent spoken and written communication skills in English;
- Demonstrated capacity to work effectively in team with national and international staff, to manage a range of tasks, to work pro-actively and with diligence, and to manage resources effectively while meeting deadlines; and
- Willingness and ability to travel in the Project's target districts as required.

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The designated team leader should have substantial experience in leading a team with national and international staff with a focus on results, preferably as part of an ODA-financed project/program.

All other members of the team not specified above should have at least:

- Undergraduate university degree in a relevant area;
- Spoken and written communication skills in English and Lao; and
- Willingness and ability to travel within Lao PDR as required.

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In addition, the team's members should between them meet the following requirements:

- Substantial experience in social sector research in Southeast Asia or in countries presenting similar development challenges to those of Lao PDR;
- Demonstrated knowledge and understanding of the education sector in Lao PDR, including familiarity with current Government strategy and policy;
- Demonstrated knowledge and understanding of the social and economic issues facing the poorest communities in Lao PDR, particularly those in remote, upland areas;
- Demonstrated capacity to organize training programs, develop training materials and manage training sessions; and
- Strong computer skills in word processing and communications.

Appendix B

The National Economy and Economic Development

1. Development and Trade

The estimated structure of the Lao economy is summarised in Table B-1.

Table B-1: Estimated Structure of the Lao PDR Economy, 2006

Sector	Estimated share of GDP*		
Agriculture**	42.2		
Crops	24.5		
Livestock & Fishery	14.7		
Forestry	2.9		
Industry***	31.5		
Mining & Quarrying	5.3		
Manufacturing	20.5		
Construction	3.2		
Electricity	2.6		
Services	25.4		
Transportation, Post, Communication	6.2		
Wholesale & retail trade	10.4		
Public administration	3.5		
Hotels & restaurants	2.4		
Other	2.9		
Import duties	0.9		
TOTAL	100.0		

Source: Statistical Yearbook 2006

Economic development has been hindered by difficult geographic conditions, the lack of adequate transport and communication links, and a highly dispersed and thinly spread population.

Cross-border trade leads to significant incomes and employment for Lao people, even though, since much of it is conducted informally, it tends not to be included in the official balance of trade statistics57. Cross-border trade is an important part of the further economic development planned for the GMS (Greater Mekong Sub-Region), of which Lao PDR may be said to be the centre58. The GMS has received large investments from the ADB (Asian Development Bank) and other donors, relating to roads, transport, and other infrastructure. The GMS has also been developing both east-west and north south "corridors" to promote trade and other developments.

^{*} At current market price

^{**} Agriculture decreased from 44.4% in 2005

^{***} Industry increased from 29.2% in 2005, with mining & quarrying increased from 3.1%, i.e. relatively by 71%.

⁵⁷ Thus it has been described as "not counted, not taxed and not generating government revenue" (UNDP, 2006), although this description is arguable, since the consequent multiplier effects are bound to generate tax and revenue payments.

⁵⁸ The GMS countries are Vietnam, Cambodia, Lao PDR, Thailand, Myanmar, and Yunnan Province of China. Page B-1

These corridors have led to the now widespread notion that Lao PDR is rapidly changing from being a land-locked country to a land-linked country.

The east-west corridor begins at Mawlamyine, Myanmar, on the Andaman Sea, crosses Thailand, Lao PDR, Vietnam, and reaches Da Nang on the South China Sea in central Vietnam, with ongoing connection to the Cambodian port of Sihanoukville on the Gulf of Siam. In addition, in March 2008 railway lines were laid across the existing first Friendship Bridge to Thailand, to provide the first rail link to Lao PDR. As part of the east-west corridor, along the route of the newly repayed R9 highway, a second Friendship Bridge across the Mekong River between Lao PDR and Thailand was recently opened near Savannakhet, in south-central Lao PDR (about 400k. by road south from Vientiane), so that the transportation of goods from Bangkok to Vietnam, which used to take two weeks by sea, now only takes three days by road59. The northsouth corridor connects Kunming in Yunan Province, China, with Lao PDR and Thailand, with links to both Cambodia and Vietnam. As part of this north-south corridor, the new R3 highway across north-west Laos from Houayxai on the border with Thailand (about 600 k. by road north of Vientiane) to Boten on the border with China was completed and opened in March 2008, with yet another bridge (the fifth) over the Mekong River agreed to be constructed at Houayxai60. As the new road construction across one of the poorest regions in the country and reaches previously isolated villages, these are already benefitting from donor aid inputs relating to health, water, sanitation, and non-formal education ⁶¹.

Successful economic development has been concentrated on the plains close to the Mekong River which, for most of its length, forms the western border with Thailand. The mountainous hinterland in the north has experienced much less development and has the highest poverty rates. The road system is inadequate or non-existent in many areas, so that frequently any excess food in one area cannot be brought to market, quite apart from the charges levied by provinces on the movement of goods across their borders.

Much potential agricultural land cannot be utilised for a variety of reasons, including geographic isolation and large areas with unexploded ordnance. Although agriculture is the country's most important economic sector, a surprisingly low figure of only 6 percent of the country's total land area is permanently used for agriculture, roughly 50 percent for crops and 50 percent for pasture. Periodic major droughts and erratic monsoons exacerbate the situation. Lao PDR is still the most forested country in Asia but, following many years of intensive logging, forested areas have been declining significantly, down to the present estimated 41.5 percent coverage ⁶².

However, given the difficult background conditions, the country has recorded remarkably successful economic progress in recent years. In 1986 the Government introduced the New Economic Mechanism (NEM) which officially abandoned the central planning system and introduced near total price liberalization, exchange rate unification, removal of the government's trade monopoly, the opening up of foreign and inter-provincial trade, the acceptance of private

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59 Source: Vientiane Times, 25 February 2008.
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⁶⁰ Source: Vientiane Times, 4 March 2008.

⁶¹ Source: Interview and ADB wall chart at Ministry of Public Works, and article in Vientiane Times, 15 February 2008.

⁶² Source: MAF (Ministry of Agriculture and Forestry), 2005.

firms in various markets and the reduction of the number of State-Owned Enterprises (SOEs) by 75 percent.

The Government's Sixth Five Year Development Plan (2006-2010) places special emphasis on increasing international trade, and particularly exports, in line with the National Growth and Poverty Eradication Strategy (NGPES). The external trade pattern of Lao PDR is unusually concentrated, with 81 percent of exports going to Thailand, the European Union and Vietnam, and with imports being similarly concentrated. Around 74 percent of Lao exports consist of garments, wood, tourism and electricity, with this proportion set to increase rapidly over the next few years. This high degree of concentration suggests an equally high level of vulnerability. To date, Lao exports have had little success in breaking into the large and lucrative USA market, in spite of the estimated over 1m. Lao people resident there, who are reportedly keen to purchase products emanating from their home country.

2. Gross Domestic Product

After Lao PDR became a member of ASEAN (Association of South East Asian Nations) in 1997, over the five-year period 2001-2005, Gross Domestic Product (GDP) grew at the high rate of 6.24 percent per year and reached US\$2.76 billion in 2005, whilst GDP per capita rose to reach US\$49163. In the same year total export value reached US\$245.62m., an increase of over 84 percent compared to 1996, and the total number of foreign tourists arriving in the country exceeded 1m. for the first time, went on to reach 1.2m. in 2007 and is predicted to reach 1.6 m. in 200864. Official Development Assistance (ODA) resources play a central role in the Lao economy, contributing over 60 percent of the total cost of the PIP (Public Investment Programme), and over 70 percent of total public expenditure in the socio-cultural sectors, including education and health.

It is reported that in the first six months of 2007, GDP growth reached 7.6 percent, as compared with the Government's target of 7.5 percent, and GDP per capita reached US\$678 (against the target of US\$591). Inflation was at 4.4 percent, which was the lowest level for some years65. The Government's 2007/08 Plan includes the aims that GDP will be increased by 8 percent as compared to 2006/07, GDP per capita will rise to US\$728, inflation will be 6 percent, the trade deficit 5 percent, and the deficit on the state budget will be 5.4 percent of GDP ⁶⁶.

The IMF has predicted a continuing high ongoing annual growth rate of 6-7 percent67 in real GDP between 2006 and 2010 and external trade is expected to grow at an average of over 10 percent annually. In a number of respects there are grounds for significant optimism relating to the national economy in future years, not least in connection with (i) much increased sales from mining activities, (ii) the projected international sales of electricity from major new hydroelectric

⁶³ Source: CPI (Committee for Planning and Investment).

⁶⁴ Source: Lao Hotels and Restaurants Association; outstripping, for example, the annual total of 900,000 tourists in the favoured holiday destination of Mauritius.

⁶⁵ Source: Reports to 3rd Session of VIth legislature of the National Assembly by Prime Minister and Minister of Finance, quoted in Target Magazine, August 2007.

⁶⁶ Source: Socio-economic Development Plan and State Budget for FY 2007/08, quoted in Target Magazine, September 2007 67 Which is just below the target of 7.5 percent set by the Eighth Lao People's Revolutionary Party Congress. Page B-3

power installations, the first benefits from which are due to come on stream in 2009, and (iii) the increasing numbers of tourists visiting Lao PDR.

Ongoing concerns include that the national income accounts show large deficit balances on both the balance of payments 68 and the Government's fiscal accounts. The official statistics show a continuing large balance of payments deficit, although the latter is probably more than offset by the unofficial inward flows of currency from informal cross-border trading and the significant payments home from Lao people living abroad. Lao exports are now increasing significantly faster than imports and it is anticipated that there may soon be a balance for the first time between the official data for imports and exports.

