

What do you need to know to design a teacher education project? An analysis of how teacher education projects are implemented in Cambodia against a backdrop of global policy and local contexts.

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This thesis is submitted for the award of PhD

I certify that the work presented in this thesis is my own.

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Abstract

In this thesis I examine what I learnt from teacher education projects implemented in Cambodia between 2001 and 2011. I show how global, regional, national and local agendas impact on project planning, implementation and evaluation. I use a set of questions to structure my thesis based on my early experience of working in Cambodia on education projects.

In the first half of the thesis I explore how educational development projects work in relationship to multi-level contexts. I draw on research in the field of comparative and international education to contextualise the work and to justify the units of analysis. The types of data I collected and methods used reflect the different projects and the extent to which I had control over the research that was undertaken. By contextualising teacher education in the wider development agendas of international aid, neoliberal economic policies and world education culture I show how these agendas impact on project design, implementation and evaluation. Then, by analysing two projects in detail, I demonstrate how international agendas affect the project outcomes at a local level.

In the second half of the thesis I move away from the technical aspects of project design to address concepts of culture, religion, history and language in Cambodia through an exploration of the available literature, an examination of project data and by regularly interviewing six Khmer mathematics educators. Grounding the cultural concepts in the real experiences of Cambodians allowed 'local voice' to be given the same value as global educational priorities.

In the conclusion, the original questions and the extent to which they have been answered are again considered. This leads to a list of 'generic activities and orientation questions' that I hope will contribute to the planning of other international educators encountering the field of educational development for the first time.

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Glossary

ADB	Asian Development Bank
Animators	Name given to district education advisors by World Bank, EQIP project
ASEAN	Association of Southeast Asian Nations
BETT	Basic Education Teacher Training
BETT ELP	BETT Early Literacy Project
BETT Maths	BETT Mathematics Project
BRAC	NGO development project in Bangladesh. BRAC is not an acronym
BTC	Belgium Technical Cooperation
Cambodia	Cambodia has had several different names in the last fifty years – for clarity these are listed here with dates Kingdom of Cambodia 1993 –(ROC) The State of Cambodia 1989 – 1993 The Peoples’ Republic of Kampuchea 1979 – 1989 (PRK) Democratic Kampuchea Regime (Pol Pot period) 1975 – 1979 (DK) The Khmer Republic 1970 – 1975 The Kingdom of Cambodia until 1970
CIE	Comparative and International Education
CIES	Comparative and International Education Society
CESSP	Cambodia Education Sector Support Project
CITA	Cambodia’s Independent Teacher Association
CPP	Cambodians People’s Party
DAC	Development Assistance Committee
EFA	Education For All
EMIS	Education Management Information Systems
EQIP	Education Quality Improvement Project
ESSP	Education Sector Support Programme
EU	European Union
FTI	Fast Track Initiative
GATT	General Agreement on Tariffs and Trade
GMR	Global Monitoring Report
GNP	Gross National Project
IMF	International Monetary Fund
JICA	Japan International Co-operation Agency, a bi-lateral donor
KLP	Kampot Literacy Project
KMP	Kampot Maths Project
KPC	Kompong Cham, a target province for BTC
KSHP	Kampot School Health Project
MDGs	Millennium Development Goals
MoEYS	Ministry of Education Youth and Sport
MUSTER	Multi-Site Teacher Education Research
NGOs	Non-Government Organisations
NEP	NGO Educational Partnership
ODA	Official Development Assistance
OMC	Odtar Meanchey, a target province for BTC
OECD	Organisation for Economic Cooperation and Development
Pali Canon	This is the collection of scriptures for Theravāda Buddhism. It is divided into three parts and often referred to in its Sanskrit name as Tipitaka which means three baskets. The first two sections deal with rules for monks and nuns and the second the discourses of the Buddha and some of his disciples. These two sections are common in most versions of Buddhism. The third section, Abhidhamma Pitaka, which is about philosophy, is strictly Theravadian.

PAP	Priority Action Programme
PD	Participatory Development
PISA	Programme for International Student Assessment
PRSP	Poverty Reduction Strategy Papers
PRA	Participatory Rural Appraisal
RTI International	Research Triangle Institute is an independent, non profit organisation providing research, development, and technical services to government and commercial clients worldwide.
RtR	Room to Read, an iNGO working in the development of literacy
SAP	Structural Adjustment Programmes
SCNiC	Save the Children Norway
SEDPII	2 nd socio-economic development plan 2006 -2010, Cambodia
Sipar	A French NGO working in Cambodia to improve literacy
SR	Siem Reap – Target province for BETT project and where BTC was based
SWAp	Sector-Wide Approaches
TIMSS	Trends in International Mathematics and Science Study
UNDP	United Nations Development Programme
UNESCO	United Nations Educational and Scientific Cultural Organisation
UNICEF	United Nations Children’s Fund
UN	United Nations
UPE	Universal Primary Education
USAID	U.S. Agency for International Development
VVOB	VVOB (NGO) Flemish Association for Development Cooperation and Technical Assistance, mandated by the Flemish regional and Belgian national governments.
VSO	Voluntary Services Overseas
WB	World Bank
WHO	World Health Organisation

Introduction

I have written this thesis as a response to my first encounter with education development. It is based on the research data I collected in a number of projects that I worked on or led in Cambodia. I collected this data in order to illuminate what was known about the impact of in-service teacher education programmes in low-income countries. I set out to analyse this data to identify the opportunities and constraints in teacher development models. From this analysis I planned to design an in-service training model with a set of components that could be applied and adapted in low-income countries. The model was to be based on the best possible use of available resources and how they could contribute to improving teaching and learning in classrooms. To an extent I remained focused on this original goal to the conclusion of this study. Whilst what is presented in the conclusion is certainly not the detailed model I set out to produce I was able to suggest that there are some principles that underpin the design of a programme and factors that need to be taken into account.

In the early years of this study the aim to create this model seemed laudable and I focused on its design. Whilst I am critical of my rather naïve aim, the process I went through in trying to design that model and the issues I encountered all contributed to the focus of the thesis as a whole. The collection of data has taken ten years and has been shaped and formed by the projects I was involved in and the encounters I had. In the space of this thesis it is only possible to present some of the processes and outcomes. In the process of making this record I choose what to include and omit and therefore to some extent have already made the decision for the reader on the perspective I have chosen to present which I make clear in the thesis.

The study also includes what I believe to be a very important part of education development that is often neglected in a positivist research climate: the voices and the development of the local educators. I am grateful to the voices of those educators for grounding the research into the practical realities of the Cambodian teachers, by sharing their lived experiences. The educators, as insiders, enabled me as the outsider, to gain a deeper understanding of what local and national cultural dimensions looked like in classroom practice. Discussing project implementation with the educators and their own relationship to that implementation illustrated many aspects of project development that are important to the conclusions drawn. Through discussions focused on teacher identity and the issues encountered by Cambodian teachers both the educators and I were able to make better sense of teaching and learning in Cambodian classrooms.

The Research Questions

There are five questions that underpin this thesis derived from my first encounter of being an education advisor in Cambodia and the difficulties I experienced. These questions are not used to structure the thesis, but as a tool to illuminate some of the issues discussed. Through the projects described and the data collected I have been able to provide a response to each of these original questions that I think will make a useful contribution to the thinking of anyone starting out in teacher education project design.

Question 1: How much did I need to know about Cambodia, its people, teachers and its education system before I could make a contribution to its educational development?

To prepare myself to work in Cambodia as a VSO volunteer I started to learn the language, read the history books and try to make sense of its education system, religion and culture. As my time in Cambodia changed, however, from working on projects to designing them, I was constantly questioning whether this information was relevant or useful to project design.

Question 2: How can national and international project staff work together with local people to develop the education system?

I was uncomfortable with being perceived by the Khmers as an external expert. My expertise appeared to be given higher value than the expertise of my local colleagues. I understood that I had been advantaged by my experiences of education in a high-income country and that privileged me in having types of knowledge and understanding that my local colleagues did not have, but I also recognised that my colleagues had different experiences and knowledge from me that I perceived as equally valid. The question developed into how can outsider and insider knowledge be combined for improved project design?

Question 3: How far were the experts imposing their ideologies, educational values and strategies on the local people and did that match with the local needs?

In Cambodia in 2007 there were 1495 local NGOs registered under the Ministry of Interior and 337 international NGOs registered under the Ministry of the Exterior (Sato et al 2011). This leads to hundreds of experts each bringing with them a range of experience and expertise from different cultural backgrounds. How could they bring their experience and expertise without imposing their ideologies?

Question 4: How does the international aid agenda affect educational development and the lives of local people?

Before I began work as a VSO volunteer in Cambodia my view of aid was largely mediated through disaster reports and contributions to collecting tins. I soon began to see aid as a business in its own right and therefore I wanted a better understanding of the development industry and its impact on teacher education project design.

Question 5: How should a teacher education programme be developed and what components should it include?

My contribution to Cambodia was technical assistance to the education system which often included providing appropriate training opportunities. I knew very little about how to design a teacher education project, but as I reviewed the research literature and grew in experience I became increasingly motivated to continually analyse the projects I was involved in to lead to improved project design.

This thesis was originally written chronologically. This partly reflected my accrued knowledge and experience in educational development and that each new project design drew on the research evidence and experiences from the one before. However, over the period of the study my analysis of the data and understanding of the issues affecting comparative education led to a change in direction. Whilst I always retained the underpinning questions of my first encounter with educational development I became increasingly concerned with how the dynamics of local, national, regional and global influences affected the outcomes of the education projects I was involved in and this led me to approach the writing up thematically.

This change of direction led to a different structure in the writing up of the thesis. The first half of the thesis could be described as technical-rational, an approach often prevalent in project reports (Maskell 1998). Chapters One and Two focus on the field of study in which the thesis is positioned and justifies the units of analysis chosen and the methodology and methods used. One and Three illustrate how global economic, education and development agendas impact on teacher education. I analyse the data from the EQIP monitoring and evaluation exercise to examine the extent of global influence on local practice. In Chapter Four I use the Kampot School Health Project to unpack some of the practices that are advocated in development policy to ascertain the impact they have. I also focus on how development organisations develop co-operative practices. This is followed in Chapter Five where I explore teacher

education projects in detail, concentrating on the training project cycle and components used to develop effective teacher training. Experiences from the basic education projects in Kampot and the first part of the implementation of the BETT mathematics project are used to develop the analysis.

The second half of the thesis is more ethnographic in approach. The analysis in the first part of the thesis provided a useful overview of how global agendas impacted on education projects, but it did not provide any insight into why local educators and teachers responded in the way they did, nor why some interventions appeared more sustainable than others. In Chapters Six to Eight I use the voices of the Khmer maths educators, evaluative outcomes from the BETT projects and the research literature to try to understand how culture, religion, language and history affected project outcomes. Using the concepts of culture, identity and agency was unavoidable in an analysis of the research data. Because of limitations on space in the thesis these concepts are not explored in depth. Instead I develop working definitions give the reader an understanding of how I am applying the concepts to the data analysis. In this last part of the introduction I outline the projects as a point of reference for the reader and then provide a research methodology for each of these projects in Chapter Two. An overview of the projects is provided in Annex 1.

The Projects

Education Quality Improvement Project (EQIP)

The EQIP project had two main components. The first component financed a quality improvement grants programme that recruited and trained district animators (education advisors) who worked with communities and schools. The World Bank (WB) who provided a soft loan for the project worked in conjunction with the Ministry of Education Youth and Sport (MoEYS) to promote the view that effective schooling would result from encouraging local financial decision making within school clusters and communities. The school clusters were provided with a budget from the project and support from the EQIP appointed district animators. The clusters made improvement plans based on their school vision and assigned their budgets to these plans using management information on cluster achievements from Education Management Information Systems (EMIS). As the project was implemented, qualitative data collected from school visits and classroom observations was also used to inform improvement planning.

The second component of EQIP supported the institutional strengthening and capacity building of Cambodia's education sector. Geographically the country is split into 24 provinces, three of which were involved in the EQIP project reaching 24% of Cambodia's primary school population. In 2003 in Kampot province where I was working, there were 8 districts, 45 school clusters and 260 schools.

One of the strands of the EQIP project was to build up a group of provincial trainers. In-service training was used extensively in the EQIP project. Kampot province had 45 trainers who received some pedagogical training from project staff and MoEYS. Trainers were then expected to negotiate with school clusters to make a training plan for the school staffed based on local needs and then use their experience to design and deliver training to teachers that would match those needs. Teachers were trained by provincial trainers on a weekly basis.

The EQIP project was my first experience of development work. The structure of the project and my role on the project provided good opportunities for me to begin to understand the issues facing Cambodian schools. I started in Cambodia in January 2001 as a Voluntary Services Overseas (VSO) volunteer. As a volunteer my work was initially focused on supporting two district education advisors (animators) and school directors through training programmes and joint classroom observations. I began to identify issues facing teachers and the animators and to understand how I could develop my role to support them.

After 18 months in country I took on the role of Lead Technical Assistant in Kampot Province as an employee of the World Bank in the EQIP project. This role had a substantial focus on effective project implementation and monitoring and evaluation, but also provided opportunities for me to work with district animators and the provincial office of education to respond to the needs identified by school directors.

Whilst working in this position I implemented and reported on a provincial-wide monitoring and evaluation exercise. The research methods were defined by the international project staff in conjunction with the World Bank. The data collected and the different monitoring teams were identified in the WB project methodology. I used this data to learn about the interaction between global policy and local culture which provided important insight into what needed to be taken into account in education project design. I was able to understand the position of the EQIP project within the wider agenda of accountability, standardisation and competency based curricula and in its relationship to development partners in general. I also became increasingly aware of the difficulties surrounding pedagogic change which in Cambodia, as in many other

countries appeared to mean a shift from the more traditional didactic teaching methods towards what Khmer educators referred to as 'child-centred learning'. I became interested in how that shift was driven and why and what were the effects of this policy on classroom practice. As I observed teaching and learning I became increasingly interested in why the animators and teachers viewed education as they did and this becomes a major focus of the thesis.

Kampot School Health Project (KSHP) in EQIP

I also became involved in designing a provincially led health intervention, the KSHP, funded through EQIP, but initiated due to concerns raised by the school directors and animators. A significant component of the EQIP programme was based on school and community leaders discussing priorities for educational spending. An example of a priority was expenditure on infrastructure related to health. By 2002-3 spending on latrines and safe water systems accounted for an average 12.7% of the EQIP budget in Kampot (MoEYS 2002b). However, the animators were concerned that despite the spending, pupils' health remained poor and new facilities were not well used. The animators and consultants did not have the necessary expertise to provide health training to teachers. To address the issue we decided to approach Non-Government Organisations (NGOs) working in health. By combining resources from a health based NGO with the school infrastructure system created by EQIP a province wide health education programme was introduced. Examining this project provides insight into issues of sustainability and partnership and the wider development context of international and national development agendas. At the same time this examination sheds light on local cultural and language contexts as well as identifying how the components and processes within a teacher education project have an impact on the outcomes.

The Kampot Maths Project (KMP) and the Kampot Literacy Project (KLP) in EQIP

During the implementation of the EQIP project in Kampot both consultants and animators expressed concerns that the provincial trainers were insufficiently skilled to support schools in the teaching of early grade mathematics and Khmer literacy. In this thesis I examine how I used my learning from the implementation and evaluation of the Kampot Maths Project (KMP) and the Kampot Literacy Project (KLP) to inform the design of the BETT projects.

Basic Education Teacher Training (BETT)

BTC is a bi-lateral donor in Cambodia who financed a school improvement project focused on building schools in rural areas, providing scholarships and improving the teaching and learning process. BTC worked through a national steering committee led by MoEYS throughout the project implementation. I was the lead consultant on four projects for BTC. The first one initiated in early 2006 and completed in 2011 was focused on mathematics in-service education for primary and secondary schools and later in the second project all the national teacher training colleges for pupils in grade 1 to 9. The third project was initiated in late 2007 and focused on Khmer literacy in grades 1 and 2 and later in a fourth project expanded to all primary teacher training colleges nationally and completed in 2011. In this thesis I only make use of data from the pre-service programmes where it has direct relevance to teachers and teacher educators on the in-service programmes.

BETT Mathematics

I designed the mathematics programme within the remit of the overall BETT teacher training strategy and within limitations of financial and human resources. I based the design on experience from EQIP and KMP, an initial needs analysis in the BTC target provinces and international research into best practice in mathematics and training programmes. I designed the project with a research component to gain greater insight into the teacher educators' own perception of their learning and development and how local culture impacts on project outcomes. My research focused specifically on the mathematics teacher educators who were fundamental to the success of the project. By trying to make sense of their experience of the mathematics training programme in which they were involved I hoped to improve project design further. I wanted to explore how language, history, religion and the culture of Cambodia affected the educators' approach to learning and teaching in a local situation, but also as part of national and global agendas.

All mathematics educators were initially trained by external experts to deliver the training programme and to provide follow-up support to the schools. After receiving training and participating in the editing of the materials, the educators then worked in pairs to deliver the training to their allocated schools. Once training was developed the educators worked with their own cluster of approximately 7 to 10 schools to provide additional support.

BETT Early Literacy Project (ELP)

The implementation model for the ELP was the same as the maths project. However there were some significant differences. The initial needs analysis was more extensive than the maths project for several reasons. Khmer language was culturally sensitive. There was no available research on how pupils learn Khmer. There was limited availability of reading materials and nothing for early readers. The international consultants had varying levels of knowledge of the language, but none were fluent. It was possible to make use of the linguistic department of the Royal University of Phnom Penh for knowledge about the Khmer language but the only materials available that supported the learning of Khmer were written for adults or second language speakers.

After the needs analysis the development of pupil materials was given major emphasis. In the maths project only a few generic materials were produced by the project team, but the literacy project included the development of pupil readers and supporting materials.

The Khmer educators who applied for the positions were interviewed and then trained by international consultants, following the same pattern as the maths programme. The same applied to the training of teachers in clusters and the support programme that was put in place. However the structure of the training manuals was based on an activity a day and so the programme was significantly more detailed because it focused on grades 1 and 2 only.

Chapter One

I begin this chapter with a short examination of comparative education, the academic field in which my research has been contextualised. Reviewing the literature in this field informed my research methodology, giving me insight into the theoretical and practical issues that researchers had encountered. I then explore these issues in greater depth in Chapter Two. Positioning my work within the field of comparative education also provided the opportunity for me to identify and analyse generic issues associated with the design and implementation of education development projects. Researchers of comparative education often refer to the effects of globalization and neoliberalism on development and education policy (Carney 2003, Crossley & Watson 2003, Glaze & Lazeron 2006, Hursh 2005, Lingard 2000 and Olssen 2004). In part two of the Chapter I provide working definitions of these concepts. I go on to examine the impact of global development and education policy trends on national and local practice in Cambodia. This I start to contextualise with reference to the Royal Government of Cambodia and how its citizens respond to the global policy agenda. These themes are then developed in later chapters in the thesis.

Comparative Education

The cross-disciplinary nature of comparative education makes it an ideal field to examine the themes that arise from the research data in this thesis. Wilson (2003) stresses the long history of comparative education asserting that it could be perceived as the second global academic and practitioner field to appear in academia after geography. Comparative and International Education (CIE) has been subject to much recent reflection about definition and boundaries. Crossley and Watson (2003) argue that the need for re-conceptualisation in comparative and international education has arisen due to: intensification in globalization; neoliberal economic agendas; the changing role and impact of international agencies; the development of communication technologies, the need for improved policy practice links; increased tension between economic and cultural dimensions of development and social reform. Nearly all of these themes are discussed in this thesis.

The re-conceptualisation discussion around comparative education is applicable to both practitioners and researchers in the field and how their field is viewed by the outside world. It is relevant to how research is justified and the choices researchers make on the theoretical frameworks and methodologies they use. Bray et al (2007) show that the field has grown due to the increase and variation in the roles of people involved. They identify how policy makers, international agencies and academic consultants all contribute to international comparisons.

However, Cook et al's (2004) study of comparative education showed that the most influential organisations in the field are not the donors and iNGOs but multilateral agencies largely represented by USA. Cook et al listed World Bank (WB), United Nations Educational and Scientific Cultural Organisation (UNESCO), United States AID (USAID), United Nations Children's Fund (UNICEF) and the United Nations (UN). This leads to a call from the research community to examine the roles that bi-lateral donors and iNGOs play in shaping educational debate and policy (Crossley 2002, Watson 2001). My work provides a good example of the variety of roles. I was employed by an international agency as a consultant. I was a member of an academic community and therefore motivated to ensure the research undertaken was rigorous and original. The international agencies employing me were motivated to change policy in the countries in which they operated. Crossley (2002) writes that an interest in CIE has been revitalised. This could reflect the growth in practitioner involvement in research and development issues. A greater variety of researchers and purposes in the field is likely to lead to tensions between academic research and project consultancy, an issue I discuss in the methods chapter.

As roles in comparative education have become increasingly varied so too has the content of studies. Cook et al (2004) summarise research studies that have already been undertaken to look at the boundaries of comparative education. Their survey pointed to the continued multi-disciplinary nature of comparative education. Cook et al (2004) write that the most influential works in the field are largely contemporary. One of the tables presented in Cook et al's (2004) work lists the most popular themes that researchers engage with. These included: globalization, non-government organisations, funding, language policies, gender, methodologies, higher education, economics etc. It is interesting to note that in their table there is no mention of basic education, phases in compulsory education such as primary or secondary or literacy and numeracy, which suggests that this is an under-researched area.

Themes in comparative education also reflect the growing interest in how individual nations are affected by factors beyond their boundaries. Lingard et al (2005:764) discuss emergent global policy in education. They use Bourdieu's notion of field to examine the relations between global and national educational policy fields to '*locate the practices and products of policy*'. Lingard et al (2005:760) conceptualise education policy as a field with multiple levels, '*one of which includes a global character under the increasing influence of international agencies such as the World Bank and OECD*'.

Globalization

In my short outline of interests in comparative education and international education it is clear that the role and purposes of globalization has become embedded in the discourse. Globalization is not a new phenomenon, but as Dale (2000) writes developments in travel, technology and communications have led to its intensification and therefore its relevance in analysing research data beyond the national and local context in which it may have been collected. Globalization is often seen in economic terms, but it is also associated with the cultural, social and the political agendas all of which have the potential to impact on education systems. Featherstone (1990) and Hall (1991) describe globalization as a process. Olssen (2004:263) describes globalization as a higher degree of interconnectedness as a consequence of changes in technology and '*as a discursive system, pursued at a policy level by powerful states and international capital*'. Giddens (1991:64) defines it:

as the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa.

Globalization can also be defined as existing in a third state, in that it has been created outside of nations (Featherstone 1990, Lechner & Boli 2005). Featherstone (1990) uses the term 'third culture', not as the bi-lateral exchanges between nations, but as an existence of an entity. This leads to the idea of a global culture that exists outside of the nation, but influences how nations behave (Meyer et al 1997). Lechner & Boli (2005) suggest that a world culture exists and grows in parallel to the cultures of nation. The word global then, is used to describe this third state, but it appears to be biased towards a dominant Western culture rather than reflecting cultures from around the world. Hall (1991) discusses a concept of global mass culture which is characterised by its Westernness and use of English as a global language and Ritzer (1995) unpacks what he refers to as the penetration of rationalization and efficiency in '*The McDonalozation of Society*'. In reading the literature it is noticeable that the word global could often be exchanged with English speaking high-income countries.

Meyer et al (1997) point out that the goals of nations have become remarkably uniform and as they become increasingly interrelated, individual autonomy diminishes. Lubbers (1998) and McGrath (2001) also discuss how globalization reduces national autonomy. Lubbers describes globalization as a borderless world and this has societal consequences in terms of the diminishing capacity of governance. McGrath (2001b:392) writes that the power of globalization:

reduce[s] room for manoeuvre in political and practical decision making by arguing for the primacy of the forces of the global market over any possibility for individual self-determination.

Meyer et al (1997) take the concept of a global third state one step further by introducing the idea of world education culture. World education culture they argue has resulted not only in a more homogenous philosophy of education, but its purposes have pressured nations to expand their education systems. Lingard et al (2005) discuss the emergence of a global educational policy field that operates above the nation and discuss how this education policy field becomes separated from the education practitioners. They also argue that research should examine 'cross-field effects', for example the effect of human capital theory on education policy, a relationship explored in this thesis.

Difficulties arise in any study of globalization and attempts to produce theory. Globalization is often contextualised within the present and does not take sufficient account of its historical routes (Clayton 2004). This supports Olssen's (2004) argument that the structures characterising globalization such as neoliberal policies have already taken place. For a researcher the danger of an incomplete theory is that its use may result in a diminished analysis of data. In this example if the data was only analysed in the context of globalization, economic and social patterns over a longer period of time may be omitted. Due to this limitation some comparativist educationalists prefer to use world-systems analysis, a theory attributed to Immanuel Wallerstein who published his first volume in 1974. Wallerstein's theory has a historical dimension in that he shows the rise of capitalism and the relationships between nations from the 16th Century. Comparativists using this global theory as a starting point find that it allows them to examine neoliberal economic agendas as ideology beyond their location within contemporary globalization (Clayton 2004, Arnove 1980), but there are still limitations. World systems theory is useful for analysing economic effects but it has been criticised for failing to put sufficient emphasis on culture (Boyne 1990 and Worsley 1990) Without exploring culture Worsley argues it is impossible to make sense of the modern world where religion, nationalism and ethnic conflict are more important than internationalism. As Giddens points out

Most people think of [globalization] as simply 'pulling away' power or influence from local communities and nations into the global arena. And indeed this is one of its consequences. Nations do lose some of the economic power they once had. However, it also has an opposite effect. Globalization not only pulls upwards, it pushes downwards, creating new pressures for local autonomy ...Globalization is the reason for the revival of local cultural identities in different parts of the world...Local nationalisms spring up as a response to globalising tendencies.. Giddens (1999) BBC 1999 REITH Lecture 1
http://news.bbc.co.uk/1/hi/english/static/events/reith_99/week1/week1.htm

Lingard (2000:80) writes that the *'the nation-state still retains some capacity, if it at times lacks the will, to do more politically than simply facilitating economic globalization'*. Lingard rejects the idea that globalization is simply a top down homogenisation process of politics and culture. In Chapter Three and Four of this thesis I explore how global education and development agendas are advocated in Cambodian national policy, but go on to demonstrate that policy is not necessarily translated into local sustainable implementation.

Neoliberalism

Much of the literature on globalization refers to neoliberalism (Hirst et al 2009 Lechner & Boli 2008, Lingard 2000, Morrow & Torres 2000, Pieper & Taylor 1998, Philips 2002, Went 2000). In this section I have used the literature on globalization to develop a working definition of neoliberal policy derived from its history and its prevalence, as well as its relationship to globalization, development and education.

After World War II, economic policy was often defined on the Keynesian principles of economic investment, promotion of corporate profits and improvement of social welfare to achieve better equality for all (Hursh 2005). Keynes had led the British delegates at the Bretton Woods conference, the starting point for the development of an international post-war economic policy and the establishment of global institutions such as the International Monetary Fund and the World Bank (Steger & Roy 2010). Hursh (2001) writes that policies of neoliberalism came from a corporate and political response to the increased personal and labour rights that grew after World War II. Harvey (2005) demonstrates that in the late 1970s changes in political leaders led to new remits. Policies were concerned with reforming trade unions, reducing inflation and responding to the opening up of China as a market economy. This, he argues, was the starting point for neoliberalism, a policy that had previously been relatively obscure (Harvey 2005). Thatcher, Prime Minister, UK (1979 -1990) and Reagan President USA (1981 -1988) and to a lesser extent the Prime Ministers of Australia and Canada argued for an end to the Keynesian economics that had advocated government investment and government ownership. These policies were replaced with different principles such as the privatisation of state held companies, reduced government intervention in the market, the lifting of tariffs and regulations and the end to the restriction on capital flows and investments. The policies of free market and trade-liberalisation were seen as underpinning the ideology of most neoliberalists.

Researchers regularly cite neoliberalism in development and education policy discourse. However, many authors whilst referring to the difficulty of definition do not define the concept

for the reader. As Ball (2012:3) writes '*It is one of those terms that is used so widely and so loosely it is in danger of becoming meaningless*'. Thorsen & Lie (2006) argue that neoliberalism has become a default description for any political or economic policy that is considered undesirable. Ball (2012) examines the nuances of neoliberalism. He suggests that it has fallen into separate waves and phases at different times and therefore policy has adjusted over time and within geographical boundaries. Likewise Steger & Roy (2010) suggest it would be better to refer to neoliberalisms in the plural, to recognise the variety of policy and practice. Harvey (2005) describes neoliberalism as a theory of political economic practices rather than a complete political ideology.

In this thesis, when I refer to neoliberalism I am suggesting that conceptually it originated from economics. The study of economics is not a pure science so in order to understand the context of the market, which economists study, it is necessary to also study human behaviour and values (Ekelund & Hebert 1997). It is in this process that formulae and theories are developed and economics becomes both theory and ideology. I argue that neoliberalism developed as a political ideology with specific traits and characteristics that were identified within policy and are now referred to as neoliberal approaches.

Thatcherism and Reaganism became the ideological reference points for a vast process of restructuring that reduced demands on the welfare states and provided a more flexible regulatory environment within which globalizing economic processes could proceed with fewer obstacles (Morrow & Torres 2000: 37).

Neoliberalism may have started out from economics, but as it developed into theory and ideology it is logical that it could then be applied to other areas of human experience. In a neoliberal policy perspective educational investment is identified as the key to economic advantage leading to the involvement of economists in education policy. In a neoliberal policy perspective on development poverty is linked to the state having too much ownership and intervention in the running of the country's production and therefore structural adjustment programmes were concentrated on privatisation and social welfare became neglected. Neoliberal economic agendas permeate education and development policy. This in turn affects project design, implementation and evaluation. A pre-requisite then, to understanding the intricacies of internationally funded projects in Cambodia is an examination of these agendas.

Globalization and Neoliberalism in Education

As early as the works of Adam Smith and John Stuart Mill theories have been posited that equate education with capital. Since World War II there has been a growth in the attention

given by economists to the relationship between educational investment and economic outcome (Hanushek 2004, Bonal 2004). Lingard (2000:84) writes that:

education policy became an element of economic policy framed by a microeconomically focused and rearticulated version of human capital theory linked to the changing structure of economies and labour markets in the postindustrialised nations of the globe.

Becker (2002:292) proposes that:

human capital is by far the most important capital of modern day economics in that the economic success of individuals and whole economies depends on how extensively and effectively people invest in themselves.

Becker's argument would suggest that there is a direct relationship between outcomes of education, usually measured by qualifications, and the profit an individual can make. Consequently wages should rise in line with the academic profile of the workforce (Brown and Lauder 2006). Barro (1998) in a study on '*Human Capital and Growth in Cross-Country Regressions*' examines attainment and time spent in school as contributors to economic growth. He notes that average years of school attainment that adult males had in secondary or higher education can be positively related to growth, but when similar correlations are made for both genders in primary schools and for girls in secondary schooling economic growth was considered weak. Conclusions from this type of research can be very influential on governments and can lead to policy change. For example a policy focus on investment in tertiary education where economic return may be perceived as higher than a similar sized investment in primary education.

Research in USA, England and Canada linked additional schooling and higher achievement on standardised tests to higher individual earnings (Hanushek 2004). The studies cited by Hanushek (2004) suggest that one standard deviation in a test score translates into a higher wage on average of 12%. Becker (2002) provides evidence that there is a positive correlation in the USA between levels of qualifications and individual profit. Barro (1998) notes that international testing can be used as a measure of the quality of schooling and argues that scores on science tests have a positive relationship to economic growth to a far greater extent than those in mathematics or literacy. Here is another example of where economic research can affect decisions about education policy and curriculum (see Drori 2008 for discussion).

Neoliberal politics extended well beyond the education systems of high-income countries. Johnson and Thomas (2004:302) and Riddell (1999:209) write:

in economic development literature educational systems or programmes are regarded as effective to the extent that they provide human capital to meet development needs.

Economists have so dominated educational policy making in developing countries that it is often difficult to separate out educational from economic perspectives on educational reform.

There have been some research studies in developing countries that link individual income with education (Hanushek 2004) although most seem to be based on quantity of schooling rather than quality. Despite this Hanushek (2004) posits that the potential return in low-income countries is greater than in high-income countries.

Human capital theory has led to high-income countries investing in knowledge based industries as a means to become more competitive in global markets. When the European Union Council met in 2000 at Lisbon it set a strategic goal for 2010: *'to become the most dynamic and competitive knowledge based economy in the world'* (European Parliament: *Lisbon European Council 2000*). Casey (2006) demonstrates how Australia and New Zealand developed an adapted OECD model which expands knowledge across a spectrum of industries. Education is not only a public service to its citizens, but a service industry that fits into the global neoliberal agenda. This benefits powerful nations by allowing them to export knowledge and expertise to those countries with a less developed knowledge economy (Sidhu 2007). For example higher education institutions recruit foreign students to boost income and educational consultancy services are exported on a global scale.

A profusion of policy showing the failure of schooling and the need to create a knowledge economy provides evidence that the idea of human capital theory is prevalent in educational planning. Examples include: in the UK the documents *'Skills for All'* and *'21st Century Skills'*; in USA *'A Nation at Risk'*; in Korea *'Edutopia'*; in China *'Action Plan for the 21st Century'* (Grubb and Lazon 2006). In New Zealand *'Tomorrow's Schools'* (1990), *'Education for the 21st Century'* (1994), *'A further Tertiary education policy for New Zealand'* (1997) (in Casey 2006). France and Sweden made changes in their education systems to promote economic growth and Italy, Spain, Portugal, Yugoslavia, Turkey and Greece improved education systems based on an idea that they were related to economic growth (Resnik 2006). Ideas of knowledge economy permeate at regional and global as well a national level. For example the European Union promoted the *'Europe of Knowledge'* and OECD emphasised the *'Knowledge Revolution'*.

Resnik (2006:175) writes the:

education-economic growth discourse became the basis of educational policies throughout the world – a fact that contributed to the expansion and empowerment of international organizations.

The idea of educational investment as the key to economic advantage becomes linked to the development of the education system to match a model of corporate managerialism which has led to common trends of accountability and standardisation (Scoppio 2000, Avis 2000, Apple 1999, Hursh 2005, Court 2004). Scoppio (2000) using England, Ontario and California as examples, argues that before the 1980s education reform focused on equity. By the 1990s there was considerable devolution to the local level, but standardisation and accountability were increasingly nationalised. In England this led to the introduction of a National Curriculum and standardised assessment at the same time as introducing local management of schools and grant maintained schools that could opt out of local authority control. Hursh (2005) argues that as economic productivity becomes more central, the development of the well rounded educated person is replaced with the development of an economically productive person. This model of education based on accountability leads to standardisation and thus the measurement of performance and productivity or what Apple (1999) refers to as the global standardised person. Normand (2001, cited in Resnik (2006)) argues that results from studies implemented around the school effectiveness movement in Britain were transformed into simplistic and standardised prescriptions. These prescriptions formed the basis of international indicators which have been used since the mid 1990s in order to compare the performance of individual nations. I discuss the effects of this process in Chapter Three based on the EQIP project.

Hursh (2005) presents the neoliberal policy as one that introduces choice into the education market. In high-income countries parents become the consumers of a service, choosing their school which is predicted to lead to increased educational achievement (Court 2004). The idea of introducing choice is that it forces schools to respond to the needs of the communities they serve, and therefore should make individual schools and teachers accountable for the learning outcomes achieved by their pupils leading to a more equitable system by providing students with an equal entitlement. The school competes for the clients by proving its effectiveness, largely measured by its performance. Ball (1998) writes that education policy becomes based on a formula of social market devolution equated to performativity and raised standards leading to increased national competitiveness. However, the application of a market policy model to schooling could be seen as misleading as most people do not want a market but a 'good local school' (Peters 1995:51) and as Brown and Lauder (2006) note that while there are

relationships between economy and education, this relationship is not as pronounced as policy suggests.

These theories may explain why, ultimately as Scoppio (2000) points out, only pupils from higher-income families will benefit from a neoliberal system and the advocates of such policies are not concerned with issues of equality, but with a desire to create efficient human skilled capital that is needed to achieve higher performance in global markets. This is evidenced in the work of Härmä (2009) who examines choice in India and concludes that the growth of low fee private schools appears to contribute to Education for All (EFA) goals with poorer families being able to attend, but in reality many rural families are still unable to afford this schooling.

One of the criticisms of human capital theory is that it is based on a deficit model. The presupposition is that people at the bottom of the employment ladder are so positioned because of their lack of skills and abilities. Providing more education will remedy the problem. This argument is positioned around the individual rather than society and therefore does not address issues of social inequality or the current distribution of wealth. Hickling-Hudson (2002) argues that this person-centred model has the effect of blaming the poor and the low-income country for their own inadequacies which leads to a study of poverty rather than a study of the powerful and influential. She goes on to say that educationalists have to learn that expanding the education system will not necessarily lead to more productive economies. Expanding the system and increasing minimum competencies will only lead to low-income countries fitting into the globalised economy by providing cheap labour. Similarly Bonal (2004) argues that whilst the World Bank endorsed poverty reduction strategies and progress was made towards increased enrolment rates and improved educational system efficiency, the policies did not lead to a reduction in poverty.

After World War II the relationship between educational investment and economic growth became legitimised by the UN who poured aid into developing countries. Rizvi and Lingard (2006) write that international organisations have a prominent role in the constructing and legitimisation of educational reform. King (2007) also demonstrates how multilateral agencies have constructed the global agenda on education. Resnik (2006) writes that the role of economists in education grew substantially which enhanced the role of organisations such as UNESCO and OECD, both of which contributed to the notion of human capital theory. Resnik (2006) posits that these organisations became '*world education managers*'. Lingard (2000:98) argues that the '*OECD has been an institutionalising mechanism for neoliberal economics and new managerialism*'.

Although much educational development research comes from the data collected by UN organisations (McNeely 1995) there is less research on the effects of these organisations in the development of global education or their impact on nations and yet their policies do lead to global patterns in education. For example Meyer et al's (1997) research shows that because UNESCO data was based on a six year primary education model and three years of lower secondary and three years of upper secondary many nations also organised their systems in the same way. Lingard (2000) writes that OECD and UNESCO have been instrumental in promoting a culture of performativity in newly restructured education systems, supporting the conception of human capital in a neoliberal market ideology. McNeely, like Resnik, points to international organisations becoming the facilitators of a worldwide pattern of educational institutionalism. McNeely provides evidence for the patterning of world education by referring to researchers who have conducted cross-country analysis. These researchers concluded that the aims of individual national policies were in line with those of the World Bank and UNESCO. This suggests that certain education models become diffused world wide which leads to an accepted world education culture. McNeely goes on to argue that research needs to be conducted into how world education ideas are formulated and transmitted.

Lingard (2000) uses the term '*vernacular globalization*' to represent the idea that political systems vary and therefore how countries respond to globalization is varied. As an example he compares Australia's federal state approach to Britain's National and Local Authority system and suggests that education policy is more nuanced than it first appears. I agree with Lingard that the country's political system will ultimately affect how policy is devised and implemented, however I argue that the underpinning principles of governments are often based on global policy as can be seen in the negativity associated with teacher-centred learning and the increasing international focus on a phonetical approach to reading. I have already presented evidence to argue that world education culture is embedded with ideas of economic growth and linked with neoliberalism. In an analysis of the education policy of the 1980s and 1990s in high-income countries ideas of decentralisation, managerialism and school autonomy are clearly evident. Ten years later these same policies are embedded into the project designs of the World Bank in low-income countries. This fits with King's (2007) research who posits that the process of fashioning a global education agenda started with the 1990 Education for All conference in Jomtien, Thailand led by United Nations organisations and World Bank. The 1990 'Education for All' (EFA) debate shifted the focus of educational development from prioritising enrolment to reflecting on quality which affected interventions in low-income countries globally. The EQIP project discussed in Chapter Three provides a good example.

As international partners came to a consensus on the key areas for development the drive for 'quality education', global standards and accountability was increasingly introduced. The 155 delegates at the World EFA agreed that universal primary education should be achieved by the end of the decade. In many low-income countries the demand for education was already exceeding the supply. Governments with poorly developed education systems were often forced to make policy changes that would later have significant consequences on the quality of the education that was provided. This is illustrated by Chimombo (2005:155) who examined ten case studies in Malawi and wrote:

it appears that increased access to schooling has been achieved at the expense of the quality of education offered.

Khaniya & Williams (2004), writing about Nepal, point out that while completion rates in primary school remain low and provision is minimal, high enrolment rates are unlikely to lead to an increase in human capital. Chimombo (2005) and Khaniya & Williams (2004) echoed the work from the World Bank (2002) which also expressed concern that the success of EFA goals could undermine the quality of education that was offered. In Cambodia:

Teacher class ratios were increasing as a result of the success of the enrolment campaigns...greater efficiency puts learning quality at risk (MoEYS ESSP Review Report 2002a).

When the Dakar EFA Conference took place ten years later, a framework of action was developed. The universal primary education target was set at 2015 and the primary education goal was elaborated. Reference was made not just to enrolment, but to the quality of education pupils would receive. All three newly elaborated sub-targets referred to quality:

have access to free and compulsory primary education of good quality.....full and equal access to, and achievement in, basic education of good quality.....improving all aspects of the quality of education and ensuring excellence for all (DFID, 2001:10).

Not only did the Dakar framework sub targets emphasise the importance of quality, but they also made reference to measuring outcomes...*'so that recognised and measurable outcomes are achieved'* (DFID, 2001:10). By 2005 when the EFA Global Monitoring Report was published, worldwide concern was increasingly directed at the quality of education:

The achievement of universal participation in education will be fundamentally dependent upon the quality of education available (UNESCO 2005:28).

As national and regional policy increasingly focuses on human capital theory and knowledge based economy, global approaches to policy, curriculum and pedagogy develop. In the next part of the Chapter I argue that global educational trends are caused by competition in neoliberal markets and the influential role played by multilateral donors and agencies.

Education and development paradigms are closely linked. The neoliberalism of free markets leads to education policy agendas centred on accountability, standardisation and performativity. These principles are embedded in development policy through the wide spread use of logframes and objectifiable indicators (*discussed in Chapter Three*) and the setting up of Education Management Information Systems (EMIS).