3. Major Economic Sectors

The mining sector has experienced spectacular growth of export earnings in recent years. By February 2008 the Government had approved more than 100 mining projects in Lao PDR, most of which are still at the survey stage69. By 2009 hydroelectricity generated from the Nam Theun 2 dam will be exported to Thailand and other countries and at the same time new hydroelectric dams are under construction or are planned. The share of mining and energy exports has risen from one-third of total exports in the early 2000s to one-half in 2005, and this proportion is expected to increase further in future years.

The Government's ambitious hydroelectric plan, under which it sees Lao PDR as "the battery of ASEAN", is for a total of 70 separate dams to be completed or under construction by 2020. By the same year, hydroelectric projects already signed with Vietnam are set to produce 3,000MW of electric capacity70. Much of the additional electric output will be sold for export but domestic consumers will also benefit. The much increased export earnings from mining and hydroelectricity will significantly raise both national income and fiscal revenues, allowing the country to increase investment in sectors where additional expenditures are much needed, especially education and health. The Government has set itself the target of freeing the Lao PDR from the status of a least developed country by 2020 and there are good grounds for anticipating that this can be achieved, indeed that Lao PDR may be approaching a period of significant economic take-off.

Tourism has developed well, to the level that the total number of tourist arrivals reached 1.2 m. people in 2007 and is predicted to reach 1.6 m. in 2008, with the level of average expenditure by each tourist steadily increasing in real terms71, and with this sector currently being the country's major source of foreign currency earnings. The number of tourists visiting Lao is now predicted to grow at 30 percent per year. It is anticipated that there will be further big boost to tourism and

68 An interesting example of the problems of data collection and availability relates to the fact that the most complete information on Lao trade is obtained from the export and import data recorded by the Lao trading partner countries. On this basis, for 2004 Lao exports were officially recorded as totalling US\$1,022.5m. and imports as US\$727.4m. (including \$140.8m. for tourism and over-flight revenues), with growth rates over 2000- 2004 of 8.6 percent and 9.1 percent respectively.

69 Source: Vientiane Times, 8 February 2008.

70 Source: Vientiane Times, 31 January 2008, and confirmed by interview at NUOL, Faculty of Engineering.

71 Source: Interview with Lao Hotels and Restaurants Association.

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export earnings from the 25th annual SEA (South-East Asia) Games, which will be held at a number of separate sites in Lao PDR in December 2009 ⁷².

Concern remains that the benefits from successful economic growth are liable to be distributed unevenly, that the higher income groups will be the main beneficiaries and that the rural poor, who comprise over 80 percent of the country's population, may derive little or no benefit. In so far as it can be assessed, income inequality appears to be increasing. With this in mind, the Government launched its NGPES, to target the reduction and eventual eradication of poverty, down from the present figure of an estimated 32 percent of the population living below the national poverty line. Other concerns include the disadvantaged position of women and of minority ethnic groups throughout the country.

A major constraint to more rapid private sector development relates to the underdeveloped financial system and the poorly developed banking sector, with all forms of credit being difficult to obtain, and only after complying with lengthy official procedures.

A recent report73 estimated that the critical shortage of the expertise required for development will pose one of the most serious constraints on economic development in the Lao PDR and that strengthening human resource capacity will represent one of the country's major challenges over the foreseeable future. A map of Lao PDR showing literacy rates by province is given in Appendix B. This map makes apparent the much lower literacy rates in the poorer northern provinces, as low as 56.2 percent for males and only 37.2 percent for females in the province of Phongsaly in the far north.

Due to the rapid economic progress, the demand for qualified, skilled and appropriately trained personnel is ever increasing. A recent press statement by the Ministry of Education stated that: "One major aim will be to enhance vocational training schemes to meet the growing needs of the labour market"74. Hence it is hoped that the present study will make a timely and significant contribution to this major and growing area of concern.

72 Source: Socio-Economic Development Plan 2007/08, quoted in Target Magazine, December 2007, and Vientiane Times, 9.2.2008

73 United Nations Common Country Assessment (CCA) for Lao PDR, 2006. 74 Source: Ministry pursues education reform, Vientiane Times, 9.2.2008

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Appendix C

The Labour Force and Labour Markets

1. Labour Force Data

A recent report75 commented that in Lao PDR, adequate detailed data relating to the labour force, employment, under-employment and unemployment are lacking. The surprisingly very brief reference to the labour force in the National Socio-Economic Development Plan (2006-2010) notes that the skill level of the labour force is developing only slowly when compared to the improvements in the economic components in each sector and area. The capacity development of the labour force is characterised by self-improvement, with only relatively occasional opportunities for training, resulting in casual labour. The Plan comments that without proper institutional arrangements and training programmes, it would be difficult to achieve the object of appropriately redistributing the labour force and population to meet the requirements of industrialization and modernization.

Of all the GMS76 countries, only Lao PDR, with a projected annual population growth rate of 2.1 percent77, has a rapidly growing labour force, as is shown in Table C-1.

	2005 (m.)	2010 (m.)	2015 (m.)	2020 (m.)	Projected % increase, 2005-2020
Labour Force	2.95	3.34	3.78	4.28	44.8
School Age Children*	1.68	1.90	2.25	2.43	44.8

Table C-1: Projection of the Labour Force and School Age Children, 2005-2020

Source: National Statistics Centre. *Age group 6 to 15

It seems clear that to find productive employment for this rapidly growing labour force will be one of the country's major future challenges, and it will be an even greater challenge if some proportion of the estimated 2m. Lao people living abroad decide to return home. There will be only limited, and reducing, employment opportunities in subsistence agriculture, which is unlikely to prove attractive to many young people. The approximate distribution of the labour force is given in Table C-2, showing the predominance of those working in the family and self-employed (80 percent).

75 Source: IIEP, 2004.

76 Great Mekong Sub-Region

77 Source: World Bank, World Development Indicators, 2005. Results from the 2005 census include projections that both birth rates and mortality rates may fall significantly and so the rate of population increase may fall steadily in the years after 2012, to reach perhaps 1.4% by 2020, but with the outcome being quite uncertain, depending on whether mortality rates fall faster than birth rates, and assuming that external migration remains constant.

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Table C-2: Approximate Distribution of Lao Labour Force, 2003

Category	Approximate % of Labour Force	Approximate % of Category who are Females
Family and self-employed	80.0	55.0
Wage/salary employed	20.0	33.3
In public sector	12.0	33.0
In private sector	7.0	50.0
Unemployed	1.0	33.0
Total	100.0	51.0

Source: Data from Central Statistics Office

Note: The figures quoted for unemployed are liable to be misleading, since most of the labour force is rural, and, whatever their current work circumstances, they would be unlikely to register as unemployed ⁷⁸.

Labour market data are even more striking when presented in terms of numbers of people employed, as in Table C-3.

Table C-3: Census data of numbers employed by category, 2005

Category	Numbers Employed	% Females
Government employee	168,388	31
Parastatal employee	11,446	33
Govt. & private sector employee	121,786	40
Private sector employee	19,486	27
Employer	7,210	31
Own account worker	1,149,906	32
Unpaid family worker	1,260,671	71
TOTAL	2,738,893	51

Source: Population and Housing Census 2005.

Table C-3 shows the predominance of the "own account worker" and "unpaid family worker" categories, which together total over 2.4m. people, and which mainly relate to agricultural work. Generally, the poor are excluded from the formal labour market because of their geographic and linguistic isolation, including generally low levels of functional literacy skills. The census report also showed wide variations in data between provinces for all labour-related indicators; for example, the proportion of the active population engaged in non-farm activities varied from 64.7 percent in Vientiane Capital, 27.3 percent in Xaysomboon, 26.6 percent in Vientiane Province, down to only 7.3 percent in Saravane.

A recent report 79 demonstrated the typically small-scale nature of employment situations when it gave the results of a labour force survey in terms of numbers of employees in the place of work, as follows:

78 Source: IIEP. 2004.

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• working with fewer than 5 employees: 93.4%

with 5-9 employees: 4.2%with 10-99 employees: 2.2%with 100+ employees: 0.2%.

2. Migration

Migration, both internal and external, is a significant factor relating to employment. External migration mainly refers to movements to Thailand, the majority of which take place through illegal channels along the long border of over 1,800 km., and by their very nature are unrecorded. As noted above, previous estimates of the numbers of Lao nationals working in Thailand have varied widely. There has been increasing concern at the numbers of young females who are illiterate or poorly educated and cross the border looking for work in Thailand.

A recent study showed that the strongest motivating factor in labour migration abroad related to limited job opportunities in Lao PDR, with other "push" factors including boredom with the rural lifestyle, a low level of education, and constant exposure to Thai media. Many Lao females migrating to Thailand obtain work as domestic workers which may be poorly paid, may entail working in poor or dangerous conditions with little or no legal protection (e.g., against salary deductions or withholding of salaries), may leave them open to physical and sexual abuse by traffickers and middlemen, restrictions on movement and communication and being forced to work for long hours without rest periods ⁸⁰.

With regard to internal migration, the national census 2005 found that over the inter-census period 1995-2005 internal migration, both within and between provinces, had been a relatively constant trend, continuing at about the same rate as between the previous two national censuses. Over the ten-year period since 1995, a total of around 350,000 people (8.4 percent of the population aged 10 years and over) had moved between districts, and of these around 185,000 had moved between provinces. By far the largest gain of internal migrants was recorded in Vientiane Capital, which recorded a net gain of close to 60,000 people over the ten-year period, followed by Borikhamxay and Vientiane Province, which gained around 5,000 each. Other provinces to gain were Luangnamtha and Bokeo. The largest losses of population were recorded in Huaphanh, Luangprabang, and Xiengkhuang, with over 16,000 each, followed by Phongsaly with around 11,000.

The main overall trend for internal migration related to migration movements southwards from the northern provinces, towards both the national capital and the central provinces. Migration movements to or from the southern provinces were at much lower levels and may be considered not significant. With all migrants, the younger age groups predominated. Very few persons aged 65+ moved between provinces. Anecdotal evidence from various visits and meetings during the course of the present study suggested that since 2005 internal migration has continued at least at the same rate and may perhaps have accelerated, including that there may be a significant trend that young people completing secondary or post-secondary education in other provinces may move to Vientiane Capital in search of employment.

79 National Statistics Centre (2007)

80 Source: UNIFEM (2007) Page C-3

3. Major Employment Sectors

It was recently estimated81 that growing export trade in certain specified sectors contributes more directly to human development in Lao PDR than that in other sectors. The former sectors include labour-intensive exports of garments, wood products, processed foods, handicrafts, international tourism, agricultural exports and labour "exports" to Thailand. These sectors create substantial additional employment, especially for women, directly increase the incomes of rural families and rural women and may lead to rural communities benefitting from remittances sent back home.

By contrast, the latter sectors include minerals, timber, electricity and transit trade. These are capital intensive, use less labour, and may damage the environment and local livelihoods. However, it should be noted that an important reservation to the above is that increased trade in the latter sectors may have much higher value added and should contribute significantly to the government's budget, with the potential to make additional funds available for further social sector development, including for education.

A brief summary relating to the major employment sectors may be given below (with the exception of agriculture and forestry, which are dealt with more fully in section 11):

Garment factories: An estimated 26,000 workers were employed in garment factories (in 2004), with the great majority being young (aged 18-25) rural women coming mainly from the northern provinces (80 percent being migrants from rural areas), often working in low productivity firms in poor conditions for low wage rates. Reportedly, a significant proportion of these (numbers unknown) study English in their free time, with the hope of gaining more attractive services employment in restaurants and hotels. Few of these workers receive any formal training and most learn quite simple tasks on an on-the-job basis. Employers report that there is a lack of highly-skilled workers and that turnover is high, with consequent high training costs, especially for the relatively small number who will go on to hold supervisory positions ⁸².

Handicrafts: The industry mainly consists of small home-based businesses, with much of the work being done by women, although there are also connections with some of the large garment factories in Vientiane. The work, such as weaving of silk and cotton textiles and embroidery (all done by women, and with important inputs from women in ethnic minority groups) is often delicate and artistic and requires a certain level of skill, with an estimated total of 120,000 people being involved, mostly part-time but 20,000 of them full-time. The Lao Handicraft Association has 101 members, most of them being buyers, retailers and exporters. There is a problem relating to the passing on of skills to the next generation, since it is reported that fewer young women are interested in learning, sustaining and enhancing the skills needed to continue the production of high-quality traditional handicrafts ⁸³.

Tourism: As measured by total international tourist expenditures, tourism is Lao PDR's largest service export84, with total arrivals now exceeding one million people annually. The tourist 81 In UNDP, International Trade and Human Development, Lao PDR, 2006

- 82 Source: ALGI (Association of Lao Garment Industry)
- 83 Source: LHA (Lao Handicraft Association).
- 84 Although strictly speaking this would not all relate to tourism as such, in view of the large number of expatriates either working on various aid projects or in country for other non-tourist purposes.

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industry has linkages to the domestic economy for food products, handicrafts, transport, restaurants, entertainment and other services. The tourism industry reports a serious lack of workers with the necessary skills in foreign languages (mainly English, but also including, for example, French, Chinese and Japanese, with potentially very large markets available relatively close to hand), hotel and restaurant management, tourism promotion, travel agencies, and tour guiding and transport. All these skills are reported to be in limited supply. The Government's plan is that relevant training activities should be decentralised to those provinces which are experiencing increased flows of tourists, including Champasak, Oudonxay, and Luang Prabang85. By contrast, the national Lao traditions relating to hospitality, graciousness, gentleness and welcoming need no training and the country is agreeably free from security and related problems. The WTO (World Tourism Organization) recorded that, from a variety of points of view, tourism would be one of the best of all industries for Lao PDR to develop. Direct employment in tourism in Lao PDR is estimated to total 18,000 workers, with an extra 41,000 jobs created indirectly, and so an overall total of 59,000 jobs related to tourism

Processed Foods: The industry has only two firms, both very labour-intensive. Between them they employ a total of 760 people, mainly from communities located close to the processing plants, and with most (79 percent) workers being women, from ages 16 years upwards. Development of the industry is constrained more by the shortage of raw materials to process, rather than by any labour problems ⁸⁷.

External Migrants: With about 10 percent of the Lao labour force working in Thailand88, these migrants send or carry back home total remittances estimated at US\$100 m. each year, but in fact the total could be much higher. These significant "exports" go unrecorded in any official figures. Most migrants are lowland ethnic Lao, come from rural areas, are young (mostly aged 17-25) and the majority are single and female. Migrants tend to be not well educated, with the females being less educated than the males. On average, educational attainments are less than those of rural women working in the garment industry. A 2005 survey by the ILO (International Labour Organisation) found that more of the women were illiterate than the men (9.9 percent against 5.4 percent) and fewer of the women had attended primary school (54.0 percent against 58.6 percent).

85 Source: IIEP, 2004.

86 Source: LNTA (Lao National Tourism Administration).

87 Source: Lao Farmers' Products and LAICO (Lao Agro Industry Co. Ltd.)

88 The ILO (International Labour Organisation) estimated 300,000 Lao workers in Thailand, but Thai sources suggest much higher figures.

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Appendix D The Education System

The Education System

1. Education and National Development

The Government of Lao PDR has identified education as a critical sector for national development. Increasing equitable access, improving the quality and relevance of education and strengthening its management and efficiency are some of the Government's major goals. In an effort to achieve EFA and in line with the Millennium Development Goal, NGPES and the EFA National Action Plan, the Government aims to have all primary-age children enrolled in school and to have all children complete a full primary education by 2015, although there must be serious doubts as to whether this can be achieved.

In February 2008 the Ministry of Education formally launched the Basic Education Sector Development Programme (BESDP) to drive reform and development of the nation's education system, but a major problem will be the shortage of available resources. To achieve the above goals, the Government of Lao PDR faces many challenges. These include disparities between provinces and districts especially with regard to access, the shortage of trained teachers, the lack of management skills, and gender or ethnic discrepancies.

All Lao citizens, regardless of race, sex, ethnicity, or social or economic status, have the right to education but at present for many children this right cannot be fulfilled. The NGPES (National Growth and Poverty Eradication Strategy) highlights education as one of the four key sectors for the achievement of its strategic vision of achieving poverty eradication through strong economic growth. The National Socio-Economic Development Plan (2006-2010) states that one of the main goals of education policy is to meet the needs of the socio-economic development of the nation and thus contribute to poverty reduction. The plan also states:

"Education and literacy are prerequisites for the introduction and adoption of modern productivity enhancing technologies and for competing in both domestic and world markets".

The plan further states that the role of education includes building a workforce that is knowledgeable and competent in implementing development policies and programmes and has the capability to apply the results of modern science and technologies for the benefit of the Lao society. The plan also includes a reference to the need to expand vocational, technical and higher education to meet the needs of the new labour market and to improve the economic rate of return ⁸⁹.

The Government's National Education System Reform Strategy (NESRS) 2006-2015 states that it aims to develop human resources that are applicable to the strategic development of the country's economic components, in order to contribute to the transfer to industrialization and modernity90. The NESRS comments that the education system still has not yet achieved an

89 Lao PDR might wish to note the example of South Korea, which recently announced a significant expansion of teaching of English throughout its school system. Source: Vientiane Times, 31 January 2008.

90 Earlier official documents had emphasised the importance of education in "building a new generation of good citizens" (Lao PDR Constitution, Article 19), or in similar terms, but had not included references to linkages with the needs of the labour force and economic development as such. Source: Lao PDR Constitution, Prime Minister's Decree 1996, Education Strategic Vision 2000.

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appropriate balance between quantity and quality and that in its development it has not directly followed a national education strategy and it does not complement the current goals for socioeconomic development.

2. Education and Continuing Concerns

There are serious concerns relating to the approximately 58,000 children (35,000 girls) who do not enrol in primary schools, and the approximately 50,000 (30,000 girls) who drop out of primary school each year. Considering the group of children aged 10-18, around 8-9 percent of the boys and 14-18 percent of the girls (depending on varying estimates) have never been to school, with the proportion being much higher in the poorest districts and for non Lao-Tai children. Province by province variations in education enrolments and achievements are very significant, to the detriment of the poor rural areas.

Differences in net enrolment rates linked to poverty are quite significant and have not been reduced over the last five years, confirming that the problems of late admissions and high repetition rates are still very much present in the poorest districts. The HDI (Human Development Index) calculation of combined gross enrolment ratio for primary and secondary education varied from 58.9 percent for Vientiane Province down to only 34.3 percent for Phongsaly. For girls, primary age-specific participation rates vary widely, from 92 percent for urban majority-group girls to only 52 percent for rural non-Lao-Thai girls. Universal primary education is still remote in poor rural areas, especially for minority children and for girls ⁹¹.

Internal efficiency in primary education is low, since about one-third of students repeat Grade 1 and another 18-19 percent repeat Grade 2. An average of nearly 8 years is required to produce one primary school graduate.

Significant gender imbalance in enrolments continues and is only decreasing very slowly. The fact that the language of instruction is Lao contributes to the poor rates of drop-out, repetition and absenteeism for children of ethnic groups. The NESRS comments that expanding access to education in remote, isolated and mountainous areas is slow and consequently there is a big gap between the growth of education in urban areas and that in rural areas.

The NESRS also comments that the quality of education does not meet the demands of society and the labour market. Adult illiteracy remains widespread, particularly in rural areas. A Grade 5 national achievement survey in 2006 indicated that achievement was particularly low in mathematics, with most Grade 5 students performing at Grade 3 level and with 65 percent of pupils assessed as being at pre-functional level. There were wide differences in achievement in all three main subject areas among provinces. Financial and other resources available for education are very limited, as is considered further in section 12.