Within the neoliberal perspective I have identified several key issues that are common to both high and low-income countries, but are manifest in different ways, reflecting complex power relationships. I argue that in the present climate the purpose of education in a high-income country is increasingly concerned with each individual's contribution to knowledge economy. In a low-income country the purpose of education is seen as playing a key role in poverty reduction. However, from these quotations it can be seen that the production of human capital is also a priority in low-income countries: '*Once children are taken out of schools future human capital is permanently lowered*' (UNESCO 2010:20) and in the preface to the Policy for Curriculum Development 2005 – 2009 MoEYS 2004:

Education is regarded by each country in the world as an important field in ensuring the development of human resources to meet national needs. Societies and nations need continuous human resources development. It is a common world trend that reform is an important task to ensure the improvement of the quality of education.

Having developed an argument that global economic and development agendas define the purpose of education I now want to extend that argument further by suggesting that there are also global patterns affecting what pupils should be taught and how.

In high-income countries the neoliberal agenda leads to schools becoming increasingly accountable for pupil performance. In order to compare the performance of schools and nations, standardised tests and competency based curricula are introduced. In many high-income countries national and international testing such as Third International Mathematics and Science Study (TIMSS) and the Programme for International Student Assessment (PISA) become bench marks for measuring a nation's performance. Is it possible to design international tests that can be fair given differences in culture, geography and educational organisation of the curriculum in different nations. Beaton (1998) analysing the TIMSS questions and outcomes argues the TIMSS test was fair. He reasons that even when countries de-select test questions that they do not think are relevant to pupils of their nation this has very little consequence on the result, suggesting that cultural context is not important in

maths education. If this is the case and a country is seen to be successful it can easily lead to de-contextualised educational borrowing.

Competing in the tests may also lead to the global homogenisation of the curriculum and its content, but by whom and for whom? After all there is limited participation in international tests for pupils from low-income countries and where there has been participation the results reveal that the average child in a low-income country performs at a lower level than 97% of pupils in a high-income country (EGRA Toolkit, 2009). I could argue then that many low-income countries have not been led towards a globalised curriculum in the same way as high-income countries due to their non-involvement in international testing and their often inadequate education systems. However many low-income countries were previously colonised or were influenced to some extent by missionary groups, so their school systems would have been affected. When designing the teacher development project in Cambodia it was evident that maths school text books had been influenced by a French approach to teaching calculations division providing a good example and the early primary textbooks were influenced by the work of UNICEF and UNESCO.

As countries became increasingly interrelated, perceived effective models of schooling are copied and transferred. Globalization permeates the education system whether it is traced back to the influences of religious missionaries introducing their notions of education and schooling into foreign lands, or to the early research of education comparativists such as Michael Sadtler who established careful research methodologies in order to explore how education systems worked in other nations.

Le Métais & Tabberer (1997: Unnumbered) examine a wide variety of elements in the education systems of different countries that include aims and values, assessment and curriculum. They conclude that it is important to explore international diversity in order to understand what is happening in international comparisons:

without an understanding of the overarching curriculum and assessment frameworks, it is hard to identify the lessons which can be learned from overseas experience.

For example Kwok & Lytton (1996) found that Hong Kong Chinese pupils performed better than Canadian pupils on the test, but they rated Canadian pupils' mathematical competence as higher than their Chinese sample. Salili & Hau's (1994) work on teacher evaluations also suggests there is a cultural difference between nations. They found that the attitudes of Western students towards feedback showed that effort and ability were positively correlated.

In the perceptions of Chinese students the effect of teachers' feedback comments on ability was more important than comments on effort. Fuligni & Stevenson (1995) conclude that differences in how adolescents use their time in America, Japan and China are related to both cross-cultural and individual differences in mathematics achievement.

Other research suggests that the timing of the test may have an effect on the achievement gap in outcomes. For example McIntosh et al's (1995) research in Australia, Japan and the United States showed that there were wide variants within countries' performance but there were also significant differences between country results. They noted that Japanese students performed better than students from the US and Australia in the lower grades, but differences began to narrow in the higher grades. Shimizu (2001) conducted research with Japanese students who had been included in the 1995 TIMSS testing, in 2000 as they entered university. The students identified a range of factors that they considered had contributed to Japan doing well in international tests. The main factors were high expectations of parents, the culture of the Japanese, such as their diligence and the importance of academic success in society, good teachers, a clear national curriculum and entrance exams. The students believed:

*that the thorough mastery of ku-ku enabled them to do well in mathematics
.....and that the abacus played a significant role in maintaining citizens'
literacy in traditional Japanese society.*

<http://www.nctm.org/resources/content.aspx?id=1548> accessed 04/08/12

The Japanese students in the study were able to point out many reasons why Japan achieved well in international tests, but by university level they were also making some criticisms. Students explained that High schools had focused on the procedures to solve problems rather than the mathematical concepts. This led them to only view mathematics problems as something that was given by a teacher and they therefore had not gained an understanding of the applied aspect of mathematics which led to a passivity and negativity towards mathematics by university level.

Perry & VanderStoe's (1993) found in a study of first grade classrooms in the US, Japan and Taiwan that Asian teachers asked significantly more questions about conceptual knowledge and problem-solving strategies than US teachers and Chinese teachers asked significantly more questions embedded in a concrete context than US teachers. Schaub & Baker (1991) explored why American pupils scored less well than Japanese pupils and concluded that Japanese teachers were better at restricting the ability range so were able to make better use of whole class teaching whereas American teachers encouraged students to work more on their own. Whitburn (1995) argues that English teachers encourage children to progress at their own rate

whereas Japanese teachers emphasise keeping the whole class together. In this case Whitburn argues the Japanese teacher places value on the performance of the whole group rather than the individual and in saying this there is an argument that Western and Asian values appear to be different. Whitburn (1996) suggests that attainment differences may be linked to the different values cultures give to education and mathematics.

Much of the research cited above was at the end of the 1990s when it would appear from the content that two pedagogies are clearly recognised. It would appear in Western Anglophone countries that there was a partial use of a constructivist pedagogy while Asian teachers appeared to have classes of pupils that were less differentiated in ability and used a whole class approach. Several researchers have shown how pedagogy matches a nation's value system, which gives rise to the idea that Asian societies are collective in nature and Western societies are individualistic (Whitburn 1996, Le Métais & Tabberer 1997). This type of comparative education research can become a predictor of change. Anglophone Western nations wanting to achieve the same results as the Asian Pacific Rim nations started to develop strategies based on whole class teaching, such as in England with the introduction of the National Numeracy Strategy (DFEE 1999). This is a clear demonstration of importing practice without context.

Knowledge and curriculum content like educational policy have to some extent become globally defined, possibly attributable to a neoliberal agenda focused on test comparisons and the importing of educational practices. However, Guile (2006) questions both what knowledge politicians and economists are referring to when they demand that the work force must be trained to participate in the knowledge economy and whether this then leads to a global body of knowledge. The involvement of multilateral agencies and corporations can be added to politicians and economists all of whom have contributed to the development of teacher standards and global systems of assessment which ultimately lead to a globally defined curriculum (Luke 2011). The challenge for a designer of educational development projects is how they take into account the interaction between this global knowledge and local educational needs. As George & Lewis (2011) comment, Caribbean citizens perceive education as an import and therefore consider it to be a return to colonisation. To prevent this rejection local knowledge needs to be recognised and featured in the national school system. George and Lewis (2011) argue that the past practices of multilateral agencies have contributed to the non-recognition of knowledge generated by low-income countries.

Pedagogy

A discussion of 'knowledge' in education is not limited to the curriculum knowledge of the subjects themselves but must also include the teacher knowledge or pedagogy of how pupils should be taught. Galton (2007) discusses three aspects of pedagogy: the science of pedagogy which he describes as the general principles that have developed from research into theory and practice, such as the study of psychology and empirical studies focused on classroom observation; the art of pedagogy, described by Galton as how teachers adapt pedagogy to meet the differing needs of classroom contexts and the craft of pedagogy described as how teachers apply their experience to teaching and learning situations. However, Galton is writing about pedagogy in a high-income country so can this have resonance with Cambodia? To some extent it can be argued that Cambodian teachers do focus on all these aspects of pedagogy, however, if teacher training is taken as an example to explore pedagogy it is clear it is not valued in the same way. Teacher training in Cambodia focuses almost exclusively on subject knowledge, including some aspects which could be defined in Galton's words as the science of teaching. There is a curriculum for subject knowledge. The delivery mechanism is generally based on student teachers working through the pupil graded text books. Additionally there is a distinctive Cambodian subject knowledge content which matches arguments that vulnerable countries have to ensure nationalism is a part of the educational infrastructure for fear of homogenisation in the global system (Giddens 1999). The teacher training timetable does include pedagogy lessons but these are usually based on students making materials for practicum independently. The students then have opportunities to work collaboratively to learn how to use the materials in the classroom. In the structure of this training it is clear that national policy has been influenced by global pedagogic principles, but trainers resist attempts by external organisations to change the way pedagogy sessions are delivered. There are conflicts between the values placed on pedagogy by external consultants and members of government, but not necessarily between the consultants and the trainers or colleges. For example MoEYS policy for the appointment of trainers in the colleges was based on qualifications only and teaching experience was not necessary. Interestingly one of the outcomes of BETT was that the in-service maths trainers, despite not having high enough qualifications did eventually gain status and respect in the training colleges and a few were even employed by the colleges suggesting that there is some power for change at the local level (see Chapter Five and Six for discussion).

It is possible to argue that a science of teaching could lead to the development of generic transferable pedagogic principles. Therefore it should be possible to identify historic and

global trends in policy documents focusing on pedagogy as this science develops. However, the art of pedagogy would suggest that whatever the generic principles are the teacher would have to adapt these to local circumstances based on the needs of their learners. The idea of craft in pedagogy also contributes to a local rather than globalized view of teaching and learning where teachers draw on prior experiences both as a teacher and a learner. Taking into account national and local cultures and the historical contexts of an education system it may be reasonable to conclude that when pedagogy is translated into practice the greater influences on that translation are from national and local contexts rather than global principles.

However, global trends appear to have developed due to the significant role of aid agencies, economists and politicians in education who now see not only curriculum and knowledge but also pedagogy as part of educational policy designed to reach an end result: that of a more productive economy or a reduction in poverty. In this thesis I will demonstrate that since World War II educational policy has become increasingly directed by aid agencies, politicians and economists. This has led to a crude and simplified view of pedagogy based on conflicting views of what education should look like in practice. I demonstrate that this led to pedagogy becoming viewed as two ends of a spectrum teacher-centred or learner-centred. Teacher-centred pedagogy is based on a formulaic view of education where the teacher transmits knowledge to the group of receiving pupils. Conversely in learner-centred pedagogy the teacher is perceived as a facilitator, supporting pupils to make sense of their world by helping them to construct meanings based on prior knowledge and experience and therefore is individualised for each learner.

Constructivist views of learning have become increasingly influential in the West. The idea that each individual constructs their own meaning is not new and has been traced by D'Angelo et al (*Undated*) back to Socrates who focused on helping students construct meanings on their own rather than being informed by an authority figure. Kant (1724 – 1804) also recognised that how learners perceived and responded to stimuli affected how they understood their world. John Dewey cited in Scott & Palincsar (2009) proposed that educators should build from pupils' current understanding and interests and argued that too much emphasis had been placed on subject knowledge and not enough on the activity of the pupil. Dewey wanted pupils to work on genuine problems for them rather than the problems generated by the teacher (Phillips 2003). Piaget depicted the learner as a solitary enquirer in which the biological ideas of accommodation and assimilation were important learning processes (Phillips 2003). He also proposed that learning was based on maturation. Vygotsky, critical of Piaget's individualistic

model, proposed that it was social interactions that played the significant role in how the learner constructed knowledge (Vygotsky 1978), but he had studied the work of Piaget and there are clear elements of developmental phases (Alexander 2010). In summary there appear to be two approaches to constructivism: one that places emphasis on the individual learner and the other that learning is socially constructed, however both are linked through the idea of readiness for learning in terms of the developmental stage of the learner. Alexander (2010) suggests that a view of natural development is an Anglo cultural approach to learning. He argues that in England development happens whereas in Russia it has to be interventive. These ideas could be at the heart of why pupils are not automatically promoted in some education systems whereas they are in England.

Ideas of constructivism became prevalent in English speaking countries, but although they appear less obvious in European approaches to education there is a wide body of evidence that here too constructivism has left its mark. In Europe the idea of didactics is central to an understanding of teaching and learning but in England this is a concept little discussed, possibly due to its moral connotations. However, educational research in France based around didactics is focused on the behaviour of an individual in a context and therefore how the learner develops and constructs knowledge (Schubauer-Leoni & Ntamakiliro 1998). So it can be argued that concepts of constructivism and social constructivism are relevant to studies both in Anglo speaking countries and in Europe although Pepin (1998) argues that France did not embrace child-centred approaches but remained focused on subject matter learning and Germany combined both subject knowledge and child-centred approaches.

Scott & Palincsar (2009) argue that constructivism is not a form of pedagogy but a theory of knowledge that has been applied to teaching and learning and therefore this has led to a number of educative models that have been based on a notion of constructivism. Papert (1980) in his introduction of LOGO programming was arguing that children were put into an active position of constructing knowledge through powerful concepts of science and mathematics giving claim to new technologies leading the way for constructivist pedagogies. In reality the constraints of the classroom environment and knowledge of the teacher meant that LOGO was incorporated into a teacher-centred pedagogy, because it was dependent on teachers having a higher level of mathematical skill than they actually possessed (Cuban 1986). This finding is important. Introducing a new pedagogy or a resource is not in itself going to make a change to teaching and learning, the teacher must be the agent of any change which incorporates the idea of art and craft in pedagogy.

Enquiry based learning (see Edelson et al 1999) and problem based learning advocated by Polman (2000) provide another example of constructivism in practice. In these models learning is based on social constructivism. The students work in groups to solve the problem or undertake an inquiry. This approach to learning is often rooted in science education (Matthews 2003) see for example Manchester University's Centre for Excellence in Enquiry Based Learning (<http://www.ceebl.manchester.ac.uk/ebf/>). Larochelle et al (1988) argue that in France the whole approach to problem solving is conceptualised differently and therefore this would affect how pupils are taught, providing another example of how a constructivist pedagogy can be nuanced. For example both countries may still practice a constructivist approach based on some form of problem based learning, but it would be expected that in classroom practice the pedagogy would look different.

Galton et al (1980) argue that before World War II education was becoming increasingly progressive and child-centred, focused on this idea of constructivism. In England in the early 1960s learner-centred approaches grew in strength aided by a reduction in streaming and inspections which gave more autonomy to teachers and schools. By the time the Plowden Report (1967) was published the pedagogy of child-centred learning based on psychological developmental theories and an individualist approach to education was beginning to take shape (Gillard 1987):

Individual differences between children of the same age are so great that any class, however homogeneous it seems, must always be treated as a body of children needing individual and different attention (Plowden, 1967:75a)

The Living and Learning (1968:9) Halls-Dennis Report in Ontario was published at a similar time to the Plowden report. It recommended '*an individualised programme of instruction for the development of the potentialities of the child*' and '*viewed school as a place of personal growth and development based on a learning process of self-discovery*'. The USA also implemented what is often termed as progressive education influenced by Dewey and his followers, but this was earlier than in England and Canada and by the 1950s there was already a backlash against progressivism.

However, the progressive Plowden approach was heavily criticised in England. Criticism had grown of Piaget's developmental theories on which the Plowden Report had placed significant value and in the original idea of constructivist learning, insufficient emphasis had been placed on how learning is socially constructed. The danger of this progressivism became a theme of the Black Papers published between 1969 and 1977 and fuelled by Bennett's report (1976) *Teaching Styles and Pupil Progress* that claimed pupils exposed to progressive methods were

four months behind those taught with traditional approaches. The report had widespread media coverage. The criticisms which suggested that his approach to the research was simplistic were hardly heard (Chitty 2004). As Bryan (2012) argues the line was drawn in the sand between the traditional and progressive approaches. Gammage (1987) argues that much of the Plowden Report was misrepresented and that while there were organisational issues around the learning that the authors tried to promote this should not have undermined the principles. Additionally there was little evidence that the practices advocated by Plowden were widely used in classrooms despite a considerable increase of funding in primary education (Gammage 1987, DES 1978). Therefore it would be reasonable to assume that the 'blame' that was placed on this pedagogical approach in later years was unjustified.

Learner-centred policies continued to appear in Britain after the Plowden report, for example in the document *Curriculum from 5 to 16* (HMI Curriculum Matters, 2 1985), but by the late 80s in England the neoliberal economic agendas were leading to increasingly standardised curricular. The introduction of the National Curriculum and new assessment arrangements in England in 1998 led to greater political control over the education system. Farnan (2012) suggests, however that this curriculum was still designed on a Piagetian understanding of learning and at this point the government did not intervene in the pedagogy. Teachers were still free to organise the content in the way they felt most appropriate leading to a divergent range of classroom organisation. In England it was not until the introduction of the National Literacy Strategy in 1998 (DfEE) and the National Numeracy Strategy in 1999 (DfEE) that the involvement of the government now included the pedagogical approaches teachers should use. Although the strategies were non-statutory the emphasis placed on them in initial teacher education and through accountability led to them becoming obligatory. National government was recommending approaches to pedagogy, for example '*whole class interactive teaching*'.

From a research perspective it is clear that there are recognisable pedagogical approaches and, as economic planners have become increasingly involved in education these approaches have become politically polarised. In addition to the political choices behind pedagogy there are also cultural issues as posited by Alexander (2010) in the idea that how pupils develop is understood differently in different cultures and in the example given by Larochelle et al (1998) that how problem solving is contextualised in a society affects the pedagogical approach, a relevant point already discussed around Japanese strategies in the teaching of mathematics. These differences lead to the necessity of understanding pedagogy within local cultures and classroom contexts.

In England the combination of economic agendas and politicians becoming increasingly involved in the detail of teaching and learning led to a polarised view of pedagogy where teacher-centred education was at one end of the spectrum with learner-centred at the other. At different times policy favoured one approach over the other, thus I argue that pedagogy can have historic trends. This polarised view of pedagogy and the emphasis on the politician making the decisions rather than the educationalists is clearly evident in this interview with Nick Gibb, Minister of Schools in England from May 2010 to September 2012

.....in education there is a problem with the educational orthodoxy that prevails in the education world. It takes somebody from outside education to try to reform it. (Education Select Committee January 16th 2013: Nick Gibb Q61)

This polarised view of pedagogy is also evident in Ireland where in the publication *Right Minds* (April 2012) the title reads '*Let us cheer Michael Gove for waging war on child-centred claptrap*'.

The tragic era of child-centred 'education' is nearing its end in Britain. In Ireland, meanwhile, the 'education revolution' is still in full swing. sooner or later, we shall wake up to the fact that this is something our economy can no longer sustain. If, as we are often told, the key to recovery is research and development, we must not hesitate in ditching child-centred nonsense for knowledge-centred excellence (Dooley, Right Minds, 4th April 2012).

Pedagogy is a complex construct developing from a vast theoretical and practical research base. It is often highly nuanced and in practice dependent upon the individual beliefs and values of teachers so therefore it could be assumed that it is unique to each nation, locality and even school. I have also argued that because the funding of education in low-income countries is often provided by external bodies, national governments are pressurised into agreeing funding conditionalities and therefore the policy agendas of the World Bank for example are palpable (Lingard et al 2005). Despite the argument that global trends should be less influential because the local teacher must adapt them to local contexts I demonstrate in this thesis that global pedagogic trends in Cambodia remain significantly influential and these trends are historically situated. As Lingard et al (2005:766) point out:

...the State is not powerless in the face of globalization, but different states have varying capacities to manage 'national interests'.

In this thesis I examine the effects of applying external models to the national and local education systems and how this leads to policy intention becoming transformed in local classroom practice.

Learner-centred education in low-income countries

Thompson (2012) writes that because of the lack of precision over what learner-centred education is educators should be careful before they argue that it is a Western liberalised construct. However, whilst there are many different types of progressive approaches and constructivist theories that have commonalities it would appear that an idea of child-centred learning has been widely embraced in English speaking countries, in donor organisations and to some extent is recognisable in classroom practice in Europe.

In this thesis I argue that despite the theoretical frameworks based on research into how pedagogies are constructed, national differences in culture and the development of different education systems, affected by global development and economic agendas, has led to a far cruder understanding of pedagogy. This understanding has become increasingly polarised. It is clearly identifiable in education policy documents and in donor literature. In the next few paragraphs I explore how learner-centred pedagogy became a dominant policy in the agendas of development agencies and what learner-centred learning looks like in the classroom practice where it was applied.

The introduction by UNICEF of the child-friendly school concept started in 1995 and provides a good example of how teacher training becomes based on a concept of learner-centred education. UNICEF (2007a) has put together a framework for rights-based child-friendly schools that incorporate dimensions of health, nutrition, family, community, teaching and learning and excluded children. This thesis is limited to a concentration on only the teaching and learning element of child-friendly schools and the impact of health on education programmes. Whilst this is appropriate to the nature of the research it does have an effect of de-contextualising UNICEF's holistic approach. Although there are issues that will be identified in this section Jones (2006) points out that UNICEF's contribution to the improvement of children's lives is largely deserved. UNICEF (2007a) writes that effective learning:

Promotes good quality teaching and learning processes with individualized instruction appropriate to each child's developmental level, abilities, and learning style and with active, cooperative, and democratic learning methods. Provides structured content and good quality materials and resources. Enhances teacher capacity, morale, commitment, status, and income — and their own recognition of child rights. Promotes quality learning outcomes by defining and helping children learn what they need to learn and teaching them how to learn.

http://www.unicef.org/lifeskills/index_7260.html

In figure 1.1 a summary of some of the coverage of UNICEF's projects and descriptions taken from UNICEF reports demonstrates to some extent how the theoretical principles of child-friendly learning transfer into schools and classrooms.

Figure 1.1: A summary of how UNICEF's child-centred learning principles are implemented in schools

Country and extent of coverage	Organisations involved in child-friendly policy	Child-friendly classroom implementation
450 schools in Lao PDR, UNICEF (2008a) ₁	Child-Friendly School strategy is being implemented nationwide by the Ministry of Education with UNICEF's support	'brightly-decorated classrooms equipped with teaching aids and other materials meant to create an interactive learning environment, and help teachers deliver lessons that are relevant to children's lives' (Source 1)
Rwanda, UNICEF (2008b) ₂	UNICEF and local partners promote child-friendly schools	'UNICEF will focus on creating child-friendly schools with walls and roofs designed to withstand earthquakes or other natural disasters' (Source 2).
Philippines, UNICEF (2005) ₃	Philippine Government with UNICEF	'Under the scheme, boys and girls are treated with equal respect and are allowed to flourish without stereotyping. Schools that have adopted the concept record lower dropout rates' (Source 3).
Pakistan, UNICEF (2006) ₄ 5,000 'child-friendly' schools. 450 of these UNICEF-supported schools dot the country's four provinces and 4,500 more are rising in villages.	Pakistan Government with UNICEF	'Colourful drawings and phrases in English and Urdu cover wall columns of the girls' school. Well-equipped and inviting environments to encourage learning are hallmarks of child-friendly schools'. 'Some 10,000 teachers have been trained in child-friendly methodologies' (Source 4).
Lebanon, International Medical Corps 25 child-friendly schools Lebanon, UNICEF (2008c) ₅ 100 child-friendly schools	International Medical Corps (IMC UK), Lebanon Ministry of Education and UNICEF	'Train teachers to understand and identify behavioural problems in children and address them creativelyto rehabilitate playgrounds and provide schools with toys and recreational equipment....' (Source 5).
Cambodia, UNICEF (2007b) ₆ 6 provinces out of 24	MoEYS Cambodia with UNICEF support	'The aim is to increase equitable access to school and the quality of basic education'. The Child-Friendly Schools Initiative adopts a comprehensive approach that can accelerate progress towards education for all' (Source 6).

Sources:

1. UNICEF (2008a) Press Centre UNICEF Executive Board members visit child-friendly school in northern Lao PDR Website accessed 2nd April 2008 http://www.unicef.org/media/media_42849.html
2. UNICEF (2008b) Newline Goodwill Ambassador Yvonne Chaka visits earthquake-affected Rwanda Website accessed 2nd April 2008 http://www.unicef.org/infobycountry/rwanda_43098.html
3. UNICEF (2005) Newline Girls are equal to boys in Philippine schools. Or are they? accessed 2nd April 2008 http://www.unicef.org/infobycountry/philippines_27372.html
4. UNICEF (2006) Child-Friendly Schools in Pakistan, Photo Essay accessed on 12th April 2008 <http://www.unicef.org/photoessays/35569.html>

5. UNICEF (2008c) UNICEF Humanitarian Action Report 2008 in Lebanon Accessed on 12th May 2008 http://www.unicef.org/har08/files/har08_Lebanon_countrychapter.pdf
6. UNICEF (2007b) Newsline Child-friendly schools support girls' education in Cambodia 12th April 2007 http://www.unicef.org/infobycountry/cambodia_39364.html Accessed 12th April 2008

It can be seen from *figure 1.1* that learner-centred pedagogy appears to be identified by a set of visible practices such as well constructed buildings, colourful display and the provision of resources. Cambodian classrooms had similar visible indicators and as discussed in Chapter Three local advisors and teachers described classrooms in terms of how learner-centred they were. This was usually in direct reference to the resources, arrangement of tables and evidence of group work. One of the difficulties of drawing any conclusions in a study of these reports is that few details are provided to indicate what the teaching and learning process in the classroom looks like or how pupils are learning to learn. Added to this general difficulty of definition in practice is the view that child-centred learning replaces other teaching methodologies. For example UNESCO write in their report *'Teachers as Life Long Learners'* that teacher training policy in China aims to move teachers *'from subject centred to child-centred teaching'* (UNESCO 1997:15). At the end of this report UNESCO state that traditional teacher training programmes (pre-service and in-service) in the nine countries are not only costly, but are also deemed *'inadequate with regard to efficient, child-centred teaching practices'* (UNESCO 1997:51). In 2002 UNESCO writes on page 31 under target 5.3 *'Ensure that by 2015 that in-service training programmes are operationaltraining should emphasis child-centred approaches'*. The child-friendly school concept and learner-centred methodologies of teaching go beyond UNICEF and are making a global impact. UNICEF itself writes *'UNICEF's key contribution to education quality is the child-friendly school model'* (Wright 2006, Section 6, page un-numbered)

Understanding how learner-centred pedagogy is implemented through practice demonstrates how the teaching and learning process begins to be defined into separate teaching strategies in order to make it measurable. If the process is to be measured, then the professional development of the teacher and the teaching and learning that goes on in a classroom are essential to that process. Alexander (2001) writes that separating the teaching and learning process from the culture and classroom behaviour will provide a superficial understanding of the pedagogic practices teachers are using:

factorization of pedagogy has proved a boon to policy-makers and quangos caught up in the rhetoric of 'standards', for such research provides ready legitimation both for shopping lists of teacher training competencies or for school inspection criteria and for disembodied nostrums like 'interactive whole class teaching. Alexander (2001:271)

Cambodia has already introduced measurable teacher standards.

I also argue that global pedagogic trends move around the world with a time delay. For example learner-centred pedagogy became a priority for donors in low-income countries years after it had partially been rejected in favour of whole class teaching methodologies and managerial approaches I have already discussed that appeared in Anglo-phone classrooms. In the discussion of pedagogy, I have cited research that makes it clear that adding resources or a new teaching technique does not change classroom practice. Despite this there were claims that constructivism was embedded in the teaching and learning processes of prior decades, but there is little evidence that this formed the predominant feature of primary school teaching.

Globalization and Neoliberalism in development

Donor funding often makes a major contribution to the education budgets of nations. Without this budget teacher development would be limited. Cambodia as a low-income country receives significant loans and grants for educational development from multilateral donors and agencies, bi-lateral organisations and iNGOs. These donors are often in a powerful position to impose conditionalities on Ministries of Education to ensure that projects are aligned with a particular model of teacher development (Harley 2005). So how far is the educational policy that is subsequently developed and implemented in Cambodia a product of global influences? In the intersection between the national and the global where and with whom does the power and agency lie? In the next part of the Chapter I unpack how global aid policy has developed and in what ways this has affected Cambodia. This enables me to begin to examine the balance of agency and power between global influences and Cambodia's national priorities.

The development of the United Nations specialist organisations started in 1946. The International Bank for Reconstruction and Development (now renamed the World Bank) and the International Monetary Fund (IMF) were established in 1944 and in 1945 the United Nations Charter was written. The Official Development Assistance (ODA) that then followed after World War II reconstruction in Europe was rooted in the activities of colonial powers in their overseas territories (Führer 1994). Aid was often used to assist in decolonization and reflected a US perspective of development that was built on an expansion of a world liberal economy and the suppression of communism (Mundy 1999). Development aid was used to integrate post-colonial nations towards U.S. policy and increasingly represent the Western vision of the future (Mundy 1998, Mundy 1999, Black 2002).

ODA is now defined as loans or grants made to countries on the DAC (Development Assistance Committee) List. ODA comes from public funding such as national taxes and does not include money given voluntarily by the public to iNGOs. Money collected through taxes is generally dispersed by multilateral and bi-lateral donors. In the EQIP project my work was funded through both an iNGO and a multilateral donor and funding for the BETT programmes was through Belgium Technical Co-operation (BTC) a bi-lateral organisation.

Aid flows in the 1950s and 1960s were channelled through highly concessionary bi-lateral grants and loans that operated from most of the OECD countries. However, the receiving government was often tied in to the donor. The contract would force the government receiving the loan to acquire technical assistance and imports from the donor rather than using local resources often leading to higher costs.

One of the reasons that development aid failed in the 1950s and 60s was due to it being based on a premise of investment equating to rapid economic growth. Public institutions were closed in favour of private enterprise, but this often left a gap in supply, leading to the failure of projects (Stiglitz 2002). Whilst development theorists recognised the complexity of the different starting points of nations (Riddle 2008) this was not always translated into appropriate policy. The international relationships formed between nations created a paradigm of interdependence. For example in the 1970s in a context where the US devalued the dollar to continue to finance the Vietnam war, oil prices were increasing and food supply issues were prevalent so every nation was affected (Macrae 2001). The effects of events like this were to increase interest rates leaving many nations with huge debts far higher than the original loans. The events of the 1970s caused a debt crisis, another factor leading to the changing nature of aid from a political to an economic orientation (Macrae 2001), but also to a more humanitarian focus on poverty, health and education.

During the 1980s Structural Adjustment Programmes (SAPS) were introduced by World Bank and IMF and are now often referred to as the '*Washington Consensus*'. The idea behind these adjustments was to raise General Domestic Product (GDP), improve the efficiency of the price system and create a more transparent system (Pieper & Taylor 1998). It was thought that these actions would lead to less corruption and greater poverty alleviation. Structural adjustment required governments to cut public funding and remove subsidies for basic necessities, devalue national currencies; increase exports and liberalise financial markets (Lechner & Boli 2008); demands that are clearly recognisable as fitting into a broadly neoliberal ideology (Lauder et al 2006). In this neoliberal ideology poverty was believed to have resulted

from the state having too much ownership and intervention in the running of the country's production. At the same time as the Washington consensus policy was aimed at reducing state intervention and promoting privatisation, human capital theory was gathering prominence in the World Bank which allowed for the application of a neoliberal agenda to education (Rose 2006). Public sector reform had a substantial impact on education. Budget reductions led to tensions between allowing for localised responsiveness versus a system of centralised accountability, and between markets and equity (Blackmore 2006). Although the Washington consensus led to investment in education this was still in an environment of policy reductions in government expenditure. As Morrow and Torres (2000:43) so aptly write:

the most visible impact of globalization on education in developing societies stems from the imposition of structural adjustment policies ...given the insurmountable obstacles to raising capital internally, there is no other choice than adapting policies that systematically undercut the capacity of government to construct educational policies that enhance educational quality and seek to develop some degree of national autonomy in the context of research and development. In this context bi-lateral and multilateral organisations (most importantly in education the role of the World Bank and UNESCO) have a strong presence in the formulation of educational policy under constraints of financial austerity and structural reforms of economies.

By the end of the 1980s structural adjustment was being increasingly criticised (Macrae 2001 Stiglitz 2002). Evaluations identified a number of problems that prevented the effectiveness of these programmes (IMF 2003). According to Sachs (2005) the policies were based on ideas that the poor were creating their own poverty and if low-income countries endorsed private sector-led economic development their fortunes would be reversed. The results of tied development grants operating in liberalised markets were criticised for benefiting the Western market and the elites of the recipient country widening the gap between rich and poor. Additionally the rise of successful new East Asian markets where there was considerable state intervention led to the questioning of non-intervention as the only solution (Rose 2006). Criticisms of structural adjustment did not necessarily lead to substantial policy change, but it did lead to new policies of enhanced structural readjustment and sector-wide approaches that were implemented to address the criticisms of SAPs. These new mechanisms coincided with the acceptance of human capital theory by the World Bank and led to increases in World Bank loans for basic education (Rose 2006).

The Enhanced Structural Adjustment Facility of Cambodia (1999 – 2002) states that in order for Cambodia to make reforms it requires substantial technical assistance to broaden its revenue base, deal with external debt, set up a VAT system and complete a functional review of its ministries. An analysis of external financing is given: *'since new debt would be contracted on*

highly concessional terms, the debt service ratio is projected by the Fund staff at 5½% in 2002'.....yet in paragraph 28 the report states that.....'Cambodia's capacity for debt service is limited and therefore they cannot set up any un-concessional loans during the period of the facility' (IMF 1999, paragraph 39). Despite Cambodia's place on the DAC List of lowest income countries, because the debt was perceived to be generated due to the Vietnam War, Cambodia does not qualify for debt forgiveness (see discussion of how Cambodia became caught up in the war on communism in Chapter Six).

Sector-Wide Approaches

Sector Wide Approaches (SWAs) were developed from the 1990s onwards to try and address some of the issues that had arisen from SAPs. SWAs, as they came to be known, were an attempt to ensure that partnership between donors and governments replaced conditionalities and that donor aid should be coordinated to ensure effectiveness in an environment where policy was government supported.

The Cambodian government introduced a SWAp for national education reform in 1999. It was hoped that integrated policy framework and coordinated donor-funded projects would lead to improved educational attainment (MoEYS 2001C). The SWAp started with an agreed Statement of Intent, which, after negotiation was signed by a group of the largest donors. All donors were encouraged to be part of the process and by 2001 a document called Principles and Practices for Partnerships had been produced (MoEYS 2001c).

*The government's new paradigm that advocated a shift from "donorship to government-led ownership and partnership"drove the MOEYS and its partners towards the SWAp process in the education sector. An additional factor that drove them to take a practical step towards SWAp was an alliance of like-minded donor agencies, and substantial technical backup by the Asian Development Bank (Council for the Development of Cambodia
http://www.cdccrdb.gov.kh/cdc/practices_chapter6.htm) accessed 04/08/12*

To formalise educational reform planning MoEYS drew up the Education Strategic Plan 2001-05 in consultation with technical and financial support from the World Bank, Asian Development Bank (ADB), donors and NGOs (ADB 1999). An Education Sector Working Group was established in 2001 with aims that included co-ordinating the work of donors in the education sector and making links with the Government (MoEYS 2001c). The final report of the Education Sector Review Group report highlights:

.... the need to strengthen financial planning and management systems, as well as giving continued attention to upgrading monitoring systems. It emphasises the importance of achieving an effective balance between quantitative and qualitative improvement.

Buchert (2002) writes that SWAps generally advocate government ownership and partnership with donors to increase the effectiveness of the system by ensuring accountability and coherence. Higgins & Rwanyange (2005) note that in Uganda the SWAp was considered a good example of donor harmonisation, but there was a failure to address local experience and perspectives and respect social relationships. In Chapter Four of this thesis I use a health programme to examine how partnerships and ownership in Cambodia developed and examine the significance of local experience.

According to the Global Monitoring Report in 2011 the Cambodian SWAp had moved donors away from project-based aid towards national capacity development and improved planning and co-ordination. MoEYS has taken the lead in piloting and implementing public financial management reforms, *'with encouraging results in terms of financial planning, accounting and reporting mechanisms'* (UNESCO GMR 2011a:227). However, Sato et al (2011) in justifying their study of Cambodia to analyse foreign aid argue that Cambodia is the most aid dependent country in Asia with approximately 90% of public spending being derived from aid since 2005. They pointed out that donor fragmentation had been a consistent issue since 1992 adding to Cambodia's transactional costs and making aid less effective. McCormick's (2012) research suggests that while the Education Sector Working Group has 12 official members only five regularly attend and there is a conspicuous lack of regional representation. Budget and support modalities were the focus of discussion, dominated by the multilateral donors and yet in the 2011 Global Monitoring Report the writers comment on how the Paris Declaration on Aid Effectiveness (2005) and the Accra Agenda for Action (2008) which aims that donors' aid should be more effectively aligned to national priorities states:

Donors have been particularly slow to use national public finance management and procurement systems, and they have a poor record in improving coordination (UNESCO GMR 2011a:113).

Poverty Reduction Strategies

Since 2000 when the World Bank endorsed the global poverty agenda, approaches to aid have shifted. Aid is increasing and significant proportions go directly to governments through direct budget support (Wallace et al 2006). Shifts in the aid agenda to a focus on poverty reduction strategies are not necessarily mirrored in the educational development agenda, although the organisations within educational development are largely the same. This may be an effect of the increased involvement of economists in educational planning who focused on increasing human capital (Resnik 2006). The change in policy of how aid should be channelled coincided with new mechanisms for providing aid, the Poverty Reduction Strategy Papers (PRSP) initiated

by World Bank and IMF in 1999. According to the IMF they introduced this approach as they recognised the importance of government ownership and the need to focus governments specifically on poverty reduction. The PRSP has five core principles: country-driven through broad based participation of the civil service; results orientated, focused on outcomes that will benefit the poor; comprehensive in that it recognises the multi-dimensional context of poverty; partnership orientated i.e. involving government, local stakeholders and donors and based on long-term poverty reduction. By the end of March 2008, 70 completed and 50 part completed PRSP had been written (IMF Fact Sheet April 2008). In order for a low-income country to qualify for concessional lending they have to write a PRSP.

One of the earliest in-depth reviews of the PRSP has come from Gould et al (2005). The research is significant to this study for several reasons. It sets out to look at the shift between SAP and PRSP by exploring the relationships between donors, states, iNGOs and national stakeholders to ascertain whether there is an increase in state ownership. In this exploration Gould et al (2005) evaluate whether the PRSP is another one size fits all strategy or if it is made to measure. By examining how the PRSP were developed in Tanzania, Vietnam and Honduras they draw pertinent conclusions that can be seen as relevant to the Cambodian context.

Figure 1.2 is a summary of some of the issues that have been identified since the introduction of PRSP. The first row in each section focuses on the case studies of Gould et al (2005), the second on the IMF summary of major findings (2004) and the Evaluation of PRSP Issues Paper (IMF 2003) and the third on the National Poverty Reduction Strategy of the Royal Government of Cambodia (2002). My comments are in italics.

Figure 1.2: A summary of an analysis of Poverty Reduction Strategies

Perspectives	Source	Description
Partnerships	Gould et al	The new partnership paradigm is essentially promoting the idea that non state stakeholders should be part of policy making, i.e. the 'poor' should be included in the policy writings.
	IMF	The PRS approach does have the potential to encourage the development of country ownership of a long term strategy of growth and poverty reduction policy, but has not as yet done so due to the short time frame and some design issues
	Cambodia	National workshop launched in 2001. NPRS would be focused on reducing poverty and increasing growth. The Socio-Economic Development Plan II would be used as the basis of the NPRS – <i>This suggests that a preconceived idea of policy already existed and consultations with the 'poor' would therefore be superficial. Poor women's active participation was organised through an NGO Women for Prosperity. ADB had already completed a study of 154 villages a few months earlier ensuring the ministry had regular feedback on rural conditions. It is questionable that this can be defined as consultation</i>

		<i>for the NPRS.</i> <i>The multi-dimensional section in the NPRS report looks as though it has been written from a Western academic perspective. No historical writings are cited from a Khmer to support the material.</i>
Neoliberalism	Gould et al	When the elements of the poverty reduction frameworks are explored it reveals a neoliberalism that has become structural adjustment redefined in the name of the poor.
	IMF	Some critics see the PRSP as similar to the SAP, but in a different guise, this could be because the policy and the related Poverty Reduction and Growth Facility are not sufficiently linked. IMF structural conditionality has been streamlined.
	Cambodia	Private sector was identified as an issue. This included banking and legal issues and land rights. Opening up to private sector representatives may well lead to a policy reflecting the needs of the wealthiest earners in Cambodia.
Stakeholder input	Gould et al	In the countries discussed by Gould et al non-state actors were limited to only a few of the professional urban elite and representatives from INGOs.
	IMF	Whilst stakeholders have been consulted their input is limited. This is put down to a lack of capacity of the civil service and the need for more training. Process breaks down in the final stages and the final document is often different from the one originally discussed.
	Cambodia	Much consultation involved circulating drafts in Phnom Penh which were not translated into Khmer. Cambodian NGOs needed assistance in understanding the NPRS process and this was not available within the consultation timeline. Education inputs were based on discussion with NGOs and donors. <i>This evidence points to a lack of participation.</i>
Technical assistance	Gould et al	The change in Bank policy is to enforce through advice and capacity building rather than external supervision.
	IMF	IMF staff was not active in the process of policy formation seeing the term 'country-driven' as preventing them from having a role.
	Cambodia	A full time participation consultant was hired to support the process.
Budget	Gould et al	PRSP identify growth as a primary target, but when the framework is translated to budget it is almost exclusively concerned with social sector spending. Supporting direct budget funding allows nations to absorb more credit and thus ensures continued debt and administration of that debt
	IMF	The approach has led to a better understanding of the multi-dimensional nature of poverty and understanding of how it links with growth. Creating a financial framework for economic growth and poverty reduction has been limited; this partly reflects the limitations of the PRSP.
	Cambodia	'The direct budget support up to 2002 is solely attributable to the ADB Education Sector Development Program (ESDP) policy loan. The 2003 portion consists of US\$ 5 million from the ADB and US\$ 3 million expected from EU, both of which are loan'*source.
Donor Involvement	Gould et al	As donors align to the PRSP harmonisation deepens with the most powerful players forming an elite. As multilaterals obtain ever increasing power, bilateral organisations become increasingly uncomfortable with the contradictions of partnership in theory to partnership in practice.
	IMF	Insufficient scope for treating different countries differently. An acceptance by the donor community of the PRSP approach. Unsatisfactory modalities for donor involvement. IMF/WB still dominant, old facilities with new labels (referring to external critique rather than a self-evaluation).
	Cambodia	There appears to be a lack of bilateral donors involved in the process beyond GTZ and CIDA. There was no mention of BTC despite it being a

	<p>large donor. Representatives were provided from the donor sector: UNICEF, World Food Programme, UNESCO and WHO attended monthly meetings and provided technical input noticeably all multilateral agencies. Difficult to determine Cambodia's exact debt, negotiations with the Russian Federation. The U.S. has refused to write off any debts contracted by Cambodia during the 1970-1975 war. Even with some debt relief from Russia debt servitude remains at between 15-20% of GDP for the next 10 years. The government must avoid non-concessional funding. 15-20% of GDP is a large change from the 5½% GDP estimated in the previous document. <i>Does such a large percentage make Cambodia's targets unobtainable?</i></p>
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Comparing the experiences of Cambodia to the case studies of Gould et al (2005) and the findings of IMF identifies a number of issues related to the new aid modality. Despite policy advocating partnerships which implies equality in relationships between organisations and government, this has not been achieved. Stakeholder engagement is reduced if consultation periods are short and the working language for policy development is not the national language. There are also several issues around donor harmonisation. McGrath & King (2004) observed that a more coordinated donor approach can potentially reduce national ownership. Bi-lateral donors do not have the same power as multilateral donors and agencies and could become aligned to policy they do not feel comfortable with. The process itself has already been defined by the multilateral donors suggesting that national and local contexts are irrelevant. Including private organisations within the process is evidence of a continued neoliberal approach to aid that has been criticised for making the rich richer and the poor poorer.