Nevertheless, over the past decade, there have been steady increases in the availability of education. Overall, net enrolment in both primary and secondary education has improved, primarily due to an increased number of schools and a rising focus on rural and ethnic This is in line with international trends that in recent years education-employment-economy linkages have progressively been given significantly greater emphasis in many countries throughout the world.

91 Source: Cambridge/ADB (2007).

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communities. Repetition rates have improved, although it seems that rather little attention is paid to absenteeism on the part of those children who are enrolled. Total enrolments in primary schools in Lao PDR are predicted to continue to rise, from over 857,000 in 2007/08 to over 891,000 in 2015/1692. However, while progress has been achieved in enrolling more boys and girls in schools, including in the poorest districts, much remains to be done in order to reduce disparities in achievement between poor and non-poor districts. At secondary level, drop-out rates are high, especially at the end of Grades 6 and 9, showing that many pupils are not able to carry on ⁹³.

As shown in Table 6, for the Lao population, levels of education completed are very low, since only 15.4 percent of the population aged 6 and over have completed primary school, only 7.4 percent have completed lower secondary and only 3.6 percent have completed upper secondary94. Throughout, the figures for girls are significantly lower than those for boys, and the table shows that close to one-third of females, and twice as many females as males, were shown as having no education at all. The figures would be even lower for females in rural areas.

Table D-1: Highest Level of Education Completed, 2002-2003

Population Group (aged 6 and over)	None	Some Primary	Completed Primary School (6 years)	Some Lower Secondary	Completed Lower Secondary (total 9 years)	Some Upper Secondary	Completed Upper Secondary (total 12 years)
Males	15.4	35.3	16.5	10.0	8.8	3.3	4.4
Females	31.0	32.4	14.4	7.2	6.1	2.3	2.7
Total	23.3	33.9	15.4	8.6	7.4	2.8	3.6

Source: Lao Expenditure and Consumption Survey (LECS 3)

As one recent report commented:

"Lao educational attainment lags behind the thresholds identified in international research. This poses a serious challenge to the competitiveness of Lao exports and of domestic goods and services...Human resource development is the most serious challenge the country faces. There will need to be both upgrading of the existing labour force, and improvements in the enrolment, retention and quality of education of Lao children ⁹⁵."

Another recent report reached a not very optimistic conclusion:

"Lao is entering the global market economy for which the population is ill prepared to benefit. Literacy rates are low. Too many young people never enter school or enter but fail to complete primary school...Unless these 'next generation illiterates' can become literate and upgrade their education level as adults, they will face rapidly increasing difficulties in providing for their

92 Source: MOE/ESITC

93 Source: Cambridge/ADB (2007).

94 These figures are significantly lower than in neighbouring and competitor countries.

95 Source: UNDP, 2006. *Page D-3*

families as they face a labour market which demands basic literacy and numeracy and competition with younger workers who can read and write. ⁹⁶"

3. Education and School Leavers

From the perspective of the present study, there is particular interest in estimating the numbers of young people leaving the education at different levels, which may be summarised as in Table D-2.

Table D-2: Estimated Numbers of Young People leaving the Education System by level, 2005/2006

Estimated Numbers of Young People leaving education at each	Males	Females	Total
level			
Left primary school without completing grades 1 - 4	37,883	34,092	71,975
Left primary school during grade 5 or after completing Grade 5	4,790	3,249	8,039
Left lower secondary without completing grades 6-8	16,017	11,128	27,145
Graduated from grade 8 but not admitted to grade 9	2,643	4,499	7,142
Left upper secondary without completing grades 9-11	8,389	5,003	13,392
Graduated from grade 11 but not admitted to post-secondary	6,266	3,736	10,002
education			
Graduated from vocational school	563	339	902
Graduated from technical school	1,087	772	1,859
Graduated from university	4,100	3,555	7,655
TOTAL left education system	81,738	66,373	148,111

Source: Cambridge/ADB EDP team data

Note 1: Not including graduates from teacher training (total 2,457 in 2005/06), on the assumption that the latter find employment within the education system.

Note 2: The above total of 148,111 may be compared with the total of approximately 140,000 using 2004 data estimated by UNDP (2006).

The data given in Table D-2 may be compared to those given in Table D-3, showing actual and projected rates of transition from grade levels, from 2005/06 to 2019/20. Thus it is apparent that the MOE is anticipating steady and significant increases in the proportions of students successfully continuing their studies to higher levels of education. This has significant implications for expected future progression in major skill levels and is therefore very relevant to the present study.

96 Source, MOE, EFA/MDA, 2007.

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Table D-3: Actual and Projected Rates of Transition from Grade levels, 2005/06-2019/20 97

TRANSITION MATRIX	2005/06	2009/10	2014/15	2019/20
	(Actual)	(Projected)	(Projected)	(Projected)
Grade 5 to 6, Females	74.8%	79.3%	85.0%	95.0%
Grade 5 to 6, Males	78.8%	81.6%	85.0%	95.0%
Grade 5 to 6, M+F	77.0%	80.5%	85.0%	95.0%
Grade 5 to TT 5 + 4, M+F	0.1%	0.1%	0.1%	0.1%
Grade 5 to further studies, M+F	77.1%	80.6%	85.1%	95.1%
Grade 8 to 9, Females	77.4%	77.0%	76.5%	68.0%
Grade 8 to 9, Males	75.8%	76.1%	76.5%	68.0%
Grade 8 to 9, M+F	76.5%	76.5%	72.2%	63.4%
Grade 8 to TT 8 + 3, M+F	0.4%	0.7%	1.0%	1.0%
Grade 8 to Voctec, M+F	0.8%	4.2%	8.5%	17.0%
Grade 8 to further studies, M+F	77.6%	81.4%	81.7%	81.4%
Grade 11 to Technical Schools 11+3, VET, F+M	14.5%	14.3%	14.0%	14.0%
Grade 11 to TT 11+1 PS, F+M	0.9%	1.0%	1.0%	1.0%
Grade 11 to TT 11+2 PS, F+M	0.1%	0.3%	0.5%	0.5%
Grade 11 to TT 11+1 PR, F+M	4.6%	4.4%	5.0%	5.0%
Grade 11 to TT 11+2 PR, F+M	0.1%	0.6%	1.0%	1.0%
Grade 11 to TT 11+3 LS, F+M	8.1%	12.2%	12.0%	12.0%
Grade 11 to Private Technical Institutes, 11+3 to	17.0%	17.0%	17.0%	17.0%
11+5, F+M				
Grade 11 to School of Foundation Studies, F+M	9.0%	9.4%	10.0%	10.0%
Grade 11 to all Faculties except engineering &	11.3%	11.6%	12.0%	12.0%
medicine, F+M				
Grade 11 to Faculty of engineering, F+M	3.7%	4.1%	4.5%	4.5%
Grade 11 to Faculty of medicine, F+M	0.4%	0.7%	1.0%	1.0%
Grade 11 to Luang Prabang University	2.1%	4.3%	6.0%	6.0%
Grade 11 to Champasak University	2.8%	4.8%	6.0%	6.0%
Grade 11 to further studies, M+F	74.6%	84.5%	90.0%	90.0%

Obviously, the above two tables must involve a degree of approximation 98, especially when projecting forwards as far as 2019/20, but nevertheless they are useful and relevant for the purposes of the present study.

Visits and interviews during the course of the present study indicated that:

• Employers and potential employers are very disappointed with the overall quality of basic education received by young entrants to the labour market. Whatever might be the specific skills required for specific labour market situations, employers were unanimous in saying that even more important for their purposes was for young job

97 Source: Cambridge ADB/EDP team data and projections98 For example, (i) some newly trained teachers may decide to seek employment in other economic sectors, (ii) some new university students may have graduated from upper secondary schools in previous years, or (iii) some young people may have gone to, or returned from, other countries.

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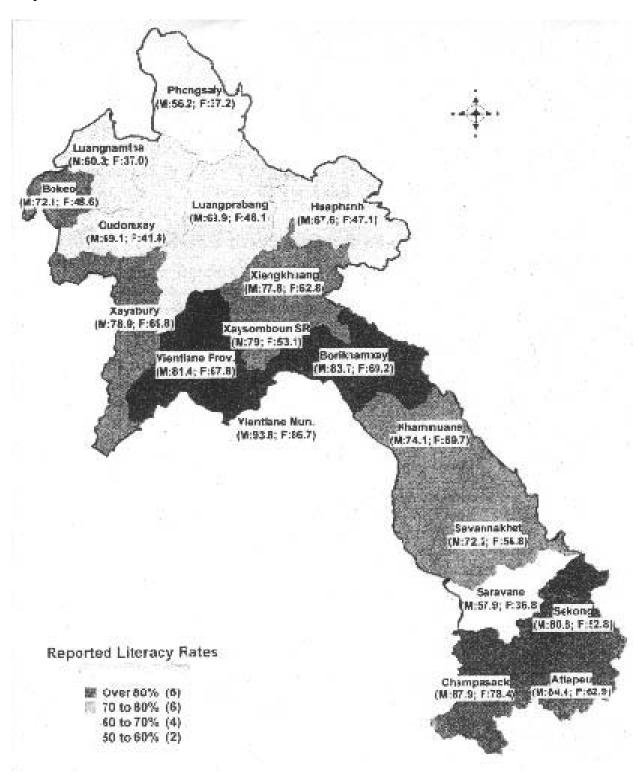
- applicants to have achieved good levels of basic education, which all too frequently they found to be lacking ⁹⁹;
- Some primary schools are lacking basic physical facilities, such as a sound classroom with a dry roof which will not let in rain during the wet season;
- Secondary schools are concerned that the young students entering lower secondary
 after having completed primary school have not received a good grounding in basic
 education and often need significant remedial teaching in order to bring them up to
 the required standard;
- Secondary schools often lack adequate specialist teachers, resources, facilities and equipment for important subjects in the school curriculum— so that, for example, chemistry has to be taught solely as a classroom subject, without the possibility of conducting any practical experiments, or carpentry cannot be taught at all;
- It was striking that some secondary schools may have 75 pupils in one class, and
- Students who have completed the full six years of secondary education are not up to the required standard for them to be able to undertake a bachelor's degree course, as is the norm in many countries and as will be mentioned further below.

99 E.g., during the course of the present mission, two separate travel agency assistants needing to multiply 12×3 were apparently unable to do so without the use of a calculator.

Appendix E

Map of Lao PDR showing literacy rates by Province for males and females aged 15 and over

Map of Lao PDR



(Source: National Literacy Survey 2001, Figure 4.1)

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Appendix F

Notes on Visits to Educational and Training Institutions

Notes on Visits to Educational and Training Institutions

National University of Laos (NUOL), Dong Dok campus

This is the main campus of NUOL and is large and spacious, with apparently plenty of room for future development. NUOL is multi-campus and so there are several other campuses elsewhere. There is high demand for admission to courses and many applicants cannot be accepted. Quota students are allocated by MOE and Provincial education departments, whereas other applicants take a competitive entrance examination. There are also special courses for other unsuccessful applicants, running from 5 p.m. to 8 p.m. each day.

New students coming from Upper Secondary schools are not up to the level required to start a Bachelor's degree course and must either commence with a Foundation Studies course for one or two years, or can enrol for the Higher Diploma programme, after which they may be able to transfer to a Bachelor's degree, via a bridging course.

The university recently set up a Council made up of university professors and representatives from Government Ministries and employers and other external organisations, in order to improve external contacts and connections. When establishing any new course the university tries to assess whether there is a need in terms of the country's human resource requirements.

Most students are Lao but some come from other countries, mainly from Vietnam and Cambodia. From the Departments on the main campus, NUOL estimates that after graduation around 50 percent can get jobs successfully in Lao, whereas others either work for their families, or start their own small businesses, or go abroad to work in Thailand and other countries.

Faculty of Engineering, NUOL, Sokpaluang Campus

Academic staff and students here feel that they are quite separate from the main university campus, located some kilometres away, and they would like to become an independent University of Technology. At present the university centrally absorbs 21 percent of their incoming funding, which they resent.

Of the total of 5,494 students currently enrolled, the great majority, 4,722 (86 percent) are males. Around 74 percent of students are enrolled on Higher Diploma courses and only 25 percent on Bachelor programmes, with one percent on Masters programmes. The Faculty endeavours to sign MOUs (Memorandum of Understanding) with major employers, under which students can do periods of practical placement within the companies' factories, and the Faculty can provide short-course training for some of each company's employees. Courses also include study tours to the sites of major new projects, such as dam construction.

The Government, through the MOE, recently requested the Faculty to commence new courses in hydropower and electricity (which started this year) and in mining engineering, transport engineering and water resources engineering (which will start next year), to fill the perceived national need. In addition, by 2010 the Faculty will start new courses in chemical engineering and survey engineering. The new Chemical Engineering course will be orientated towards the needs of the agricultural sector to develop further towards food processing. For any proposed new course, the Faculty sets up a "jury", including external representatives from relevant

employers and Ministries, to assess whether the proposed curriculum meets national needs.

Since this campus is restricted in size, there are plans for a major new high-rise building. The Faculty includes a second campus, located at Tad Thong, some 16 kilometres to the north of Vientiane, for the Water Resources Engineering Department.

After graduation, the great majority of graduates from this Faculty have no difficulty in getting suitable jobs.

Faculty of Agriculture, NUOL, Nabong campus

This campus is located at around 30 kilometres distance from Vientiane and has a large site, with its own farm, on which students are required to do practical work. Both buildings and equipment seem quite old, and perhaps in need of some renovation, apart from the road leading to the campus being in quite poor condition.

Some new students arrive with good agricultural experience, either from having previously studied at one of the four (soon to be five) schools of agriculture, or from having worked on their family farm, but these students tend to have problems with the basic science courses. Other students come straight from Upper Secondary school without such practical experience but tend to cope better with the science courses.

Of the 1,013 Students (309 females, 30.5 percent), 532 (33.8 percent females) follow the Higher Diploma, whereas 481 (25.4 percent females) study for a Bachelor's degree. Enrolments are divided approximately 50-50 between the Department of Agronomy and the Department of Livestock and Fisheries, with only a small number (currently 14) following the new courses in Rural Economy and Food Science.

Many graduates from this campus, including the great majority from the Higher Degree programme, will get jobs as Agriculture Extension Workers in the Provinces, and will thus work to raise productivity from agriculture in their respective areas. Some well-qualified graduates will go to work at the two newer universities in the north and south, which both have agricultural departments requiring specialist staff.

Pakpasak Technical School

This large technical school, the oldest in the country, has a total of 4,067 students enrolled, with 2,466 females (60.6%). There is very high demand, especially from girls, for courses in office based subjects such as Accounting, Business Administration, Secretarial and Computing, which have a total of 2,994 students (73.6 percent of the school's total). By contrast, there are fewer applications from boys for practical subjects such as mechanics, electrics, welding, plumbing and carpentry, and the school has difficulty in filling some of these practical courses. The sewing course has only 8 girls enrolled. All courses include both English language and computing.

However, graduates from all these practical courses find it relatively easy to get jobs, whereas of the over 2,500 students studying accounting perhaps only around one-third will be able to find relevant jobs in the short-term. The school has large factory-type workshops but at present some *Page F-2*

of these cannot be fully utilised and some of the equipment looks quite old and perhaps needs replacing.

The school aims that all its courses should have a strong practical base, both within and outside the school, including those courses should have 60 percent practical content. Students go out to employers and factories for periods of external practical experience. The school is currently developing with employers a new Dual Cooperative Training (DCT) scheme, under which students will spend 70 percent of their course time with companies.

Within the school, students make products, e.g., furniture, that can be sold and thus generate income. The school has nearly completed a large new sloping lecture theatre, for which all the practical work of building modification, ceiling replacement, electrics, furniture construction, and carpentry was done by students as part of their practical course work.

Lao-Japan Vocational School

This school runs vocational training courses in (i) dressmaking, (ii) cooking, and (iii) hairdressing, for students, almost all girls, many of whom come from disadvantaged backgrounds. All students start with a 2 months basic course, then many progress on to a 3 months intermediate course, after which those who can stay on follow a 6 months advanced course.

The latter involves on-the-job training, in which the students do practical work in their chosen fields, including being involved in running small businesses. This leads to income generating activities, such as providing and serving lunches. The students also have courses in Business Management, English, and Japanese. The staff includes two visiting volunteer ladies, one from Nepal and one from Japan.

All applicants for places must have completed primary school but among these applicants the school gives preference to those with lower levels of educational achievements, in order to offer places to the poorer and needier applicants.

A large new building is under construction and nearing completion, financed by IV-Japan.

Thatluang High School

Although located in quite old and dark buildings, this is clearly a very privileged school, situated close to the Parliament building. The school includes all six grades of Lower Secondary and Upper Secondary and has 1,153 enrolled, including 584 girls (50.7 percent). Almost all students continue throughout the full six years. This year at the end of Lower Secondary, only 23 (22 boys, 1 girl) did not pass and had to repeat Grade 3.

The students here have strong motivation and support from their parents, educational achievement is high, both repetition and drop-out are at low levels, and the majority of students go on to some form of higher education. Many students are dropped off at the school by car each

morning. The school Director could instantly produce from his computer any statistics that we requested. The school Director said that his main problems include that achievement at primary school level is too low and so in the early years of Lower Secondary the school finds that many pupils need extra remedial teaching, to bring them up to the required standard. Also that at Upper Secondary level the classes are too large, with up to 59 students in each class.

Vientiane-Hanoi Relationship Vocational School

This school comes under the Vientiane Capital Department of Education, rather than directly under the MOE. This is a specialist school for computing and related subjects, located in spacious buildings donated by Vietnam. Ongoing contacts with Vietnam include both staff and student exchanges and the optional teaching of the Vietnamese language, whereas it is compulsory for all students to study English. The best 10 students each year are selected and sponsored to go for further studies in Vietnam.

Current enrolments total 694 (325 females, 46.8 percent). Students may be enrolled on courses at either middle or higher level, depending on their initial examination results. There are a variety of courses relating to different aspects of computing and electronics, and also television and radio. This is the only specialist computer college and demand for places here is high.

With the current boom in computing, the great majority of the graduates have no difficulty in getting suitable jobs, to the extent that the school is unable to meet the very high demand for computer specialists, especially computer technicians to do computer repair and maintenance work.

The Director feels that his main problem related to the relatively weak academic background of the students. The students who come to this college have failed to get into university and therefore they are not of the highest calibre.

Hoauxang Primary School

This Primary School, located around 20k. outside Vientiane, currently has 103 children enrolled, 52 boys and 51 girls, with enrolments having steadily declined from a total of around 250 some years ago, due to the steady decline in the birth rate. There are now only around 20 children in each class, in quite large classrooms which could clearly hold many more children. The school buildings are generally in good condition, except for the roofs which leak in water badly during the rainy season. The school shares a large playing field with the local Lower Secondary school (which caters for children from 9 villages). The school has electricity but no telephone (other than the Director's own personal mobile).

The school serves the local village which is on a main road and generally is not poor, but there are some very poor families living further away from the road in or close to the rice fields. Some of their children do not come to school, or do not attend regularly. Overall, demand for education is high and some families in the village pay for their children to attend private schools. Both drop-out and repetition are low and education results are good. Last year the pass rate in the Grade 5 examination was 100%. All the children then go on to Lower Secondary school.