It can be seen that the economic policy discussed at the beginning of the Chapter is mirrored in development and education discourse. Neoliberalist approaches are evident in how private enterprise is encouraged. In the thesis I illustrate how multilateral donors and agencies have significantly more influence on national government than bilateral donors (*see Chapter Eight for a discussion of the development of literacy policy*) and unpick the relationships between

iNGOs, MoEYS and multilateral donors in Chapter Four using a health programme as an example.

Concluding Remarks

Since World War II there has been an underlying principle that aid and educational investment equates with economic growth. Development was perceived as linear and could be managed through investment and a set of guiding principles, but economic models of development have been criticised because there was insufficient investment into understanding national contexts. From the earliest forms of aid to SAPs, SWAps and more recently PRSPs there is enough evidence to suggest that development agendas, despite advocating principles of greater country ownership, partnership, stakeholder participation and sustainability have only led to superficial outcomes in these areas. McGrath & King (2004) pointed out that SWAps were based on human capital theory which ignores any analysis of the local context and observed that a more coordinated donor approach can potentially reduce national ownership. Crossley & Watson (2003) fear that through SWAps external bodies can control the whole of a nation's education system. In Chapter Four I use the Kampot School Health Project to demonstrate that the global aims of these policies do not always achieve the desired results.

Figure 1.2 showed that when similarities between the PRSPs were identified there did appear to be a one size fits all approach to development. There was little evidence of full participation beyond superficial stakeholder meetings and it appears that the multilateral donors are dominating educational processes in Cambodia (McCormick 2012). It is clear that the PRSPs' educational principles are guided by human capital theory (Tarabini & Jacovkis 2012). A presentation of the evidence leads to the conclusion that the neoliberal agenda is still very much a development paradigm.

There is also evidence to support the argument that both development and education agendas are managed by multilateral donors suggesting that low-income countries are little more than the recipients of external global policies. Not only do these institutions impose their policies on to low-income countries, but they also profit from these policies. Hickling-Hudson (2002) argued that increased education only leads to low-income countries serving the needs of high-income countries through cheap labour. High-income countries developing a competitive knowledge economy do so in order to exploit economic opportunities available from exporting knowledge to low-income countries.

In order to measure how educational investment leads to economic growth the economists have become the educational planners and drivers of policy change rather than the educationalists. For example the economist Psacharopoulos (2006) wrote that education investment is better as a social investment rather than a private one and that return at the early childhood level is particularly high; leading to promotion of primary education (Rose 2006).

I have shown that the neoliberal agenda leads to accountability, standardisation and the economic management of the education system. The proponents of this approach argue that making the system accountable for what it does will lead to a fairer system for all. However, all the examples seen so far, such as parental choice or development of education services appear to only benefit individuals with higher earnings or higher-income countries. I use the EQIP project in Chapter Three to explore how the neoliberal agenda permeates education development projects in the national context.

There does appear to be something that can be defined as '*global education*' made up of policies, knowledge and pedagogy that exist in a third space. For low-income countries this '*global education*' is centred on the aims and objectives of the donors, for example the policies of World Bank leading to the creation of EMIS systems or UNICEF's notion of child-friendly schools. However, the use of the word global is misleading; because that would imply that all nations can contribute and influence '*global education*'. It would appear in practice that global education is not even representative of the West or all high-income countries either. I have shown how the multilateral donors become the policy makers and the global education managers where even large bi-lateral donors can become sidelined. It is important to define who the global education managers are and their purposes, particularly as regional influences grow. The growing interest in Asian culture and educational practices and how more affluent countries in Asia are beginning to extend their policies into low-income countries could lead to changes in power structures where the global becomes challenged by Asia.

Global education culture permeates high-income countries as well as low-income countries. For example there is a commonality in educational management practices and a common aim: the development of human capital and knowledge economy. In practice, however, there does appear to be differentiation in pedagogy. International testing has led to more detailed research in the participating countries related to pupil outcomes. This has raised questions of difference in culture and how that might have an impact on the education system. From Chapter Six onwards I take this as a starting point to explore how local and national cultures

impact on teachers and the education system in Cambodia. There also appears to be a fairly substantial time lag in the policies and pedagogies of the high-income countries being practised in low-income nations. For example the concentration of constructivist learning paradigms in low-income countries long after they have been rejected in favour of less individualist approaches to education in high-income nations.

In this chapter I have concentrated on providing working concepts based on my understanding of globalization and neoliberalism. I then explored these concepts in the context of development and education, setting the scene for me to examine how the global policy orthodoxies of the world education managers interact with the agentive capacities of individual teacher educators, small NGOs and bi-lateral donors. The usefulness of comparative education that I have started to discuss in this chapter is considered in more detail in Chapter Two when I demonstrate how I carried out the analysis of my research data.

Chapter Two: Methodology and Methods

This thesis is based on practitioner experiences and academic research enabling the intentions and purposes of comparative education to complement those of research in development education. Comparativists argue that development agencies focus predominantly on processes of change (Lewis 2009) and issues that fit with their existing policy agendas and have a tendency to concentrate on present circumstances with no historical context. Practitioners criticise the research community for not involving local people in the research process and not disseminating research results sufficiently well in the country of origin or in a form that local people can understand (Laws et al 2003). As a consultant and a researcher I wanted to understand issues that face both comparative educationalists and development practitioners to enable me to plan for best practice.

The research I present in this thesis has been generated from projects where I was employed as a consultant to a donor agency. McGrath (2001a) expresses concern that consultancy can lead to poor practice in research and identifies researchers who argue that consultancy itself is re-enforcing a particular world view methodology and developmental discourse. For example international agencies have been perceived as dominating much of the research in low-income countries and in the past two decades that research has largely consisted of a measure of school effectiveness or project impact. Additionally Watson (2001) notes that pressure from governments and donor agencies to carry out research in the present leads to a loss of the historical dimension. However, Laws et al (2003) point out that research in low-income countries has often been carried out by international researchers recognised for their expertise, but make the salient point that the 'knowledge' gained from the research often ends up in the country of the expert and is not available or not understood by the country which was the subject of the research. Their argument for development workers becoming more involved is that they will do the research with their local colleagues. Cook et al (2004:147) write that:

Comparative education today represents those engaged in an ongoing discourse in full consciousness of their own diversity, but remaining largely amenable to others who might contribute to the conversation.

If Law's (2003) argument is correct then including the educators in the research process has supported their academic development and made a contribution to the Cambodian people creating their own knowledge.

Using CIE to position my work has enabled me to challenge the ease with which an assumption on a particular world view methodology is made. It allows me to view the consultancy as the basis for analysing my data in a wider historical theoretical framework. It has also been useful in identifying priorities for structuring the analysis of the data. An awareness of the criticism of comparative education research led to me creating opportunities to develop research capacities in Cambodia for Cambodia and providing opportunities to disseminate and discuss research data.

Research in Comparative Education

Early comparativists placed an emphasis on the historical and literary context in which their studies were completed which were insightful but open to generalisations. During the 1950s and 1960s as countries were released from colonial powers the necessity for educational planning and the collection of educational statistics grew. The analysis of these statistics began to dominate the field which paved the way to a more scientific approach (Crossley and Watson 2003). Sweeting (2007) argues that between the 1950s and the 1990s there was a lull in the exploration of the historic dimension of comparative education. Kazamias (2001) posits that this was possibly due to neoliberal and positivist social science approaches and it is only in recent years that its significance is once again being recognised. His work suggests that comparative educationalists could learn much from a historian's approach to comparison. Similarly Lewis (2009) argues that development agencies place far too much emphasis on change. He proposes an anthropological approach to research that places an emphasis on political and historical factors.

Keough (1998) suggests that some projects are designed from observations of reality, but Kapoor (2002) argues that an over reliance on the practice leads to under theorisation. This suggests that there is a difference between the approach of the comparative educationalist as a researcher who knows how to study education themes in low-income countries compared to the international educational developer who designs and implements education projects based on what they see. This fits with Crossley & Watson's (2003:120) work on the reconceptualisation of comparative education where they identify two types of research:

the theoretically-orientated comparative tradition andthe more explicitly applied and action-orientated expertise associated with international education.

In this research I attempt to use both approaches. My initial decisions were based on what I observed, but at a later stage in my development I made more use of explicit theory.

Methodological Issues

One of the dangers inherent in the data in this thesis is that it is drawn from a number of different projects and therefore is open to fragmentation. McLaughlin (2004) argues that comparative education needs a philosophical dimension and at the same time philosophy requires a comparative dimension. This alignment will contribute to an increasingly sophisticated framework in which to describe and analyse educational phenomena based on philosophical questioning. The positing and refining of questions and the interpretation of the data is often driven by what Blackburn (1999) describes as a philosophy that explores the structure of our thought and its application of questions about ourselves. These questions arise from critical self reflection that extends to a '*scaffolding of our thought*' (Blackburn 1999:4). Blackburn is arguing that this is one way of doing philosophy which could be described as broadly analytical. Using philosophy in this way to interrogate the data provided another tool that ensured validity in the interpretation of the data. This underlining philosophical approach aligns well with the work of Rust (1991:616) who writes:

Legitimate meta-narratives ought to open the world to individuals and societies, providing forms of analysis that express and articulate differences and that encourage critical thinking without closing off thought and avenues for constructive action.

However, can the researcher develop this level of openness at the same time as following what the comparativist Noah (1973:113) suggests?

The comparativist should seek to extend and enrich to the limit general "law-like", cross system statements.

I argue that it is possible to use both approaches simultaneously and that this strengthens the analysis. The narratives of the educators were contextualised in global and national agendas, whilst patterns in what they said also lead to some generalisation.

As the researcher, I approached my work from personal experience which inevitably led to some prejudice. However, I was aware that I could create similarities and differences and patterns in what I observed not because they existed but because of the relationship I had with my data and the way I interpreted and made sense of that data. The methodology and methods for executing the research must therefore reduce prejudice and where that is not possible it must illuminate the assumptions that have been made, leading to a more objective view of the data that is gathered. Ensuring that the data analysis is transparent should lead to a greater clarity of the subjective assumptions made by me the researcher. Maxwell (1996) points out that traditionally, even in quantitative research, personal experience has been treated as bias, something that needs to be eliminated in order not to invalidate the research.

Glesne & Peshkin (1992:43) write that: *'a participant observer must analyse the observations for meaning and for evidence of personal bias'*. I use the research into religious beliefs and values as a worked example of the difficulties of operating in another culture and removing assumptions from the research data. As a researcher from a country steeped in the Christian tradition I had to consider how far immersion in my own culture has been underpinned by the Christian theology that had led to a certain world view, with assumptions and bias. For example, as I encounter an unknown religion I am likely to be affected by my already entrenched world view. Vickery (1984:9) writes *'probably more arrant nonsense has been written in the West about Buddhism than any other aspect of Southeast Asian life'*. Vickery is referring to the Western ideal of Buddhism, a mixture of philosophies, moral principles and beliefs that have developed through historical contexts for centuries that is frequently interpreted by Westerners as gentle goodness. Even an experienced researcher such as Max Weber has been criticized for his analysis of Buddhist culture. Weber applied his concept of ideal type to the sociology of religion which logically led to Ancient Buddhism becoming described as an ideal type. Seneviratne (1999) critiquing Weber's work argued that the ideal typology as a construct for analysis became the 'real' thing. He writes that Weber did not work in the same meticulous ways he had when making links between Calvinism and the spirit of capitalism and because of this the Euro-Buddhist canon that came about portrayed a rationalised and sanitized Buddhism.

The texts used to identify the ethical principles of Buddhism were also selected and if other texts for consideration did not fit into the newly defined Western view of Buddhism they were rejected. The selected texts were then determined as spiritually and ethically valid or dismissed as magical chant. Spiritually Buddhism became split between high Buddhism based on ancient relics or a kind of folk Buddhism. Ironically Seneviratne (1999) argues that this Euro-Buddhist cannon was used by new nations as they emerged from colonial rule in a process of religious modernisation that was often allied with national resurgence. Seneviratne (1999) also argues that the process of religious modernisation can nearly always be linked to urban wealth. As the researcher I am aware that the data is approached through a double lens, my own religious tradition and how within that tradition the religion of the other has already been interpreted and presented.

Units of Analysis

A large amount of comparative education research is analysed within the context of nation (Crossley and Watson 2003), but with the intensification of globalization and more grassroots

practices in development focused on local communities, different levels of analysis have been used. In comparative education the researcher determines the unit of analysis for their data. Sweeting (2007) writes that localities such as regions or districts, cultures, genders, organisations and values may be equally valid units of comparison. In this thesis I use four units of analysis: the global, the regional, the national and the local. In analysing my data I consider the units separately and in relationship to one another. Lingard et al's (2005) work on Bourdieu reflects on the concept of '*field*'. Bourdieu defines a field as a structured social space. The space is hierarchical and unequal with organisations and people possessing differing amounts of power. It is the power they possess that defines their position in the field and the strategies they use. This concept of field provides a thinking tool in terms of power and agency in this thesis as I explore the relationships between each unit of analysis. As Lingard et al (2005) point out Bourdieu's concepts of habitus, capitals, social fields and strategy are widely used by researchers, but there has been little application of Bourdieu's work to educational policy processes.

The global as a unit of analysis

I have already discussed globalization at length in Chapter One, so the purpose of the following section is only to outline its usefulness as a unit of analysis. In Chapter One I argued that a global cultural entity and a world education culture existed in a third space. I discussed the emergence of a global education policy and how multilateral agencies such as the World Bank and OECD have become world education managers. So in my data analysis I am interested in exploring how the global education policies of these agencies become reflected in Cambodian national policy and in turn are translated into classroom practice. As Lingard et al (2005:766) write:

Drawing on Bourdieu (2003:91) we might argue that the amount of 'national capital' possessed by a given nation within these global fields is a determining factor in the spaces of resistance and degree of autonomy for policy development within the nation.

For Cambodia, I argue, it is Westernness that appears to be the main contributor to the global cultural identity and therefore Cambodia's relationship to the global entity would appear to be lop-sided, limited to responding rather than contributing. For Cambodia, with a lack of '*national capital*', this global identity becomes a hegemonic power, enforcing its values and principles through trade and aid. Cambodia, like other vulnerable nations, therefore maintains its identity through nation building, which in this case is to build on what it means to be Khmer (see Anderson 1991). As Capella (2000) has argued, multi-national networks of financial

institutions led to a few world centres, with the rest of the world appearing to be in a black hole. In this black hole local people have to deal with the effects of local issues as well as the impact of global policy on their daily lives which can lead to an erosion of local traditions. The globalization process then creates a tension between a developing homogeneity and retaining national identity.

The regional as a unit of a analysis

When I started the thesis I had not considered that the regional positioning of Cambodia was significant to my research questions, however, as I contextualised the projects I realised that regional organisations were significant in the analysis of the outcomes for several reasons. Firstly countries are grouped together to form regional organisations. England is part of the European Union (EU) and Cambodia is a member of the Association of Southeast Asian Nations (ASEAN). Regional organisations may reflect the economics, politics, policies and philosophies of the most influential countries within those organisations. As a result Cambodia is affected not only by globalization but also regional variances such as its position in ASEAN and its relative power in Pan-Asia discussion and economy. Reyes (2001) argues that the positional characteristics of several countries in terms of sharing the same patterns of relationships can be related to the characteristics with other nations at a regional level. Exploring the EU and ASEAN websites provides a good example.

The European Union was set up predominantly as a trading organisation after World War II, whereas ASEAN was founded in 1967 (Singh & Salazar 2007) to make a regional alliance to resist Western and Chinese imperialism and limit the rise of nationalism in Southeast Asian countries (Owen 2005). The following extracts are taken from the first page of the website from each organisation.

EU: 'One of its main goals is to promote human rights both internally and around the world. Human dignity, freedom, democracy, equality, the rule of law and respect for human rights: these are the core values of the EU' EU website accessed 10th April 2012 http://europa.eu/about-eu/basic-information/index_en.htm

ASEAN: 'Mutual respect for the independence, sovereignty, equality, territorial integrity, and national identity of all nations' and the right of every State to lead its national existence free from external interference, subversion or coercion; ASEAN Website (2012a) accessed 10th April 2012 http://www.aseansec.org/about_ASEAN.html

It would be difficult to make conclusions about the shared values the nations have in each of these organisations from the two statements written above, but there are some notable

differences. The EU uses the language of '*promote*' which suggests they feel they have a right to interfere in countries around the world in the promotion of their core values, whereas the language on the ASEAN site is based on protecting each nation from interference and acknowledging national identity. How far the statements on these sites represent historical images of Europe as the coloniser and Asia as colonised is debatable. Seemingly the website statements express a difference in values rather than behaviours.

In both regions there are further complexities in trying to identify shared cultural values between the different countries in the group as the member states are not financially homogeneous. For example in the EU Germany has GDP rated 4th in the world whereas the GDP of Greece is rated at 32nd. In ASEAN Singapore's GDP is rated 42nd in the world compared with Cambodia rated at 122nd (World Bank, April 2012a).

There has been much discussion on Asian values from a Western perspective, most of which was associated with the economic growth of Japan, Singapore, South Korea, Taiwan and Hong Kong (Han 2007). The interest of European countries in the economic growth of Asia continued after the financial crisis of 1997-98. Singh & Salazar (2007) suggest that this was because it was anticipated that there would be a change in the style of Asian governance towards Western models. However, Jones (2007) argues that the cultural preference in governance is different in Asian countries. He writes that government is administrative rather than a liberal, pluralistic state system. Han (2007) points out that Asian values were defined by the Asian political elites and were derived from the Asian philosophical traditions and historical experiences. He argues that by examining the trading relationships formed in different regions it is possible to identify their different value systems.

As well as financial differences between countries within a region there are religious and cultural ones. The EU is a secular body, but for member states the most influential religion is Christianity, whereas the ASEAN member states reflect a greater diversity in religious adherence. For example, the Philippines are largely Catholic, Malaysia and Indonesia are predominantly Muslim, Cambodia, Thailand and Laos are Buddhist. If ASEAN and the EU are compared it could be argued that there is far greater homogeneity in the EU. To a researcher that could suggest using the regional as a unit of analysis, particularly in the context of Southeast Asia is not necessarily significant. However, development policy which is considered within the discussion in this thesis could also be considered from a regional perspective.

A traditional view that aid flows from the rich Northern countries to the low-income Southern countries is challenged in a regional analysis. *'Germany has taken bold steps to revive the recession-hit Greek economy'* (Guardian 091011) and Japan has supplied significant amounts of aid to Cambodia for years (Hirata 1998). After the disasters in Japan of 2011, ASEAN *'poured aid into Japan'* (The Nation 160311). Profiles of donors have also changed over time and new donors with different priorities have emerged. More recently the Western view of aid through the Development Assistance Countries (DAC) is challenged by non DAC countries such as China, Thailand and South Korea (Sato et al 2011). The Chinese government clearly states that it places high priority on the Greater Mekong Sub-region, which includes Cambodia, as a land bridge connecting China with South and Southeast Asia (Sato et al 2011). It remains to be seen how these new influences from Asia will affect aid modality and the policies that develop.

In the education section of the ASEAN website it can be seen that there are similarities in attitudes towards education which appear to be aligned with Western perspectives: *'Education lies at the core of ASEAN's development process, creating a knowledge-based society and contributing to the enhancement of ASEAN's competitiveness'* (ASEAN 2012b). This quotation supports the globalised view of a world education culture and again regional differences are not as significant as they might at first appear.

Cambodia joined ASEAN in 1999 (ASEAN 2012a), but as a member of the group it does not mean it shares its values. Asian values are often aligned with Confucianism and therefore expressed as hard work, strong family ties, a respect for education and the entrepreneurial spirit, respect for elders and freedom in an orderly society (Han 2007). However, whilst Confucianism may be taken into account when trying to understand moral values and behaviours exhibited by the peoples of a nation, this cannot be separated from an in-depth understanding of the complexity of how the religion has developed in separate states. Tamai & Lee (2002) compared Confucianism in Korea and Japan and concluded that whilst there were clear similarities in how Confucianism had developed in these nations there were also marked differences. Although Cambodia is based in the Asian region it was not Confucianism that influenced Cambodia, but Buddhism intertwined with Hinduism and, like Confucianism, this has developed differently in each practicing nation (Gombrich 2006). Aspects of Theravāda Buddhism are similar to other Indian traditions, but Gombrich (2006) identifies specific practices in Cambodia that have no parallel in other Indian traditions. So while it is useful to try and understand regional identity, much care must be taken to separate out the different influences on that identity. It is clear nations within a region may share some things in

common such as in Han's arguments around values, but each nation retains its national identity.

The national as a unit of analysis

I have argued that it is necessary to use the global as a unit of analysis because globalization affects national education policy forcing educational expansion and homogeneous pedagogic practices. In the previous section I also argued that a regional unit of analysis was relevant when contextualising project data because it has some effect on the individual economic and political practices of the countries within the region and how they are interrelated. However, countries across regions are not homogenous and the development of each has been affected by complex power relationships between countries in the region and beyond. This results in each nation having a distinct cultural identity and therefore justifies the national as a necessary unit of analysis.

In using the national as a unit of analysis I can examine the intersection between state values and purposes and the principles behind global educational reform in the context of the Cambodian education system. This matches with the growing interest in the field of comparative education focused on how national educational systems operate and how the roles of bi-lateral donors and iNGOs play in shaping educational debate and policy (Crossley 2002, Watson 2001). Carnoy (2006) suggests that a theory of state is a particularly useful starting point for analysis of educational data. He reasons that the state supplies and defines the role of education, the state pays most of the school teachers and the state is defined by the political relationship between it and its citizens. Understanding the functions of state and how effectively those functions are implemented is a pre-requisite to understanding the educational context and its purposes. In order to understand how the Cambodian education system operates at a national level it is necessary to position Cambodia in global and regional agendas, whilst at the same time looking at how a uniquely Khmer culture has formed and affects teacher development projects.

The study of culture within the social sciences has followed two broadly different arguments, naturalism and anti-naturalism. In naturalism the primary goal of the social scientist is to provide an explanation and prediction of social phenomena by means of law. In this sense it matches with the positivist approach that has been discussed in the comparative education field. Anti-naturalism breaks away from positive objectivity. The goal is to understand culture in relation to individual lives and experiences, which becomes a search for meaning in the

interpretative tradition (During 2007, Martin and McIntyre 1994). Using the national as a unit of analysis fits into a positivist approach whereas when I consider the local as a unit of analysis it could be considered to be more interpretative. Therefore both of these approaches to studying culture are relevant to the research data discussed in the thesis.

Hall (1996:439) describes culture as a *'grounded terrain of practices representing the languages and customs of any specific society'*. Hofstede (1991) describes culture as the collective programming of the mind which distinguishes one group from another. Maxwell (2002) argues that the concept of culture has partially been created by ethnographic study. For example traditional anthropological studies focused on the culture of others. Culture was perceived as not only outside of oneself, but also as having relative value. In British culture this split could be seen between the greater value placed on the term 'high culture' than that of the popular or mass culture, but from a global perspective value was attributed to culture by the labels different cultures were given, such as 'civilised', 'primitive', 'tribal', 'pre-modern' etc. Maxwell argues that the roots of cultural study are bound up in concepts of ethics, morality and power. If culture is linked to power (Maxwell 2002) it would therefore be expected that in any given nation many sub-cultures exist. In this thesis it was not possible to take into account subcultures. Cambodia has an ethnic and religious diversity that I have not been able to consider in the thesis as it would add further breadth without adding depth. Due to the limited participation of women in the research group it was not possible to analyse differences in culture between male and female as this would lead to identification of participants. It was possible to take cultural variation into account between rural and urban areas, as this had significant impact on teachers and schools and therefore the design of a teacher development programme.

Barker (2008) writes that the study of culture has no origins, but he refers to its roots based in the fields of literature, sociology and anthropology. In anthropology, behaviours, values and beliefs become ascribed to a nation's people. However, culture cannot be separated from its historical and religious roots. Culture is complex to define and more complex to study leading Robertson (1992:33) to recommend we should discuss the *'problem of culture rather than culture 'itself'*.

Culture is linked closely to a concept of identity, be it individual, group, national or international. At a national level identities are performed through the religious ceremonies, the cultural practices and the everyday interactions of human beings in work and family life. Wallerstein (1990) posited a view that there are traits shared between people in a group, that

within these groups there are different sets of traits and there are traits that are unique to individual people:

When we talk of traits that are neither universal, nor idiosyncratic we often use the term 'culture' to describe the collection of such traits or such behaviours, or of such values, or of such beliefs (Wallerstein 1990:30)

So in defining culture it is possible to consider the identification of national behavioural traits. For example, we can ask if it is possible to say that Cambodians could define themselves as Khmer and would therefore subscribe to and recognise certain types of behaviours that were exhibited by other members within the group. If this is the case then a set of behaviours that most Khmers identify with can be used to define what it means to be Khmer. A group of American psychologists (Lim et al 2002) set out to develop a multidimensional, culture-specific acculturation measure to use in the clinical treatment of Cambodians living in the United States of America. They identified a set of behaviours that they could describe as 'Khmer', explored gender differences and identified attitudes towards family. Lim et al's (2002) identification of cultural practices and behaviours included Khmer music, steamed rice for breakfast, offerings to ancestral spirits, participation in Khmer holidays, traditions, use of proverbs and phrases, celebrations and the use of cupping and coining. Their entire list is clearly identifiable in Cambodian society. So too is the practice of greeting others with hands held together and raised below the nose (sompeah) and using an age appropriate form of greeting.

Lists of behaviours may provide some guidance on the visible practices within the Khmer culture but not all can be isolated as distinctively Cambodian. Participation in cultural holidays and celebrations is tied into the Theravāda Buddhist tradition which is equally relevant to the culture of Thailand (Siriwan 2000). Theravāda Buddhism crosses geographical boundaries but there are often distinctive practices within religion that can also be recognised as nationally unique. It is possible to argue that some behaviour could be defined as uniquely Khmer and these behaviours are relevant to an interpretation of research data in the teacher development projects discussed. See, for example in Chapter Eight the issues identified in developing story books for young pupils.

The local as a unit of analysis

Identifying global and regional trends leads to an examination of how these trends become embraced or resisted in national and local practice. This leads on to an examination of how the agentive capacities of the national and local people are acted out in relationship to the global policy orthodoxies identified. I have argued that Cambodia's culture is unique and therefore

the intersections between the national, regional and global must be examined from the perspective of the local because it is at the grassroots level that the project is implemented and therefore where change is expected to take place. At the local level then the analysis becomes interpretative, focusing on the individual teachers and teacher educators involved.

The construct of identity in the social sciences often has different meanings. It has been used synonymously with ethnicity; as a common identity with others as in social identity theory and as the multiple meanings that people make connected to the multiple roles they play in society (Stryker & Burke 2000). The third category, symbolic interactionism, originates from a theory posited by George Herbert Mead and developed by Blumer (1969) which led later researchers into two approaches to try to understand and explain social structures. Research has been conducted into how social structure affects the self and how the self affects the social structure.

Essential to using the local as a unit of analysis is focusing on the freedoms and choices that Khmer educators have and how this affects their commitment and motivation to a project. Paige et al's (2008:532) research in South Africa reveals that teachers' vision for the future *'reflected an explicit belief that they could contribute to the future being a better place'* and I wanted to know if there would be similar findings in Cambodia. In a discussion of culture I might also ask to what degree individuals have control over their destiny. This capacity for self determination is referred to as agency. Agency can be contrasted against the power the state has to control the actions, attitudes and free thinking of individuals (Lewis 2008). In this thesis it can be equally applied to the relationship between state and international organisations working in Cambodia, so agency, like culture and identity becomes a construct that can be used at all levels of the analysis. In this thesis I use agency to describe the freedom an individual has to make an action and what motivated them to make that action. Sociologists argue that agency takes place within the social structure and therefore analysis of project data must include a focus on agency to understand how that agency affects the social structure. In a teacher development project this leads to a focus on teachers and teacher educators and therefore their professional identity. Teacher identity is based on how society views a teacher and how the individual teacher affects the views of society. Definitions of professional identity have varied across studies, but more recent research focuses on teacher thinking and beliefs which underpin teacher behaviours (Veerlop, 2001) and therefore the choices teachers make and how much freedom they have to act.

Because culture and identity are socially constructed to an extent they are shared and therefore have some permanence, whereas agency may be more individually and temporarily defined. However, given project success is ultimately determined by the actions of the teachers and teacher educators, agency within the project can be discussed in terms of the choices teachers and teacher educators have as well as their power to resist change. Khmer teachers have limited resources and a restrictive curriculum which may therefore lead to the perception that they also have limited agency. The EQIP and BETT projects prescribed what teachers had to do and what they were expected to achieve. But if the local unit of analysis focuses on teacher agency in terms of commitment, motivation and resistance, it is possible to analyse how this affects project implementation. In the concept of agent, each social actor is free to respond to the system and act independently. Clayton (2000) argues that the focus of research can be on the choices and actions of individuals as they construct themselves and others in a variety of infinitely different contexts. The role of the individual may be contextualised in the global and national, but it is defined by each individual's understanding of their existence, action and feeling. The teacher responds to external stimuli, but by analysing the data based on a concept of agency I am focusing the research on how far the teacher can also affect the external stimuli.

Teacher development projects are designed, implemented and evaluated in local and national contexts, and yet regional and global policy agendas appear to have more influence on the design and implementation process. As a result development projects in the local and national setting cannot be contextualised in isolation from the global economic, development and education policies that affect project design. I therefore argue that multi-national organisations and global policy orthodoxies influence project development. Development projects appear to fit into globalised approaches reflecting a neoliberal standardised and competency based agenda where success has to be measured. However, by moving the data analysis to focus on teacher identity and agency, the discussion is steered towards aspects of teaching that are not associated with the technical and the measurable but with what it means to be a teacher and how that contributes to the quality of education. This suggests that a local unit of analysis is potentially going to provide as relevant a focus on change as analysing data from national, regional and global perspectives.

Methods

Research in development

Laws et al (2003) suggest that in development work there are two prominent approaches to research: programme focused or issue focused. They define characteristics for each type of research. Programme focused research includes needs assessment, community profiling, stakeholder analysis, action research, programme evaluation, participatory research and participatory learning and action. Development projects rely heavily on key informant interviews which are increasingly used to look at the factors that have worked well in programme implementation and those that have become a hindrance (Riley & Hawe 2005).

Issue based research includes research for campaigning, thematic research across countries reviewing what is already known of an issue, making the voice of less powerful people heard by decision makers and reframing an old issue. Issue based research is often used to influence policy. The characteristics listed by Laws et al (2003) include quantitative and qualitative processes. However, if these characteristics are taken one by one and consideration is given to them in terms of how they are used in practice quantitative approaches are implemented more frequently and the qualitative approaches may be limited in their scope. For example, needs assessment and stakeholder analysis can be carried out through the use of large scale surveys or questionnaires. The thematic approaches appear to be related to advocacy and are more likely to require research expertise in document and policy analysis. The qualitative methods, which may include interviewing could be limited by untrained researchers or translation as well as a lack of human resources and it is often time consuming to conduct interviews in detail at the start or during a project. The generation of large data sets through the use of questionnaires and surveys is common in development research and is not without value. However, research conducted by individuals or organisations lacking in research expertise means the results of the study may be affected by both poorly structured initial data collection and a limited understanding of how the results could be analysed. This in turn gives incorrect messages for future planning and development. There are also a number of difficulties in using these approaches in unfamiliar cultures and where there is a heavy reliance on translation.

Using quantitative and qualitative methods

The purpose of quantitative research is to *'contribute to an explanation and prediction of educational phenomena'* (Bray et al 2007:40). In the field of development, quantitative research is often chosen as a preferred methodology for on-going project reports and

evaluations. There are valid reasons for this preference. Projects are often operating in short time frames where implementers may be pressurised to produce impact reports for donors quickly and consult a wide range of stakeholders. There are advantages in analysing large data sets to provide patterns on educational phenomena. Questionnaires can quickly alert project staff to difficulties in implementation and translation issues and pupil outcome data is a powerful tool for advocacy.

However, Vulliamy (2004) expresses concern that as education becomes globalized, quantitative methods of research in an increasingly positivist research climate are used to generate large scale policy change whilst a more qualitative approach is diminished. McGrath (2001a:267) writes: *'the current cult of efficiency works against the painstaking analysis of systems, cultures and histories and in favour of quick, simple and implementable solutions'*. Dale (2000) suggests that globalization will lead to a further reduction in qualitative research. He also makes the point that in global systems nations have less autonomy and are therefore seen to have an increasingly limited role in providing individualised education systems so there is no necessity to compare one system against another.

Despite the usefulness of some quantitative research, a solely quantitative approach in this thesis has been rejected as it could not provide an in-depth picture of the teaching and learning processes in any of the projects discussed. Crossley (2002:2) writes that globalization, whilst on the one hand leading to greater quantitative studies of the statistically comparable, can also provide:

renewed legitimacy to quality modes of research that emphasize grassroots fieldwork, ethnography and the interpretative/hermeneutic paradigms that emphasize micro-level studies of education.

Brodie et al (2002) point out that to understand educational reform it is necessary to make sense of how teachers implement pedagogical practices in the classroom. This implies that research into teaching and learning has to take place in the classroom. Carney (2003), after critiquing research on school effectiveness in Nepal, wrote that the research was limited and therefore called for *'a more ethnographic research agenda that explores schools'*. Vulliamy (2004) also argues that qualitative research strategies have an important role in the development of education policy, especially in low-income countries. He suggests that large scale policy is often being adopted in the absence of this type of research.

Qualitative research generates descriptive data from what people say and from the observations of what they do. In recent years qualitative research methods have developed

more extensively and reached beyond their original background from within the social sciences. Whilst qualitative research fields have developed, so too have the characteristics of that research. For example, methods are developed that reflect the type of research that is being implemented and the philosophy of the researcher.

Ethnography

Ethnography is an analysis of cultures and detailed description based on fieldwork, usually where the ethnographer has participated in people's lives for an extended period (Barker 2008). Ethnography has successfully been used to explore classroom cultures such in as the work of Robin Alexander (2001) and Givvin et al (2005). Geertz (1973:10) describes ethnography as trying to read a foreign faded manuscript that is '*not written in conventionalised graphs of sound but transient examples of shaped behaviour*'. Ethnography can be seen as a kind of '*intellectual effort*', where the ethnographer is making meaning from the '*thick descriptions*' of even minor aspects of the culture (Geertz (1987) cited in Anfara and Mertz (2006). Ethnography is often used to study marginalised groups or members of communities whose voices are not heard (Kearney 2003) and therefore it would be expected that it is widely used in the broader remit of educational development research. As ethnography is generally carried out in unfamiliar cultures or contexts it is nearly always comparative (Bray et al 2007). Ethnography also covers both the process of the research and the written product. The written product provides an interpretation of the life of individuals, their actions and experiences that must be interpreted and contextualised within its history (Bray et al 2007). Ethnography therefore tries to represent subjective meanings, feelings and culture of others.

Ethnography as a research methodology is not without its critics. Data represented by the ethnographer is already interpreted. Working through translation adds layers of interpretation to the research. The dialogue has already been interpreted by the translator, as have the researcher's questions and therefore the process of assessing key information is less reliable. For example, the speaker's key points which may have been emphasised with facial expression and body language can become detached from the context of the translation.

As the researcher in Cambodia my understanding of the language, although limited, still enabled me to link some of the facial expression and body language to what was being said, but at times it also led to misunderstanding. The more personalised ethnographic approach that provides a way of interpreting the interview data collected from the educators had to be placed in a wider more universal setting. A significant amount of the qualitative data in this

thesis comes from the voices of individual educators, but these are contextualised within the wider picture of what it means to be Khmer and what it means to be a teacher educator.

Some of the research presented in this thesis to answer questions around culture has made use of an ethnographic approach but I would be reluctant to describe the research as purely ethnographic. There is a loss of rich description due to the translation process. The coding process in the analysis that relies on key words and phrases was also lost to some extent, again due to translation. The repetitive nature of some phrases that appeared to come from all those interviewed, in part may have reflected the extent of the English vocabulary of the interpreter. Despite this, the research does benefit from careful attention to what each of the educators said throughout and the longitudinal nature of the research gives a part-ethnographic approach some validity.

Narrative Enquiry

Exploring the concept of 'self as agent' through dialogue with individual teacher educators branches out into an understanding of narrative enquiry. Much of the research data that is embedded in Chapters Five to Seven originated from the dialogue between the teacher educators and me and therefore the teacher educators reveal piece by piece stories about themselves. Narrative inquiry has become increasingly popular in a range of disciplines where researchers are trying to understand the complexities of social life. Reissman (1993:1) writes *'story telling is what we do with our research and what informants do to us'*. The methodological approach is to analyse the informant's story to see how it was constructed and look at the language used. The researcher will be interested in why the informant chose to describe the events they did, what might be left unsaid, where they put the emphasis and so on.

It was difficult to decide how I would use the stories of the six educators in this thesis. On the whole it seemed appropriate to use them in full. Each individual biography reflects the political phases of Cambodia and as such provides a rich and realistic history. The biographies could also be triangulated against the written history which gave validity to the narratives. The biographies reveal the extent of tragedy that the educators experienced, but because they had a specific focus on education, they also reflect the hope the educators had for Cambodia's future. This makes their stories different from the many narratives that have been written by the survivors of the Democratic Kampuchea (DK) regime (DePaul, 1997, Yathay 2000, Lung Ong 2001, Chanrithy 2001) and the books written by non-Khmer historians. Coates (2005) writes that when help is given to people they want to tell their story. As part of the healing process, a

document is made so the story can be shared. The educators were telling a story of the history of Cambodia from their perspective and recording their story was important. However, the purpose of this thesis was not to contribute to the healing process in this way. It is also difficult to tell how useful the complete biographies would be to the reader, so I decided instead to concentrate on the educators' experience of their schooling, teacher training and teaching career. This gives the reader some understanding of the backgrounds of the educators and how this may affect their perspectives on education in Cambodia.

As the purpose of the thesis was to understand how all parts of Khmer life impacted on the education system, discussions with the educators included Khmer identity, culture, history, language and religion. The data, once analysed, has then been used throughout Chapters Five to Eight to illustrate how local experience is relevant to the development of teacher education projects. Interviewing the BETT maths educators over such a long period made the most significant contribution to illuminating concepts of culture, identity and agency.

As with quantitative research there are also limitations in using qualitative research in development paradigms as I have discussed in how ethnography and a narrative inquiry could be used. However I argue that for the purpose of this thesis qualitative research is a more useful tool than quantitative research for focusing on the process of teaching and learning which will provide insight into the effectiveness of teacher education projects.

Interviews

Wengraf (2001) starts his discussion of interviewing based on the idea that there are two basic models: the 'hypothetico-inductivist', a common sense model and the anti-common sense model of 'hypothetico-deductivist'. Wengraf's argument is suggesting that in fact during the interview dialogue both these models are used, but the researcher may favour one over another. If I apply Wengraf's argument to my own tactics I can see that I am aligning myself to a deductive method. I am starting by making a basic hypothesis in the very questions I am asking. Once those questions are used to initiate the dialogue I also assume that given the cultural differences and the language barriers I am more likely to retain the control and the authority in any dialogue. There could be a number of reasons that it is difficult to empower the interviewee and I present this list as a caution to myself and the reader that this must be taken into consideration when the data is analysed. Wengraf (2001) states that the research interview is to gain information from the informant and it is not there to change, help or empower the interviewee. Whilst I agree that this stance is ethically laudable and should be

applied, I do not think it is possible to interview individuals over a period of time without that having some sort of effect on those individuals. As Speedy (2008) points out there is some overlap between therapeutic and research interviewing. It is important to note that Speedy is a psychotherapist and thus may have encountered this overlap in the course of research and professional work and that this is not within my experience. Needless to say, this is an important point to take into consideration when interviewing in a country where many people have traumatic histories.

Throughout the ten years I spent in Cambodia I conducted interviews through translation with a wide range of stakeholders. Most of these interviews were individual and structured with a limited number of follow-up questions based on responses received. The interviews usually only happened once as they were conducted in schools and training colleges. Stakeholders included teachers, trainers, teacher educators, representatives from district and provincial offices of education and MoEYS. Most of these interviews had the purpose of monitoring and evaluating project implementation and were used in EQIP, BETT ELP and BETT maths pre-service and in-service projects. Teacher interviews often started with a discussion of the classroom observation that was usually conducted before the interview. The data from these interviews is primary and mostly used in the thesis to contextualise different aspects of classrooms, teaching and learning and the Cambodian education system in general.