The Director said that her main problem is that as the number of children continues to decline, her budget also declines and has now reached a very low level. The leaking roof is a major problem and this needs either substantial repair or replacing.

Naxaythong Secondary School

This large secondary school, which includes both Lower Secondary and Upper Secondary levels, has a total of 1,401 pupils enrolled, 727 boys and 674 girls (females 48.1 percent). The school serves 9 villages and many children cycle quite long distances to come to school. The school has a large roofed but open air canteen which provides income generation. Drop-out this year totalled 23, 15 boys and 8 girls. The great majority of the pupils continue until the end of Upper Secondary, except that some girls marry very young and do not continue after Lower Secondary.

The existing school buildings look to be in good condition and the school received classroom furniture donated by DIC (USA). However, some furniture is not suitable and the numbers of classrooms and teachers are very inadequate and classes are far too large, with currently around 75 pupils in each class. There are no laboratories and so science lessons, e.g. in chemistry are solely classroom based and cannot include any practical work. The timetable includes carpentry for boys but since there are no workshops or teachers or equipment or materials the subject cannot be taught. 25 second-hand computers were donated to the school but now only 13 are working. The school aims to teach computing to all pupils at Upper Secondary level but at present with so many pupils they can get only very little practical time on the computers, only around 2 hours per week.

The school lacks sufficient teachers in some subject areas, such as mathematics. Other teachers would benefit from upgrading or additional training. Some children may not attend school regularly, due to having to do work with their families at various times. Many pupils go on to some form of post-secondary education or can get jobs but also some are unemployed. Some university graduates from the local village cannot get jobs and have to return to the village to work with their families.

Lao German Technical School

This large school was founded with German aid and still receives annual visits from German specialists to give demonstrations and run workshops. The school has four specialist sections, Automotive, Electro-Techniques, Installation and Plumbing, and Metal Machining. Total enrolment = 526, of whom only 5 are girls, since girls are not attracted to these courses.

The first two of these are popular, with many applicants and with about 80 percent of graduates securing good jobs, including via a company-related training arrangement with Toyota. But for the latter two sections, there are relatively few applicants and the school is unable to recruit sufficient students to fill the courses. However, employment prospects for graduates are good and all can find good jobs.

All students spend part of their course time using computers and studying English. The school arranges for students to spend periods of practical placements with local companies. The Director said that his main problems relate to the inadequate budget and shortage of materials for doing practical work.

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English Language Training Unit

A specialist unit in central Vientiane established by MOE and the Vientiane Education Department, to teach English language courses to nominated and seconded government officials, including school teachers who need a better level of English. The unit has 3 classes, with 24 students in each class, and with courses lasting for 7 months.

Receives external funding from DESERET International Charities and has two visiting volunteer teachers from the USA. This unit seems to work well, especially with the visiting American teachers, and the students seem well satisfied with the courses.

Lao Korean Vocational Training Centre (under Ministry of Labour and Social Welfare)

This large and impressive institution is to all intents and purposes a vocational training school, but since it is one of the three (soon to be four) which comes under the Ministry of Labour and Social Welfare, it is called a Vocational Training Centre. The several large buildings and the related equipment were donated by South Korea, and South Korea has recently given the Centre a generous new equipment grant of US\$800,000. Ongoing contacts with Korea include both staff and student exchanges and the optional teaching of the Korean language, whereas it is compulsory for all students to study English.

The courses are all very practical in orientation. Enrolments currently total 506 (females only 56, or 11.1 percent). The boys mainly follow courses in automobile engineering, electrics, computing, carpentry and electronics, whereas the girls do mainly computing and dressmaking. All students study English and all long-term students follow courses in computing. The centre has difficulty in filling the courses in some practical subjects such as carpentry, electronics and dressmaking, for which demand is not strong.

Courses may be short-term, of varying lengths, from 3 months or 6 months up to one year, or long-term, of two years. The applicants for short courses may have only completed primary school, or may have dropped out of lower secondary, so their educational background is not strong. A recent survey indicated that 61 percent could get suitable jobs in factories and other locations, whereas the remainder mainly worked in SME (small and medium size enterprises). Around 5 percent go to work in Thailand and the centre provides some relevant training for them to be able to do so.

Lao Furniture Association Competence Centre

This large specialist training centre is financed partly from the member companies of the Lao Furniture Association and partly with aid from GTZ (Germany) who provided a large new training workshop. Training courses of either 3 months or 6 months duration are provided in various specialist wood-related technical processes, for both young and older trainees, some of whom come from various Provinces outside Vientiane. The centre is located adjacent to one furniture company, many of whose products are exported to China, where there is strong demand for high quality wood furniture products.

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Vientiane Province Technical School, Nonsavang, Vientiane Province

This is the only technical school serving the large and widely scattered Vientiane Province, so some of the students live a long way away from the school and are accommodated in dormitories. The school depends directly on the MOE and has little or no direct contact with the local Vientiane Province Department of Education. The teaching blocks are all in good condition and some teaching blocks were donated by Thailand and by other donors. An Australian volunteer is currently teaching engineering at the school.

There are currently 1,460 students enrolled, including 663 females. Although the school's records were not very clear, it appears that total enrolments have declined, from a total of over 1,800 a few years ago. We were not able to clarify why this was the case. The major subject areas for enrolments are business management with 844 (481 females), electrics 254 (2 females), and agriculture 250 (79 females).

Even though the school teaches computing, the school's budget records are only partly computerised, with all student fee payments recorded manually in a large volume.

Youth-Child Development Centre, Nonsavang, Vientiane Province

This centre, which falls under the Lao Youth Union, was set up with assistance from Sweden and Japan, partly to assist children from ethnic groups, although the latter have now largely moved away from this area. The centre offers teaching programmes in after school hours and during school vacations. Currently courses are offered in English language and in computing, although it is planned to also start courses in sewing and carpentry.

There are currently 155 students enrolled for English, including 89 girls. For computing, 10 students are enrolled at any one time, to use the 10 computers available, for courses lasting 3 months.

The government pays the salaries of the two permanent staff members. All other costs, including the costs of the part-time instructors, are financed from the fees paid by students. The fee payments received total approximately Kip 4m. per month. Children of government employees, including teachers, pay only half fees. Children from poor families can be accepted free, by arrangement with village communities.

Lao-Chinese Women's Friendship Training Centre

This centre is run by the Lao Women's Union, which ranks as a government ministry, with its president a member of the government. The centre has around 100 young women enrolled at any one time for short course programmes lasting for 3 months each. Subjects covered at present are sewing, hairdressing, food processing and traditional massage, and it is hoped to start a computing course in the near future.

The large building, sewing machines and computers were donated by the Chinese Women's Union, with which there are close contacts. The government finances the staff salaries but other costs have to be covered from course fees paid by the students, currently Kip 350,000 (=US\$ 36) per student per course. Many of the girls enrolled here dropped out of school but the poorest girls may not be able to come to this centre since they or their families find it difficult to pay the course fees.

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Appendix G

Photographs taken at some Education and Training Institutions visited



Students at the Lao-Japan Vocational School Work together on a Business Management module. Provided that applicants have completed primary school, this vocational school gives preference to those with lower rather than higher educational levels and achievements, in order to aid the poorer and more needy students.



New lecture theatre at Pakpasak Technical School: all the work of building alterations, electrics, furniture construction and carpentry for this lecture theatre was done by the school's students, under staff supervision, as part of the students' practical training.

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National University of Laos, Faculty of Engineering, Sokpaluang campus, Department of Civil Engineering: concrete testing equipment, financed by The World Bank



NUOL, Faculty of Agriculture, Nabong Campus, Department of Agronomy: soil pathology testing laboratory. Many graduates from this Faculty become agriculture extension workers in provinces throughout Lao PDR.



The Lao-Korea Vocational Training Centre (under the Ministry of Labour and Social Welfare): this large and spacious centre, which is very like a vocational school, receives substantial funding and other resource inputs from Korea, including a large new equipment grant.



The Youth-Child Development Centre, Nonsavang Village, Vientiane Province: this training centre comes under the Lao Youth Union and was established with funding from Sweden and Japan, partly to help children from ethnic groups. The centre runs training courses, mainly in English language and computing, after school hours and during vacations.

Appendix H

Table of Technical & Vocational Schools under Ministry of Education with breakdown by subjects (2006-2007)

	Table of to	echni	cal 8	k voc	ation	al sc	hools	und	er Mi	inistr	y of	Educ	ation	with	ı bre	akdo	wn b	y sub	jects	(200	6-20	07) S	ourc	e: D	HTV	E,MC	DE					
	Name and school location															St	ıbjec	ts														
		Accounting	Automotive Technology	Building Construction	Business & administration	Business & administration 2	Carpentry	Computer Accounting	Carpentry&Furniture	Electricity	Electricity 2	Electronic	Financing	Food&Hotel	Food, Hotel&Travel	Foresty	Informatic Accounting	Informatic Administration	Informatic Office	Land Surveying	Livestock	Mapping & Surveying	Metal Welding	Mechanics	Mine Surveying	Mining	Planting (Agronomy)	Plumbling	Road&Bridge Engineering	Road&Bridge Surveying	Secretarial	Tailoring
1	Savannakhet Techn- Voc		X		X	x	X			X		X		X										X				X	X	X		x
2	Pakpasak Technical School	X	X	x					X	X		X			X								X	X						<u> </u>	X	x
3	Vientiane Province Techn	X		x				X		X			X	X		x					X						X				!	x
4	Pakse Technical – Voc			x		X				X	X			X									X	X								x
5	Luangprabang Techn– Voc				x	x	x			X				X										X				X				
6	Bolikhamxay Techn – Voc			x	x		x														X						X					x
7	Khammouan Techn- Voc				X	X	x			X				X																		x
8	Polytechnic Technical Sch									X										x		X			X	X						
9	Lao-Germany Technical Sc									X													X	X				X				
10	Attapu Technical – Voc			x										X							x						X					
11	Bokeo Integrated Voc			x	x																X						X					
12	Xaignabouli Integrated Voc			x	X																X						x					
13	Xiangkhouang Integr. Voc			x										X							X						X					x
14	Dongkhamxang Agric. Sch																				X						X					
15	Louangnamtha Integr.Voc			X																	X						X					
16	Phongsali Integrated Voc			x											X						X						X					
17	Houaphan Integrated Voc			x			x														X						x					x
18	Oudomxai Integrated Voc			x																	X						X					
19	Vientiane-Hanoi Friendship																X	X	X													

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Appendix I

MOE Evaluation of Non-Formal Education 2004-2006

Stage 4 Evaluation Result of Non Formal Education (2004 - 2006)

IV. Some proposals on tasks according to things found out:

Things found out	Proposals for
1. Administration/Management	
1.1 The minimum lessons and experiences of	• To improve the consistency and suitable of the
leading skills within some Education Centers'	Education Centers' Board of Leaders (should have
Board of Leaders	a senior person within the board of leaders)
	• The board of leaders should have unity and
	solidarity for best performance
	• The board of leaders should dedicate the warmth
	and closely working with office staffs, teachers and students
	• Increase well relations and coordinates with
	concerned organisations more and more
	Should have good policy and solidarity with
	interior and exterior people multiplicity
	• Should be arranged some workshop for the board
	of leaders and concerned staffs
1.2 The executive reports of some Education	• The executive reports should be done for 3 times
Centers have not done on regular basis.	within an academic year:
(Some Centers have never produced)	• After opening the new academic year
	• Complete the first semester
	• And final academic year
	• Every executive report should be sent one copy to Ministry of Education and one copy to Goodwill
	International Organisation
1.3 The Statistic collections of each Education	To appoint staffs to responsible for statistic
Center were not detailed and cleared	collections
	• Collect the statistic according to the Ministry of
	Education Forms.
1.4 Problems are always occurred for each center	• Assign the provincial coordinators to follow,
	promote and solve the problems within the centers
	regularly and coordinate with the District
	Education Offices that the centers are located
	• Assign the Director of the center must
	communicate and coordinate with the District
	Education offices and District Administration in
	order to ask the director for performing and
2. The Education Improvement and Vecational Tra	solving the problems within the centers
2. The Education Improvement and Vocational Tra	• Organize the consultation conferences between
2.1 Study Target groups : • The amount of vocational students come to	the Education Center Administrators and
study are still small	Provincial Coordinators in order to analyse
study are still siliali	1 TOVINCIAL COOLUMNATORS III ORUCE TO AMALYSE

100 Source: MOE, Department of Non-Formal Education

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- The students are still not satisfy with the identity conditions
- The transferring students are still slow
- The amounts of female students are still
- problems are still remaining and planning for the next coming years
- Announce to the concerned organisations select the right target students
- Transferring and accepting the students should be on time
- The people who wish to study should be priority love and voluntary to study
- Continuously promote the believing to the target students
- Selection process should be mainly more aware of needs of females
- 2.2 The Education nourishing and upgrading:
- The performances of primary school courses are still very slow
- The levels of knowledge acceptance are differences
- The students are always absent, not active, not listening to the teacher's advices and not follow the centers' rules
- The studies and teaching equipments are not enough
- The teaching hours of lower secondary school teachers are high
- Some of students are still having the local thinking
- The teachers are still not enough

- The directors of the centers who is responsible for academic studies should be involved to the teaching classes in order to perform the courses consistently and suitable
- Organize the continuously teaching method exchange among the teachers within the same teaching levels for internal and external
- Arrange some special classes for the weak students
- Educate the thinking of students regularly and increase the high responsibility
- Keep supplying the studies and teaching equipments on time and must be enough
- Sharing the suitable teaching hours for teachers (no less or more)
- Increase the number of teachers for some subjects

2.3 The Vocational Training:

- The vocational students are still having less expectation identified
- The practical hours are still small scale (students have the chance to learn only theory but no have to do practical work)
- The equipments are still short
- The products are still very low quality and they could not be sellable
- The knowledge levels of vocational teachers are limited and not guaranteed
- There are very small amount of rotation funds released

- Accelerate the target expectation that 25 students per one vocational subject
- Strictly follow the vocational courses (Clothes cutting and design, Weaving carpenters) that the Ministry of Education have launched
- Organize the continuously teaching method exchange among the teachers within the same teaching levels for internal and external
- Manage to buy the equipments as budgeted; the equipments must have the good quality
- Select the skilful and good technical vocational teachers
- Provide the concentrate training courses to the vocational teachers
- Create the conditions to allow the increasing rotation funds release
- The ration funds should be cash rather than equipments

- 2.4 Class repetition and school leavers:
- There are numbers of high class repetitions and school leavers

No	Name of Center	2004 -05		2000-	Total		
1	BounNeua	21	38	10	22	91	
2	NaMor	15	08	03	10	36	
	Total	36	46	13	32	127	

- Teachers have accelerated responsibilities to their work loads
- Arrange some special classes for weak students and behind the other students
- Create the good environment within the centers
- Giving the warmth and closely look after students
- Regularly educated
- Good accommodations and good food
- Arrange external recreations activities

- 3. Extra activities and recreations:
- Some extra activities are not regularly movement

NamBak	Namor	BounNeua
- Cooking	- Welding	- Vegetable
supplementary	- Chicken	plantation
food	breeding	- Mushroom growing
	- Trees	- Pigs breeding
	nursery	

- Planning the extra activities must analyse the possibilities and suitable
- Extra activities have to act continuously and regularly
- Assign person to responsible for news board
- Gather news writing and other topics
- Establish and expanding group of book readers
- The education centers should be provided libraries

- 4. Organizing Stage IV Evaluation:
- Response the Evaluation Forms of Provincial Coordinators, Directors of the centers and teachers are still incorrect
- The target students who completed from vocational school that go for evaluation are very small numbers (The identified expectation is 45 students), this means the evaluation of the output is not well adjust and clear
- Recheck and modify the evaluation forms
- Clearly explain an describe the evaluation forms
- The Directors of the centers should be followed up the completed target students; where are they? What are they doing? Write in details.
- Should be recheck statistics that centers have been assign, which one is not clear should be questions and explain more to the forms of statistics
- Planning and identify the clearly time frame for evaluations
- Should be brain storm and learn the past experiences before and after among the evaluation teams.

- 5. Evaluation:
- Continue performing:
 - NamBak District Center
 - NaMor District Center
 - BounNeua District Center

Stop operating the project at the Ethnics Secondary School of Xaiyaburi province

- Continue expand any successful activities
- Readjust any remain activities
- Improve the working methods of the Board Directors of BounNeua Center
- Supply enough vocational equipment Looking for target vocational student that meet the conditions that Ministry of Education rules

Appendix J

Questionnaire to Employers

LAO PDR MINISTRY OF EDUCATION DEPARTMENT OF PLANNING AND COOPERATION POLICY ANALYSIS DIVISION

QUESTIONNAIRE 1 TO EMPLOYERS

No.	Question	Y	our respons	se
	SECTION A: YOUR DETAILS			
1	Your name			
2	Your contact telephone number			
3	Your e-mail address			
4	Name of Company or Organisation			
5	Type of Business			
6	Do you need to employ more staff in specific fields?	Yes / No	0	
7	If Yes, please indicate which fields			
8	Which categories of extra staff do you really need?			
	SECTION B : NUMBERS OF EMPLOYEES	1		
		Males	Females	Total
9	How many total employees do you have?			
10	How many total new employees do you expect that will you take on during 2008 ?			
11	Of the new employees you will take on during 2008 , how many do you expect will be young and will come direct from having just completed their education?			
12	How many total new employees do you expect that will you take on during 2009 ?			
13	Of the new employees you will take on during 2009 , how many do you expect will be young and will come direct from having just completed their education?			
14	How many total new employees do you expect that will you take on during 2010 ?			
15	Of the new employees you will take on during 2010 , how many do you expect will be young and will come direct from having just completed their education?			
16	Of the new employees you will take on in 2008 , how many will need to have completed Primary School?			
17	Of the new employees you will take on in 2008 , how many will need to have completed Lower Secondary School?			
18	Of the new employees you will take on in 2008 , how many will need to have completed Upper Secondary School?			
19	Of the new employees you will take on in 2008 , how many will need to have completed Technical Education ?			

No.	Question	Yo	our r	esponse
20	Of the new employees you will take on in 2008, how many will need to have completed Vocational Education ?			
21	Of the new employees you will take on in 2008, how many will need to have completed University ?			
	SECTION C : EDUCATION AND SKILLS BACKGROUN			
		They did ha	ve	They lacked
22	Of the new employees you have taken on over the last 5 years, in general did they have or did they lack sufficient education background ?			
23	Of the new employees you have taken on over the last 5 years, in general did they have or did they lack adequate literacy and numeracy?			
24	Of the new employees you have taken on over the last 5 years, in general did they have or did they lack sufficient proficiency in reading and writing the Lao language?			
25	Of the new employees you have taken on over the last 5 years, in general did they have or did they lack sufficient proficiency in speaking the English language?			
26	Of the new employees you have taken on over the last 5 years, in general did they have or did they lack sufficient proficiency in using computers ?			
27	Of the new employees you have taken on over the last 5 years, in general did they have or did they lack any specific skills you require?			
		Pleased		Displeased
28	In general, are you pleased or displeased with the availability of the numbers of young people you wish to employ?			
29	In general, are you pleased or displeased with the availability of the quality of young people you wish to employ?			
30	When you next recruit new staff, what specific education, qualific seeking?	ation and expe	erien	ces will you be
31	Your general comments about the education system and the young education (Please write a few lines, to give your views)	g people who	gradı	uate from

Note: In addition, Questionnaire 2, a shorter version of the above questionnaire, excluding Questions 9-21 above, was sent to the 25 employers' associations and groups, as listed by LNCCI (Lao National Chamber of Commerce and Industry).