In the BETT maths pre-service and in-service projects interviews were set up to take place on more than one occasion as the purpose was to understand what supported learning and what created barriers to learning. In the BETT maths pre-service project one trainer was selected from each of the 18 training colleges. The overall selection of trainers took into account gender and experience. In these interviews I focused on the mathematics trainers' subject and pedagogical knowledge. This was achieved by giving the trainers an assessment or task before they had the interview and then using the task as a basis of the interview. These interviews were also used to evaluate progress of project implementation, gain input from the trainers, gain understanding of the Cambodian education system in practice and assess further needs. Interviews in the BETT maths in-service project had different characteristics from interviews used in the other projects and therefore I refer to these separately under the summary of the methods for this project.

Interviewing has been used as the main source of data collection throughout the study. As the researcher I was aware that the interviews themselves would affect the quality of the data and this was particularly relevant as I was working through translation. I found that when working

through an interpreter my interviews have to be more structured and prescriptive than interviewing through first language. For example the interpreter had to read the questions in advance and had to discuss the meaning of the questions in order to make sense of them before they were used. The interpreter also had to understand the follow-up questions which meant I was less creative and innovative than I might have been. I kept questions to themes in order that the interpreter could understand what was being asked. Some of the interpretation from the responses I received was already through the lens of the interpreter. Time was invested into discussing impartiality with the interpreter and the need to accurately translate what was being said, however, there was still a filtering process where I did not get back all the response. My understanding of the Khmer language was at a level where I could not keep up with the speed of the conversations and my vocabulary was not developed well enough to understand the content fully. Partial understanding made the translation process more frustrating as some times I would think I had understood what the educator was saying only to get a very different translation. I also had to prompt the translator to revisit bits of the conversation that I could recognise had been missed in translation. As well as issues of translation the interpreter plays a role in the interviewing process. Their personality and the effect they have on the educators also had to be taken into account. With more experience I was able to choose the interpreter for an interview session based on their language knowledge and personality.

Specific project related methods

In the Methods section I present a series of tables to provide clarity as to how the research methodology was designed and implemented in each project and by whom. I start by identifying the scope of each project and the funding. I identify what data was generated to specifically answer the research questions I posed in the introduction to the thesis, the data I generated from specific project research and data taken from monitoring and evaluation processes. I also describe any methods and methodological issues that are project specific and therefore have not been discussed in the methodology or methods above. In order to clarify how the units of analysis have been used throughout the thesis I identify which units were used in each project analysis and how they interrelate to one another. Additionally I provide a summary overview of all the projects in Appendix 1.

How the Education Quality Improvement Project contributes to answering my research questions.

‘How far were the experts imposing their ideologies, educational values and strategies on the local people and did that match with the local needs?’

Project	Time Frame	Funders	Coverage
Education Quality Improvement Project (EQIP)	Project 1999-2004 My involvement between 2001 – 2003 only	World Bank, DIFD & VSO	All primary schools in three Provinces, Kandal, Takeo, Kampot (approx 24% of Cambodia’s primary schools)
Aim of the Project	To provide quality improvement grants to schools to support the institutional strengthening and capacity building of Cambodia's education sector.		
My role on the project	Initially I was a volunteer funded by VSO for 18 months to advise schools on quality improvement. I then became an employee of the World Bank as the Lead Technical Assistant in Kampot Province for 12 months. During both roles I operated within the parameters of the project implementation laid out by World Bank. I led the Kampot 2003 Monitoring and Evaluation Exercise (M&E)		
Data generated for project purposes			
During the implementation of EQIP the use of monitoring teams and instruments was extensive. The personnel that made up the teams, the forms and numbers of visits per team were laid out. This led on to an annual M&E exercise and it is the data from this exercise that is analysed in Chapter Three of the thesis. Data was based on the different evaluations made by local and international teams involved in the M&E Exercise in the 15 sample schools in Kampot. The methodology for choosing the sample schools is summarised in figure 3.4. The make-up of the monitoring teams is shown in figure 3.3. I also make use of qualitative data taken from lesson observations and training sessions made by representatives from members of the Ministry of Education Youth and Sport. During the implementation of the EQIP project I designed some small-scale research based on testing pupils’ early literacy skills in grade 1 and 2 classrooms in 10 sample schools which I refer to in Chapter Eight.			
Research generated specifically from the project to answer the thesis research questions			
None			
Specific research for the thesis and funding			
The research presented in this thesis is based on an analysis of the data collected through the EQIP M&E Exercise in Kampot 2003. I started the analysis in 2005 after the closure of the project. There was no funding for this analysis.			
Research Participants			
See figure 3.3 in Chapter Three that outlines the work of the monitoring teams.			
Methodology used to analyse the data			
For the purpose of this study I used the data derived from the M&E exercise and lesson observations to compare how international and local teams rated and described classroom pedagogy to gain insight into the differences between global and local perspectives. I used data from classroom observations quantitatively and qualitatively for two main purposes. Firstly to determine whether classrooms and teaching and learning processes have changed during project implementation and secondly to use the results generated for comparison of perspectives between national and international teams. There are a number of methodological issues in using classroom observation data. In the			

discussion in Chapter Three I argue how standardised statements affected the results of the data obtained in the EQIP project and therefore produced unreliable data to judge changes in practice in teaching and learning. In Chapter Three and Five the difficulties of designing and using classroom evaluation tools.	
Methodological Issues	
Some schools were visited more frequently than others so the average ratings discussed were more reliable in these schools. However, as the main comparison of the data is between the perspectives of the different monitoring teams rather than focused on individual schools this issue is reduced in significance.	
Units of analysis	
The majority of the analysis on the EQIP data is from a global and national perspective.	
Ethical Issues	
The data used in the thesis was collected under the auspices of the EQIP project which had an agreed remit within MoEYS. As the Lead Technical Assistant in Kampot I collated the data and wrote up the annual M&E report for the project. I used the data from this report as the main source of my analysis. As I had written the report I had a good understanding of the data collected although I had not chosen the methodology nor owned the data. However, this was not an issue as the methodology is clearly stated by World Bank and the data was publicly available through the Project Implementation Unit in Phnom Penh and was shared with the other funders such as VSO.	
Chapters in which research is written up	The analysis from the data is used to support an argument that despite a globally defined view of quality education international and national teams do not share the same perspectives. The data is also used to demonstrate the effects of global project frameworks on teaching and learning. The majority of research from this project is discussed in Chapter Three. There are also references to the EQIP project in Chapter Four, Five, Six and Eight.

How the Kampot School Health Project contributed towards answering my research questions.

'How can national and international project staff work together with local people to develop the education system?'

Project	Time Frame	Funders	Coverage
Kampot School Health Project (KSHP), implemented within the auspices of EQIP	The project was implemented in the school year 2002/3 The research data was collected in summer 2005	World Bank GTZ, DED & VSO	All schools in Kampot Province (approx 246)
Aim	To use the school system as a mechanism to deliver basic health education.		
My role on the project	To work with local and international stakeholders to develop a mechanism for delivering the health training.		
Data generated for project purposes			
Needs analysis through interviews with school staff, district education advisors and questionnaires given to teachers. A trial school health day with pre and post testing through the use of questionnaires given to teachers and children.			
Research generated specifically from the project to answer the thesis research questions			
None			

Specific research for the thesis and funding

I designed and analysed a questionnaire, distributed to 100 school directors 18 months after the funding for the project was withdrawn. This research was self funded.

Research Participants

10 schools in the initial needs analysis
One school – all staff and pupils in the trial health day.
School directors from 100 schools selected by the director of the Provincial Office of Education in Kampot 18 months after the close of the project.

Methodological Issues – focus on questionnaires

Questionnaires provided valuable information throughout project implementation for the following tasks: needs analysis, on-going assessment of the implementation and clarifying issues around language use and translation to improve the quality of training.

There were difficulties with questionnaire preparation. The clarity of translation was always an issue. It was particularly difficult where the research needed to focus on more difficult concepts, therefore the questionnaire was not an appropriate tool to go beyond the direct and superficial. Additionally most of the projects discussed had wide-scale coverage and therefore it was not possible to translate results in detail. This meant that when I prepared questionnaires they were based on yes/no or scaled answers so data could be quickly obtained. In the BETT maths programme it was recognised that worded scale responses were not easily translated in Khmer. It was therefore easier to make a scale based on percentages than more/less or by adding words such as *very* or *likely*.

I also needed to develop the questionnaire so the participant was prevented from supplying what they considered was the correct answer rather than what they really thought. In some of my trial questionnaires I discovered that participants will often only tick the *yes* box. I therefore prepared statements based on positives and negatives to reduce this effect.

Questionnaires were used in project implementation as a quick check of how the participants perceived the progress being made. In this respect they were particularly useful at revealing situations that had been unpredicted. For example the high mobility of teachers in grade one and two classes (see Chapter Eight).

As a starting point for needs analysis questionnaires were particularly useful in the KSHP and the BETT Early Literacy Project as they revealed difficulties in language use; local health knowledge; cultural values and understanding between the organisations implementing the programme and the local beneficiaries. Identifying these issues before the training in both cases led to clearer language use in training sessions.

The ‘novelty value’ of questionnaires in Cambodia, their perceived relationship to project funding and the quality of organisational procedures always ensured questionnaires were 100% distributed and returned. However, participants were not experienced in how to fill out questionnaires and had some ‘political fear’ of giving incorrect answers. Many participants were not used to reading. School directors and teachers, the main respondents, were literate but limited comprehension affected the results. Experience had shown me that results in the last stages of project implementation could be effected by the participants’ concerns that if the evaluation was not positive funding would be withdrawn. To reduce this effect it was made clear to participants that there was no link between the response to their questionnaire and project funding although it is likely many participants were doubtful that was true.

Units of analysis

The focus of the analysis on the KSHP data is from a national and local perspective. From a national perspective I explore how organisations work together. The local analysis starts a

process of exploration in terms of language use and culture and how that affects project design which I build upon in subsequent Chapters.

Ethical Issues

One of the difficulties in researching sustainability is that there are no longer any project mechanisms which can be used to implement the research. To research sustainability I had to rely on the good-will of the Provincial Director of Education in Kampot, a Khmer colleague and the school directors. In order for the questionnaires to be delivered I made arrangements to cover costs, but did not arrange any additional payments for the questionnaires to be completed as I did not want the results to be effected by what could be seen as a financial benefit. One of the disadvantages of researching a closed project is the research I conducted could not be sent back to the participants. Research published in international journals is not readily available in Cambodia. Even with a translator the type of language used in an academic paper does not lead to easy translation and therefore the research was not accessible to the participants. In hindsight these types of ethical issues require further exploration and should be planned for at the outset.

Chapters in which research is written up

The research generated from this project is related to an analysis of how stakeholders worked in partnership and how project implementation could best be designed to lead to sustainability. The issues are discussed in Chapter Four.

How the research I gathered from the BETT Mathematics in-service programme contributed to the questions

‘How should a teacher education programme be developed and what components should it include?’ and ‘How much did I need to know about Cambodia, its people, its teachers and its education system before I could make a contribution to its educational development?’

Project	Time Frame	Funders	Coverage
BETT Mathematics Programme (In-Service)	2006 -2011	BTC	Target schools in Kompong Cham OtdarMeanchey, Siem Reap. Teachers of grade 1 and 2
Aim	To improve the quality of teaching and learning in mathematics in primary and lower secondary schools by: <ul style="list-style-type: none"> ▪ Developing the capacity of a group of maths educators who would support teacher teaching and learning through training and school support. ▪ Developing classroom activity and instruction manuals. ▪ Developing training manuals. 		
My role on the project	I was lead consultant on the programme. I designed and developed the structure for the implementation of the project including support mechanisms and evaluation processes.		
Data generated for project purposes			
Classroom observations undertaken and documented by the trained maths educators. Classroom observations made by the international consultants. Comparison of classroom observations over a two year time period completed by the maths trainers.			
Research generated specifically from the project to answer the thesis research questions			
Evaluation of training programme through the completion of mathematics related tasks at			

different points of the implementation. Questionnaires and interviews.
Specific research for the thesis and funding
A series of tasks, interviews and questionnaires given to 20 educators to explore how the different components of training benefited their learning. Semi-structured group and individual interviews with six maths educators over a period of six years. BTC supported my research through the provision of interpreters
Research Participants
Either the whole group of mathematics educators (20) and for the longitudinal study six mathematics educators.
Methodological Issues – Focus interviews
In the BETT maths in-service project six maths educators were selected from a group of twenty on the first day of meeting, as a representative sample based on gender, experience and position in the education system. I conducted semi-structured interviews with these educators every few months for the duration of the project. I also made observations which were recorded as field notes. The data collected provided a means of analysing the educators' responses to the training as well as their perceptions of how the training informed their teaching and learning and gave some insight into the factors that they perceived influenced learning. The data from the interviews was triangulated with observations of the educators in natural settings such as the training environment and the classroom. Over six years I interviewed the six maths educators as a group, in threes and in pairs as well as individually. Initial interviews were often based on a series of monologues with each educator taking turns. Educators generally repeated what the last person had said or started on an unrelated issue. There was little inter-connectedness. By the final year of the project interviews had evolved into discussion where increasingly the educators commented on what others had said and were on occasions prepared to challenge and disagree. Growing confidence also enabled them to discuss difficult concepts in greater detail and begin to identify education issues that affected Cambodia more specifically. The relationship I had as an outsider had an effect on dialogue in interviews. Sometimes the insider tries to include or value the outsider and this can change the direction of a dialogue. The power relationship also has an effect on the discussion. In dialogue it is necessary on occasions to try to decipher whether the interviewee is trying to guess what the correct response is or whether that is generally what they think. The need for the 'correct response' diminished throughout the period of interviews as the trust between the insiders and the outsider grew, however, at the end of the project when insiders may have perceived that continuation funding would be dependent on their evaluations correct response had to again be avoided by ensuring that these interviews were not seen as part of the general project evaluations. I did not pursue any discussion on politics even when it was touched upon by the interviewee and would have been relevant and useful to the research. Political allegiance is significant in the school system, but sensitive. In February 2002 there were local multi-party elections. Out of the 1,620 communes that took part only 23 were lost to the CPP government. In 2003 during the run up to national elections there were 13 political killings. Sensitivity in interviews is particularly relevant in a context where the educators have traumatic histories and have never received emotional support or counselling to deal with those histories. My questions were therefore tempered with an understanding that I was not a trained counsellor and had to proceed with caution. Personal history revealed by the educators was treated sensitively so I often deliberately remained a listener and only asked

questions directly related to educational experience. This was not a lack of interest in the inner-life of the person I was interviewing, but a respect for that inner-life and my inadequacy to be able to deal with the traumas they may have shared.

Other issues that affected the quality of the interviews included hierarchal perceptions, language differences, the translators' role in the dialogue, the relationships built up between myself and the educators and the lack of experience educators had in being interviewed. All these issues have contributed to a lower quality in the final transcripts and at times have prevented the in-depth analysis that it was hoped would be possible with interview data. There are inevitably issues of validity and potential bias: much of the data (both written and verbal) required translation and there are potential linguistic and cultural misunderstandings. The educators, while chosen as a representative sample on day one, were not necessarily representative members of the wider group. The relationships that developed between me as a consultant and the interviewees as course participants may have also influenced the responses.

Units of analysis

The majority of the analysis on the maths data starts from a local perspective. It also explores how a local unit of analysis then fits into national, regional and global practices.

Ethical Issues

Permissions were gained for the use of interview data from the six mathematics educators. The six educators were asked on each occasion of interview if they were comfortable for transcripts to be used in published reports, journal articles and a PhD thesis. They always provided consent. In a discussion of anonymity with the educators it was decided that their names would not be used as they were too easily identifiable from the outcomes and, although none of the educators had felt there were any issues with what they had said, there is still a certain amount of political fear in Cambodia and status and hierarchy continue to be sensitive areas. As the educators came from an original group of only twenty it would be possible to identify them from references made to gender and age. Therefore to create anonymity I have used pseudonyms throughout which cannot be used to identify experience or gender.

One of the most difficult ethical issues for me was how to give the educators and others access to the final reports and thesis that was produced. I have already cited Laws et al (2003) who points out that the expertise is taken out of the country. Some of this difficulty was overcome by developing educators' skills in reading data presented in tables and graphically. This was particularly valuable in the BETT maths programme as it served the purpose of ensuring there was an on-going discussion as to the progress of the project and it also provided real context data to develop mathematics subject and pedagogical understanding. In the ELP project it was also a useful process as it led to educators becoming more determined to ensure that the data collected was an accurate reflection of what was happening in schools. Producing final reports and research in English did create problems. Despite having a talented translator the educators had limited access to research from this project or others. The final reports from the project were not fully translated, but detailed executive summaries were and these were widely distributed.

'But Jane, it's our culture' was a statement frequently used by the representatives from MoEYS and Khmer colleagues. For me this statement identifies the issue of insider and outsider debates in comparative education research. This statement reveals a tension between the actions that might be imposed by an outsider and how they are received by the insider. The phrase emphasises not only the importance the speaker places on culture, but also that the culture belongs to the speaker. As the outsider I have to contend with three basic ideas. My colleague is clear what Khmer culture is. My colleague identifies with Khmer culture. My colleague is defending the culture. My colleague's defence could be based on the

perceived power relationships between the insider and the outsider. Alternatively the defence could be genuine advice that the action is unsuitable and could cause cultural conflict, or it could be a defence against change. Whatever the context these five words present an ethical issue. The words underline a clear relationship in project development where the outsider is often in a more powerful position to impose upon the insiders and therefore they need to develop an ethical and sensitive approach to project design that is not an imposition of power.

Chapters in which research is written up	The research from this project underpins the thesis. It is used in Chapter Five in an examination of training programmes and their components and in Chapters Six and Seven to unpack perceptions on how history, culture and religion affect teacher education development.
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How the BETT early literacy in-service programme contributed to the research questions

‘How much did I need to know about Cambodia, its people, its teachers and its education system before I could make a contribution to its educational development?’ with a specific focus on language and literacy.

Project	Time Frame	Funders	Coverage
BETT Early Literacy Programme (In-Service)	2007 -2011	BTC	Target schools in Kompong Cham, OtdarMeanchey and Siem Reap. Teachers of grade 1 and 2
Aim	To improve the quality of teaching and learning in early literacy in grade one and two classes by: <ul style="list-style-type: none"> ▪ working with a group of Khmer educators who would train and support teachers. ▪ working with Khmer educators to design early reading books and materials. ▪ designing training manuals for use with the reading materials. 		
My role on the project	I was lead consultant on the programme. I designed and developed the structure for the implementation of the project including support mechanisms and evaluation processes. I also took the lead of the overall design of project materials for pupils, trainers and schools.		
Data generated for project purposes			
Lesson observations of teachers and educators. Scrutiny of teacher workbooks designed as part of the evaluation mechanism to monitor project implementation. An early reading assessment tool used in a sample of the BETT intervention schools and a control group of non-BETT schools.			
Research generated specifically from the project to answer the thesis research questions			
None			
Specific research for the thesis and funding			
Semi-structured group and individual interviews with six maths educators. The use of an interpreter was supported by BTC. Although the maths educators were assigned to another project, having built relationships with them enabled me to explore some of the issues that were raised in the literacy project.			

Research Participants

66 teachers in the needs analysis research and 8 teachers for in-depth interviews
1280 pupils in the sample intervention schools and 600 pupils from control group schools in grades 1 & 2 for three consecutive years.
Six mathematics educators

Methodological Issues

Developing assessment tools for early literacy is a complex process. The tool had to be designed so that young pupils could respond to questions and have the opportunity to show the assessor what they knew and how well they could read without being intimidated. Many young pupils were unable to write so the assessor needed to be able to scribe their answers. For these reasons the assessment process was time-consuming and therefore expensive. The test design and the structure for implementation was an international and national team effort. A baseline assessment for the ELP was implemented at the end of the school year 2007/08 with subsequent assessments made in 2008/09 and 2009/10. A total of 1280 pupils were assessed each time. An assessment was also made with a control group of schools which did not receive support from BETT or other NGOs/Donors. The baseline assessment was designed to assess whether the activities initiated through the ELP project led to changes in pupils' reading abilities. It was predicted that many factors would influence changes in pupils' reading abilities including: the location of the school; the ratio of permanent teachers to contract teachers; availability of resources and additional support from donor organisations and NGOs. It was not possible to take all these factors into account, but the sample did represent schools in different circumstances. Schools working with other projects were avoided. Approximately 30% of schools were selected from the 127 schools implementing the ELP programme. The schools were selected using the following criteria: number of schools selected in each province was in ratio to different geographical localities; time school had been part of the project and length of service given by the school director.

As the test was in Khmer language it was implemented by the ELP trainers. The ELP trainers spent two days in training. They had opportunities to discuss the baseline and its importance. Discussions included the need to make the test as fair and as objective as possible. As part of the process all ELP trainers assessed pupils by watching video materials and conducted moderated assessments with pupils in schools. This was to ensure there was comparability in judgements before trainers participated in the assessment. Trainers were also given written instruction sheets on how to conduct the baseline from arriving at the school to leaving. The methodology is recorded in detail in the Literacy Completion Report (BTC May 2011). Whilst there was inevitably some opportunity for subjectivity in the testing, robust training and moderation did partially resolve this problem. The assessment tool did cover four areas and results from this tool have generated quality data that has provided some picture of how pupils are learning.

I did encounter a difficulty with the assessment tool and book for grade 2 because I should have realised that I would need a separate tool for the grade 2 assessment at the outset. This short sightedness led to less data to compare over a time period, but due to the limited reading capacity of the pupils this was not significant. It would also have been useful to have built in a period of testing before the form was used in all target schools. Two of the questions on the 'attitudes' test were not transferable to the control group as they were based on the series of books so this was another error that had to be considered in the data analysis. In the first year of the assessment one of the pupil books was used as the assessment tool. This gave early indications as to pupils' reading ability and was not an issue for that year as the implementation had only just begun. However, it was not possible to use this book in subsequent years as pupils had already worked with it. Therefore a book had to be designed for assessment purposes only which was not planned for at the start of the project.

Units of analysis	
The data from this project was particularly useful for exploring how local and international teams can work. The analysis also shows the tensions between international organisations and how they are played out in local implementations.	
Ethical Issues	
The ownership and the collection of the data could be considered an ethical issue. For example Khmer colleagues and trainers collected and collated the data and BTC supported the assessment processes. However, I designed the procedures for recording and analysing the data. I also analysed the data. I made the data available in Cambodia through the Early Literacy Report (BTC 2011) which was prepared for the completion of the project and through the executive summary which was translated into Khmer and widely distributed. BTC in drawing up contracts with international consultants included how intellectual property rights would be shared. It states in the contract that ' <i>BETT allows the consultants to use non-confidential data for research purposes and research publication if reference is made to the source</i> '.	
Chapters in which research is written up	The research gained from the ELP project is discussed in Chapter Eight.

Concluding remarks

Many types of educational research make use of a hierarchical or a multileveled structure. For example in the EQIP project data was collected against school effectiveness criteria and pupil outcomes were used. Riddle (1997:180) asks five questions about research into school effectiveness, two of which are focused on research methodology: Why has Third World research not used the analytic techniques applied in industrialised countries and how has multilevel analysis been used in third world research?

In answering these questions Riddle makes the following points about multileveled research. There is often a wide gap in the perceptions of different groups at different educational levels. These groups may also place different values on quantitative and qualitative results. Even when reliable indicators of school effectiveness were generated in the research projects examined by Riddle a lack of contextualisation risked making the research dishonest. Riddle argues that in industrialised countries multilevel research has been utilised to identify the factors that make a school effective, but these results were then fed into donor projects world wide, leading to projects becoming built on statements such as '*class size is irrelevant*' and '*learner-centredness is the most appropriate pedagogy*'. Research in low-income countries may not use the same analytic techniques as high-income countries because the research is often piecemeal, donor driven or implemented by academics in tight timeframes and therefore does not provide the quality of data that may lead to the more insightful application of research as in Western outcomes.

For all these reasons the research data in this study comes from many sources and is both quantitative and qualitative. A mixed methodology has been used because of the inherent difficulties of researching in another culture and language. I used a range of research tools to obtain data from different sources aimed to enhance validity of the results through triangulation. This does not imply that the findings can be generalised from this small scale project, but does increase confidence in any inferences made. The advantage of this was that I was able to identify some trends in quantitative data and use the questions this raised in the interviews with the educators.

The research presented in this thesis is based on several different development projects implemented over a period of ten years. This inevitably led to a mixed methods approach between and within projects. The variance in data collection is also relevant to how this thesis is written-up. In order to make it easier for the reader I provided a summary of the methods used for each project related to the research question that is being answered and linked this to where it is written-up in the thesis. How much choice I had over the methodology and methods used in the research was dependent on my participation and role within a project so I also made clear what my role was and how far I developed and implemented the research discussed.

Exploring the culture, religion, language and history of Cambodia contextualises the education system. Positioning the local context in relationship to global education policy and development aid illuminates some of the issues that need to be taken into account when designing teacher education programmes. Sweeting's (2007) outline of historical structures was useful in helping me think about how I would embed into the presentation of my data, the narrative from the Khmer educators. By introducing the Khmer educators' stories into the historical and cultural accounts of Cambodia I was able to avoid an outsider only perspective on education development projects.

In Chapter One I introduced the field of comparative and international education as a frame of reference for positioning my research. There have been calls from the comparative education research community to examine policy, practice and theory links more closely; to explore the relationships between multilateral, bi-lateral donors and iNGOs; the increased conflict between cultural and economic aspects of development and to consider how neoliberalism and globalization have impacted on national and local contexts. I introduced these themes in Chapter One and went on to build on this in Chapter Two by specifically looking at how comparative education uses units of analysis for examining the data. In this chapter I have

focused on the field of study in which the thesis is positioned and justified the units of analysis chosen and the methodology and methods used.

In Chapter Three I analyse the data from the EQIP monitoring and evaluation exercise to examine the extent of global influence on local practice and in Chapter Four I use the Kampot School Health Project to unpack some of the practices that are advocated in development policy to ascertain the impact they have. The second half of the thesis is more ethnographic in approach as I shift the focus of my research from the global to the local. In Chapter Five I explore teacher education projects in detail, concentrating on the training project cycle and components used to develop effective teacher training. Experiences from the basic education projects in Kampot and the first part of the implementation of the BETT mathematics project is used to develop the analysis. In Chapters Six to Eight I use the voices of the Khmer maths educators, evaluative outcomes from the BETT projects, and the research literature to try to understand how culture, religion, language and history affected project outcomes.

Chapter Three: Neoliberal Contexts and ‘Global Pedagogy’

In this chapter I use the EQIP project to contribute towards an answer to my third research question: *‘How far were the experts imposing their ideologies, educational values and strategies on the local people and did that match with the local needs?’* In Chapter One I have already argued that dominant global economic perspectives lead to economic planners imposing their ideologies on nations. This chapter explores in more detail how the ideologies of international experts influenced Cambodia’s education system through donor projects and what result these influences had.

I have demonstrated that in the neoliberal perspective considerable value is placed on the links between economic growth and educational investment. The advocates of neoliberal policy only appear to discuss the quality of education, curriculum and pedagogy in relation to measurable outcomes and accountability. I believe this limits the understanding of the educative process and does not take sufficient account of the needs of teachers or learners. Because in low-income countries large proportions of educational funding are provided by multi and bi-lateral donors both education pedagogy and policy become globalised. I show how these global agendas do not take into account the culture and context of the nations in which the policies are implemented.

This chapter begins by unpacking the notion of ‘global pedagogy’ and the neoliberal education management culture of measurement, accountability and standardisation in relation to Cambodian education policy. This examination shows where values are placed and leads on to a discussion of how *‘objectively verifiable indicators’* become enshrined in the planning and implementation of development projects. In the second part of the chapter I examine how the global pedagogies and policies are enacted out at the national level using the EQIP project as an example. This provides a partial answer to the second part of my third research question focused on the match between global policy and local need.

Cambodia and global pedagogy

In Cambodia many donors, INGOs and MoEYS promoted a learner-centred teaching policy. The World Bank EQIP project, UNICEF child-friendly schools and the aims of the Belgium Technical Cooperation (BTC) are all examples. The principles of child-centred learning may be considered an appropriate goal for quality education in Cambodia, but the application of these principles will be affected by the education system, its teachers and available resources. Promoting a methodology that is reliant on human and physical resources a country may not

have, is going to lead to problems of implementation. As Brewer writes in Global Campaign for Education *'in these circumstances the child-centred learning approach to teaching (which donors have spent millions promoting) evaporates into little more than a fond memory from training college'* (Global Campaign for Education, 2004 page 7). Roth, one of the educators interviewed stated *'I was taught child-centred learning methodology for two years in the Regional Teacher Training College in Battambang'*. At the beginning of the BETT project there appeared to be no evidence of this approach in his teaching or the training at the training college.

In 2001 when I carried out dual classroom observations with EQIP animators (district education advisors) they would often indicate at the end of the visit how much child-centred learning had taken place. The animator would summarise a school visit with comments such as 65% of the teachers in this school are using learner-centred methodology 90% of the time. When I asked the animators to explain these statements they would refer to whether they had seen a teacher hold up a poster or how the tables were arranged. Again I had not seen evidence of the child-centred learning approach. Lessons I observed during 2001 revealed that most teachers taught directly from textbooks and that most pupils' involvement was centred on copying exercises from the board. Pupils were occasionally placed in groups, but did not work as a group. For many pupils 25% - 50% of the learning time was lost while they waited for teachers to mark books or for the next lesson to begin. The observations I made in BETT target provinces in 2006 revealed similar outcomes. I was more concerned about the learning time lost than the teaching pedagogies used. After all, whatever the classroom practice, if pupils are not engaged in activity they are not going to learn. Cambodian children had between 450 and 650 instruction hours a year, an amount well below the international norm of 900 hours (World Bank 1999) and as Khaniya & Williams (2004) point out the effectiveness of classroom instruction depends on how much time is spent on instructional tasks which do not include marking attendance registers, maintaining order and checking homework.

What is noticeable from my observations in 2001 is that both Roth and the district animator already had an understanding of what they thought was meant by child-centred learning. I on the other hand, coming from the UK engaging in my first encounter with development work had not heard the term before. When I did understand what they were referring to I interpreted it from my perspective as a constructivist pedagogy. But I did not see a match between constructivism and practice in Cambodian classrooms which were *'mostly exclusively devoted to instruction or recitation'* (Benveniste 2008:87). I became curious about the development of child-centred learning in Cambodia, where it had originated from, why it was

interpreted in the way it was and whether it was even appropriate given the low level of human and physical resources.

I was also concerned that this mismatch between the pedagogy that people thought they were implementing and what they were actually doing was in part because there had been little discussion at the local or national level. As Latif (2002:14) points out:

.....part of the problem with quality achievements in education in Bangladesh is the fact that there has not been sufficient public debate within the country on what actually constitutes quality despite wide ranging measures to improve the overall quality of education.....

What I saw was the imposition of pedagogy from the World Bank and other donors with the assumption that West was best.

Cambodia as part of the neoliberal agenda

In Cambodia MoEYS collected data on attendance, gender, drop out, promotion and repetition in order to guide strategic education planning. The development of an Education Management Information System (EMIS) is a common activity in education development. EMIS systems have been set up in at least 40 countries where the World Bank has been involved in education donor projects (Trucano 2008). The EMIS systems are seen to enable governments to make effective policy decisions by analysing the data they have collected (Hua & Herstein 2003). However, Trucano warns that use of EMIS can be '*confounded by a variety of social and cultural factors*'. Data collected in Cambodia passed from the school director, to the cluster director, district and province before reaching central government. Anecdotal evidence suggested that the data was subject to change at all the different levels it was passed through as there was a fear of blame should the data not provide evidence of effective policy. Attendance records provide a good example of the issue. When staff from the EQIP project visited schools they monitored attendance. However, during the majority of school visits the absenteeism observed was significantly higher than the absenteeism recorded on any other day of the school year, yet a reason was always provided to justify this phenomenon. Teachers and school directors, when interviewed, expressed their concern that they would be blamed for absenteeism and consequently decreased the numbers recorded. In some instances teachers revealed a second 'hidden' register that provided a more precise picture of attendance (MoEYS 2002b). The MoEYS EMIS data on dropout, promotion and repetition rates therefore has to be viewed with caution. Two immediate dangers from this type of monitoring need to be considered. Firstly, if the monitoring is inaccurate it may not be appropriate to use the data to inform future planning and secondly, if accurate quantitative data for easy to

measure actions is difficult to obtain, how is it possible to develop measuring systems that can assess subjective data such as the quality of the teaching and learning process?

Measuring the progress of EFA is an international target, judged by the number of pupils attending school and the learning that takes place. Measurement initially focused on the quantitative elements of improving education. Drop out, promotion and repetition rates, pupil teacher ratios and resources allocated per pupil have all been measured and a search to find correlations between them have been investigated by policy analysts. Increasing pressures on ministries, donors and INGOs to provide evidence of quality improvement has led to the development of a range of tools to measure quality.

The shift of education policy from an emphasis on quantity to quality has been mirrored in the shift in the measuring system. Measuring quality in education is simpler if the process is broken into inputs, processes, outputs and outcomes. Most data collection has concentrated on the inputs, outputs and outcomes. Arguably inputs need to be measured and correlated with outputs and outcomes as this provides an indication of efficiency and cost effectiveness within a system. Measuring outcomes allows the researcher to collect quantitative data which are often seen as more defensible and rigorous than qualitative data (see Chapter Two). However, unless the data was contextualised within the culture it is collected, it may not provide the in-depth understanding that could be useful in guiding future educational reform. Even if the data collected is contextualised, there is the additional difficulty of defining what is to be measured and how it is to be measured. Flecknoe (2001) points out that there is a lack of consensus on desirable outcomes and a lack of instruments to measure these outcomes.

Measuring the potential learning from any given situation is difficult due to the often unpredictable nature of the teaching and learning process. If the focus is on standard learning outcomes, the teaching and learning process is easier to measure and therefore the managers of that system are made accountable. The danger of making the process measurable by prescribing the outcomes is that the individual learned experiences, interests and needs of the pupil are marginalised in an attempt to measure the standardised learning outcomes. Constructivist learning is complex enough, but if it is now implemented alongside a managerial approach to education there are likely to be conflicting principles. If this is the case in a highly developed education system, what happens when these same conflicting principles are put to the test in an education system that is under resourced? The following is one example from southern India of how competencies and constructivism have been put together:

.... Karnataka has introduced a novel approach to learning through play (Kali Nali). This is an activity-based, child-centred participatory method of learning for Classes 1 through 4. Textbooks based on competencies and Minimal Levels of Learning are used....textbook-less, child-centred 'joyful learning' has been introduced.....which allows children to proceed at their own pace (World Bank 2002:36).

The writer claims the results of this new approach is repetition rates that have been significantly reduced. For the reader there is no information to indicate how the teaching and learning process is implemented or what variables may have affected the lower repetition rate.

If learner-centred pedagogy is to be measured, and I am advocating it should, to prevent an imbalance in education policy that may otherwise only be derived from pupil outcomes, then ensuring monitoring and evaluation is aligned to the educative approach is important. Monitoring and evaluation must be built on the answers to the following questions: Do those assessing classrooms have an agreed definition of what they are assessing? What does the educative approach they are assessing look like in practice? Can tools be designed to measure the educative approach? Is there a match between the practice being measured and the instrument measuring that practice? UNICEF (2000:18) writes the following about measuring the education system:

whether schooling is of high quality will be measured by the readiness of a child to succeed; the nature of the teaching learning process itself: whether the learning environment is child-centred...and whether the students attain nationally defined competencies in literacy, numeracy and life skills.

Baumgart (2001:13), a monitoring and evaluation consultant hired by the EQIP project, wrote that the '*ultimate criteria for judging project effectiveness has to be in terms of pupil outcomes*'. He identified pupil outcomes which included: pupil participation in schooling, progression, repetition and dropout rates derived from EMIS data and compared to census data on school age population. Achievement in literacy and numeracy could also be obtained from grade 4 testing instituted by EQIP and used in EQIP and non-EQIP schools for comparison. Additionally pupil-centred classroom behaviours could be rated by the district advisors and cluster supervision teams on school score cards (Baumgart 2001). Therefore a system of monitoring was developed so quantitative outcomes from grade 4 testing and EMIS statistics could be validated against the qualitative data gained from the school score cards and classroom observation. The idea that pupil-centred classroom behaviours can be measured would suggest that it was necessary to measure the performance of the teacher.

Increasingly measuring teacher performance has been seen as another indicator of system effectiveness. The difficulty of measuring teacher effectiveness is defining what can be measured. Measuring teacher performance by pupil outcomes is contentious and generally involves too many variables to provide any kind of accuracy. If teacher performance is to be measured then a system of measurement is usually derived from the currently preferred educational methodologies in use. For example the UNICEF quotation suggests that measurement should be based on the child-centred nature of the learning environment or the teaching and learning process. The difficulty with this is learner-centredness is defined from what constitutes good classroom practice and becomes detached from theoretical understanding. This may lead to definitions being limited to a set of skills and strategies for the teacher to implement and predetermined learning outcomes for the pupil to achieve.

Measuring teacher effectiveness usually leads to a project or government defining characteristics they associate with good teaching. This list of characteristics then becomes the checklist of standards used to measure the performance of the teacher. Draft Teacher Standards were devised by key stakeholders from donor agencies and MoEYS in 2007. These Standards (see annex 5) were divided into four domains Knowledge, Practice, Learning and Ethics. Each domain has two or more fields and each field has several standards statements:

A standards statement is a brief and clear description of what is valued in one vital aspect of what a teacher knows and does. Each statement is expressed in terms of observable evidence of teacher actions that have an impact on students; this evidence can be used to appraise teacher performance (MoEYS 2007, draft 6:1).

This quotation provides clear evidence that global neoliberal policy is affecting Cambodia. The statement shows how the policy is represented in practice. Teaching is broken down into clearly observable characteristics that can then be used as a measure of performance.

Even if the prevailing global policy is accepted at national level it still has to be interpreted. Decisions need to be made on the content of the standards and how they will be used. This draft policy document has been created by the Cambodian Education Sector Support Project, financed by the World Bank. It would appear likely that the content of these standards will also reflect global perspectives on effective teaching and learning. In the completion report for CESSP (2012) it states:

Teacher Professional Standards aimed at introducing a set of minimum standards for teacher performance from pre-primary level to upper secondary level..... This shows that primary sector quality upgrading was also part of (C)ESSP' (CESSP 2012:30)

and *'The Teacher Standards activity was successful in that it resulted in a policy which is being implemented by the MoEYS (CESSP 2012:52).*

This statement exemplifies a neoliberal approach to education through the introduction of minimum standards. The statement implies that the WB initiated teacher standards as part of their project, which goes against the notion of ownership and partnership. The statement appears to make the claim that the WB through the CESSP project improved the quality of education by introducing standards; yet the WB back in 1993 recognised that the agenda for development had often been donor driven rather than government led, resulting in failure (World Bank, 1993). More recent development strategies have moved towards government owned projects. But this example and those in Chapter Four suggests participation of local people remains limited whilst research shows that the creation of effective partnerships is more likely to lead to project success (Miller Grand-Vaux, 2002).

As I stated at the end of the section on global pedagogy in Cambodia I believe that discussions with local people about its value and relevance were not given sufficient emphasis. This is also true of the introduction of curriculum 'learning outcomes' and 'teaching standards'. It is possible MoEYS will assume that these approaches are correct as they come from external experts and therefore the discussion will be focused on how they can be implemented rather than should they be implemented in Cambodia's education system.

Planning for accountability and impact

Donor agencies, in order to show accountability and transparency prioritise the development of systems to measure impact of interventions. This has often led to a results based management approach to designing, implementing and evaluating projects, yet Wallace et al (2006) argue that the cultural assumptions embedded in logical tools limits communications with peoples coming from different cultures. Results based management usually includes a logical framework (logframe) which is best described as a planning tool often used in the conceptualisation stage of a project and may be drawn up as a response to terms of reference for project funding. Logframes use *'objectively verifiable indicators'* in order to measure success. These indicators are usually expressed in: *quantities*, for example the number of teachers who participate in a training programme; *time*, when the training takes place and *quality*; how well the teachers were trained. This planning mechanism fits well with the core principles of Poverty Reduction Strategies Papers discussed in Chapter One.

The logframe was originally designed for corporate and military purposes and only later introduced to development work, initially by USAID in the 1970s, and appears to be almost unheard of outside development settings (Hailey & Sorgenfrei 2004). Logframes are not only used for planning; as Harley (2005) points out they are also the favoured method of project evaluation used by international agencies. Although they are used extensively there is a considerable body of criticism largely related to how they are applied during the implementation stage rather than the actual design concept (Hailey & Sorgenfrei 2004).

Harley's (2005) work on logframes was particularly useful in identifying what happens to the project when a logframe is applied. By examining three projects in Africa he was able to identify common strengths and weakness. He identifies strengths such as the approach to the assessment of a particular intervention and that logframes are intended to be clear, transparent and accountable, but he also identifies three main limitations. Firstly he agrees with the work of Hailey & Sorgenfrei (2004) where they write about the assumption made that there are causal relationships between inputs, activities, outcome and objectives. On the basis of this it could be argued that if the outputs are achieved then the project purpose has been achieved. Secondly in Harley's (2005) examples it quickly becomes apparent that whilst the strength of the logframe is in the structure and the 'smart' targets that are set as objective verifiable indicators, at the same time these indicators are largely time and quantity bound in order to make them measurable and the quality based indicators are not used widely. Thirdly Harley (2005) writes that by constraining the logframe to such a sharp focus the evaluation process can become limited, unintended consequences are missed or remain unexamined as they do not relate to the original targets. As a result of this quality is neglected in favour of the more manageable quantity indicators. It is also noted that because the monitoring and evaluation tools are included at the project conception there is little discussion or stakeholder input. The following example I take from EQIP demonstrates the domino effects when a logframe is applied.

The logframe impacts on how the project will be shaped before it starts through the use of verifiable objectives. The emphasis is placed on the outcome rather than the educative process. The end product, the report, is also internationally driven. As Maskell (1998: unnumbered) point out:

consultants reporting on programme delivery.....present assessments based on the criteria of the funding bodies.....reports appear to be written in a genre reflecting a global perspective with a technical-rational approach, tending to overlook the viewpoint of Khmer educators.

Despite the recognition of the usefulness of the qualitative reports and data collected in EQIP the final report was a detailed in depth statistical analysis of grade 4 pupil achievement and other available Cambodian data. Marshall (2004:1) starts the report by drawing the reader to the attention that the EQIP data has allowed for one of the few quantitative reports of education outcomes in Cambodia.

The overall findings of this report are, in many ways, consistent with the abundance of qualitative monitoring conducted by EQIP technical assistants over the years. These reports demonstrate that EQIP has made progress in upgrading capacity and improving teaching and learning environments. The rate of change has been incremental rather than dramatic.

Marshall goes on to say that: *'The results of the various statistical analyses provide strong support for the contention that EQIP participation leads to improved student outcomes'* (page 55). EMIS data collected by MoEYS made it possible to analyse the EQIP effect over the period of 1992-2002. In this time period there was a dramatic increase in promotion rates and a decrease in student dropout rates across all provinces of Cambodia, but the EQIP effect was 'over and above the general trend'. EQIP participation was also associated with higher test scores. Because the EQIP project was based on a school visioning process to decide on how to spend grants, implementation across clusters and schools was not even. However, the largest investment component was teacher development, made up of activities such as teacher training, library improvements, and teaching and learning aids.

The robust relationship between money devoted to teacher development and student learning is an important finding for both EQIP and Cambodian education in general. The result suggest that in-service training initiatives can improve teaching capacity that, in turn, affects student performance (Marshall, 2004:56).

The findings of the EQIP programme suggest that the project investment, which was approximately US\$2 per child, per year, did make an impact on pupil outcomes.

The international approach to the aid agenda has further ramifications in that the emphasis on the importance of the quantitative outcomes can lead to equally important qualitative outcomes becoming neglected. The qualitative evidence presented in EQIP of both teaching and learning and teacher development suggests that there is unlikely to have been an improvement in student outcomes and yet the quantitative data presented by Marshall (2004) suggests that the correlation between the two was robust. If teacher training had not contributed to increased learning outcomes what had? It could be possible that improved classroom environments and pupil health led to better retention and attendance, greater

teacher accountability through the supervision process and less teacher absenteeism. In the Year 3 Kampot Annual Report the animators stated that:

teachers are not only becoming more conscientious due to the support they are receiving, but also due to the level of attention that is being paid to them. Their efforts and difficulties are being recognised and this encourages them to try harder to improve MoEYS (2003c).

From this quotation it can be seen that supervision is viewed as favourable from the point of view of the teacher and leads to an improvement in professional practice such as attendance and the preparation of lessons plans. This outcome matches with findings from Barrett (2005) in Tanzania.

However even if pupils attend school there is not necessarily a link between enrolment and learning outcomes either:

In Cambodia, a scholarship programme introduced in 2005 increased enrolment in lower secondary school by twenty-one percentage points, however, the positive impact on enrolment and attainment had no discernable effect on learning achievement (Fiszbein et al., 2009 cited in GMR 2011: 93).

Filmer and Schady (2009), completing an external evaluation of CESSP (the follow up project from EQIP), draw the same conclusion, that pupils entering the programme scored no higher on achievement tests in maths and vocabulary tests than if they had not attended school. In the CESSP completion report 2012 it acknowledges these reports and writes that MoEYS will continue to operate the scholarship programmes 100% from internal budgets up to grade 12. The report also noted that the poorest pupils did not benefit as they had already dropped out of school in primary and that enrolment rates went up at schools that parents had been identified as 'scholarship schools'.

The effects of the neoliberal agenda are evident in that now the informed parent can select a school where their child may get a scholarship. The final link is whether being schooled to grade 9 will make a difference to earnings. In the World Bank (2012b:41) report it states that:

The principle of monetary benefits analyzed are the incremental earnings of beneficiary students. In order to identify minimum long-term benefits for the next 15 years, the wage gap between Grade 9 graduates and Grade 6 graduates are calculated based on 2004 data and assume an expected minimum inflation rate of 5 percent from 2012 onwards.

Given that the evidence in the external evaluations suggests that there is no difference between the results of a student who left in grade 6 and one attending to grade 9, research is needed to explain what is happening, but the scholarship investment continues presumably because this is what was set up in the logframe.

Monitoring and Evaluation in the EQIP Project

All the data discussed in this section is derived from a specific set of tools designed to measure quality improvement. The tools themselves, although agreed by the many stakeholders using them, were considerably influenced by international perspectives on education. The tools were measuring the forms and strategies of learner-centred education rather than the extent to which teachers could understand and engage with the learners to help them to develop new ideas and meanings which Brodie et al (2002) define as the substance of learner-centred teaching. The tools were developed in a context of the government promoting a learner-centred pedagogy, but also to the background of the introduction of learning outcomes and teacher standards. These considerations undoubtedly have an effect on the context of the research. Whilst creating a list of measurable indicators could provide a way of measuring quality there is a danger that the statements become separated from the behaviour and culture of the classroom (Alexander 2001). As a consequence the indicators on the form do not provide an adequate explanation of the context. In order to make sense of the classroom observation form, it is therefore necessary to contextualise the information collected. Interviews with school staff, the cluster supervision teams and the analysis of the feedback go some way to provide a commentary that triangulates the data collected from the monitoring forms and provide greater meaning.

During the implementation of the EQIP project supervision processes evolved to ensure rigorous monitoring and to encourage school improvement. The use of monitoring teams and instruments was extensive. The personnel that made up the teams, the forms and numbers of visits per team was laid out clearly (*see figure 3.3*). Training was given to all teams on how to use the monitoring instruments for data collection, discussion and to support the schools in making improvements.

Figure 3.3: Supervision teams in EQIP

Name of Team	Personnel	Forms	Number of visits
Cluster Supervision Team	All cluster chiefs in district	Classroom Observation Form Training Observation Form	8 per month
District Supervision Team (Team size dependent on district)	Director and deputy director of District office of Education Animator Chief of finance and primary education	SEER Report (1 section per visit per team member) Classroom Observation Form	12 per month

	All cluster chiefs.		
Provincial Supervision Team	Director and deputy director Provincial office of Education Provincial chief of finance, primary education and inspection	SEER Report Training Observation Form	6 – 10 per month
Monitoring Evaluation Exercise Team	Provincial project co-ordinator Provincial international technical assistant, district animator, District education advisor (international).	SEER Report Classroom Observation Form	One visit per sample school

Source: Adapted from Draft Animators’ Manual and Supervision Guidelines (MoEYS 2000d)

Supervision consisted of an observer watching a lesson, completing a monitoring form and giving the teacher feedback to develop their classroom practice. There was a range of monitoring and evaluation tools used in both school and classroom supervision which included: the School Effectiveness Evaluation Report (SEER) for measuring school improvement, the classroom observation form originally designed to improve quality of feedback, the in-service teacher training observation form designed to monitor teacher training (see annex 2).

Initially the SEER report was a monitoring instrument used by the district advisors to determine the level at which a school was operating during a monitoring visit. The form consisted of a set of descriptors laid out in four areas: supporting inputs, enabling conditions, school climate, and teaching and learning processes. Each of these areas was subdivided into a further four to six categories. Each sub category had five statements that described the quality of performance in that area with ‘1’ as the weakest and ‘5’ as the strongest description of good practice. District advisors would tick the statement that they felt was the ‘best fit’ description based on the evidence they had collected during the visit. During August 2001 a similar monitoring tool was designed for observing classrooms. Like the SEER report it had the dual purpose of supporting the user by helping them advise the school staff on what improvements they needed to make through the use of ‘best fit’ level descriptors and allowed for the collection of data. The classroom observation form was also adapted to create a teacher training observation form. By August 2002 the SEER report and the classroom observation form had been through a process of review with a large number of stakeholders, thus the outcome descriptors used on the forms had been reached by agreed consensus. The data collected from the forms provide insight into the agreed perceptions of stakeholders, both local and international.

This research has only concentrated on the teaching and learning elements of the SEER report as this provided greater insight into the monitoring and evaluation process than other aspects of the report. Four areas were identified for use as a specific measure: varied teaching strategies, frequent homework, time on task and regular assessment and feedback. If the descriptors from level 1 are compared to the descriptors in level 5 desirable classroom practice is clearly identified. For example under varied teaching strategies level 1 is 'teaching in all classes seems to be the same. 'Teachers talk, and children listen or copy' and at level 5. 'Teachers use varied methods, and teaching materials are widely used. Pupils are active learners'.

The classroom observation report is also split into sub sections. Descriptors include pupil involvement, teachers' questions, use of teaching and learning materials and the use of grouping. Under the heading of 'grouping' the level 1 descriptor states 'pupils are only in one grouping when more than one would have been more useful. The grouping is not related to the objective of the task', whereas at level 5 'all pupils participate actively in different groupings: individually, pairs, small groups and whole class. Groupings are related to the objective of the task and learning intention'. In the section under 'questions' the level 1 descriptor states that 'pupils are not encouraged to ask questions', whereas at level 5 'pupils ask questions for various purposes to teacher and other pupils. Pupils are supported in their questioning'. Under the section on learning materials at level 1 'pupils have no access to learning material they can manipulate', but at level 5 'all pupils use learning materials when necessary at their own initiative. Most pupils own some learning materials'. Similar statements are made for teaching materials. At level 1 'teacher does not use teaching aids when it would have been useful', and at level 5 'Teacher uses teaching aids appropriately to support learning intentions'. Many of the level 1 descriptors describe a typical classroom in Cambodia, such as pupils listening and copying and not asking questions. Level 5 implies there is a pedagogy that should be aimed for by the teachers and that teaching and learning will improve with the use of grouping, questioning and appropriate materials.

During the first year of implementation supervisions were generally seen as effective in improving teaching standards, however the district advisors reported that the supervisors had insufficient skills to complete their work to the desired standard as many were not fully aware of new methodologies and had not been classroom teachers for a long time (MoEYS 2002c). This matches with Marshall's (2004:84) interviews with school directors:

The inspectors and people from the higher authority generally know less about new methods than the teachers do. This is a problem for us because we

need inspectors and people from the higher authority to help us. They should know more than we do.

The EQIP project had introduced an annual monitoring and evaluation (M&E) exercise after an external consultant in April 2001 had visited the project and questioned the integrity of the data collected (Baumgart 2001). *The MoEYS Education Sector Review Group* had emphasised that attention needs to be given to the monitoring process:

..... further guidelines/training (is needed) on how to assess the different school performance descriptors in the proposed score card [e.g., how should “high quality of teaching” be defined?]..... MoEYS, Education Sector Review Group (2002a:35) (see Chapter 1 Sector-Wide Approaches for context).

The report states that score cards must be descriptive so that “mechanistic” monitoring that does not capture quality aspects [*can be avoided*)] (*MoEYS, ESRG (2002a:37)*).

The M&E exercise described here was designed to gain deeper insight into qualitative changes that had taken place in the schools. At the time of the monitoring and evaluation exercise there were 260 schools in Kampot province. A sample of 15 schools was selected using six criteria. The percentage of each of the sample schools in each criterion approximately matched the percentage of the total sample in those criteria. When the sample was compiled, each of the eight districts in Kampot was represented with some schools matching more than one criterion (*see figure 3.4*).

Figure 3.4: A summary of the criteria used to select sample schools in EQIP

Criteria	Categories	Percentage of the 15 sample schools meeting the criteria
Type of school	Core	20%
	Satellite	80%
Gender of director	Male	73%
	Female (approx 50% of population in Cambodia are women, but under represented in management positions)	27%
Time in EQIP project	18 months (sample adjusted to represent all districts)	73%
	30 months	27%
Location	Urban (within the provincial capital)	7%
	Rural (outside urban capital, within easy access of road)	86%
	Remote (not easily accessible by road and 25km from the nearest district centre)	7%
Size	1 – 7 classes	27%
	8- 15 classes	53%
	16+ classes	20%
Breakfast programme	Yes	20%
	No	80%

The M&E exercise consisted of a series of focused visits, made between February and May 2003 by a team of Khmer provincial and international project staff. Some use had already been made of moderation exercises between district advisors and international project staff to check consistency of scoring and feedback. During these moderations there was general agreement on the best fit level descriptors in the teaching and classroom sections of the observation form, but greater discrepancies in the learning section (MoEYS 2003a). The focused visits comprised of classroom observations using the EQIP monitoring forms and generally included semi-structured interviews with the school director, classroom teachers, school librarian and members of the community. All the monitoring forms completed by cluster supervision teams from the sample schools were collected during the M&E visits. The data collected from the supervision teams and M&E team is contextualised by referring to qualitative data that described teaching and training activities that took place during the period of April 2001 to January 2003.

Data analysis derived from the monitoring and evaluation exercise EQIP

The data collected from the SEER forms shows how the school was graded and suggests what improvements were made over a period of time. It is possible to make some comparisons between schools and their different circumstances, but the sample is too small to draw any conclusions. The classroom data collected from the sample schools consisted of 60 observations made by the M&E team and 219 observations made by other supervision teams (MoEYS 2003a). This data can be compared, if due consideration is given to the differences in the quantities of visits and the use of averaging. The data provides some insight into how the monitoring teams scored the classroom observations using the rating forms. There is an observable pattern in how the M&E team scored their visits. The classroom section is rated at the highest level, followed by the teaching section and then the learning section. This pattern is the same for all 15 schools in the sample. The Cluster Supervision Team (CST) observations generally follow the same pattern with the exception of one school having a higher score in learning than that of the classroom section and six schools scoring the same or higher in the learning section than the teaching section. Overall scoring is different between the two teams. On 33% of the observations the M&E team scored some sections on the forms with a rating of less than 3, where as the CST teams only scored less than 3 on 11% of the sections. This suggests that expectations and interpretations of the observations made were different. The other largest difference when comparing the results from the two teams was the difference in scoring between each section

The results of the comparison between the M&E team and the CST team can be seen for each section of the monitoring form; the classroom in figure 3.5, teaching in figure 3.6 and learning in figure 3.7. As in earlier moderation visits, the greatest mismatch between the scoring of the supervision teams and the M&E team lies in the section on learning. Exploring the reasons behind these differences in the scoring of the teams provides insight into the interpretations made by local and international staff. Throughout the project, class teachers were always positive about the value of supervision, even though it was recognised by school directors and others that the quality of the feedback given was often poor. It was suggested that supervision caused a ‘Hawthorne’ effect: the act of the supervision itself and someone spending time with a teacher went some way to improving the teaching.

Figure 3.5 Comparison of scores awarded by different observation teams: classroom

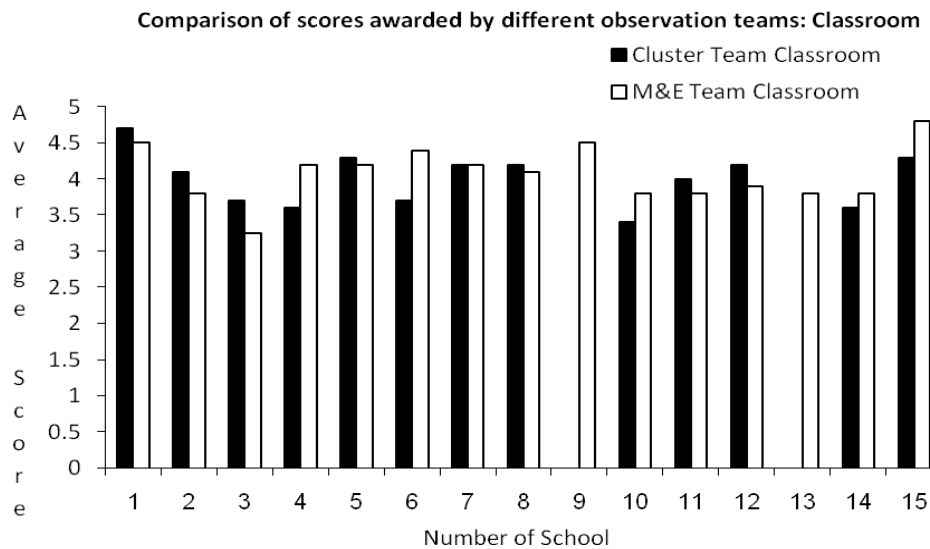


Figure 3.6 Comparison of scores awarded by different observation teams: teaching

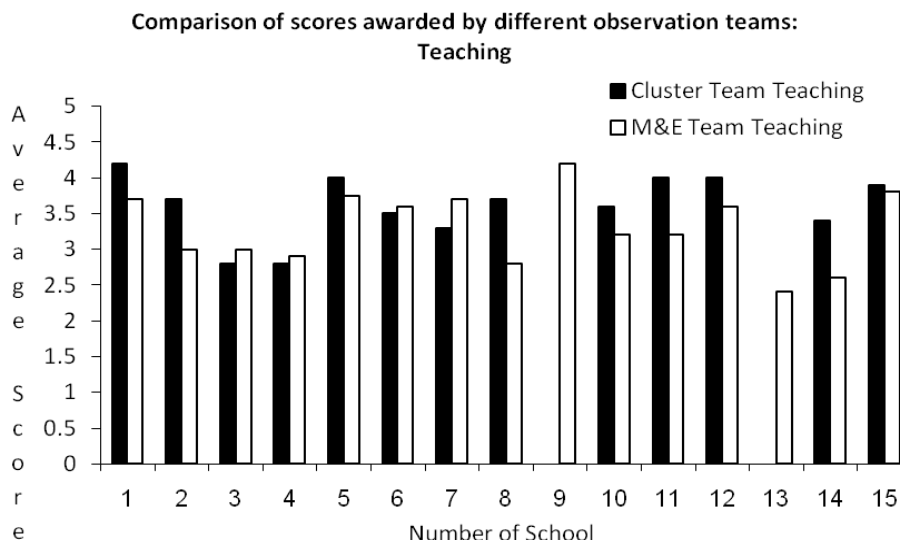
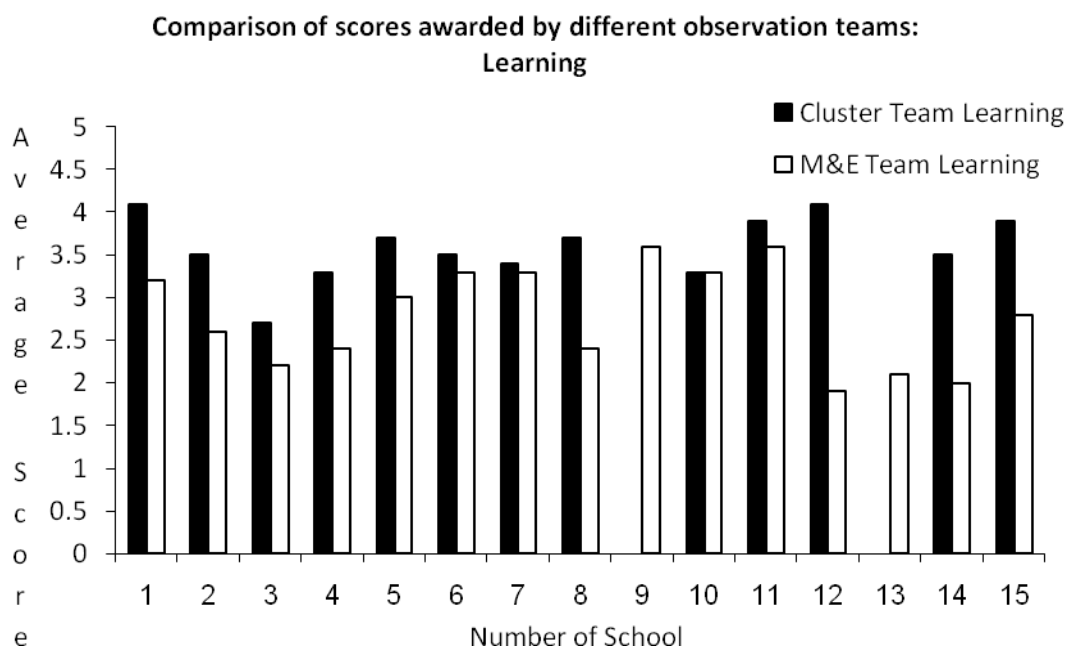


Figure 3.7 Comparison of scores awarded by different observation teams: teaching



Feedback comments were generally descriptive, judging the practice that had been observed. In 91% of the comments teachers were asked to improve their practice. Examples included 'prepare a lesson plan' or 'encourage pupils to write neatly'. Although the observation form had been split into three parts, the majority of feedback concentrated on the teaching section. Feedback on the teaching section focused on four areas: support given to slow learners; group work; teaching resources and the teacher's use of questions. A few comments in this section did identify some of the issues that teachers were facing. In observations of group work one supervision team pointed out that pupils worked individually and were often off task. The teachers' ability to ask questions was a frequently occurring theme, but no suggestions as to how they might improve in this area were given. More feedback was given about slow learners than any other category, generally encouraging teachers to plan specifically for slow learners and monitor their progress. There were suggestions as to how slow learners could be supported; which included helping at least one slow learner an hour, or two a lesson, sitting a slow learner with a more able pupil, listening to slow learners read and providing more activities or additional explanation. Comments on the classroom section of the form were nearly all related to display or administrative issues. Only 15% of the total comments related to what children learnt. Comments on learning referred to marking books, helping pupils ask questions and pupils' access to learning materials. The quality and quantity of comments varied. For example in one school only three different comments had been made for all the supervisions that had taken place during the school year. They included 'strengthen the capacity of the slow-learner', 'use more materials' and 'make regular lesson plans in all subjects'. With the exception of the section on slow learners all the scores given to the

teachers by the CST at this school were high. The CST feedback provides an indication of what the supervisors understood of the teaching and learning process they were observing.

During the M&E exercise observations noted that many teachers used a third of the space in a classroom limiting the teachers' access to the pupils compressed into the remaining two thirds. Changing this practice so the teacher does have access to the pupils may appear to improve the quality of the teaching and learning process as the teacher can walk around the room and assess. Realistically, providing access to the pupils alone will not improve the quality of the process. The teacher would also need to prepare pupils activities that went beyond the current practice of reproducing the exercise on the chalkboard. Once pupils were engaged in the new activities the teacher would need sufficient skills to help the pupils construct understanding and meaning. If a descriptor was created for this situation the ratings may create a superficial result. For example *'the teacher assesses pupils' learning throughout the lesson'*. The descriptor would be dependent upon the activities set creating a learning situation and the skills of the teacher to support the learning through the use of that activity.

I had often seen pupils sitting in groups, but the task was generally not suitable for group work and consequently was done individually or only one child in the group was involved. In mathematics sessions this often resulted in one pupil doing a calculation while other pupils either observed or were off task. The M&E team concluded that in this situation learning was less constructive than when all pupils were observed working on the exercise individually. The observation form may have prevented the CST from interpreting the situation in terms of teaching and learning as they could see group work as a descriptor that was rated more highly than individual work. The form was therefore leading them to observe single strategies rather than interpret the whole teaching and learning process. During several observations it was noted that activities for pupils were inappropriate or that the demonstration from the teacher had taken most of the lesson. Again CST observations suggested that a teacher with resources, even though they may have not been particularly useful or relevant, was achieving at a higher level than a teacher without. These findings suggest that when the strategies become separated from an understanding of the pedagogy they are derived from the learning process is constrained.

Learner-centred approaches to teaching demand more of the teacher than the traditional teacher-centred pedagogies that were used by the majority of teachers in Cambodia. Throughout the project teacher trainers had been asked to model learner-centred teaching. Observation forms identified an increase in teachers who used learner-centred teaching in the

classroom, but what was understood by learner-centred teaching still remained questionable as this example illustrates. A trainer was observed preparing for a training session for grade 1 teachers on 'eye awareness', a topic from the school text book. He explained his training session would include two activities. Teachers would draw a beautiful woman as a teaching aid to start a discussion with pupils. Teachers would draw a set of eyes for each of their groups and the pupils would discuss the pictures. In an interview with the trainer after the session alternative activities were suggested. Teachers could ask pupils to discuss what they saw on the way to school and record their responses. The teacher could ask the pupils to work in pairs drawing one another's eyes. When the observer and trainer discussed these activities the trainer explained they were not pupil-centred as the teacher would not have used a teaching aid and the children would not have participated in group discussion. This suggests that the trainer's understanding of learning reflected the measurable criteria on observation forms rather than demonstrating an understanding of how pupils learn.

In interviews with teachers and school directors, learner-centred teaching was not explained in terms of what and how the pupils learn. Instead characteristics were given that the teacher needed to demonstrate in the classroom in order to be judged as teaching in a learner-centred way. These characteristics included encouraging pupils to ask questions and discuss, arrange tables or pupils in groups and provide pupils with visual aids and lively classroom display. These findings are not dissimilar from the categories that Brodie et al (2002) used to analyse their data of teachers' use of learner-centred teaching. They identified resources, group work, tasks and questions and described these as the forms or strategies which may or may not have contributed to the substance of learner-centred teaching. Brodie et al (2002) categorised their findings into a matrix where the majority of teachers fell into the category of taking up the strategies from the training, but not the substance of learner-centred teaching which they concluded required more time.

An analysis of global pedagogy in a national context from EQIP

Although learner-centred pedagogy was promoted by MoEYS and underpins the EQIP project there still remains a lack of clarity of its definition. In the EQIP Annual Project Progress Report (MoEYS 2003b) in Year 4 'Child-centred Learning' is used as a front page title, but no reference to what this means in terms of pedagogy or practice is given. A close reading of the report will provide an inkling of what the project designers are referring to, for example the report refers to '*learner-centred classroom management*' and '*encourage the "learning by doing" approach*' on page 60 and on page 73 the report states that '*we have found ways to improve teaching and learning. Strategies include: 'How to keep all pupils actively learning, how to plan to teach*

for learning results, how to incorporate the learning materials displays in the teaching program'. If these points are compared to the comments made by the national supervision teams it would appear that the superficial understanding of child-centred learning permeates the whole project. At the end of the report is a series of attachments. Attachment 14 provides considerable insight into what the Ministry of Education understood the teaching and learning process to be. The attachment provides a record of school supervision reports carried out by the deputy chief and chief of the following education departments: Teacher Training, Inspectorate General, Educational Planning and Primary Education Department and Pedagogical Research Department. (*The reports from the Pedagogical Research Department have not been used as they are identical between the provinces and suggest a lack of thoroughness compared with the others*). The reports were written up under a number of headings. The summaries and subsequent analysis are taken from the sections on each report under the headings of teaching and learning (*figure 3.8*) and teacher training (*figure 3.9*). Names and departments have been removed.

An analysis of the teaching and learning and teacher training components of these reports are important as they provide a glimpse into how MoEYS describe child-centred learning. The reports, although written out under a set of headings appear not to have followed a specific monitoring tool and therefore more insight is gleaned into what MoEYS officials ascribed value to.

The majority of the report referred to lesson plans, child-centred approaches and materials. Seven of the eight descriptions written under teaching and learning referred to teachers implementing a child or student centred approach, with one description referring to an active teaching method. Six of the eight sentences on child-centred approaches were coupled with a description on lesson planning. Lesson planning referred specifically to the '*three column and five step approach*' and description three even provided an outline of the five steps. Seven out of the eight observations referred to the use of learning materials. The rest of the comments were more wide ranging. Four of the reports commented on an active method or climate. Three reports mentioned questions. In all three comments the word question is coupled with '*brave*'. Only one comment was related to assessment; '*teachers evaluated students knowledge more often*'. Comments on learning were less frequent. Two descriptions suggested that children found it easy to understand, another comment stated that the learning atmosphere was '*full of enjoyment*', a third comment was related to the student being interested in learning and that children were exchanging ideas and there was one comment about children being confident.

In summarising the comments in this way it is clear that emphasis is placed on correctness of process, the importance of writing the lesson plan in the correct way. Teachers implementing child-centred approaches are seen as progress. There is no real indication as how the child-centred methodology is applied in the classroom, beyond a suggestion that it has something to do with correct use of teaching and learning materials, encouraging pupils to be more active, asking more questions and it may include a hint of enjoyment or interest in learning.

Figure 3.8 : The MoEYS perspective on teaching and learning

MoEYS Official	Notes from the observation of teaching and learning made by ministry officials when visiting classrooms in the EQIP project
1	<p>Lesson plans were seen and made regularly for all subjects. The objectives of the lessons were properly set up</p> <p>Materials were relevant to the lessons and well used and the teachers followed the lesson plans properly</p> <p>Lesson plans were written in the three columns which followed the recommendation of the teacher training college</p> <p>Teachers used a child-centred approach.</p> <p>Teachers evaluated students' knowledge more often</p>
2	<p>Through direct observation, teachers have implemented student-centred approach. They applied five steps and three column principle with reference to the lesson plan. Some of the other school practiced five steps and three columns principle of the Ministry of Education Youth and Sport. Each step had a good link.</p> <p>They made the student understand.</p> <p>Teachers used tangible, semi-tangible and intangible material.</p> <p>Schools' climate is active.</p> <p>Student in the group bravely answered the question.</p> <p>They came up to the blackboard sticking puzzle pictures. It made student easily understand and confident.</p>
3	<p>Each school has prepared lesson plan as three columns with content, teacher and student's activities. For the new graduated teachers practiced one column and old teachers implemented five steps as a child-centred approach.</p> <p>In the lesson plan, accurate objectives oriented lesson was taking into account: Knowledge (content and major rule were provided to the students). Skill (in thinking and in carry out) Attitude (change of morality and virtue of living)</p> <p>Teacher had adequate material to reflect the lessons. Students also had material which was appropriate with the content of the lesson.</p> <p>The learning atmosphere was full of enjoyment.</p> <p>Plan was well applied according to each step:</p> <p>First step: Class balance maintenance for student's concentration.</p> <p>Second step: Review old lessons</p> <p>Third step: Teach new contents</p> <p>Fourth step: Strengthen knowledge and evaluation</p> <p>Fifth step: Homework and other advises</p>
4	<p>Child-centred method was used by implementing the four techniques of Technical Group Leader documents</p> <p>The students were then brave in answering the questions and giving the ideas with the teachers as well as with their friends.</p>
5	<p>Teachers have strived for teaching with the application of student-centred approach</p> <p>They respected the five steps principle and three columns</p>

	They used material that made student easily to understand and remember well. Students were active in follow up the lessons until the completion of the five steps.
6	Teachers had regular lesson plan and step teaching book. They practiced student-centred approach and organized teaching material. Student used better environment material. Student took part in with interest to learn, understand, consider, dare to question, answer, exchange and provide idea with children language. The classroom's climate was active.
7	With adequate teaching material, teaching and learning are qualitative. Teacher used student-centred approach and all teaching linked to the lesson plan.
8	Schools had various kinds of teaching and learning materials and both teachers and students were able to use teaching and learning materials. Teachers used an active method and it was easy to understand.

Source: Adapted from MoEYS (2003a) Project Annual Progress Report School Year 2004 Attachment 14, pages 75 – 93

Seven of the eight reports written by the MoEYS officials also gave an account of training (*see figure 3.9*). By their comments the evidence in the report appears to have come from interviews with school directors but it is also possible some training was observed. All seven reports referred to regular Thursday training and demonstration classes and six out of the seven reports comment on materials production. Additionally one report mentioned teacher supervisions which suggest that the writer understood this to be part of teacher training. Given the amount of supervision implemented through the EQIP project it was surprising more reports did not make this link. One report mentioned that the cluster made use of the Provincial Teacher Training College to facilitate training and one comment was made about the Technical Group Leader using the child-centred-learning approach, but this was coupled back to the five step lesson plan. It is unlikely that these reports provide an accurate record of the teacher training. There is plenty of evidence to suggest from other EQIP reports that Thursday training was implemented regularly. What is not so clear is how much of the Thursday trainings were given over almost entirely to materials production. Evidence in Kampot suggests that this was common in the majority of clusters (MoEYS 2002c, 2003a). What these observations do give is a further glimpse into what MoEYS perceived teacher training should be. Additionally it alerts the researcher to some of the difficulties of implementing teacher training programmes.

Figure 3.9: The MoEYS perspective on teacher training

MoEYS Inspector	Notes from the observation made by ministry officials when visiting teaching training in EQIP project schools
1	Teacher Training and Technical Group Leader (TGL) meeting were organised to strengthen the capacity of the teachers and TGL Members Schools had regular inspection to observe the teacher teaching Good and experienced teachers were selected to show demonstration classes in

	order to share the experience to each other among the teachers in the cluster Teaching materials were produced by the teachers and by grades
2	In enhancing education quality and effectiveness, the capacity of leaders of the Provincial and Office of Education Services, chief of the cluster and principals have been strengthened through technical meetings, demonstration, class seminars at the core school of each cluster as determined time. At the technical meeting, each TGL raised student-centred approach to state each subjects via the five steps and one column principle, using teaching material produced by core cluster schools, satellite schools or by classroom teachers. With the initiative from certain clusters, the Thursday training has been divided into four groups. The first group is for knowledge training, second group for research and methodology, third group for class demonstration and fourth group for technical meeting at each school (Kraing Ponro cluster school).
3	Experienced teachers for demonstration class were thoroughly selected. The demonstration class was performed regularly as scheduled. Material teaching producing was remarkably made in the light of lesson content for each grade.
4	Clusters and schools organised the regular teacher training and TGL meeting activities for full day on every Thursday by having the trainers from the Provincial Teacher Training College as the facilitator.
5	Teacher training and technical group leader of the core and satellite schools, generally there was technical training through the subjects at the teachers' request by hiring trainer with the use of EQIP's budget. At the same time, there was technical meeting, demonstration class and teaching material production to strengthen quality and effective teachers..
6	Every Thursday meeting has a teacher training program, technical meeting, pedagogical meeting, a demonstration class and producing teaching material for all subjects.
7	As the school principal reported, every Thursday there was a pedagogical meeting at the school including the demonstration class. The technical group leader helped instruct a lot of teaching material producing for each classroom.
8	No comment

Source: Adapted from MoEYS (2003a) Project Annual Progress Report School Year 2004 Attachment 14, pages 75 – 93

Evaluation of training reported in the EQIP Annual Report for 2003 (MoEYS 2003c) suggested that training sessions were ineffective because a disproportionate amount of time was spent on material production compared with learning. The materials produced were often only relevant for one lesson, they were often costly and poorly made and rarely durable. Training sessions were not well planned. Trainers lacked knowledge and skills needed to train in some subject areas. Many making sessions included origami to decorate classrooms and libraries and had little benefit for the pupil. Few materials were made for pupil use.

Concluding Remarks

Monitoring and evaluation tools used in education improvement projects need to be designed in order that they make it possible to measure aspects of quality improvement. This would

suggest that quality has to be defined, agreed, realistic and measurable if the use of the form is to provide a measure of qualitative change. The data analysis has revealed that the monitoring instruments did provide a snap shot picture of the school at a given moment in time. Triangulation and moderation exercises in the EQIP project have provided some evidence that the ratings system was reasonably robust. The forms themselves had evolved over time with input from many stakeholders so it could be argued that there was an agreed consensus as to what constituted quality improvement, although the descriptors identified were largely internationally defined. In the EQIP project monitoring forms appeared to work well where the indicators were based on school environment as less interpretation was required. The monitoring forms did encourage stakeholders to change practice in order to obtain higher scores. This worked with the more easily measurable descriptors such as keeping the school yard clean, providing drinking water and sweeping classes. The ratings achieved by schools concerned with classroom and school environment were relatively consistent across teams suggesting an agreed understanding.

Where monitoring and evaluation tools are used to measure the quality of the teaching and learning process many difficulties are encountered. As Alexander (2001) had pointed out the factorisation of pedagogy in order to standardise outcomes meant the forms did not encourage holistic interpretation and consequently the measurement can become disembodied from the processes taking place. The necessity for donors to provide evidence that their projects are having an impact may lead to the design of monitoring tools on the basis of pedagogic practices that may have been internationally imported rather than derived from an agreed discussion of what changes could realistically be made to improve the quality of the education in the national context. As with Harley's (2005) research on logframes, the use of monitoring tools that introduce easily measurable and observable criteria may identify the desired outcomes for a project, but can fail to identify '*unintended consequences*' and '*may mask aspects of critical importance to overall project impact*' (Harley 2005: 36).

The last section has focused on the use of forms as a tool for measurement, but at the beginning of the section it was stated that these tools had two purposes, the second of which was to support quality improvement in teaching and learning processes. How far the tool contributed to improvements in the teaching and learning process is debatable. The feedback given demonstrates that the quality of supervision was generally poor, often focused on the more superficial aspects of teaching and rarely concerned with learning. This would suggest that despite good intentions the form did not support the teaching and learning process. What it may have done was provide teachers with 'best-fit' examples of what their practice should

look like, but without an understanding of what this meant in the classroom so it was difficult for teachers to aspire to the next rating. When teachers did achieve a higher rating it may have been because they had added an additional strategy or resource, but often the observer was unable to determine whether that strategy or resource had improved the learning.

The findings from the EQIP monitoring and evaluation matched the research literature. Alexander (2001) had emphasised that if the teaching and learning processes became separated from classroom practices and culture, outcomes would be superficial. O'Sullivan (2006) pointed out that quality education had to be grounded in cultural traditions. Sidhu (2007) suggested that quality regimes can lead to the creation of instruments that result in educators behaving in a certain way and Hailey & Sorgenfrei (2004) warned that it is all too easy to neglect the qualitative indicators in favour of more manageable quantitative processes. The EQIP research and literature review findings were all taken into account before designing the monitoring and evaluation tools for the BETT programmes.

In EQIP, exploring the reasons behind the differences in the scoring of the teams provided insight into the interpretations made by local and international staff and how the process could be improved. Feedback comments were generally descriptive, judging the practice that had been observed with few recommendations on how teachers could improve. Only 15% of the total comments related to what children learnt and when they did, referred to marking books, helping pupils ask questions and access to learning materials rather than content. There has to be agreed understanding on interpretation which means all stakeholders must be involved in the design process. The descriptor based tools often require the building of one descriptor on to another which complicated interpretation. Unless the descriptor was related to an easily observable criterion it was open to interpretation. Quality descriptors end up as fragmented lists. Descriptors become unattached from the underling pedagogy. Rating tools force judgements of improvement when no improvement may have been made. The users of the tools, both observers and teachers, have to understand the underlining principles of the descriptors. Desired outcomes may be identified by descriptors, but unintended outcomes could be masked.

This chapter, through an analysis of the EQIP monitoring and evaluation programme has contributed to answering: 'How far were the experts imposing their ideologies, educational values and strategies on the local people and did that match with the local needs?' The EQIP M&E process revealed that despite four years of project implementation an agreement of what constitutes good teaching and learning is not shared between national and international

project staff. This may be partially due to the mismatch between pedagogic approaches or an understanding of teaching and learning processes, but it could also reflect the way national and international teams work together and the relative values placed on that partnership an issue I will explore in more detail in the next chapter.

The discussions in this chapter have led me to conclude that the design of a project and the tools used to measure its success are based on the imposed pedagogies and ideologies of the external consultants which leads to inflexibility and misunderstandings. I do not think this is intentional hegemonic practice, but that it has become so embedded in the globalised culture of the design process and project accountability arrangements that there ceases to be an awareness of the impact of these elements on the results. An examination of the EQIP project in this chapter has enabled me to identify the unintended consequences of logframe planning and accountability practices and in doing so consider how I can operate in these imposed frameworks when designing a teacher education project. I hypothesised that an open ended design to measuring tools would avoid some superficial practices and create a space for discussion between the experts and the national educators that would lead to a shared agreement on what might constitute realistic change, an approach I took in the design of the BETT maths programme which I will examine in Chapter Five.

Chapter Four: Ownership, Cost Effectiveness, Partnership and Sustainability in Project Design

Chapter Three built on the evidence from Chapter One that identified how global agendas influence national planning, implementation and evaluation of donor projects. At the end of Chapter Three I raised questions as to why national and international teams viewed education differently. I suggested that this difference in perceptions could result from the way national and international teams work together. It may also be reflected by the differing relationships that stakeholders have to the project. Development policy stresses the importance of ownership, partnership and sustainability, but what do these global policies look like when they are applied to projects in national and local contexts? Unpacking these concepts contributes to answering the question *'How can national and international project staff work together with local people to develop the education system?'* In this chapter because I analyse these concepts in relationship to project design it inevitably leads to a discussion on cost effectiveness. All projects work in limited budgets and choices have to be made on how these budgets are used. Therefore this chapter also contributes to answering the question *'How should a teacher education programme be developed and what components should it include?'*

In order to explore the concepts and contribute to answering the research questions I analyse a health project based in one province in Cambodia. The findings from the health project show how difficult it is to embed the underlying development principles of global development aid into practice and some of the difficulties that arise in project design.

Children's Health

The Global Monitoring Report states that global recession leads to increased poverty and malnutrition. This effects school participation and engagement with the curriculum and also cognitive ability. Behrman et al (2008:vi) in a longitudinal study in Guatemala found that: the impact on reading-comprehension scores of not being stunted at age 6 is equivalent to the impact of four grades of schooling.

The health and nutrition situation in Cambodia is among the most critical in the Asia-Pacific region with an estimated under five mortality rate of 141 out of 1000 live births (World Bank 2006). The main causes of death are diarrhoea, dengue fever, vaccine preventable diseases and malnutrition (Nhean 2004). During the period of 2001 - 2003 only 16% of the population had access to adequate sanitation and 34% of the population were using improved drinking water (UNICEF 2004). Aid in Cambodia's education system had been concentrated on improving the quality of teaching and the physical environment of the school, but according to

World Bank (1993) efforts to raise the health and nutrition status of children at the same time is more likely to lead to an improvement in achievement. Themane et al (2003) in a study in South Africa concluded that there was a positive relationship between malnutrition and educational achievement. The purpose of introducing a health programme into the EQIP project was to bring about behavioural change in pupils that would lead to improved health and hence improved educational achievement. School performance is hindered by attention deficits caused by malnutrition, severe worm infections contributing to anaemia, iodine deficiency leading to sensory impairment and Vitamin A and Iron deficiency reducing resistance in the immune system (Nhean, 2004).

Development of the physical infrastructure in EQIP schools had led to improved school sanitation with new schools being built with latrines and a safe water supply. The animators working on the EQIP project identified that access to toilets and safe water had affected pupil health and the drop out rate for older girls (MoEYS 2002). By 2002-3 the grant spending on latrines and safe water systems accounted for an average 12.7% of the EQIP budget in Kampot. Despite unprecedented levels of investment into sanitation systems it was still widely reported by the animators that toilets were not used correctly. School directors often kept them locked or made them only accessible to staff to ensure they remained clean. When toilets were open they were often unhygienic, lacking water or any cleaning and therefore not used (MoEYS 2002). Markandya (2004) writes that the environmental risk factor of poor hygiene, sanitation and unsafe water is the leading cause associated with mortality. Larsen (2004) writes there are early indications that promoting good hygienic practice could lead to a decline in child death as well as being more cost effective than large community based sanitation and water projects.