Appendix K

List of Persons Interviewed

Ministry of Education, Lao PDR

H.E. Lytou Bouapao, Deputy Minister of Education

Mr. Sengsomphone Viravouth, Acting Director General, Department of Planning and Cooperation

Mrs Khampaseuth Kitignavong, Project Director EDP II, Deputy Director General, Department of Planning and Cooperation

Mr. Ouam Sengchandavong, Former Director General, Department of Planning and Cooperation Associate. Prof. Dr. Sisamone Sithirajvongsa, Deputy Director General, Department of Planning and Cooperation

Mr. Chaleun Souvong, Former Deputy Director General, Department of Planning and Cooperation (now DG of Dept. of Primary and Pre-school Education)

Mr. Inpeng Souvannasane, Head of Policy Analysis Division (PAD), Department of Planning and Cooperation

Mr. Kadam Vongdeuane, Deputy Head, PAD, Department of Planning and Cooperation

Mr. Darasack Ratsavong, Head of Project Coordination Division, Department of Planning and Cooperation

Dr. Phonephet Boupha, Director General, Dept. of Higher Education (former Deputy DG of Dept. of Higher, Technical and Vocational Education)

Mr. Lyfoung, Director General, Department of Secondary Education

Mr. Mikhop Kingkittisak, Head of Division of Secondary Schools, Department of Secondary Education

Mr. Somkhanh Didaravong, Director, Education Statistics and Information Technology Centre

Dr. Viengnaly Mounnarath, Deputy Director of Cabinet

Mrs. Khanthaly, Director, Department of Education Inspection

Mr. Vimon, Head of Budget Division, Finance Department

Mr. Seng Xiongchundu, Director, HTVED Administration Division

Mr. Phouvieng Phoumilay, Acting Director, Permanent Office of National Training Council

Mr. Sengkeo Phengsana, Department of Planning and Cooperation

Mr. Somphavanh Chanthalath, Department of Planning and Cooperation

Ms. Manichit Phommakod, Department of Planning and Cooperation

Consultants

Mr. Bounthavy Insisienmay, Managing Director, Laobandith Consulting Co. Ltd.

Mr. Claude Tibi, Team Leader, ADB Education Project, EDP II

Mr. John Bailey, ADTA, Education Sector Development Framework

Dr. Marion Young, Senior Education Adviser, Cambridge Education

Mr. P. Pozorsky, Head of GTZ Project Office

Mr. Somlith Virivong, Integrated Vocational Education and Training System (IVETS)

Mr. Arnauld de Nadaillac, Senior Specialist, Vocational Education and Training

Mr. Inthasone Phetsiriseng, EDP team

Vientiane Capital Department of Education

Mr. Donti Tamarongsa, Director, Department of Education

Mr. Punmani Sivipung, Responsible for Vocational Studies

Vientiane Province Department of Education, Nonsavang, Viengkham

Mr. Yong Sher, Deputy Director, Department of Education

Mrs. Khimvalin, Technical Officer

Mr. Sengkeo Soonthavongsa, Project Coordinator for HIV/AIDS/STI

Educational and Training Institutions

Prof. Khamhung Senmany, Vice Director, Academic Affairs, NUOL, Dong Dok campus

Prof. Dr. Boualinh Soysouvanh, Dean, Faculty of Engineering, NUOL, Sokpaluang campus

Mr. Thongly Xayachack, Dean, Faculty of Agriculture, NUOL, Nabong campus

Mr. Sitha Khemmarath, Vice-Dean, Faculty of Agriculture, NUOL, Nabong campus

Mr. Souklaty Sysaneth, Deputy Head of Academic Affairs, Faculty of Agriculture, NUOL, Nabong campus

Mr. Thongsy Hongnou, Finance Department, NUOL, Dong Dok campus

Mr. Saykham Phanthavong, Director, Pakpasak Technical School

Mr. Samlith, Head of Finance Section, Pakpasak Technical School

Ms. Sachiko Tominage, IV-Japan, Lao-Japan Technical School

Ms. Beena (Nepal), Lao-Japan Technical School

Mr. Outhay Bannavong, Director, Vientiane-Hanoi Relationship Vocational School

Mr. Baovankham Ormpheng, Director, Thatluang High School

Mr. Pavy Phengmalad, Principal, English Language Training Unit

Mr. Khamphiang Keolangsy, Deputy Director, Lao-Korea Vocational Training Center

Mrs. Kamseo Sisoontone, Director, Hoauxang Primary School

Mr. Kampa Bandavung, Deputy Director, Naxaythong Secondary School

Mr. Khamphout, Director, Lao-German Technical School

Mr. Kongpheang, Deputy Director, Lao-German Technical School

Mr. Ousa Khantharod, Head of Instructive Department, Lao-German Technical School

Mr. Douang Seng Panya, Vice Director, Vientiane Province Technical School

Mr. Phouvieng Manivong, Director, Youth-Child Development Centre, Nonsavang

Mrs. Lavan, Director, Lao-Chinese Women's Friendship Training Centre

Other Government Ministries

Mr. Chanthanom Phithasone, Deputy Director, Organization & Personnel Department, Ministry of Finance

Mr. Thongdeng Singthilath, Deputy Director General, Department of Skill Development and Employment, Ministry of Labour and Social Welfare

Mr. Bounsamack Sayaseng, Deputy Director General, Planning Department, Ministry of Planning and Investment

Mr. Buakham, Personnel Department, Ministry of Planning and Investment

Mr. Bid, Personnel Department, Ministry of Planning and Investment

Mr. Phouvong, Personnel Department, Ministry of Planning and Investment

Mr. Phetsamone Thanasack, Deputy Head of HRD Division, Ministry of Agriculture and Forestry

Mr. Souvanny Ratanavong, Deputy Director, Personnel Department, Ministry of

Communication, Transport and Construction

Ms. Vanny Senmanichanh, Vice Head, Department of Personnel, Ministry of Industry and Commerce

Ms. Sonechanh, technical staff, Ministry of Industry and Commerce

Mrs. Bounyong, Vice-Director, Department of Statistics and Planning, Ministry of Information and Culture

Mr. Houmphany, Technical Staff, Ministry of Information and Culture

Other Public Sector Organisations

Mr. Bounphom Khamphon, Assistant Chief of Technical Department, Electricité du Laos, Phonhong, Vientiane Province

Mr. Kamtieng, Assistant Chief, Personnel Department, Electricité du Laos, Phonhong, Vientiane Province

Private Sector

Mr. Khanthavong Dalavong, Secretary General, Lao National Chamber of Commerce and Industry (LNCCI)

Mr. Oudet Souvannavong, Chairman, Lao Hotels and Restaurants Association, Vice-

President, LNCCI, and Secretary General, Greater Mekong Business Forum

Mr. Thinaphone Phapmixay, Lao Agent, Pacific Timber Floors

Mr. Khampheng Vongkhanty, Deputy Director, Société Mixte de Transport Co. Ltd.

Mr. Hoth Phanivong, Vice-President, Lao Association of Travel Agents and President, Champa Lao Travel

Mr. Yothin Vetsaphong, President, Lao Furniture Competence Centre and Mountheva Furniture Company

Mr. Sinouk Sisombat, President, Lao Coffee Growers Association and Cafe Sinouk

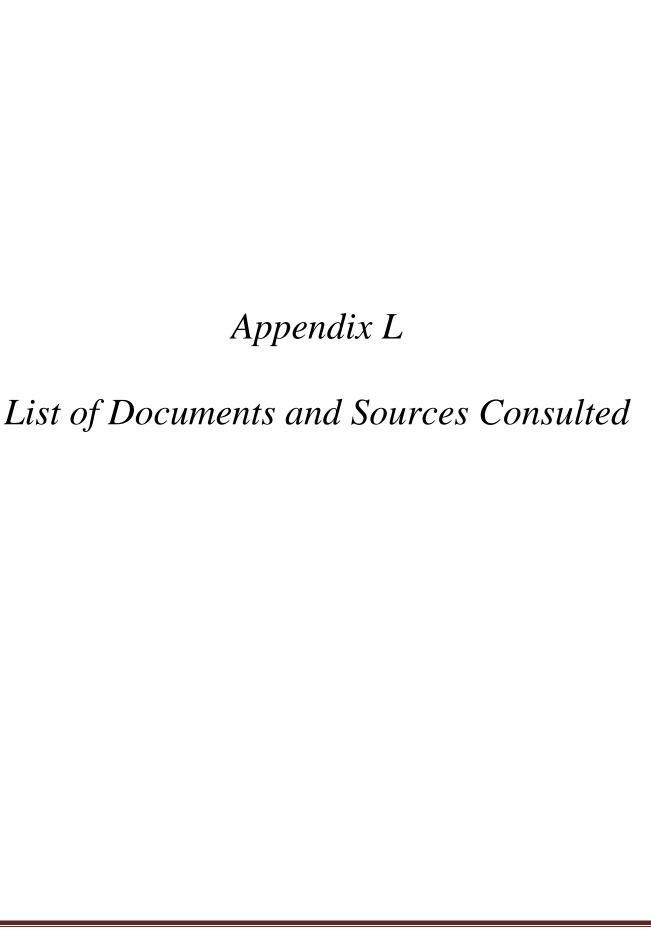
Mr. Oloff Visser, Human Resources & Administration Manager, Phu Bia Mining Ltd.

Mr. No, Human Resources Advisor, Phu Bia Mining Ltd.

Mr. Sackpaseuth Chanpasith, Human Resources Manager, Kolao Group

Ministry of Education, Thailand

Ms. Kannikar Yaemgeasorn



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