In 2003 in Kampot there were several health programmes that had been or were in the process of being implemented. The World Food Programme was operating in three of the eight districts providing some health education to local communities, school breakfasts and de-worming at six month intervals. German Technical Cooperation (GTZ) was running a health programme in four of the eight districts that included education and the distribution of vitamins A and B complex, mebendazole de-worming and iron supplements. Focusing Resources on Effective School Health, (FRESH) was launched by the World Education Forum in Senegal. It was designed, implemented and financed by WHO, UNICEF, UNESCO and World Bank who had concluded that single strategy health initiatives were not the most effective (UNESCO 2003a). FRESH provides an example of partnership taking the form of joint planning, financing and implementation. Fresh was implemented in a few schools in Kampot province. Organisations such as the Child-to-Child Trust have developed training programmes that draw

on FRESH, but also promote an essential element of health promotion which involves children in the process. They suggest child-to-child activities provide an approach that can be used in existing health projects. The child to child approach has been used by Pepy Ride in Siem Reap and Partners for Development in several provinces in Cambodia where there is a focus on malaria. In 2012 there appeared to be no further evidence that this work has been continued in Kampot (see <http://www.child-to-child.org/ctcworldwide>, accessed April 12th 2012). With existing small scale health programmes on-going in Kampot, the new investment in the provincial education system from 2001 through EQIP and the Priority Action Programme, (Asian Development Bank) coupled with local concern for pupils' health, provided strong motivation for implementing a province wide preventative health programme.

Early discussions by representatives from German Development Services (DED) partnered with Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), Voluntary Services Overseas (VSO) and EQIP staff suggested that any programme developed should lead to behavioural change. Despite the difficulty of stakeholder involvement in projects, behavioural change is seen as a more sustainable approach to health improvement than treatment programmes which require greater financial resources and are neither sustainable nor transmittable (Larsen, 2004). However, behavioural change requires a series of events that could fail at any point and thus make these types of projects open to a nil result (Cave & Curtis 1999). The majority of health programmes that had already been implemented in the province could be described as treatment rather than prevention as they generally included free food supplements and medication.

Kampot School Health Programme (KSHP) Case Study

I have already identified through the EQIP project that one of the difficulties of working with local and international teams is a lack of discussion about definitions. So at the inception of the KSHP all the organisations and stakeholders involved came together to gain shared understanding of the health issues in the province. A questionnaire was designed by the health organisations and given to sample schools to provide opportunities for local people to identify diseases their children were most affected by and to describe the support they felt they needed to help prevent them. These questionnaires were completed by 51 schools. The data revealed local beneficiaries had different perspectives from organisations implementing the health programmes. Differences included how language was used, what was known about local health issues and cultural values.

Teachers and children were also interviewed about health issues and this revealed further differences between the data on the school questionnaires and the data from the teacher and pupil interviews. In all of the questionnaires returned from schools there was no mention of scabies, but 87 children interviewed reported having had skin itchininess and lesions at some point in time and teachers raised the issue that nearly all pupils had or were suffering from scabies, although this was never referred to as a disease. The results of the questionnaire showed the most common diseases included dengue fever, worms, diarrhoea and malaria. Only one response mentioned anaemia although GTZ and Integrated Food Security Program identified Iron Deficiency Anaemia as an overwhelming problem in Cambodia, which affects the majority of children and women of reproductive age (Longfils, 2002). There was some reference to HIV and AIDS in the results from questionnaires, but it was agreed by all partners that it would be too difficult to incorporate this aspect of preventive health into the timeframe and within project resources and there were other organisations involved in the delivery of HIV and AIDs training within the province.

A trial health day was implemented based on the provincial resources and on the findings from the questionnaires and interviews. Implementation made use of new developments in the province such as, the EQIP participatory model of school improvement; the ADB Priority Action Programme (PAP) budget management structure; research and knowledge of the partner organisations of GTZ and DED, and investments in improved sanitation. Content was based on existing school curriculum for science and social studies from grade 1 to grade 6 and project knowledge of the teaching and learning process and skills of the teachers and directors. Additionally the design aimed at some new developments including the forging of greater links between health centres and schools and encouraging local involvement within the community. The final content of the health day included an introduction to the immune system; transmission and prevention of worms, diarrhoea and skin diseases.

The trial phase was monitored. Teachers completed pre and post training tests on their knowledge of health issues, but these were insufficiently interrogative to provide evidence of increased understanding. Pupil interviews revealed a varied level of understanding after the health day, attributable to many factors, including age, quality of teaching, and attentiveness during sessions. Observations of teachers confirmed that they had understood the health content and showed some success at using a more interactive approach to teaching. The school director was unable to implement a school health day without considerable support. Although community and health centre staff were invited they did not attend during the trial. Strategies for community involvement required more consideration. Observations and

interviews revealed that there was confusion in an agreed understanding of what constituted skin disease. It was possible that the confusion was caused by the formal use of language already recognised as an issue in the initial survey. It was agreed that scabies should be referred to as skin itchiness.

Four months after the pilot project had been implemented a technical assistant on the EQIP project conducted several informal interviews with the staff and children in the pilot school. The school director was asked if there had been any improvement in the hygienic behaviour of pupils in school.

More children are wearing shoes to use the latrine and more children are now washing their hands after the morning litter collection.... Pupils know more about health issues....There was a decrease in the number of diarrhoea cases in school... when a student is absent their parents often report to the school to excuse their child and in doing so give the cause for the absence. The number of absentees reported to be caused by diarrhoea had reduced since the health day (School Director MoEYS 2003b).

This statement provides anecdotal evidence that there may have been behavioural change due to the school health day, but there is no independent evidence that this had improved pupil health. Interviews with school staff demonstrate an increased awareness of basic hygienic practices.

As part of the EQIP project at the start of each new school year, the community and school director, with the support of the animator, worked through a process of agreeing a shared vision and action plan for their schools which would be funded by the EQIP budget. In the school year 2002/3, this process included a discussion on preventative health education. The district education advisers described to each cluster of schools how the health project had been designed and explained how they could use their budget to take part in the project. The schools would have felt some external pressure to 'buy-in' to the project, but as the animators who were representing the concerns of the schools had initiated the project itself it was not perceived as external consultant priorities taking precedence over local need. In practise it meant schools had ownership of the project from the start and it was hoped, therefore, that they would take some responsibility for the outcomes.

To make the greatest impact it was decided by the consultants and animators that a school day would be given over to the health programme. A school day was approximately four hours and referred to as a shift. Most schools operated two shifts per day, each shift having a different set of pupils. It was planned that the health day should consist of two lessons on health, which

included activities to get pupils involved, and a story with a health theme to be told to the whole school as a community. By using a whole school day and a whole school approach it was intended that the input was special and thus more memorable. It would also be easier for the teacher to constantly remind the children of the messages they had heard by referring back to the health day. Initially it was hoped that there could be four school health days a year and once these had been implemented during the first year they could be repeated year on year with minimal additional costs ensuring the health messages would become sustainable.

The trial had taken place in only one school and now that all schools in the province wanted to take part the risks associated with large project implementation became apparent. Larger implementation models generally lead to more cascade training. Cascade training runs the risk of delivering incorrect information and introducing misconceptions (Morgan and Deutschmann 2003, O'Donoghue 1995). To reduce the risks associated with cascade training the international team allowed additional time to support the development of subject and pedagogical knowledge by the trainers. The teacher trainers received training over a two day period based on the health content and teaching strategies. The directors were given one day of training that included a summarised version of the subject understanding that trainers had received and detailed guidance on how to organise a health day. The animators worked with directors in their district so that by the end of the training day, plans and timetables had been drawn up for the health day implementation. The project design provided an opportunity to support directors in developing leadership and management skills which fitted into the aims of EQIP.

The budget for the project came from three sources. GTZ provided international technical assistance and national health trainers for the directors' training and the teacher trainers' training. This was a total of 40 person days for the two phases of the project. The training allowances for the participants came from the EQIP national Project Implementation Unit budget at a cost of \$562.50 (MoEYS 2003b). The teachers were trained in schools. The schools met the costs of the teachers' training allowance, the teacher trainer fee and the basic materials to produce the resources, approximately, \$27,000 for the 260 participating schools. Implementing the project in the first year cost 20 cents per pupil. In subsequent years costs would be minimal, providing the health days were delivered regularly so there would be no significant loss of subject understanding and the resources that had been made were appropriately stored after use.

Observations from the KSHP

Technical assistants observed twelve school health days. The health days were generally lively and engaging and activities were educational. Competence of school staff varied and as a result some school health days were more successful than others. Using teachers, rather than external visitors or health staff was seen as positive (MoEYS 2003b). Teachers had daily contact with children so messages could be reinforced. Classroom observations provided evidence that teachers had some health subject knowledge and taught the lessons well. The results of the questionnaire pointed towards subject knowledge deteriorating if lessons were not regularly taught. Some teachers were seen embellishing the lesson content with their own knowledge. This often improved the delivery but sometimes lost the message or included inaccuracies. The cascade training had occasionally led to changes in information by the time that it reached the pupils, but in the health days observed no significant misconceptions were introduced. Teachers who were interviewed during the health day observations stated that the training they received from the teacher trainers was sufficient to allow them to deliver their lessons confidently. They commented that the information in the lesson complemented the textbooks well, explaining the content whilst providing additional information. Pupils demonstrated through questioning that they knew what actions they should take to prevent disease, but did not always know why.

The reports from those observations note that directors followed plans and were actively involved in managing and co-ordinating the day. Many school directors were managing latrines and waste disposal for the first time. Providing opportunities for discussion allowed them to identify methods and strategies they were using to manage their facilities hygienically; this was an important part of the project. By the end of the training directors had a strategy for managing latrines and were able to structure their timetables for the implementation of the health day. They had a basic understanding of the health issues that would be addressed. UNESCO (2004a) write that in moving towards decentralisation and giving autonomy to local people the training of school directors and the support they need must be taken into account. The KSHP promoted a whole school approach, where the director played a key role, rather than solely relying on the teachers and teacher trainers, but the project had no follow-up support.

In observations of the teacher trainers it was noted that their interest and motivation led to subject knowledge acquisition and in-depth understanding. Trainers used a microscope for the first time, which was for most a very exciting experience. Having access to scientific equipment

enhanced their learning experience, but it also contributed to their feeling of being valued and gave the training greater status.

Community involvement was limited. Most schools only invited the community chief, who was often unable to attend. Approximately half of the school health days observed had no community representative. The only exceptions to this were the schools in Chhouk district. The district adviser in Chhouk had actively encouraged community involvement. Community meetings were planned for and as a result many community members attended

Sustainability of the KSHP

18 months after KSHP was implemented follow-up questionnaires were given to 100 primary school directors. The data generated from the questionnaires was both quantitative and qualitative. The results can be divided into three groups: 48 schools did not continue the project; 33 questionnaires did not provide clear evidence that the project was continued, so for the purpose of this analysis the data from these has not been included; 18 schools continued with the project implementing one or two health days in the following year.

Nearly all of the respondents identified an improvement in the hygienic practices of children; for example over 90% of directors claimed that after the health days more children were wearing footwear to school and washing their hands. The information given was based on the perceptions of the directors; there is no empirical evidence that there was behavioural change. What the data does is to demonstrate that directors had a clear understanding of the types of behavioural change that would bring about an improvement in health. Results from the questionnaire also indicate that there have been some improvements in the management of the school environment. Respondents wrote that there were better cleaning systems in the school yard, more litter bins had been placed, access to water for hand washing had been provided and there were improved routines for keeping latrines clean. Again it shows that directors understand the types of procedures they need to be put in place to ensure the school environment is safe. There is some evidence to support the directors' claims that they were putting these procedures into practice. Observations during the EQIP provincial monitoring and evaluation exercise discussed in Chapter Three indicated that there was improvement in the management of the school environment.

The questionnaires prompted directors to identify strategies they had put in place to improve the school environment, to demonstrate their understanding of how to prevent dengue fever, and to identify the success of strategies they had tried to implement in school. The results here

are presented as percentages of the sample indicating that those schools which implemented the school health day were more likely to be using a greater range of strategies (*see figure 4.10*), and were also addressing the continued need for education (*see figure 4.11*) compared with those schools finishing the project. Some of the schools that did not carry out the school health day in 2003/4 identified a number of incorrect strategies to prevent dengue fever.

Figure 4.10: The relationship between implementing Health Days and range of strategies used to prevent dengue fever.

Strategies identified by schools to prevent Dengue fever	Schools repeating health day	Schools not repeating health projects
Sleep in a mosquito net	61%	60%
Remove the Tiger mosquito habitat	61%	60%
Fill in puddles	44%	44%
Cut down small bushes	28%	6%
Get rid of tyres and tins	28%	21%
Burn /bury rubbish	22%	23%
Cover water jar	17%	4%
Keep classroom door open for fresh air	11%	4%
Do not let children play in dark places	11%	2%
Clean vases in classrooms	6%	2%
Wear long sleeves	6%	0%

Figure 4.11: The relationship between implementing Health Days and health education in general.

Strategies identified by schools to educate pupils in the prevention of Dengue fever	Schools repeating health day	Schools not repeating health projects
Education in science lessons	22%	6%
Training for teachers	17%	0%
General health education at flag ceremony or labour day	6%	8%
Use posters and picture	6%	0%

Sustainability could be perceived as an end result of an intervention. For example providing de-worming pills is non-sustainable, whereas the introduction of hygienic practices is considered sustainable. Kremmer and Miguel (2003) present an argument that sustainability could be an illusion and there is no replacement at the present time for the actual costs needed to provide the treatment, i.e. de-worming pills. However, Fewtrell et al (2005) suggest that hygiene education can contribute to a reduction in diarrhoea and therefore would suggest hand-washing messages can be sustainable. Stevens and Peikes (2006) in an analysis of sustainability note that the combinations of influential factors are complex. They stress that stakeholders have to think the project is needed and effective. As the school clusters 'bought-into' the programme at the start of the year it suggests that there was a degree of perceived need, however, its sustainability may have been partially dependant on whether communities

considered the project to be effective after its implementation in the first year. Was sustainability dependant upon the commitments of the individuals involved? Why did some school directors continue the health days whereas others did not?

For the project to become sustainable it would have to be implemented annually and with minimal additional costs or training. Despite the fact that minimal resources were needed to run the project in subsequent years many schools did not choose to do so. A lack of funding for resources and training was stated by 26 schools as the reason for not continuing the project in the second year. It is possible that local participants felt that funding was necessary to provide a ceremony before the health day was implemented. Two responses state this specifically. If this is the case the overall project design may not have taken the local culture sufficiently into account.

It could be argued that schools required no additional resources at all, they merely perceived that they did, having developed a budget dependency. Schools were familiar with projects being externally initiated and funded and the more prevalent treatment programmes implemented in the province. They were therefore comfortable to take part in the KSHP while the external staff and funds were present, but once they were withdrawn this was equated with the project finishing. Morgan and Deutschmann (2003) suggest that the implementation of treatment programmes places little demand on local people, programmes are more visible as they provide resources and are consequently seen as more valuable than prevention programmes which require action from the participants to deliver 'health messages'.

Concluding remarks

In the concluding remarks I explore what was learned from the KSHP in terms of project design in teacher education and issues of ownership, cost effectiveness, partnership and sustainability. These issues are all interconnected and I only present them separately in the conclusion in order to make the arguments easier to follow.

The grant based nature of the EQIP programme had allowed responsiveness to local need that may not have been possible in a more rigid logframe approach. On a number of locally identified issues the EQIP national and international team were able to respond to needs identified by school directors or the animators by providing an alternative provision through the EQIP structure that local stakeholders could choose to 'buy-in' to. This mechanism was used for the health programme and also for the introduction of a Kampot Maths Project (MoEYS (2003a) and literacy training for grade 1 and 2 teachers.

Research at the beginning of the project on local health issues, school knowledge and experience of teachers was crucial in that it prevented errors in the implementation that may have occurred if there had been no agreed definitions. It also ensured that at least some stakeholders contributed to the programme development and felt local knowledge was valued. Despite the participatory framework of EQIP community involvement was a weakness in the project. If community participation is viewed as a process and is defined at a number of levels (Mfum-Mensah 2004) then the reason for the failure becomes evident. The proposed community involvement was superficial. It did not involve communities in the initial research nor were the communities themselves encouraged to take responsibility for the programme, this was left to the schools. The only real requirement of the community was to attend the health days. In hindsight school and community involvement could be strengthened by including the stakeholders as active participants in the evaluation process. The data collected from the interviews and questionnaires indicates that the project is perceived to be beyond the ownership and responsibility of the school. Holte-McKenzie et al (2006) suggest that involving the stakeholders in the monitoring and evaluation process and in the analysis of the results ensures the stakeholders become the researchers. The origination of the KSHP from provincial requests, despite some of its weaknesses, does suggest that ownership and grassroots development is not only possible, but should be encouraged. However, this approach relies on flexibility and must therefore lead to a relaxation of the non-responsive planning approaches currently in place where donors are tied in to specific agendas and logframes.

It is not possible to provide a cost effective analysis of the KSHP as to do this there would need to be a specific link between the policy and the student outcome that can be isolated. However, it could be argued that at a cost of 20 cents per child in the first year and a minimal cost in subsequent years that the project itself was cost effective. In large scale projects mechanisms to deliver teacher training have to be carefully chosen. The largest cost in implementation of the KHSP was the training of teachers. In the KSHP training time also included the making of classroom materials. As in the EQIP project production of materials was expensive as time spent making was time not spent in actual training. In humid climates materials made on poor quality paper do not survive the passage of time. Cost effectiveness could also be measured in terms of damage limitation. The average cost of a two-room toilet was approximately \$350.00 in 2002. If that toilet was ineffectively used due to a lack of understanding and management then the investment was wasted. This suggests project planning has to be holistic as in the example of investing in sanitation systems without supporting it with education activities.

Partnership is often perceived as a key concept in the development of education for all, however defining what partnership is remains difficult. Partnership has many connotations and in different circumstances can be used as a descriptor for very different concepts. In this project the relationships between the NGOs could be described as partnerships. From the start the project was jointly financed, implemented and evaluated. Despite the appearance of partnerships it may be easier to understand the project in terms of a series of relationships between different stakeholders at different times. The NGOs were successful in developing relationships that allowed for collaborative practice. These were developed in order to make best use of all the available resources. The development of the collaborative practices was based on an in-depth knowledge of what projects were being implemented in the province and how. The NGOs had a relationship with the donor, who provided the largest financial contribution however, the project relied on the field experience of the NGOs. Literature discussing partnership often refers to how it evolves and is nurtured which implies long term development (McCarthy et al 2003, Miller Grand-Vaux et al, 2002, Mullinix 2001). It could be concluded that the NGOs, donors and ministry in this project were developing collaborative practice that was mutually beneficial to each organisation's own objectives within a certain timeframe rather than a partnership.

Collaboration between the ministries of health and education are recognised as important if health education is going to be delivered through the school system. UNESCO (2001) argues that it is no longer a question of whether health or education ministries take the responsibility for illness in children and young people, but involvement of all partners is necessary if health improvements are to be made. Evidence increasingly indicates that the health of school aged children can be effectively and inexpensively managed through the school system (Cave & Curtis 1999). Initiating health education through the school system builds on the existing workforces and can provide health care in a variety of forms including breakfast programmes, micronutrient supplementation, administering of de-worming pills, using schools as vaccination centres, demonstrating the management of physical resources hygienically, providing sanitation and safe water and integrating health education into the school curriculum. At the time of the KSHP, ministries within the Royal Government of Cambodia often saw their roles as separate ones. The KSHP was designed to have four school health days: to ensure children had regular and consistent messages; to provide sufficient time for all stakeholders to understand the content; to allow teachers time to practice the new health activities used to promote learning and to limit the disadvantages of cascade training. This approach is consistent with other projects promoting behavioural change (Cave & Curtis 1999). At the suggestion of the EQIP national Project Implementation Unit the proposal was reduced

to two days as school health days were perceived as health projects rather than education and should be the responsibility of the Ministry of Health. It was argued that the EQIP budget could be more effectively allocated to other educational activities (MoEYS 2003). This is another example of a conflict in values or a misunderstanding of the content of the health days which had all been built on the existing school curriculum and textbooks so did not demand extra curriculum space. If ministries are to have project 'ownership', they need to be able to make decisions, but these decisions are not always going to be agreed. It is not possible to determine whether four health days would have led to greater sustainability than the two that were implemented or whether there is a correlation between the number of inputs and the sustainable outcome.

The relationships developed at the provincial level were largely circumstantial and dependent upon combinations of key individuals. This experience is not uncommon. Samoff (2004) found the same situation in West Africa. It could be concluded that collaboration is happen-chance. The collaboration is often dependent upon the objectives and policies of different organisations aligning at the same time. Collaboration at the local level led to a shared understanding of language, local health issues and infrastructure. By sharing local experiences it was possible to complement resourcing that was already in place. For example the EQIP financing had increased provision of latrines and safe water supply and encouraged schools to provide healthier environments, but it did not include a health education component. Without safe water and basic sanitation health education is futile (WHO 2003). If latrines are to be used appropriately schools require education (Bangu 1999). Collaborative practice ensured that health education was provided with the new resources. It could be argued the new resources were more effectively used because of the health project.

The relationships between ministry, donors and NGOs are complex. In the KSHP the NGOs were making use of the programmes implemented by the donors rather than working exclusively in partnership with them. For example the NGOs used the EQIP system of training and grant decisions process and the PAP budgeting system to allow schools to make their own resources. The NGOs wanted to invest more time into the programme, whereas the national EQIP project implementation unit working through the Ministry saw the project as an inappropriate investment as it was focused on health rather than education. GTZ and DED were focused on improving environmental health in the province. With access to the school system they were able to work on a larger scale and make use of teachers' relationships with children and understanding of how children learn.

An analysis of this project has suggested that the working relationships between the NGOs, donors and Ministry could be largely defined as collaborative. The organisations made the best use of provincial resources by using the knowledge of available expertise provided by NGOs and the systems and processes set up by the donors. This collaboration worked well in that it allowed both the NGOs and donors to work towards shared objectives. It would seem appropriate to stop short of describing these relationships as partnerships, for they appear to be superficial, time bound to the project and not all of the organisations had the same priorities. The relationships between stakeholders at different levels of the programme had some relevance both in the initial research and in the willingness of schools to 'buy-in' to the programme, but again these could not be described as partnerships.

It would be reasonable to conclude from questionnaire responses that many local people, even when a project is locally initiated, may view it as an external additional activity that goes alongside the normal work of school or community. It is finite, with a beginning and an end and it generally provides the school or community with resources, training or other financial benefits. These local responses suggest that a project exists in a time-bound bubble and only has an effect during the period of time it is implemented. The issue of aid dependency and project culture is not new. Policy changes to PRSPs and direct budget support could be seen as strategies to solve this type of issue. For example EQIP was providing direct budget support by operating through MoEYS. This mechanism made it possible to deliver the health project. However, the use of this mechanism did not appear to diminish aid dependency in the case of the health project as it did remain time-bound. The challenge of making a project sustainable is two fold. The activities themselves have to be sustainable, in the case of the KSHP this means that the health messages have to continue to be delivered after project completion. The second challenge is more problematic. There appears to be a project culture that leads to aid-dependency. If local people do not engage with the purposes or have ownership of the project and if it does not become embedded in the existing school or community practices it will not survive. Ultimately only one group of stakeholders out of all of those involved in the project had the potential to make the programme sustainable and that was the school directors. Where school directors had an understanding of the project, a belief in its importance, commitment and motivation the project was sustainable. Identifying the key stakeholders in terms of sustainability at the outset of the project design and specifically planning for their role in that sustainability may lead to a better outcome.

Chapter Five: Education Project Design

The focus of this chapter is on teacher education project design in low-income countries. The chapter starts by examining some of the factors countries need to consider around teacher development. I then use research from a literature review and experience already gained from my own work to support the identification of effective features of training models and their components. Teacher education projects are affected by national and global agendas, so taking the BETT mathematics project as an example I show how it fits into the prevailing global agendas, picking up on issues of ownership, partnership, sustainability and cost effectiveness discussed in the previous chapter. I then discuss how the BETT maths project was planned, implemented and evaluated within these global agendas using project and policy documents to demonstrate how the interaction between the global and local was managed.

The purpose of this research is to have a clearer idea of what makes teacher development programmes more effective and so in writing this chapter I contribute to answering my fifth question: *'How should a teacher education programme be developed and what components should it include?'* I believe that the most useful way to conduct this research is to focus on the key stakeholders in the programme, the teacher educators. Most teacher development research points to the important role they play and how often they are insufficiently supported. Since the development of the teacher educators is so key to the success of teacher education programmes I focused the research on their perceptions of how they were learning and teaching.

Teacher Education in Development Projects

Countries can take two broad approaches towards up-grading teachers. These are generally identified as pre-service education for new teachers and in-service training for practicing teachers, sometimes referred to as Continued Professional Development. As described earlier in the thesis one of the effects of the 'Education for All' agenda has, in practice, led many countries to employ unqualified teachers in order to bridge the gap between demand and supply. A good example of this effect is described by Lewin (2002) writing on the Multi-site Teacher Education Research (MUSTER) project implemented in four countries. He describes how supply issues have affected demand and how different policies are therefore developed in relationship to pre-service education. The overviews of the case studies he describes cannot contextualise the complexity of individual nations, nor provide a blue-print for educational development, but they do raise some generic issues. For example in Ghana, Lesotho and Malawi increasing national targets for enrolment increased demand for teachers. This demand

could not be easily addressed through the expansion of pre-service teacher education as the costs of existing models in these countries were financially unsustainable (Lewin 2002). This forces governments to use strategies such as the employing of under or unqualified teachers.

Although it can be argued that pre-service education is an essential ingredient in improving basic education it is also one of the most expensive interventions a country can take. Costs are often high because of pre-residential training and longer courses (Lewin 2002). In Laos it has been shown to be seven times more expensive to train a teacher than to provide a secondary school education (Mingat 1996). In many low-income countries pre-service training is too limited for teachers to become qualified, even when the country has a national standard for teacher education before they are employed. In Bangladesh only 80.8% of teachers have the nationally required teachers' certificate; in the Maldives 70.4% and in Nepal 74.6% (UNESCO 2000). Wanzare (2002) writes about similar difficulties in Kenya. Due to the resource restrictions in developing pre-service teacher education, in-service teacher education is often seen as an alternative solution.

Mingat (2003) writes that the vast majority of educational professionals, if faced with the question *'How do you improve quality in education?'* are likely to reply *'Increase the inputs into the system and improve the processes that take place'*. In 2000, a UNICEF document stated that quality has focused on the inputs and infrastructure and that only recently the processes have been considered important. O'Sullivan (2006) argues that the focus of quality education must be on the teaching and learning process and that all too often, inputs and outputs have been used as a measure of success. Tatto (2002) writes that the shift from 'Input-output models' to examining the processes has highlighted the complexities of teacher development. She goes on to write that there is little evidence to show if teachers' development has made an impact on the success or failure of education programmes. Khaniya and Williams (2004) also write that there is not necessarily a connection between investments in educational quality and improved learning outcomes.

Improving the quality of the input has become increasingly focused on teachers' professional development which inevitably relies on the professional skills of the teacher educators. However, subject knowledge, pedagogical understanding and technical skills of teacher educators are often identified as a constraint in the development of effective in-service teacher training in developing countries. Tatto's (2002) discussion of the effectiveness and cost of a teacher development programme in Sri Lanka and O'Sullivan's (2006) descriptions of two classroom observations, where the quality of the teaching and learning did not appear to be

linked to the quality of the inputs show the need for careful examination of teacher education programmes. Feldman (2002) pointed out that for teachers to change they had to change their way of being teachers. Most in-service teacher education tries to change the way adults behave, by offering a different pedagogical approach (Knamiller et al 1999). Therefore the design of a training programme is generally based on the identification of the change that is required and how that change can be evoked.

Many in-service training models in low-income countries have evolved over a period of time; been trialled, developed, modified and analysed in different contexts. I examined some of these education projects and compared them with the experiences I had gained from working on the EQIP, KSHP and KMP projects. This enabled me to make a synthesis of common factors. Despite the possible limitations of the literature review in so far as like is not being compared to like, it was useful for considering strengths and weaknesses before designing the BETT projects.

International research identifies that teacher educators are key to project success. In successful projects teacher trainers were sufficiently supported. However, in many projects the teacher trainer role was not given sufficient emphasis or the teacher trainer was not selected with appropriate skills. EQIP used trainers for each school cluster, but these trainers had often not had classroom experience and found training teachers difficult. Dyer et al (2004) noted that teacher trainers in India were taken from high schools because they had masters' degrees in education and a specialist subject, but they had no experience of primary education and tended to look down upon it (see discussion on teacher identity in Chapter Six on importance of subject knowledge). In the KMP trainers applied for the position and were selected against criteria which included experience in primary schools to prevent this difficulty, however using primary school teachers was a risk as they were often not perceived to have enough status to be employed by the schools as trainers. The KMP was a small pilot project, but it did produce some interesting findings which I considered in subsequent project design. Teacher trainers who had volunteered and been selected for the programme were committed to their own training even when no financial incentives were offered. KMP trainers were given a simple employment contract which worked well (MoEYS 2003c). One important finding from the KMP was that training given to the trainers needed to be far more extensive than the programme they would be expected to deliver to teachers. This was contrary to how much cascade training was conducted in the country such as text book orientation where the trainers received one day's input but were expected to deliver to teachers over three days. It was also noted in observations after the training that those teacher trainers who managed a

more participatory environment appeared to have a greater subject and pedagogical knowledge (MoEYS 2003c).

Training Models

Popular in-service models are cyclical in nature or based on a series of components that are developed over a period of time. Joyce and Shower's (1980) training model can be summarised as introducing new theory or techniques, demonstrating their application, practise, feedback and coaching. There is a body of research on mentor training, coaching and peer-to-peer development as well as the development of self reflective practitioners that usefully contributes to programme design. Sparks & Loucks-Horsey (1990) identify five areas of training: awareness of knowledge, skills development, attitudinal change, transfer of training and executive control and O'Sullivan (2004) presents a cyclical model with six strategies; needs assessment, organisation, determination of content, the training process, follow-up and evaluation. The implication to be drawn from these models is that in-service training develops through a series of stages that are progressive in nature. This would suggest that programme design has to take place over a period of time. If in-service education is a vehicle for change management with teacher trainers at the centre then the teacher trainers have an increasingly demanding role.

In the research literature implementation strategies for teacher education programmes were often cited as inappropriate with quantity given priority over quality and top down models focused rigidly on inputs and outputs. In a country where resources are scarce training programmes have to be efficient and cost effective. Some governments, donors and NGOs make use of cascade training as it is perceived to be a cost effective and efficient model for the delivery of new knowledge, skills and concepts to large groups of people quickly. Wedell (2005) writes that cascade training is '*intuitively sensible*' but often fails to be as cost-effective as it appears. He writes that if the aim of in-service training is to get the teachers to implement changes in their own classrooms then it is implied that the training must be relevant and contextually appropriate. Many low-income countries lack the financial and human resources needed to develop teaching and learning more qualitatively. However the delivery of curriculum and pedagogy through cascade training is largely discredited as a method which can pass on difficult concepts. Its strength lies in specific training where operatives are required to perform basic tasks. Craig et al (1998) discuss several different in-service approaches such as school based and centre based, but warn that a model based on cascade training is the least effective approach despite its wide spread use.

Cascade training is predominately used across larger interventions. This may consist of national trainers training provincial trainers, who in turn train district trainers, who train cluster trainers who then work with teachers. Training approaches in Cambodia were similar and often started with national trainers from MoEYS. The EQIP programme invested into cluster trainers who developed their own training, and sometimes delivered MoEYS training or programmes designed by international consultants. The trainers for the KSHP were taken directly from GTZ and worked with the EQIP animators so the training was repeated multiple times by the same trainers. The KMP was designed to eliminate some of the potential risks that had been associated with the EQIP intervention. Training was direct from the international consultant to the selected trainers so that the pedagogy they were taught was also modelled to them as learners. The training went directly from the trainers to the teachers rather than being staged through districts and clusters.

Dyer et al (2004) identifies that teacher education programmes are often developed by external and deconceptualised experts where little value is placed on local practitioners' knowledge. This is also evident in the work of Knamiller et al (1999) where they describe in-service courses as being tied to pedagogical philosophies predetermined by projects and overseas consultants.

Donor enthusiasm for new pedagogy, which frequently advocates learner-centred approaches, group work, attention to special needs, and a panoply of methods of training associated with best practice in rich countries, has sometimes sat uneasily with the realities of the training environment, the teacher education infrastructure, and different cultural and professional expectations of the role of the teacher (Kunje 2002: 305).

O'Sullivan (2001) writes that where project design works best it has taken into account local context and culture. The model puts the teacher first, taking their micro realities into account. However, Lacey et al (1999) warn that innovation that leads to change and empowerment may threaten political bodies and lead to the collapse of education projects. This warning is considered in Chapter Six when I examine the impact of the projects on the six educators.

In the literature review most of the weaknesses cited in the project design were that they were often based on Western models. Mohammed (2006) pointed out that enthusiasm for western models often leads to the wholesale importing of the model without adaptation, based on the view that what works in the West is best (Mohammed 2006). He also noted that theoretical assumptions of teacher education processes come from a Western perspective. O'Sullivan (2004) writes that western learner-centred approaches focus on the individual, however in some cultures such as Namibia the interests of the individual are subsumed by the

group. Dyer et al (2004) writes that where local context and culture was considered superficially, in-service training was weak with programmes not taking into account the complex relationships between teachers' beliefs and local contexts. Vulliamy (1998) warns that what works in one culture will not necessarily work in another and that pupil-centred methods, project and group work are unrealistic. George & Lewis (2011) point out that the traditional knowledge system needs to be given value in the school curriculum and development process as this leads to parity of self esteem and less belief in 'import is always best'.

The issues these researchers raise would suggest that if the project is designed by the external expert, or that local culture and knowledge is not taken into account then project ownership is undermined. EQIP provides a good example. The EQIP cluster trainers were expected to negotiate with school clusters to make a training plan based on local needs and use their experience to design and deliver training to teachers that would match those needs. However, the local needs had in a sense already been defined by the international experts. The trainers were expected to train teachers in child-centred learning, a pedagogy they were unfamiliar with.

Projects were less successful when western models were not clearly understood by teachers in low in-come countries. Mohammed (2006) writes that one teacher used group work, to help pupils with revision, but did not understand how it contributed to conceptual development of mathematical understanding. Teachers used terms such as group work, open questions, practical mathematics and concrete materials but did not understand the substance of the terms (Mohammed 2006). Kunje and Stuart (1999) point out that with insufficient basic equipment and resources such as blackboards and textbooks it is hard for teachers to implement training. In another review Dyer et al (2004) write that the design and delivery of the programme had not taken into account the need for teachers to develop skills that matched with their classroom context. A similar observation is made by Mohammed (2006) who writes that the school learning environment was often different from the training learning environment. This has the effect of weakening the training process. This risk was evident in Cambodia. The educator had a group of 25 teachers and the resources needed for the session, but the teachers may return to a class of more than 50 pupils with limited resources and therefore be unable to implement the training. In EQIP trainers used a didactic approach in their sessions to explain the value of child-centred learning and told teachers they should work in this way without a demonstration of what it was. The evaluation of EQIP echoes the findings outlined above. It was noted that although teachers were trained by cluster trainers on a

weekly basis the training process often resulted in teachers misunderstanding concepts, leading to inappropriate use of chalk boards, activities, and group work. Training time was often invested into making unnecessary resources with limited scope (MoEYS 2003b). Knamiller's et al (1999) findings were similar. They report that teachers were not attempting to apply ideas encountered during training courses to the making of materials for different contexts and purposes.

At the same time as considering the in-service training programme, the designer must ensure that the training can be supported at the school level. Weddell (2005) argues that planners must therefore take into account the support mechanism at the outset. Knamiller et al (1998) writes that the most effective way of ensuring what happens at the teacher level has an impact on teaching and learning, appeared to be for trainers to follow teachers into the schools. Lesson observation was a particularly useful strategy to provide support to classroom teachers, but the literature showed that few Western or low-income countries had included this as part of the programme (O'Sullivan 2001). There may be reasons why this component of training is not included in teacher education projects. For example Dyer et al (2004) point out that the teacher trainers were reluctant to visit primary schools and observe practice and when they did the observation was based on an inspection model rather than providing supportive feedback. In the early implementation of BTC similar difficulties were experienced. The educators coming from primary schools did not have enough status to observe in secondary schools. In the BRAC project a strong field support structure was advocated and with a supervisor for 1 to 15 teachers it proved successful. Mohammed (2006) pointed out that if in-school support processes were not included there was a mismatch between the expectation of the school and what the teacher learnt during in-service training. Interview data from the EQIP project shows that teachers felt that they knew more about the new methodologies than the managers and inspectors. In the KSHP project the fundamental role of school directors in the training process was also emphasised and had proved successful (see Chapter Four for discussion), but the sustainability fell down because there was no follow-up support programme.

The evaluation cycle in the training model has to determine how far the training has actually changed classroom practice and then use that evaluation to feed into the continuing design of the training programme (O'Sullivan 2001). Successful projects were developmental and cyclical. Despite many years of education project design thorough project evaluation remains rare and evaluation of sustainability and the cyclical process of building on best practice is almost non-existent (Lacey et al 1999). Dyer et al (2004) write of one project that none of the

district teacher education facilities had developed any systematic approach to monitoring and evaluating the impact of their programmes.

Good projects were perceived as replicable and practical as in the simple, highly structured system with detailed teacher guides provided by BRAC. Most teachers were able to reflect on their practice when given support to do so (Kunje and Stuart 1999).

Training Components

Hord (1994) cites research that shows how changes in teacher practices could be correlated to the number of components teachers had received in the training programme, with a gradual increase of between 2%-3% each time a new component was added. When the fifth component of coaching was introduced, the change in practice was much more significant, suggesting that coaching was a critical element to the model.

Craig et al (1998) discuss the components of in-service programmes such as peer coaching, action research and working with community, arguing that programmes planned with the assistance of participants are more successful than those that are not. They write that the structure of a programme should reduce anxiety and fear of change. They go on to identify the importance of balancing pedagogy and subject knowledge training, ensuring training matches with the existing curriculum and helping the teachers to engage in curriculum development. O'Sullivan (2006) argues that lesson observations illuminate the quality of the teaching and learning taking place as well as contextualising the project within the country and local area and this should be an important part of the training process. Hargreaves et al (2001) in their work identify the importance of practical training that uses real-life classroom situations. Dyer et al (2004) recommends that it is much more effective to support teachers in doing what they already do in a better way, than change to a radically different concept of education and writes that good quality programmes are practical and focus on methods that are understandable by the teachers and can be used in their own classrooms.

Research and Training

Research on teacher education has focused on the behaviours that teachers exhibited in the classroom and how this linked with pupil achievement, in order to generalise how a teacher education programme should be designed (Hoyle & John, 1995). This approach was criticised as there were few generalised outcomes. Alternative approaches have also been used such as measuring the effectiveness of teacher training with pre and post-testing methods. The disadvantage of this approach is it does not reveal how the teaching and learning process

developed. Halal (2004) suggests that action research is therefore an appropriate methodology to study the effectiveness of in-service teacher education. An examination of the educators' learning by the consultant and the educators themselves appears a valid approach to understanding how different components affected each part of the learning. I deliberately chose to evaluate the effectiveness of the programme in this way as it gives value to the contribution of the educators. I hypothesised that it would be useful to know what value the teacher educators placed on the different parts of their training as learners, rather than relying exclusively on the evaluations of the consultants. It meant that how each group perceived the learning that took place could become a focus of discussion to unpick the cultural context.

Components of the training process, such as: self evaluation, classroom observation, videoed lessons used as a teaching tool, practice teaching, portfolios and direct teaching have been researched in the United Kingdom, but the same depth of research on these individual components is not available in many low-income countries. An understanding of the effectiveness of the different components or combination of components provides insight into the professional development needs of teacher educators. Having an understanding of how individual components contribute to the teacher educators' professional development and making a link between the relative effectiveness of the component with its cost could also provide insight into the future development of training models. Although this research does not include an analysis of cost to individual components it is possible to make some approximations. Pre-course activities, self evaluation and practice teaching sessions required less financial resourcing than the taught course given by external consultants and the development of comprehensive manuals. Where there is research focused on self-evaluation it tends to be focused on teachers.

In order to evaluate the perceived effectiveness of course components, I used a range of data collection methods. Educators evaluated the training programme and their training of teachers by completing evaluation forms. In addition I used semi structured interviews with the six educators. I also asked them to devise a flow diagram identifying their perceptions of how the components of the training linked and influenced their practice. As part of the course, educators worked in pairs to devise their own forms to evaluate teachers' responses to their training. This activity was designed to help educators understand the data handling cycle as part of their mathematics training and gave the consultant insight into the educators' understanding of the teaching and learning process. There is considerable value in stakeholders in the project undertaking their own research. Action research has been seen to be an effective method for exploring pedagogical approaches to learning, appropriate to

specific contexts (O'Sullivan 2004). Additional data included a sample of the educators' pre-course activities and research diaries. I also kept a research diary which provided details and evaluations of the taught elements of the course and observed responses of the participants.

Negotiating the global and national in teacher education project design

However well the programme design and components have been considered the project still has to operate within national and global agendas. At a global level I have suggested that education and development exist in a third space and are largely managed by multilateral donors. Whilst it is advocated that global policies such as SWAps and PRSPs should be government owned and driven they are still global policies. Evidence cited in this thesis suggests that these global policies are applied with limited national involvement. The EQIP project was set up to function within the remit of MoEYS, but despite that, budgets and grant disbursements were operated from the national Project Implementation Unit, a mechanism used by many projects. The BTC projects implemented a few years later were in line with the new policies of PRSPs. BTC operated through a national steering committee which met to provide direction to the projects and ensure it was in line with the five aims of the PRSPs.

BTC signed a Specific Agreement to work with Cambodia's MoEYS from 15 May 2003 to 15 May 2007. In late 2005 BTC advertised for international consultants to design, implement and evaluate a mathematics project initially for primary and lower secondary schools in its target provinces. The target group was later increased to include more schools and all of the national teacher training colleges in primary and lower secondary education. There were some difficulties in funding as the Belgium parliament had decreased the number of countries it was going to continue supporting. The then Belgian lead on the BETT project flew to Belgium with an official from MoEYS and managed to persuade the Belgium government that the project should be extended. In May 2007 an extension was agreed until June 2011 (BTC 2008). This resulted in the mathematics programme being implemented in two parts; January 2006 until June 2008 and December 2008 until June 2011.

BTC worked in partnership with MoEYS. Its objectives were as follows:

To contribute to poverty reduction in line with the 2nd socio-economic development plan (SEDP II), the National Strategic Development Plan 2006-2010, and with the Development Goal to eradicate extreme poverty and to contribute to improved quality and equitable access to basic education in the provinces of Siem Reap, Otdar Meanchey and Kampong Cham within the framework of the Education Sector Support Programme (ESSP) (BTC, 2008:8).

The BTC contribution to the project was approximately 13.5 million Euro with a contribution from MoEYS at 4.3 million Euro (BTC 2008). The BTC offices were based in Siem Reap, a six hour drive from Phnom Penh or a 45 minute flight. However, representatives from MoEYS and BTC were still able to meet regularly as part of the joint steering committee. At these meetings members discussed the implementation of projects. BTC would make recommendations that it hoped would be supported by MoEYS and MoEYS would often make requests to the project for an expansion of training or building. Further partnership working was developed between MoEYS and BTC as BTC projects based training programmes on new MoEYS education policy documents. For example in 2007 MoEYS approved a new basic education curriculum developed by Research Triangle International (RTI) and they approved UNICEF's Child-Friendly School policy in December 2007. MoEYS working with the World Bank supported Cambodia Education Sector Support Project (CESSP) developed draft teacher standards, school director standards and school self-assessment tools. BTC also worked with other donors and NGOs. These included Japan International Co-operation Agency (JICA), VVOB (Flemish sister organisation of BTC), Room to Read, (RtR), VSO and the French NGO Sipar.

Reading through the above paragraph it would be possible to conclude that BTC, as a bilateral donor, was successfully working in partnership with MoEYS and with other development organisations. However as discussed in other parts of this thesis the policy and the practice may not match. It was convenient for BTC to be based in Siem Reap as it did not need to become immersed in the donor and NGO network, and avoided close scrutiny from MoEYS. This gave BTC flexibility to pilot new school buildings and training programmes. Working with other donors may not have been about partnership either. When BTC and JICA discovered that they were both going to develop science and mathematics they identified the risks of programme duplication and giving conflicting messages to teachers, so BTC took maths and JICA science. This meant that there was less need to work together. It was only at the final national workshops that JICA and I realised that we had much in common and this had been a lost opportunity. VVOB works closely with BTC as a sister organisation, but again there were some significant difficulties that affected the partnership. VVOB was promoting child-centred learning in a way that consultants working on BTC were not comfortable with so chose not to build on this work. As the literacy project developed MoEYS, donor and NGO relationships became more complicated as they responded to global pressures. This is discussed in detail in Chapter Eight. The most successful partnership operated between BTC and VSO. VSO volunteers attended all of the maths and literacy project training, bringing with them their Khmer colleagues and supported the participants in the PTTCs in its implementation after the training. The list of new policies implemented by MoEYS and supported by BTC all appear to

have been developed by external agencies. These policies shift Cambodia closer to a global education pedagogy and the neoliberal policies of accountability and standardisation. As a consultant it was important to understand the positioning of the project within the wider national and global agendas, because it effects how the project is designed, implemented and evaluated.

The BETT mathematics in-service project

The BETT project design was partially based on a logframe (see Chapter Three for an explanation of logframes) prepared by an international consultant separate from the mathematics and Khmer literacy programmes. The consultant drew up the framework and then it was discussed with national and international staff. The consultant was in favour of testing pupil outcomes as the main measure to show project success. However, in the mathematics programme I decided to use qualitative measures of improvement focused on the mathematics educators and the teachers they observed. This may not have provided the preferred quantitative results to validate the programme, but it did have the advantage of illuminating the teaching and learning process which would lead to the programme being adapted to meet the local needs of teachers and schools.

As Harley (2005) comments logframes do provide a useful framework for project design and in the BETT programme I made use of the framework to structure my starting point. However, once the structure was in place it was all too easy to begin to fit in other components around the structure. For example part of the logframe identified when the educators would be trained, for how long and what materials were needed. At the design stage I found I was already including expected outcomes. BTC project managers requested that measuring procedures were put in place as part of the initial design:

The monitoring tools and procedures would also need to be developed with your direct input and minimum standards that the teachers should achieve after completion of the training [they] probably need to be set right from the start of the development process (Email from BTC to lead consultant May 2006).

In Annex 6 I have included two extracts from the BTC logframe. The first extract makes use of quantitative data from EMIS reports as project indicators. These project indicators are not particularly useful as many factors could have contributed to their increase or decrease. Any impact BTC may have made cannot be isolated from other interventions and social factors. Extract two shows how quantifiable indicators can be turned into qualitative improvements for the purposes of measurement. The international BETT mathematics and literacy consultants were not involved in the development of these indicators. The indicators have been either

created from a checklist or designed to make a checklist for the purpose of counting the amount of times a different teaching strategy may have been used. I have already discussed how '*objectively verifiable indicators*' are required by many head offices of large donors and iNGOs to prove project impact, even though their use in the field may be irrelevant or counter-productive. Some researchers have also argued that the cultural assumptions built into logframes do not work in some cultures. Additionally English is usually used to write the logframes and does not easily translate into local languages which can undermine local ownership (see Wallace et al 2006 for discussion).

Whilst I did find the logframe a useful tool for planning I was also aware of its limitations. To avoid all monitoring processes being based on '*objectively verifiable indicators*' I put in place supplementary strategies that could be developed during the implementation with the stakeholders. These strategies were designed to provide greater illumination of the processes and validate the findings more rigorously. Having already studied the effect of monitoring and evaluation tools on the EQIP project by the time I designed the BETT programme I was all too aware that the tools themselves could affect the teaching and learning process negatively.

I was given a brief at the beginning of the BETT project by an international consultant:

The ultimate aim is to have a package that develops all skills required to teach a minimal/essential maths curriculum. (BETT) hope(s) to have 823 lower-secondary and 307 primary school maths teachers trained by the end of the project and preferably well before that time. As far as I can see this means we will end up with some form of cascade training, although we need to ensure we have a minimum number of layers in the cascade.....The prime concern has been that this package be of high quality. This is after all the only thing we can really control in the cascade. My own experience (but not in maths) is that a couple of months might be sufficient (but only just) to train people to implement a training package reasonably well.....Perhaps it comes down to balancing the participatory approach and capacity building with ensuring quality output that is ready for implementation (External training strategist Feb 2006).

Needless to say it was not possible to deliver directly to teachers but the BTC training only had one level of cascade. Educators were trained by consultants who then trained the teachers in multiple groups in schools. The input to educators, after experience from the KMP was also considerably greater than what they were expected to deliver to teachers. Regular inputs were given to the educators over the six year period.

The BETT training programme was designed as three inter-related elements. Firstly, an overall structure of the project in figure 5.12 shows the training input, support systems and monitoring and evaluation; secondly a training cycle for educators and teachers (*figure 5.13*)

and thirdly the individual components that made up the training process (*figure 5.14*). The model designed for the BETT programme used strategies that O’Sullivan (2006) identified such as needs analysis and evaluation. It was cyclical in nature and developed as part of the whole process, taking account of local needs and ownership. Working within project parameters, the cycle was developed on the broad recommendations summarised from the research literature described earlier.

Figure 5.12: Overview of the BETT mathematics training programme

Inputs	Numbers affected	Research
Training for trainers Training Manual Resource manual Mathematics materials	20 trainers	Baseline assessment through observations Research diaries Evaluations from trainers
Training for teachers Materials for schools Training manuals	776 teachers Year 1 pre-service teachers	Evaluations from teachers and PTTC students. M&E forms
Training for monitors Development of monitoring tools Director Training Materials Management Teacher Support	20 monitors 296 school directors and deputy directors	Evaluation
Supporting Directors Supporting Teachers Summarising progress (monitors) Summarising Progress (directors)	20 monitors 138 directors	M&E Tools
Monitoring and Evaluation Final Report Recommendations for follow-up training	Consultants and BETT staff	Synthesis of all project documentation.

Building on the experience of prior projects and research, maths educators for BETT were selected according to criteria which included at least five years classroom experience. As the project was working with MoEYS a certain amount of the selection was delegated to the district and provincial officers which sometimes led to selection not being based on the skills or experience of the trainer. Advertising alleviated some of the selection issues. Mathematics educators were selected in agreement with provincial office staff and generally from large schools so they could be seconded to the programme. Twenty educators were selected from all three target provinces representing both primary and secondary schools. This number was considered enough to ensure that: there was a team of educators for the development of materials; that the ratio of educators to schools did not go beyond 1:10; and there was room for future capacity building. I had suggested to the Khmer project co-ordinator that contracting the trainers had worked in KMP and perhaps we should consider the same approach. I had not

anticipated the result. The project co-ordinator prepared detailed legal and binding contracts in the same format as they were prepared for external consultants. The contracts identified all areas of training including preparation, self-study, participating in the development of materials and completion of portfolios. Of the twenty trainers one dropped out in the first six weeks and after that the remaining 19 stayed for the duration of the project.

In designing the BETT project I placed the emphasis on school based training. This meant that after training sessions with the consultants the educators then delivered training to the same clusters of schools over the period of the project. They then returned to the schools every month to follow-up the implementation. From experience and the literature review I had identified that school directors were essential to the process of change within schools. School directors were invited to attend all the teacher training sessions led by the mathematics educators and additional training sessions led by the consultants. This additional training focused on how directors could develop the programme within their schools. Directors participated in evaluation interviews, carried out shared classroom observations with the trainers and made contributions to follow-up visits. This model fits with research by Craig et al (1998) who wrote about upgrading the role of the school director from an administrator to an instructional leader. The educators often commented that school directors did not always attend training or were involved in administrative duties such as organising refreshments and teacher payments. They were often not available for joint observations in the support process as they had many additional tasks to attend to. This finding is not uncommon in the research literature.

All BTC programmes built on the experiences of EQIP and international research that a support programme was integral to any intervention in teacher education. The main support programme was based on the educators making a monthly visit to schools, observing classes and discussing the intervention with the school director. As in the EQIP project the classroom observation form was developed to support teachers in improving classroom practice and implementing the BETT programmes; as well as the monitoring of project implementation. The form was designed for use by the educators and school directors and all other programmes BETT was implementing. It was completed by the educator as they observed the class teacher. The classroom observation (see annex 2) form went through many stages of development. From the beginning, drawing on the experience from the EQIP project it was decided that observation forms should not be based on levelled descriptors. The design needed to avoid a simple checklist where educators were ticking how they perceived the implementation without considering the evidence for the ticks. The emphasis of the classroom observation

form was a tool to support the learning process rather than as a measure of what was achieved. Developing tools in dialogue with the educators so that they could represent what they thought was culturally important was significant. Educators wanted to ensure that teachers were creating a classroom ethos where pupils were happy. Homework and telling the pupils what they were going to learn was also important to them as this fitted in with the MoEYS five step approach to lesson planning. The consultant's priority was that the statements on the observation form were based on traditional classroom practice with movement towards pupils participating more in the learning process. Child-centred learning was not used as a phrase by any of the consultants involved in the project implementation.

The form also included a section for recording strengths and areas for development. Both were completed by the educator in discussion with the class teacher and shared with the school director after the completion of all classroom observations in the school. This ensured the school director was able to support the teachers in implementing the feedback. The educator also completed a summary of feedback from all the observation forms that had been completed over a period of a month. Each educator then selected one classroom observation form from all of their visits in any one month which provided evidence of good practice. The selected observation forms were attached to the educator's monthly summary. This practice allowed the project team to check the quality of form completion and to identify teachers demonstrating good classroom practice. It reduced the necessity to sample hundreds of observations which was unmanageable especially when translation was required.

At the beginning of the project I had observed a lesson with the educators. The notes made then were very different from later in the project. In the first lesson we jointly observed the educators all agreed that the lesson had lasted 40 minutes. I had noted the lesson had started at 14.55 when the pupils came in from break and finished at 15.15 when the pupils went out for break. The first pupil completed the activity that had been set within seven minutes. There was no further input from the teacher and the pupil remained unoccupied until break. After the observation the educators and I discussed what we had observed. The educators insisted they had observed a 40 minute lesson. We eventually settled on the lesson being 40 minutes because that is the required length of a lesson. Discussing lesson observations was a powerful means for developing a shared understanding of what we saw in lessons and the underlying cultural issues which I will examine in more detail in Chapters Six to Eight.

Figure 5.13: The training Cycle Programme

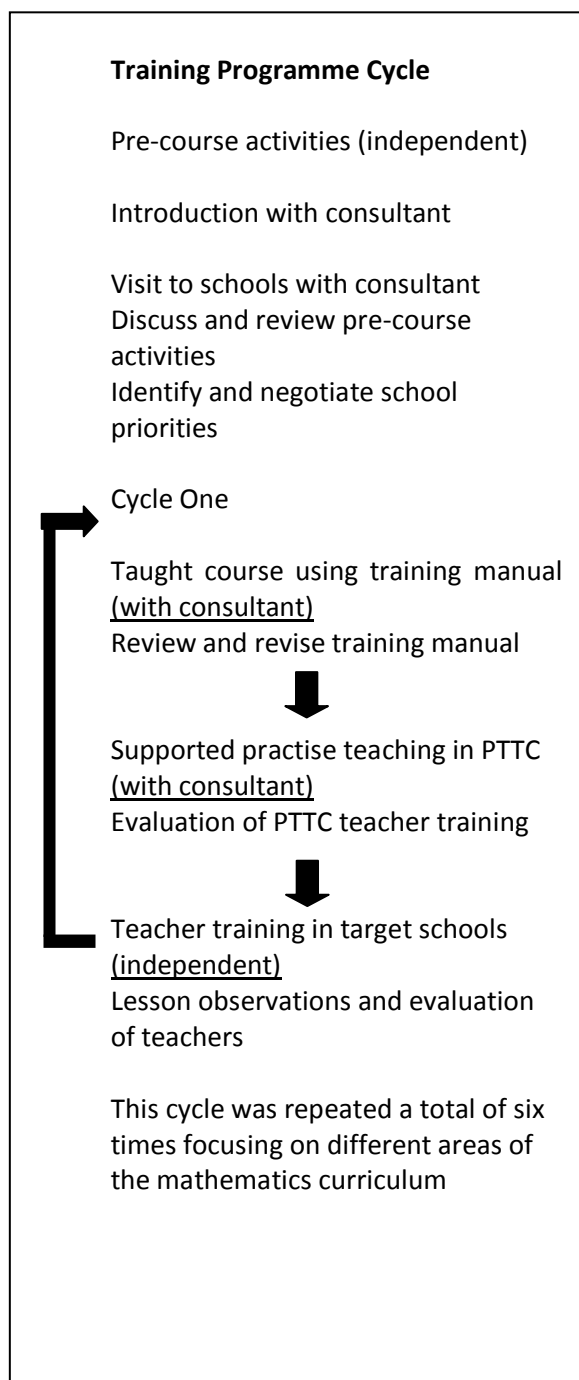
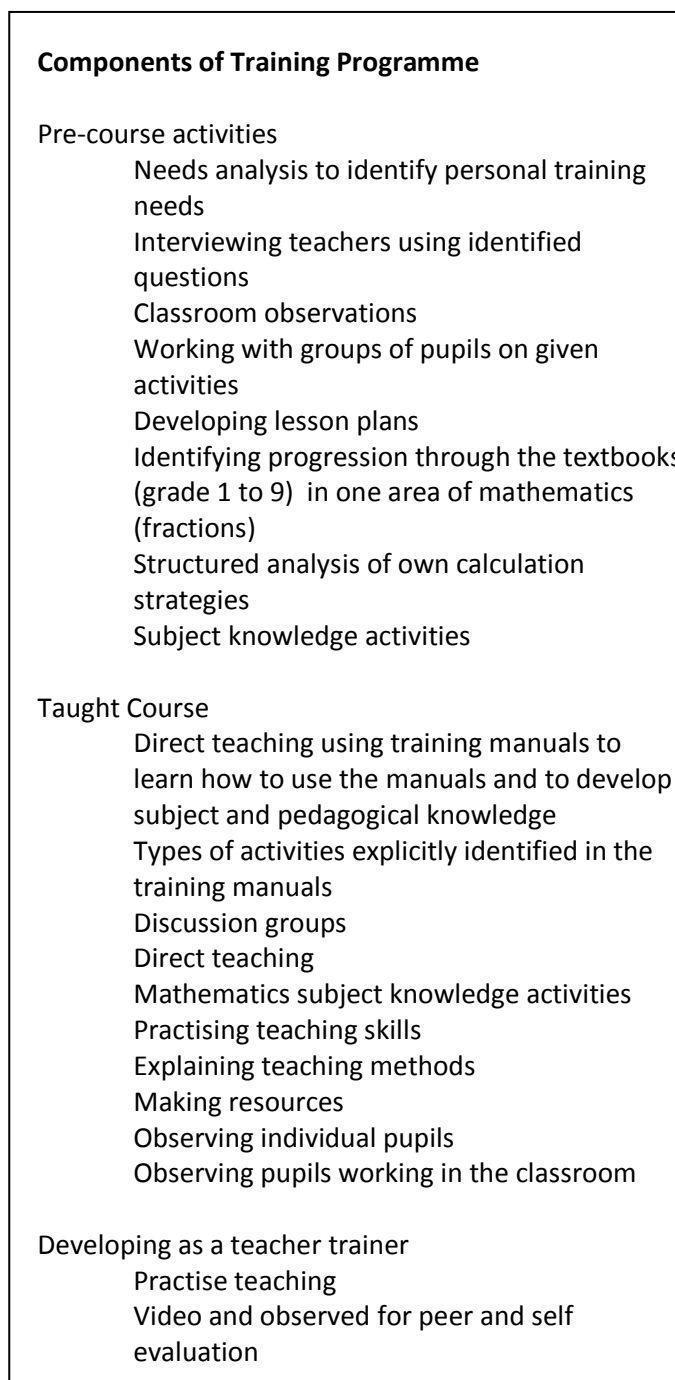


Figure 5.14: Components of the Training Programme



In order to develop the educators' skills in observation the consultants observed the teaching of mathematics and videoed some lessons in a variety of schools in Siem Reap province. The videos were used to support educators' skills in judging strengths and areas for development in teaching and learning and provided a focal point for discussions. Educators also accompanied the consultants, recorded their observations and discussed their findings afterwards. Observations were also undertaken in a variety of formats including timed observations of pupils and teachers and the identification of key teaching strategies and the

effect on pupils' learning. These observations provided a baseline for educators' understanding of the process, and a snapshot of what was actually happening in classrooms.

In early trials of the observation form the following results were noted. Four educators observed a Grade 9 lesson in geometry in 2006 and although three out of the four generally agreed that the teacher had given clear explanations, used relevant questions and that pupils were quiet, they disagreed on many other criteria. Only one educator provided two points of evidence to justify their comments. The areas the educators identified for development tended to be numerous and non specific. A sample of lesson observation forms completed by educators were analysed in 2007 to gain an indication as to whether the tool was successfully contributing to the improvement of the teaching and learning process as there had been no evidence that this was the case in the EQIP project. Criteria on the form were categorised into learning and teaching. Learning included: pupils' interest, enjoyment, use of resources, co-operation with others and new learning as well as to how much pupils had achieved during the lesson. The effectiveness of teaching was judged by the clarity of the explanations, the use of resources, variety of activities and questioning, timing and pace, assessment and feedback to pupils, extension for more able pupils and the use of homework. The sample showed that there was some improvement in the quality of the observations with some evidence matched to the criteria. Feedback began to include comments such as increase thinking time, use chalkboards and provide more support for less able pupils, but there were still some contradictions and inconsistencies in feedback given.

By December 2007 notes made from joint classroom observations by consultants and educators showed some commonality in observations. There were improvements in how feedback was given. For example consultants noted that most educators were now sensitive in the process of giving feedback, putting teachers at their ease. In three out of the five cases the educator encouraged the teacher or school director to identify their own areas for development and strengths. In two cases the educator started the feedback by focusing on the strengths, although in others there was a list of weaknesses identified. In two feedback sessions the educator dominated the feedback, but in another two observed there was a dialogue and the teacher and educator appeared to be enjoying the discussion.

Findings from an analysis of the educators' responses to the components of the programme

The educators were asked to prepare a number of activities prior to starting the taught course. These activities had three purposes. As the educators had been selected from different

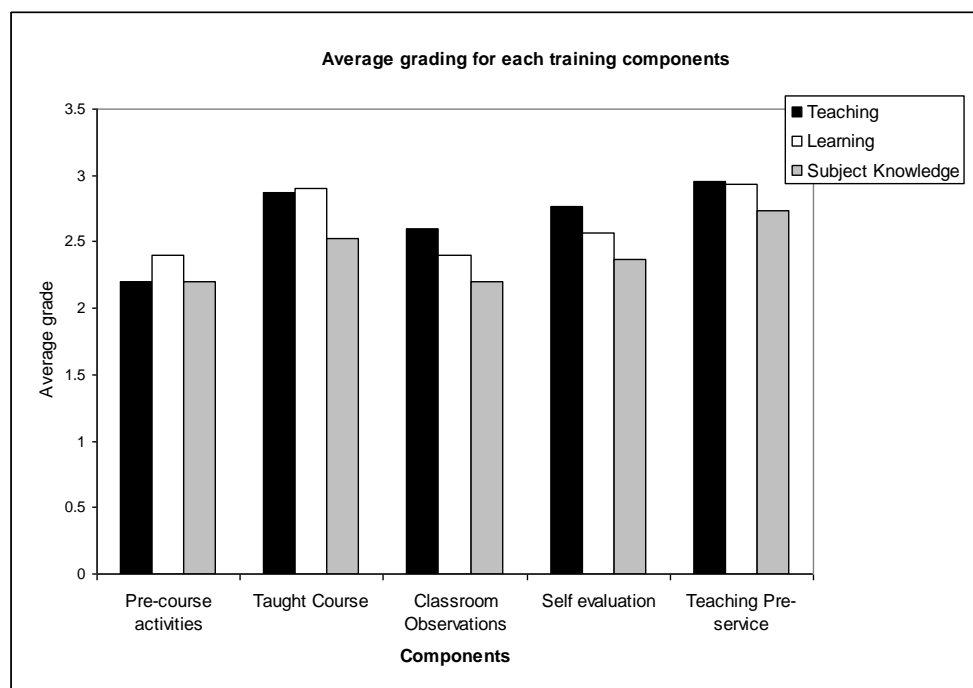
positions in the education system asking them to interview teachers, observe mathematics lessons and examine lesson planning ensured that they all had an awareness of the issues facing teachers in local schools. Some activities involved the educators working with small groups of pupils on mathematics activities; an exercise that there was little evidence of in Cambodia. I hoped this would give educators some insight into how pupils were thinking. Activities on mathematics subject and pedagogic knowledge were included to provide me with a baseline assessment so the content of the taught course could be matched to educators' needs.

The pre-course assessment activities provided insight into how the educators approached the mathematics tasks. In the mental calculation tasks the educators all demonstrated that they could use partitioning, but only one educator was able to consistently explain the methods used throughout the activity. When the educators worked with the four operations and were asked to explain the methods they used, they only provided instructions on how to do the calculation. The consultant's diary records that while the educators were initially reluctant to try more open ended problems and to question why things worked, they became more open to this approach and many of them referred to calculation strategies and helping pupils think as a major contribution to their understanding. Roth made a direct link between observations he had made working with groups of pupils on a mathematics activity and his own approach. *'The children were blind at first, then I explained a little, then the children began to understand and enjoy the activity.....When I could not do the activity it helped me when it was opened up more'*. Dara said that *'The key was to bring pupils to find the result by giving an example but not by telling them the answer'*.

The sample group of educators was asked to identify the different components of the training programme. All of the educators identified the taught course as a component and 80% referred to discussion and working with colleagues, giving examples such as *'I did not understand, but when I talked to the other educators we were able to solve the problem together'*. 60% identified their practice training session in the Provincial Teacher Training College (PTTC) as a component and 20% mentioned classroom observation and research. This provides some insight into what educators viewed as significant. The educators were then asked to grade the components on a scale of 4 (helped a lot) to 1 (did not help much) on how each component contributed to their understanding in the three areas of teaching, learning and subject knowledge. It can be seen in figure 5.15 that the educators rated all components highly. However, on average they felt that each components' contribution to developing teaching and learning was higher than subject knowledge. From the analysis of the interviews

it was also noted that only 15% of the educators identified subject knowledge as an area they had developed. The consultant’s research diary records that the educators became much more confident in mathematical subject knowledge sessions. For example in one session the educators were introduced to the ‘*Fibonacci Rabbit Problem: Fibonacci posed the problem that if two baby rabbits, one female and one male were placed in a field, they would copulate at the end of the first month and give birth to two more baby rabbits at the end of the second month. Assuming that babies were always born in male and female pairs and none died, how many rabbits would there be at the end of one year?*’ Educators became very involved and asked for less support than in previous sessions. Educators drew diagrams, discussed the problem and shared new information. They were also visibly more relaxed when they realised that every pair of educators had a different result! The research diaries and evaluations did not explicitly refer to learning about mathematics subject knowledge, although the educators talked about their ‘*new understanding*’ and ‘*using new strategies*’. It would appear that the mathematics subject learning was a new approach to understanding rather than a new body of knowledge. However, evaluating the implementation at a later stage challenged this assumption.

Figure: 5.15: Average grading for each training component given by educators



The component that appears to have contributed the greatest to the educators’ learning is the practice sessions in the PTTC. Educators made references to teaching the pre-service teachers in evaluations, interviews and the research diaries. They wrote that they learnt a lot from teaching the student teachers, but it is difficult to define what contributed to that learning. It

could be that they felt more confident with pre-service students. Over 250 student teachers provided very positive evaluations of the training on the standard project evaluation forms, and this certainly appeared to contribute towards the educators' confidence. Those students who were interviewed after the training all spoke about how different the training was from the 'usual' sessions in the PTTC. As the training took place in the PTTC, it was possible for all 20 educators to train on-site at the same time, and therefore it was easier for the consultants to observe the training and provide immediate feedback. Feedback was viewed as significant by educators; it was recorded frequently in research diaries. Training was also videoed and this was played back to educators as a group. However, none of the educators mentioned the video activity explicitly, which suggests that they did not consider it to be important. From a financial perspective it could be argued that the PTTC training component required less investment and provided a more effective outcome for the educators compared with the more costly implementation of a video component, however the use of video training has been minimal and at this stage there is insufficient evidence to argue against its use in the continued development of this project or other in-service programmes.

Figure 5.15 also identifies the significance of the taught course. The course was centred on eight training manuals developed by the mathematics consultants. Six units focused on mathematics, one on mathematical pedagogy and one on school managers' support for the programme. To ensure that the process of writing the manuals had local ownership and drew on Khmer experience, a thorough editing process was put in place. The training included specific opportunities for educators to review and comment on the manuals as they were used, both during their own training and after they had used them with teachers. The national mathematics educators from the Ministry of Education Pedagogical Research Department were involved in the editing process. Although the educators made suggestions about changes to the manuals, they were generally superficial; spelling and grammatical disagreements were common. Discussions on the 'right' word to use could easily have taken over sessions, so it was necessary to manage comments carefully and this probably truncated the discussions. None of the educators discussed the manuals in the data collection process, although one identified them as a component of the training. Observations of training indicated that educators used the manuals as a script. They were able to involve teachers in their sessions and there was evidence that they assessed the progress of their groups. However, they were not able to adapt the materials or move away from the script to meet the differing needs of their teaching groups.

Findings from data analysis by consultant

During interviews the six educators focused on methodologies and strategies. They emphasised the methods they had learnt during the training that could be used in the classroom. For example, they discussed the importance of linking pupils' activities with the lesson and using a variety of teaching strategies. All six educators spoke about how new teaching methods had helped them learn. Four of the educators talked about mathematical activities, particularly those that involved reasoning. Five out of six educators mentioned how lesson observations had helped them learn. One educator said, *'I had to observe the teachers in order to find a way of teaching them'*. Another commented that *'I use my brain to observe teaching'*. A third stated that *'Observations gave me ideas on how I can help the teachers with activities and tasks'*. Half of the group commented on how training the teachers had helped them learn themselves; one mentioned that evaluating teaching had helped his own learning, another said *'The training makes me reflect'* and, during an interview one educator stated *'the interview itself is important to my learning'*.

In considering how the training programme had changed their own practice, there were insightful comments from individuals. The majority of the educators focused on teaching methods and strategies and the importance of linking materials with the intended learning. Some identified these in more detail considering both the teacher's delivery and the active participation of the pupils: *'Using a lot of strategies in teaching each lesson helps pupils remember'*. *'I can apply one material to another situation'*, *'I am able to integrate activities into the lesson to match the learning intention'*, *'Sharing ideas makes the pupils remember for a long time'*.

The majority of educators identified active participation, discussion, exchange of ideas and interest as important factors in evaluating their own training and that of the teachers. Educators noted that the relationships between participants and the trainer were important. For example one educator described how he *'Praised participants and they asked him lots of questions and he could answer everyone'*. When he was asked where he got the answers he said *'Sometimes if I could not answer a question I would find the answer for the next training and I would send the answer back to the school even when I had moved on. I got the answers from research....I used websites given by the mathematics (consultants) and discussions with my friends'*. Another trainer used the Dr Maths website and an email to the consultant to answer a question.

The design of the educators' evaluation forms provided useful insights into what they viewed as important. The forms indicated an understanding of the factors that contribute to teaching and learning and the need to evaluate these. They demonstrated an awareness of the needs of differing abilities of pupils, the purpose and importance of questioning and the attitudes of pupils. The educators had some difficulties in designing the forms and it could be seen that the forms would not necessarily answer the questions the educators were trying to research. However, it was considered by the consultants that the educators should trial their own forms in order to give them greater insight into the process and that a follow-up session would look at the results and how their research could be developed further.

Was the BETT model and the components used effective?

Examining 'which components were the most effective for the development of a mathematics teacher educator' is set within an international understanding of what constitutes effective mathematics education, the local context and the constraints of financial and human resources. Fundamental issues associated with international partnerships such as local and government ownership, translation, support structures to ensure programme sustainability and the use of training materials have to be factored into a project design.

In terms of an understanding of the teaching and learning process, educators showed an awareness of issues faced by classroom teachers. They had an understanding of their own roles and responsibilities in the process, during the programme they became more aware of the attitudes and feelings of the participants, and concentrated on how the new methodologies and activities could be implemented. It was evident through observations of the training, that they were able to improve their didactic teaching through clearer explanations, better use of questioning and supporting the involvement of the participants. It was also evident when observing the educators' feedback to teachers and reading the observation forms that there was an increased accuracy in lesson descriptions and an identification of evidence to support the judgments the educators made. However, in many observation forms educators were still unable to link the lesson to the recommendations for improvement. For example they could identify that the teacher used an appropriate teaching aid or had not used an activity during the lesson, but the recommendations that followed were unrelated to their observations.

Training manuals were an essential part of the programme, but the findings indicate that the educators did not have any sense of ownership. Finding a strategy for educators to develop the manuals and adapt them would appear to be the next developmental step. Interviews with

classroom teachers and school directors after the training have nearly always focused on the value of follow-up visits made by the educators and the advice they have given. School directors and teachers requested that educators should meet in schools more regularly to encourage teachers and to advise and answer questions. This suggests that educators have built up their professional status. Two of the educators in Siem Reap Province were promoted during the project implementation, a similar outcome to the findings of Knamiller et al (1999).

Flecknoe (2000:455) demonstrated that there can be a correlation between in-service education and pupils' achievement. In his summary he notes that *'Teachers-as-researchers can be expected to improve pupils' achievements'*. The educators have had an opportunity to begin to research the effects of their own training and, although at an early stage of this process, they are beginning to ask more questions and reflect on their own actions. An email sent by Roth to me provides an example of this development *'I would like to tell you about my research process. I did it already, but it seems difficult to analyse. So, just now I am re-analysing again. I think it is OK. I will do it by my question. Anyway I want to know what (you) think about my questionnaire? Is it enough to analyse?'* Thinking, analysing and evaluating was identified as a major contribution to learning in all of the research diaries.

In this research, qualitative methods have been used to focus on the development of the educator. In the first part of the project implementation it was possible to say that the taught course was of sufficient length and depth to develop mathematics educators' subject understanding and to increase their technical skills. The educators showed a greater awareness of the school and the needs of teachers. This is possibly contributable to their experience, or to the classroom based components of the training. However, educators' improving skills in observing teaching, together with their change in attitude towards what teachers can achieve, suggest that the classroom based components were significant. Supporting educators in understanding the teaching and learning process through classroom observation and developing their own research questions appear to make a difference to educators' understanding. Classroom based components, such as self-study and reflection are not expensive, but increase effectiveness. At the end of 2008 it was too early in the project to draw conclusions about whether the training had changed the classroom practice of teachers.

At the beginning of the programme the educators generally only identified socio-economic conditions which they felt were beyond their control, as a threat to the mathematics training programme. However, at the end of the first part of the programme educators emphasised

their own responsibilities as educators, noting areas such as improving their capacity, giving more feedback and trying things out on one another. As Roth wrote in his research diary:

Not only the (mathematics consultant) should try to find new teaching strategies. We are the teacher educators, we have to try our best to search for any new methods and strategies. We have to find what is useful and beneficial to pupils and useful ways to make learning and teaching effective. Therefore we participate and involve actively with friends to learn and research continuously.

Evaluation of the project design from 2009 - 2011

When the project re-started in 2009 the consultants planned to build on those components that had been evaluated by the educators as successful and discuss with the educators what they perceived to be the priorities for their continued professional development and the needs of the project. Many of their comments at this stage related to increasing the finances in the system. The areas where they identified the need for professional development were often related to general skills that would make them more employable such as ICT and learning English, but they also identified the need to increase skills in classroom observation.

The regular research interviews continued with the six educators but were also used more widely with the rest of the group responding to the six educators' comments that being interviewed had contributed to their learning. More input was given on observing lessons and videoed lessons were used again to focus educators on providing evidence for their judgements. Joint observations continued to be made by consultants and educators. In January 2011 trainers carried out an analysis of their lesson observations to see what evidence they had for writing the reports they did. The training group was divided into four and each group was given lesson observations from a particular time period i.e. Jan 2009. They were then asked to make a tally of any evidence given to show whether a specific practice had occurred during the observed period. Figures 5.16 & 5.17 show the results of this activity. Whilst the data should have reflected where the form explicitly cited evidence this is not always the case as some educators tallied the results based only on a tick. Despite this the activity proved to be very useful as the educators kept asking questions as to why judgements had been made without any evidence. In hindsight this activity should have been introduced earlier in the implementation as it appeared to be the most successful approach to getting the educators to take responsibility for their role as an observer. The activity should have provided insight into the changes in classroom practice, but there were too many variables involved to make this accurate. Changes between the six month periods may have suggested improvements in classroom practice but could also reflect changes in the educators' attitudes as they became

more skilled at observation. Further research could be done by having an untrained control group.

Figure: 5.16 An evaluation of 120 lessons, 30 for each six month period, analysed by the educators for evidence of the activities listed on the lesson observation form under learning

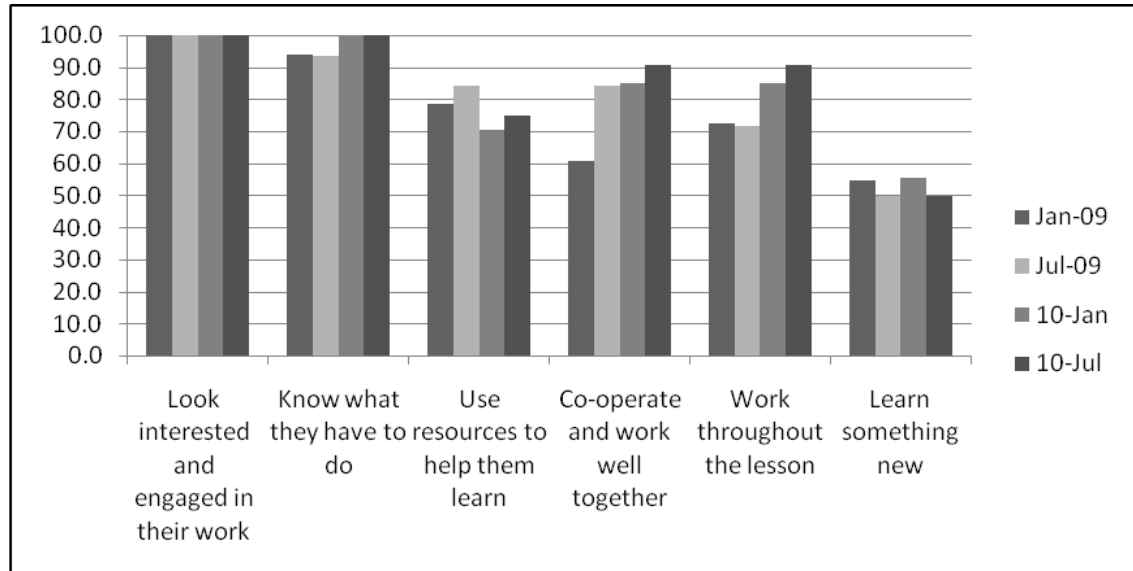
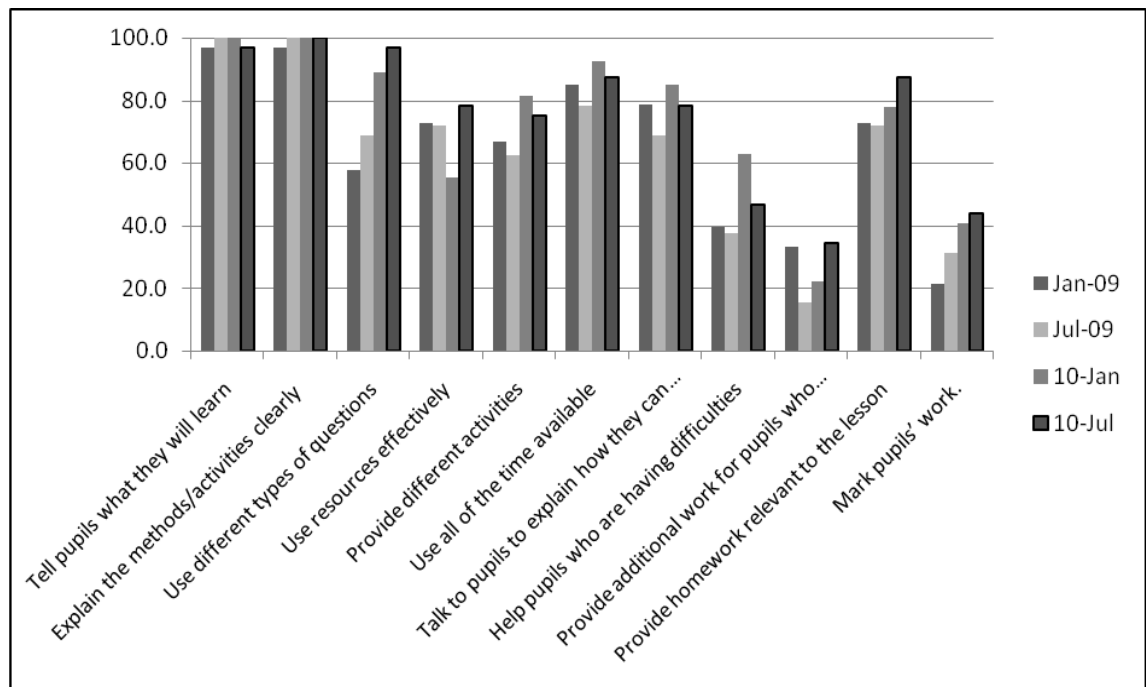


Figure: 5.17 An evaluation of 120 lessons, 30 for each six month period, analysed by the educators for evidence of the activities listed on the lesson observation form under learning



At the end of the project the educators were asked to rate the knowledge concepts and skills training according to their learning. They were also asked to consider how they learnt from teaching. The scores were separated for grades 1 to 6 and 7 to 9. The lower score in figure 5.18 shows a higher aggregated rating. This suggests as expected that the primary educators gained

more from primary subject knowledge and the secondary educators from secondary, however, the results suggest that secondary and primary educators had a similar learning experience from the secondary training.

Figure: 5.18 A table showing how the educators rated their learning from the taught element of the course based on subject knowledge and rated primary against secondary

Knowledge Concepts and Skills	Grades 1 to 6		Grades 7 to 9	
	Learning from training input	Learning by teaching	Learning from training input	Learning by teaching
Primary educators	20	21	28	31
Secondary educators	23	23	28	27

The same exercise was completed with the pedagogy part of the training. The primary educators clearly valued the primary training more than the secondary educators, however the ratings given by secondary educators is fairly static across all grade groups. An identifiable change since the evaluation on subject and pedagogic knowledge at the end of part one of the implementation is that now educators are putting almost as much emphasis on learning from subject knowledge as from pedagogic knowledge. This could provide evidence that a cyclical approach to professional development is effective. Much of the subject knowledge in the training courses in the second part of the implementation was a repeat of the first part.

Figure: 5.19 A table showing how the educators rated their learning from the taught element of the course based on pedagogical knowledge rated against lower primary, upper primary and secondary

How Children Learn	Grades 1 to 3		Grades 4 to 6		Grades 7 to 9	
	Learning from training input	Learning by teaching	Learning from training input	Learning by teaching	Learning from training input	Learning by teaching
Primary educators	17	21	19	21	26	30
Secondary educators	25	26	24	25	26	25

To support the training sessions with teachers a number of videos were prepared of the educators implementing various BETT activities with pupils. It had been noted that although BETT educators were encouraged to lead staff meetings and demonstration lessons in their schools this was only implemented on a few occasions by one or two of the group. There is no evidence that the videos produced were used for training or support in schools. However the process of developing the videos which often required several attempts at the activities with

different classes of pupils worked like a coaching session and did improve explanations, questions and general management of an activity. Hord (1994) had stressed that coaching was one of the most effective components of teacher education programmes.

One of the successes of the in-service finalisation programme was the completion of the mathematics manuals. When the first unit was printed and included all of the in-service maths educators on the author list it boosted their confidence and they were visibly proud of the achievement. This encouraged them to take a more proactive role in the editing of subsequent manuals. Although the educators found it difficult to prepare activities for the manuals themselves they did make more suggestions, requested inclusions and further explanations which strengthened the final manuals. All the manuals were signed off by MoEYS for use in in-service programmes.

Finalisation of the pre-service BETT maths programme

In April 2010 a finalisation process began focused on the pre-service maths programme. Workshops were set up with all key stakeholders to make choices about the final curriculum content, implementation and sustainability of the programmes. This had become particularly relevant as at the request of the joint BTC/MoEYS steering committee the BETT maths programme had been expanded to all primary and regional teacher training colleges (TTCs). It is not possible within the scope of this thesis to discuss how the in-service materials were converted to a pre-service implementation (see BTC (May 2011) Mathematics Completion Report for discussion), but during these workshops a number of significant issues were raised that have a bearing on project design.

The finalisation process led to more partnership opportunities with representatives from different departments in MoEYS, directors and trainers from the TTCs, representatives from the POEs and the educators taking part in workshops. In the discussion between the POEs and the TTCs it was evident that they rarely met with one another to discuss education or how the developments in pre-service and in-service education could be joined up. The joining of pre-service and in-service had not been included in the original BETT design either, as it was only expected to be a programme for BETT target schools. The expansion into pre-service had begun at the request of MoEYS in 2008 when they asked BTC to support the development of contract teachers. The BETT educators were not well located to train contract teachers as they were based in only three provinces, so six centrally located PTTCs were selected for the training. The original plan had been for the BETT educators to train the PTTC trainers to deliver the programme, but the Khmer team, MoEYS and PTTCs did not consider them to have enough

status as the R/PTTCs' trainers had higher qualifications and were generally employed straight from university (see Chapter Seven for discussion), so consultants conducted the training. Once this contract training process had been set into motion MoEYS saw the opportunity for expanding the maths programme to pre-service. All pre-service training was conducted by the consultants for the same reasons as I have already discussed. This led to the consultants working with two sets of maths trainers with different experiences and purposes and led to further research around a comparison between the programmes which is too substantial to be included in this thesis (see BTC (May 2011) Mathematics Completion Report for discussion). However, having been through this process and particularly looking at the results of the BETT ELP programme discussed in Chapter Eight I concluded that developing pre-service and in-service concurrently is a priority in education development designs.

The finalisation process identified the importance the Khmer placed on subject knowledge. Pre-service training for each subject had three distinct parts: subject knowledge, pedagogy and preparation for practicum. The BETT maths training programme was implemented in two phases. Firstly for each area of mathematics the participants were taught a unit called 'Knowledge, Concepts and Skills'. These units were based on developing teachers' understanding of the maths they were teaching and experiencing the programme first hand as a learner. In the second stage they re-visited the subject knowledge in a unit called 'How Pupils Learn'. These units were split into grades 1 to 3, 4 to 6 and 7 to 9. They were based on how to teach maths and were structured so teachers could understand the progression pupils needed to make and the misconceptions they may have. A pupil activity book was given to teachers as a separate manual, but the activities were also integrated into 'How Pupils Learn' so the training included micro teaching sessions. This process had worked well in in-service training but difficulties were encountered with the pre-service programme. The subject knowledge in the BETT programme was not considered to be of a high enough level by MoEYS, despite the fact that many of the maths trainers from the PTTCs had struggled with the subject knowledge in the training manuals. In pre-service training the pupil grade 10 – 12 texts books were used to teach the student teachers subject knowledge. They were taught in the same way as pupils. The TTC trainer demonstrated one exercise and the student teachers copied this out then worked through the exercises. In the pedagogy training in the TTCs student teachers worked through the pupil textbooks of the grades they would teach. Then in preparation for practicum they prepared materials and practiced delivering pages from the text books to their peers.

At the finalisation workshop MoEYS and PTTCs requested that higher subject knowledge was included in the manuals. Representatives edited all maths manuals and made

recommendations where they wanted subject knowledge at a higher level. All these requests were implemented, although there were some concerns that trainers would now have manuals with unfamiliar materials. In order to solve this problem an additional five day workshop was put in place to teach the new materials. This workshop was differentiated. The participants from TTCs had not always been maths trainers, nor had there always been a regular participant from each TTC. The final input provided an opportunity to re-visit the subjects of number and calculation for participants who had missed the earlier parts of the course and extend the subject knowledge of those who had attended regularly so they could take the lead on the new material in their TTCs (see BTC (2011) Maths Completion Report for discussion).

During the finalisation progress there was a robust discussion about how much time TTCs would have to implement the programme. A sufficient number of hours in the TTC maths curriculum were allocated to teaching maths, but the BETT modules were still perceived as something that was being added onto the existing programme rather than integrated. Trainers from TTCs had a very specific view on what could be defined as teaching pedagogy and what was mathematics subject knowledge. During the finalisation process TTCs agreed to re-title the BETT manuals to *'The Training Document for Basic Primary Knowledge (or Lower Secondary) in Mathematics for Pre-Service Teachers'* (formally called Knowledge, Concepts and Skills) and *'How pupils learn mathematics in Lower Secondary (or in primary)'* (formally called How Children Learn). Some representatives did not make the distinction between learning mathematics as a subject and training to be a teacher of mathematics. This led to a few becoming convinced that the subject knowledge in BETT manuals was not an appropriate foundation for the primary school teacher. The final compromise was that the 180 hours needed for the programme would be allocated over the two years, but the training would all fit into the pedagogical time allocation in the TTC and none would be allocated to the subject knowledge teaching. This outcome was undesirable as it took the cyclical element out of the training programme. There was no possibility for the student teachers to have the maths modelled to them as a learner.

A further difficulty was encountered because of the approach to lesson planning for TTC trainers. There was an expectation (although only implemented by the most committed and able trainers) that all lesson plans should be prepared on the basis of research. Therefore trainers were expected to plan their lessons using a variety of resources. The BETT manuals had been designed progressively so there was a danger of them being used as part of a 'pick and mix' approach. The consultants were not opposed to trainers using a range of manuals and

would encourage them to do so. However, at the time of writing, no materials, other than the BETT manuals, gave the trainers structure and progression. The Ministry curriculum is a list of content not a teaching plan. The best solution available was to ask the trainers to use the BETT materials as a core and add to them from other sources when appropriate. The importance of subject knowledge, a formulaic approach to teaching and the conflict between tradition and modernity that the evaluation from this project raises, are explored in greater detail in Chapters Six, Seven and Eight.

Concluding remarks by the teacher educators

The contents of this chapter have made a considerable contribution to understanding some of the more generic issues of project design. Whilst I have not discussed whether the project had an effect on pupil achievement or changed the practices of classroom teachers I do make the claim that this particular approach to project design, of developing the knowledge and understanding of the teacher educators, was a success in the programme. In May 2010 I asked the six educators to think back to the beginning of the project and talk to me about the journey they had travelled. I have edited their responses but have kept the majority of each of their statements as they give a flavour of the personality of the educators as well as how they viewed their own development, the responses of the teachers and what they thought about the project implementation. It is noticeable that at this stage of the implementation their statements have become more specific. They often provide examples or justify their opinions. The statements show growing confidence not only in what they perceive they can do, but also how others perceive them. Some of the educators also talk about how they are used in their provinces as resources. The comments from the educators also suggest that despite the conditions teachers work in they have made an effort to implement some training from the BETT programmes. The passages are included for three purposes. They help the reader identify with the educators. The reader can conclude for themselves the effect of the programme on the six educators. The voices and opinions of the educators are embedded in the next three Chapters in an exploration of how the uniqueness of a nation may also affect project design.

Roth:

My capacity of mathematics has improved since the beginning of the project. Looking at the textbook from the teacher I read again before I follow what my teacher provided to me, but now I feel the textbook leaves a lot of things out and makes mistakes. Now I understand why we do things. For example before I looked at some exercises and saw that they could not be solved, now I look at the problem and see it is not correct. When I look at the exercise now I identify things not based on subject knowledge. There is a technical part of training maths skills and subject knowledge is only part of it. I read a lot and now when I work with teachers they accept and recognise the strategy and methodology I

deliver to them. Also most teachers understand the importance of what we [BETT] provide.

Sopheap:

It's different for me now. Before I participated in the project I was afraid to do anything in general. I am afraid of people with different status, but now I am not afraid. I am confident to express my ideas. What I see different from before the project is no-one asks me anything. Now everyone asks me questions. Other people are more confident of me. My status as deputy director at the school was difficult at first as the school was not confident to trust my capacity, now they value and appreciate me. After a lot of training I am happy to work with maths and I think a lot about maths. People around me, teachers at school ask for my help. Higher authorities delegate me with tasks to do because they know my capacity. For example if people are needed for technical training they appoint me to support. Also in some training they ask for me to facilitate.

Smei:

I would like to inform you that before the project I had capacity and skills, but these were mostly theoretical. In terms of methodology I used to be a teacher, but not in the primary. What is important is the five teaching tools. I believe that if as a teacher we use the five tools effectively it would lead to a perfect classroom. Classroom observation is also related to this task - I mean a lot of teachers get a lot of experience from doing that. In the beginning most of the teachers talk and students listen and I cannot give feedback in order that they can improve. So the skill I have developed the most is how to support teachers by using the five tools. In my point of view I see most of the teacher improve a lot, but still seem some teachers do not improve enough. They have commitment and apply the training when I visit. I believe the teachers can improve their capacity in the coming years.

Dara:

I have worked for several NGOs. But what is different is all these organisations used general pedagogy whereas the BETT training is specific. It is very detailed in content and skill. Much of the training we have is theoretical, in some part we say why is this or why is that, what is different for me is I only know primary but now I can understand how to make a link between primary and lower secondary. It is not only theoretical but practical. I can explain how it fits and links. For example in algebra when I teach in primary school I pick up a strategy and explain. I have been promoted to staff accounting and also technical staff so I can support the BETT target schools more. But now the director of BETT non target schools wants me to work for them too, but I am too busy. Also I get more calls from teachers e.g. a teacher will ring and say I am teaching fractions what materials should I use. Another thing they ask is if I send the pupils out of the classroom to do work will it affect the neighbouring class or not? How to provide a link between the materials we provide and the textbook of MoEYS. I explain that we cannot know all the content in a short time and we must go step by step. Now I am more confident to observe classes and give demonstration lessons for example I will demonstrate how to use the 100 square.

Sarom:

I am a primary school teacher. What I learn at the Teacher Training College was theoretical and not practical so when I transfer to the pupils it was very difficult. After working with this project my skills improve and I am using the five teaching tools. I found a lot of difference especially in pupil activity. In general these activities focus on the pupil. I notice that the teacher only plays as a facilitator and the pupil does the activity. So to do like that the pupil can gain more skills and needs less support from the teacher. When I get training I can teach the teacher. What is difficult is in the beginning I am afraid of teaching the teacher, but now I am more confident. At the beginning the teachers did not understand how to use materials especially at the lower secondary school. The lower secondary school teachers think they cannot use local resources. When I put a bottle on the top of the table they think it is a joke, but then I use the bottles to show how common factors work and they see that it is much easier to find a material to support the activity and apply it. To begin with the primary school teacher did not value the chalkboard, but after observing lessons and explaining how to use it with them they can see how they can check what pupils understand. When I show them the teacher appreciates that it is good. Even lower secondary student accept the idea so they can evaluate the capacity of the student.. They recognise the 100 square is good and now they request for more. What is different for me is the communication between the director, teacher and me during a visit. At first there was no interest. After the training they value the visits and some schools request to visit two or three times. I notice the pupil paired work. To begin with pupils do not support each other, now they explain to one another.

Chime:

I know already that the project covers maths to a bigger scale than other projects. It also has positives and negatives behind it. I will start with the negatives. After I gain a lot of skills in teaching primary I am confident I can manage this easily, before I was missing in confidence. Recently the training of 'measures' to teachers was easy. Some were easily able to see the scale which before they only knew theoretically. Also in geometry concrete materials make it easy to see and to understand.

During training I have plenty of materials. The teacher says you look like the person who delivers the medicine. Because of thorough preparation the training does not take a long time. Usually when I visit the school I support the teacher directly. Also I present a short teaching activity in primary and lower secondary so the teacher can understand more. For example after the teacher finished the session. My capacity to improve has not only been maths but in administration. The POE now asks me to prepare progress reports for all the BETT programmes. I am very proud of that because they trust me. According to the report related to the maths. In Kompang Cham there has been some improvement in the use of open questions and the starter activity which the teacher only uses a little. Paired work has improved and using the chalkboard is now between 80 and 90%. I work in eight schools and I write the reports, but not much has changed in lower secondary schools. In grades 7 and 8 they have open questions. Some lessons use only closed questions. In primary there are a lot more concrete materials being used.

Chapter Six: Is knowledge of the history of education and the nation relevant to the design of an education project?

This chapter is the first of three that explore question one posed in the introduction: ‘How much did I need to know about Cambodia, its people, its teachers and its education system before I could make a contribution to its educational development?’ Each chapter has a theme: Chapter Six, education and nation; Chapter Seven, religion and culture and Chapter Eight, language and literacy. All three Chapters follow a similar structure. In the first part of each chapter I summarise the theme and identify key issues or concepts. In the second part I explore the identified key issues and concepts through the perspectives of the educators and project implementation and in the final section I look at how this affects teachers and the education system and therefore what is relevant to the project designer.

I have argued in previous Chapters that governments in low-income countries are often forced to respond to global pressures from development and world education agendas. But I would also argue that despite these global trends, nations define education differently. Therefore it should be possible to identify unique national practices and attitudes and beliefs of teachers that may need to be taken into account in project design.

Is every nation different?

O’Sullivan’s (2006) argues that quality education is grounded in cultural traditions, social relations and economic and political life, thus making each culture and nation unique. Given at el (2005:313) write:

Perhaps local pressures and contextual factors overwhelm more general constraints and influences so that teaching looks different from school to school and even from classroom to classroom. A key to making progress on uncovering national or global patterns, if they exist, is to examine classroom teaching directly....Arguments supporting nationally based patterns of teaching have been offered by researchers who have conducted small- and large-scale international studies of teaching.

Stigler & Hiebert (1999:85) also write that nations have a unique style of teaching. They concluded that when analysing TIMMS video archives that lessons in different countries have reoccurring themes that distinguish them from lessons in another country. They reason that patterns of teaching are based on a ‘*cultural script*’ that has been derived from teachers’ own experiences as students and that this cultural guide is then used to create their own lessons.

LeTendre et al (2000) challenge the national cultural script by arguing that there are many similarities in global classroom practices, that teachers across Germany, Japan and the United States use a similar script. This, they reason, is because the modern concept of school has

penetrated most nations. That teachers are following a national cultural script was also been challenged by Clarke (2003) who suggests that there is so much variation in practice between teachers and even lessons that an idea of a script cannot be justified. However, Le Métais & Tabberer (1997) write that curriculum and assessment cannot be separated from the actual aims of a national education system. In Japan they note the aim of the curriculum is to be a self-reliant citizen in a democratic and peaceful state and community with a respect for human values. In Korea a disciplined life is a major component of education and in the Netherlands the values acknowledged are notably Christian and humanistic as part of the Dutch tradition. The Education Law, adopted on 19 October 2007 in Cambodia states that:

The objective of this law is to develop the human resources of the nation by providing a lifelong education for the learners to acquire knowledge, skills, capacities, dignity, good moral behaviour and characteristics, in order to push the learners to know, love and protect the national identification, cultures and language (MoEYS 2007b).

This objective suggests that Cambodian education is nationalistic, but at the same time individualist and meritocratic. It appears to be influenced by human capital theory whilst reflecting a Theravāda Buddhist culture (see Chapter Seven for discussion).

Feldman (2002) writes that a teacher is a person who is being a teacher and therefore is situated in a web of relationships that spread through time and space. Philips et al (2007:712) cite Coldron & Smith (1999) who write that '*Being a teacher is a matter of being seen as a teacher by himself or herself and by others; it is a matter of acquiring and then redefining an identity that is socially legitimated*'. So a teacher builds their identity on how they practice their teaching. Therefore teacher motivation, commitment and behaviours could be associated with how they identify themselves as teachers. But there is also a collective identity that arises through social interaction. Identity is not constructed in isolation from the national and increasingly global society in which teachers live.

In order to understand the identity of Khmer teachers it is necessary to explore how Cambodian teachers are viewed, what status teachers are afforded and what respect they are given. Welmond (2002) wrote that teacher identity is not the same across societies and therefore has to be examined in individual countries. In this chapter I explore teachers' status in society. In Chapter Seven I focus on how culture and educational expectations may lead to specific types of teacher behaviours and in Chapter Eight I focus on how Cambodian teachers are affected by global and national agendas and consider what freedom they have to embrace or resist.

The history of education

Mabbett & Chandler (1995) argue that it is not legitimate to project a notion of Khmer identity back to the beginning of history as the area was made up of many principalities in the pre-Angkor period, however, with the building of Angkor could also be associated the beginnings of development of a Khmer unity. The Angkor period began in 802 when Jayavarman II (reigned 802 -850) declared himself to be a universal monarch, and ended when the Khmers of Angkor moved south to Phnom Penh in 1432 (Rooney 2005). Angkor Wat is now known as the largest Buddhist temple in the world. The bas-reliefs, artefacts, sculptures and inscriptions in Sanskrit, Pali and in Khmer found throughout the temples provide some information about the Angkor system, its kings and chronology.

The reliefs around the 12th Century Bayon temple in Siem Reap provide some insight into everyday life. Rooney (2005) has argued that daily life during the Angkor period did not differ greatly from rural life in the 21st century. I visited many temples of the Angkor period but found no evidence on bas-reliefs that would suggest there was any formal education in Angkorian times. Rooney (2005) and Mabbett and Chandler (1995) have both written about the lack of information on early education depicted on the reliefs. There are some early accounts of education that can be traced back to the seventh century. The evidence points to a traditional education system for boys, provided through volunteer monks in the village Wats (Ayres 2000a, Vickery 1984). Traditionally the wat was also used as a school room where boys could learn from the monks. Boys were taught elementary mathematics and astrology (Frieson 2000) alongside the literary and oral traditions that were drawn from Buddhist and Hindu cultures. Most of the early accounts of life in Angkor rely on the writing of the Chinese visits at the end of the Angkor period. A trip to the National Museum in Siem Reap to look for more detail on education revealed little evidence. The majority of the exhibits and information displayed focus on the kings, the gods, the art, architecture and the mythology; with the exception of the life of Jayavarman II where evidence was cited from the translation of inscriptions in the Preah Khan temple. This inscription provided an account of his two wives that suggested high ranking women were respected. The women had responsible positions in the community, one of them was a professor in a monastery who developed Buddhism and wrote poetry.

After the decline of Angkor, when early western travellers arrived in Cambodia and saw the temples they made assumptions about its history. They were unable to comprehend that the power of the Khmer empire had been so great or could have constructed such vast

architectural masterpieces. The Portuguese traveller Diogo do Couto thought the temples must have been built by Indians (Mabbett & Chandler 1995). San Antonio writes in 1604: there are many Jews in the kingdom of China: they are the ones who built, in Cambodia, the city of Angkor, which as I said was discovered in 1570

(Gabriel Quiroga de San Antonio A Brief and Truthful Relation of Events in The Kingdom of Cambodia page 9).

From the little evidence available to the contrary, it has largely been concluded that between the sixteenth and nineteenth century there was little schooling and a lack of educational policy (Ayres, 2000, Dy & Ninomiya, 2003).

The French colonial description of Cambodia was similar to the views of visitors in the previous century. Cambodia's population was largely rural, estimated at less than a million. The French described Cambodia as the poorest country in South East Asia and that it survived as a subsistence economy. They commented that Cambodia had few precious stones; no surplus agriculture; little manufacturing; no finished goods and the communication and internal market system were very much underdeveloped compared with Vietnam. It may be possible to link the low agricultural activity to the cultural life style of the country. Da Cruz cited in Chandler (2000) suggests that at least a third of able bodied men were part of the monk-hood who would have been financially supported by local communities. With a further proportion of men involved in the military it could be assumed that women were largely responsible for working the land.

Different theories have been mooted concerning French colonial policy on education. On the one hand the French are accused of taking no interest in the education of Cambodians; scholars argue that they actively discouraged education or neglected it for fear that it would lead Cambodians to challenge the authority of the French (Ayres 2000, Kiernan 1985, Shawcross 2002). The counter argument is that the French tried to educate the Khmer, to supply the civil service with administrators, but they were unsuccessful because they met resistance from the Khmers themselves (Clayton 1999).

It would appear that the argument of the French taking little interest in education has been largely founded on the policy concerning the building of Franco-Khmer schools and the modernisation of the traditional wat schools. The new Franco-Khmer schools established by the French were used by the French, the Vietnamese, Chinese merchants and Khmer children from the royal family (Ayres, 2000b). In 1883 only 8 out of 100 students at the School of the Protectorate were Khmer (Clayton 1995). The French had observed that some wat schools in

the west of the country on the borders of Thailand were influenced by the modernisation of Thai wat schools, so in 1924 introduced a nine month teacher training programme for Buddhist monks in Kampot province. The monks were given practical exercises and demonstration lessons and at the end of the course were expected to pass a test that gave them a certificate. The programme was seen as successful and was expanded to include the rest of the country.

By 1932 there were only 18 Franco-Khmer schools and by 1939 there had been no growth. In contrast in 1932 there were 225 modernised temple schools and by 1939 there were 908. Thus it is argued the French were not supporting the growth of the 'higher quality' Franco-Khmer schools. Or was it that the wat schools did not meet with the same resistance as the Franco-Khmer schools as they were based on the traditional education culture? Clayton (1995) writes that the Khmer students were not attending the Franco-Khmer schools for a number of reasons. The curriculum was considered irrelevant, making no reference to agriculture, the Khmers did not want to learn through the French language, the schools undermined traditional Buddhist values, the King was uninterested in education and therefore it was not promoted and there was a lack of qualified and appropriate teachers.

Despite 60,000 children being enrolled in the school year 1938/39 only 294 children gained the certificate. Of those enrolled in the 1944 school year approximately only 500 children passed the certificate (Dy & Ninomiya 2003). Secondary school was equally limited. In 1935 the first secondary school was built in Phnom Penh (Ayres 2000a) with an enrolment of 1800 pupils, in 1944, nine years later this number had only crept up to 2,700 (Clayton 1995, Deighton 1971). At the higher levels of education the picture is similar. Vickery (1984) argues that the French baccalaureate was only awarded to 7 students in 1931 and by 1954 it had only been increased to 144. Ayres (2000a) argues that the French only affected the elite. They built a palace, restored Angkor Wat and sponsored the arts. Education was made available to the elite who were able to study in Vietnam and sometimes in Paris.

Frieson (2000) points out that the French saw themselves as the saviour of the Khmers and that education was a priority, although she also notes that education in Vietnam appeared to be prioritised over that of Cambodia and Laos. Frieson (2000) states that new evidence from Cambodian national archives and research demonstrate the colonial government invested considerable energy in designing educational policy for the Khmers and looking for support from administrations of provinces and districts; as well as providing financial support for pupils from impoverished backgrounds. Poor enrolment, a lack of public acceptance and few pupils graduating provide evidence that these schools were unsuccessful, however, Frieson (2000)

argues that an unintended success of the schools were the growth of a small group of educated, bi-lingual women.

By early 1952 responsibility for education was handed back to the Khmer led by King Sihanouk. In the process of becoming independent Cambodia received assistance from the UN and UNESCO. UNESCO suggested that educational development must be affordable; time was needed to develop resources and the school curricula needed to be revised in order to match the needs of the Cambodians. Sihanouk took little heed of UNESCO's advice and encouraged rapid expansion of schooling, investing 14.8% of the National budget in 1962 and 20% by 1963. Between 1956 and 1963 enrolment expanded by over half a million, a rate of increase far greater than other countries in the developing world (Ayres 2000a). Although Sihanouk made a huge contribution to rebuilding the education system it has largely been condemned as inadequate. Clayton (1995), Chandler (1991), Dy and Nonomiya (2003) all argue that there was an investment in infrastructure with the growth of school buildings and nine universities. Enrolment increased, but resources were insufficient, there were few trained teachers and the curriculum was not reformed.

The curriculum during the Sihanouk period was inappropriate for both rural children, as it was still orientated towards the training of civil servants, and for university students. For example courses in Phnom Penh University had a bias towards the arts and humanities and the Takeo-Kampot University was set up to study Oceanography, 50km from the sea, and to teach medicine without doctors. Ayres (2000a) argues that there was a conflict in the system. In theory Cambodia was trying to modernise the education system whilst relying on a traditional culture. In practice this meant students did not want to study agriculture as this would mean they would remain as rural farmers with no prospect of improved social mobility and wealth, but the subjects they studied which they perceived would bring them to riches provided few opportunities for employment. The civil service was already overloaded with graduates and in 1961 Sihanouk announced that there were no more civil service positions and advised the graduates to return to their farms (Vickery 1984). Commerce was largely controlled by the Chinese so this did not provide an alternative source of employment. Many of the graduates joined the communist movement, often blaming Sihanouk for their circumstances (Chandler 2000). Vickery (1984) argues that the Cambodian education system developed from a demand by the deprived who wanted to have a system that would make them wealthy, rather than a system that was designed to fulfil society's needs.

In March 1970 Sihanouk was overthrown by General Lon Nol and others. Lon Nol, a devout Buddhist, tried to change the educational philosophy of Cambodia. He wanted to redefine good citizenship with no reference to the monarchy. Osborne (1994) writes that Lon Nol's commitment to mystics outweighed his engagement with the practicality of war and politics. The 1970-1975 war caused large scale evacuation of rural people to Phnom Penh leaving huge areas of countryside un-cultivated contributing to depleted rice stocks. From 1972 onwards the Lon Nol government imported rice from the US in the form of aid. By the end of 1974 malnutrition was severe. 80% of the countries pre-war rice fields had been abandoned and none of the rice imported from the USA was free (Shawcross 2002).

Lon Nol failed to develop education. The National United Front of Kampuchea (FUNK) perceived education in the schools as Western and a vehicle of the state and as a consequence slowly ran them down. Civil war also led to the closure and destruction of schools. The widespread death and destruction caused by the US bombing raids enabled FUNK to become more powerful, recruiting young men from rural war torn areas, possibly through loyalty to the king and propaganda. It also caused the displacement of a rural population which then sought refuge in Phnom Penh. Between 1970 and 1975 the Phnom Penh population more than tripled (Vickery 1984, Mysliwiec 1988). It has been suggested that all these conditions contributed to the growing power of the Khmer Rouge, which was initially only a small sectarian group with no popular legitimacy (Pilger 2000, Ayres 2000a). By April 1975 the Khmer Rouge troops from different regions of the country had gathered on the outskirts of Phnom Penh and over a 24 hour period the city was evacuated (Chandler 2000). The evacuees were known as the 'new people'. They were sent to the countryside to become peasants working the fields. The rural population were known as the 'old people' or the 'ancients' and were accorded higher status.

A few days after their victory the Communist party of Kampuchea (CPK) held a special general assembly in order to form a new constitution and renamed the country Democratic Kampuchea (DK). The DK ideal was to rid Cambodia of individualism, Buddhism, family ties, urban life, property, the monarchy and money; all of which were perceived as barriers to national autonomy (Ayres 2000b, Chandler 2000). The DK slogan '*once you have rice you have everything*' cited in the Grade 12 Social Science Textbook (MoEYS 2001) ruled the peoples' experience. They were forced to work in the fields to grow rice for 10 hours a day on increasingly insufficient food rations and rest, which ultimately led to disease, starvation and death (Chandler 1991). Documents in the archives of Toul Sleng (S-21), an abandoned secondary school where Sarom had once been educated, suggest some 14,000 men, women

and children passed through S-21 between 1975 and 1979, the majority of whom were tortured and executed.

Democratic Kampuchea was largely isolated from the rest of the world and consequently any evidence of the education system is limited to two main sources; documents drawn up by the DK leadership such as the new constitution and the four year plan and the stories of surviving Khmers. The constitution drawn up at the beginning of 1976 made no reference to education and the four year plan paid it little attention, although it did say it was crucial to abolish illiteracy among the population. It also stated that primary education would recommence alongside secondary education. Vickery (1984) writes that with the exception of the lowest primary grades all education was abolished until late 1978.

The written accounts of the survivors possibly provide greater insight into the education that was implemented. Schools did exist but the teachers were illiterate and the schools quickly disintegrated. Although some foreign advisors and people inside the People's Republic of Cambodia (PRK), after the DK period of history, have argued that up to 90% of the education infrastructure during the Pol Pot period was completely destroyed, Clayton (1999), and Ayres (2000a) point out that this is not the case. Many schools had been destroyed in the period of civil war leading up to the Pol Pot period and US bombing on the South East side of Cambodia had contributed to the destruction. Vickery's (1984) interviews with refugees suggest the existence of some primary schools in the more organised districts and that children were taught by teachers from the *'old people'*. Most accounts claim that children learnt little and the descriptions given of life under the Pol Pot regime usually do not acknowledge the existence of schools, possibly due to the refusal to accept anything that the DK regime had done. Some of the original teachers who could have been used by schools had been hostile to the CPK and were often executed as traitors and those teachers who supported the party were seen to have more important tasks than teaching children. The atrocities of the resulting genocide are part of Cambodia's history and the lived experiences of some of the mathematics trainers.

Prasertsri (1996) estimated that three quarters of the educated population under the regime had been killed or died from starvation. Pilger (1982) wrote that in the last census, prior to the evacuation of Phnom Penh there were 550 doctors, 11,000 university students, 106,000 secondary school pupils and 991,000 primary age school children. When he wrote for the New Statesman in 1979 he provided figures that were assumedly based on people who had been found. He noted that after the Pol Pot regime there were only 48 doctors, 450 university students, 5,300 secondary school children and 322,379 primary school age children. In 1979 a

faculty of the Technological University opened in Phnom Penh and enrolled 300 children between the ages of 10 -16. The teachers were selected from a group of graduate students returning to Kampuchea in 1976 and 1977 to support the revolution (Chandler 1999).

Initially schools opening in the 1980s were not provided by central administration, but were often the efforts of local individuals contributing to their communities (Ayres 2000a). The re-introduction of primary school education was against a background of trauma. Postlewaite (1998) writes that of the children attending primary school an estimated 30% had no father, 10% had no mother and between 5 and 10% were orphans. Ayres (2000a) suggests there were only 4,000 qualified teachers left in the country. A UNICEF consultant stated that most schools had no furniture or resources and some were set up in land surrounded by graves and mines. He observed that many children had malaria and other diseases and some attended school naked (Reiff 1980). His comments are corroborated by the stories of the six educators

The centrally administered system that was introduced by the Ministry of Education with the support of Vietnamese advisors was based on the Vietnamese system. Largely due to expedience and the experiences of those involved, policy became a mixture of the current practice in Vietnam and the previous French colonial practice, resulting in a curriculum that was 'rather classical in nature' with a pre-revolutionary pedagogy (Ayres 2000a). The Vietnamese supported a decentralised approach to administration at the provincial level. At the time, with few educational administrators and a lack of communication infrastructure this was likely to have been the only way to manage the education system. The curriculum once again was a place for political ideology; the People's Republic of Kampuchea wanted to legitimise its existence. The Vietnamese were advising a practical curriculum that promoted revolutionary history and morality. Clayton (1999) argues that the Vietnamese promoted a Marxist-Leninist philosophy from primary to higher education from the 1980s onwards. He goes on to provide examples of people who expressed political views that were 'more liberal', than those of the Vietnamese who then faced imprisonment. The priority for the PRK was to build up the capacity of Higher Education as there was a huge shortage of technical and professional people. There were few Khmer nationals qualified to teach at this level so Vietnamese and Russian educators were used. Many Khmers were sent to Russia and Vietnam to study. Adult literacy was encouraged against a backdrop of the political ideology of patriotism and love of fatherland.

During the 1980s the Cambodian government re-established teacher training colleges. There are 18 Provincial Teacher Training Colleges (PTTC) which serve all 24 provinces and run two

year courses for student teachers wanting to become primary school teachers (Grades 1 to 6). There are eight Regional Teacher Training Colleges (RTTC) that run two year courses for student teachers wanting to develop subject specific skills for secondary education (Grades 7 – 12). This system was an important change from the pre-war period where school teachers were trained nationally in a central location (Bredenberg & Geeves 2005). To begin with primary school teachers were required to have seven years basic education before they could obtain a place at a PTTC where they followed a one year course. In subsequent years entry requirements and length of training were gradually upgraded. By 1998, the present requirement of 12 years basic education followed by a two year training course was established. The teachers graduating from the training colleges are known as kru bondoh bondal. This means they have been pedagogically trained.

kru bondoh bondal tend to be the best educated primary teachers and the most familiar with child-centred, activity-based approaches endorsed by MoEYS since 1996 (Bredenberg & Geeves 2005:9)

Cambodia, like other developing countries has experienced the considerable difficulties of developing an education system reliant on teachers who have limited education. Government figures suggest that 7.1% of teachers nationally were not educated beyond primary school, and 70% were not educated beyond lower secondary school (Bredenburg & Geeves 2005). By the 1990s extensive in-service education programmes were introduced to increase teachers' general skills, but these programmes did not include pedagogy (Brendenburg & Geeves 2005). With financial and technical support from many external NGOs and donors, new educational innovations were put in place (Keng 2004). In 2003-04, 49% of all Cambodia's un-qualified teachers were employed in the three BTC target provinces (Bredenburg & Geeves 2005). Additionally, teachers completing the MoEYS's pre-service training courses may have had a minimal schooling themselves.

By the end of the 1980s the enrolment rate in primary education was the highest it had been in the history of Cambodia (Ayres 2000a). By 1991 there were 4555 school buildings and by 1999 this had increased to 5274 (Keng 2004). This was followed by an increase in enrolment from 1.3 to 2.1 million primary school pupils. By 2001 national net enrolment rate in primary school was 87%, in lower secondary 19% and in upper secondary education 7%. In 2005/06 the net enrolment rate in primary schools was 91.3% and had increased to 93.3% in 2007/08 with no gender disparity being noted (UNESCO 2008). The transition rate between primary and lower secondary remained static at 78.9%. At lower secondary school the net enrolment rate was 30.3% in 2005/06 and increased to 34.8% in 2007/08, but this indicates that the drop-out rate in primary education still remains very high. One of the suggested reasons for drop out to

be so high is there are insufficient secondary schools for pupils to go on to (Bredenburg 2003). The national average statistics also hide regional differences. In the most rural province the enrolment rate in secondary is as low as 11.4% compared with Phnom Penh at 78.9% (UNESCO 2008).

Between 1994 and 1999 more than 50% of Cambodia's education budget was funded by external contributions. By the end of the period approximately \$420 million had been invested in education reform, of which \$244 came from external donors and NGOs (MoEYS (b) 2001). In the last decade there has been a change in funding. The national budget for education has continued to increase in nominal terms, with a particular increase to teacher wages which is an estimated 70% of the total budget. The ratio between government and donor contributions has declined. In the 1990s it was almost 50:50, but in the 1997 it had declined to 60:40 and by 2003 was only 80:20 and is expected to decline further (UNESCO 2008).

Cambodia, compared with the other 26 countries in UNESCO's *'improved group'* had the second lowest starting point and had the second lowest improvement rate (UNESCO 2011, page 46). When primary school completion is broken down it reveals that only a little over 20% of pupils from the poorest families complete primary school while their wealthier peers completion rate is nearly 80%. Interestingly the gap between pupils in urban and rural areas is narrower at less than 20%. There is a gender disparity in entry to school between male and female, but females in Cambodia are more likely to complete than males. Progress has also been made in the decrease in repetition which has nearly halved in the same time period, but the decrease in drop out is less significant overall (see figure 6.20).

Figure 6.20: Changes in drop out and repetition rates

Repeat 1999			Repeat 2007		
Total	Male	Female	Total	Male	Female
25%	25%	24%	11%	12%	10%
Dropout 1999			Dropout 2008		
Total	Male	Female	Total	Male	Female
51%	48%	55%	46%	48%	43%

Source: UNESCO 2011: Statistical Table 6

The perspective of the Educators

Akyeampong & Stephens (2002) write that the values and past experiences of the teacher are the *'lenses through which they teach'*. Those entering into the teaching profession bring with

them their understanding of what teaching and learning is, formed over many years of participating in the education system. Drawing on the research conclusions of Akyeampong & Stephens (2002) I start by examining the experiences of the six educators to gain insight into how they view the education system. Beijaard et al. (2004) analysed 22 research studies on professional identity discovering that its function was often explained differently. They categorised the studies into having three main purposes: professional identity formation, identification of professional characteristics and professional identity presented by telling teacher's stories. This section starts with the six educators stories.

In an analysis of the educators' experience of primary school it is evident that the stories they tell match the era in which they started school. The overall impression from their stories is how little education each of the educators had. Smei had an uninterrupted primary education in the Sihanouk period. He described the teachers as responsible and qualified in the French style of delivery, but he did not pass the exams at the end of school. As the family moved to a rural area shortly after these exams Smei was able to go to secondary school as the demand for education was lower, an example again of the difference between urban and rural Cambodia. Dara and Sarom both started education before the DK period. Dara had an accident in grade 3 which led to substantial loss of schooling and although he was supported by his parents who were both teachers he failed the end of year exam. Sarom had full days in school living in Phnom Penh in the 1970s, but remembers how it became half day shifts in the Lon Nol period.

Both Dara and Sarom can recall some education in the DK period. Dara had to be careful not to reveal he did well at school as he had watched both his brothers who had passed grade 11 being shot. Sarom on the other hand remembers learning some Khmer and mathematics, but pointed out the emphasis was on learning about agriculture and government propaganda. He said they were taught to hate anyone from Phnom Penh. Neither Dara nor Sarom completed primary school. Both Chime and Sopheap lived through the DK period but were educated in the early eighties. Sopheap and Chime successfully completed primary school with no repeats. Roth was four when he was sent to school in 1986 because there was no-one at home to look after him. He did not repeat in grade 1, but his mother intervened and he repeated in grade 5 because he was still small and not old enough to progress to secondary school.

Secondary education for most of the educators was equally unstable. Sopheap's first year of lower secondary school was in a wat:

We brought tables from home for the lessons. The wat was shared with Vietnamese soldiers. The military defended the area with traps. We studied but we had to work in the fields too and sometimes I was injured on my shift.

Dara was able to attend a school for older children after the Khmer Rouge were overthrown, however, he was now an orphan with a younger sister to support so he had to find work. Chime explained he was successful at secondary school, but his family were poor so he could not go to school regularly as he had to work. Sarom did not complete secondary schooling. There were several stories of repetition and failure. Smei, Chime, Sopheap and Roth all failed exams. Dara did not complete secondary school but managed to gain an education to grade 9.

Smei trained to be a lower secondary school mathematics teacher on a two year course that he completed in 1964. Both Sopheap and Roth trained to be teachers, but neither of them had chosen this as their profession. Roth had tried but failed to gain entry to the University in Phnom Penh. In 1997 back in Siem Reap he heard about teacher recruitment in the RTTC in Battambang.

Actually I do not like this job but my mother fought me to do this job. I think it is my destiny. I didn't want to do this job, but I went to Battambang for an application form. I could not afford to buy it, but I met a teacher on the stairs I knew very well and he lent me the money, but it was near closing of the application time. I filled in the form and replied. It was something like destiny because in Siem Reap they needed 50 teachers, but only 10 applied. (The interpreter explained that he thought recruitment to teaching in Siem Reap was more difficult than other provinces because people can make much more money from the tourist services).

Roth said he was in the RTTC for two years where he was taught child-centred methods. Sopheap passed his baccalaureate and wanted to study to be a lawyer, his mother disapproved as accommodation would have to be sought in Phnom Penh which was considered unsuitable. Sopheap was upset that his mother pushed him in to teacher training which he did not want to do. *'I was successful at the teacher training college coming first every month, but it did not prepare me to be a teacher'*. Chime and Dara both started work as a teacher without training. However, they both had some training through different donor and NGO projects. Sarom trained to be a teacher on a three month course and started teaching in a primary school in 1984. At the same time he studied for his baccalaureate which he gained in 1989.

The educators' experiences provide evidence that when teacher training was available it did not prepare them for the realities of school. Teacher training was about acquiring subject knowledge rather than learning how to teach at both primary and secondary levels. The two educators who did not want to teach appeared to be pushed into teaching by their mothers. Chime, whilst not having teacher training also said he did not want to be a teacher and had to

do it as there was no other choice. This evidence suggests that the younger educators had a different perspective on teachers in society than their parents and older educators.

Smei went on to teach mathematics in a high school until the Khmer Rouge took control in 1975. Smei's personal story matches the evidence documented by historians of education. It indicates a shortage of teachers, the growing security issues of the 1970s and the difficulty of recruiting educated staff in the universities. In 1963 huge teacher shortages led to the introduction of half day classes so teachers could teach double shifts, a policy that it was hoped would be phased out within five years, but is still prevalent in 2012. Smei explained that schools began to re-open again in 1980. He started to teach in a lower secondary school. *'There were no resources. Children were asked to bring tables from their homes. The teachers worked without salary, but were given rice and wheat by the government'*. Many children who had missed education were now too old for school and as many classes opened with only grade 1 and 2, pupils who had previously reached grade 3 and above did not go.

After the DK period Dara started work as a teacher while continuing to study. After working for four years as a teacher he became a school director. When Sopheap joined the BETT maths project he was working as a teacher in a primary school. Chime started working as a teacher in 1993. From 1993 until 1997 he taught little as he did a course in Phnom Penh in an English private school. Roth taught for seven years in lower secondary school, but the school did not have enough teachers so he was allowed to teach in high school and he studied for a Bachelor's Degree in management. Sarom taught in the same primary school for 23 years.

In summarising the history of education in Cambodia and the perspective of the educators, issues have been raised that are common to many ministries of education in low-income countries. These include low levels of teacher training, limited education, the effects of colonialism and the influence of donor investments. Generic solutions in the form of development policies, economic reforms and education models have already been applied in these countries, but my fear is that in identifying and responding to the generic issues the nation specific issues have not been sufficiently researched and taken into account. Whilst the generic issues are evident from the above discussion so too were the national ones. What are the effects on the education system of an emphasis placed on Angkor Wat in Khmer culture, nationalism, hierarchy and tradition? How have the Khmer been able to cope with the tragedy of genocide? What is the role of women in Khmer society? These issues are discussed in the remainder of this chapter. But this chapter also raised other issues which would be better discussed in the context of religion and culture (discussed in Chapter Seven) and language and

literacy (discussed in Chapter Eight). Examples include the success of the wat schools, moral education and the resistance to French education.

What are the effects on the education system of an emphasis placed on Angkor Wat in Khmer culture, nationalism, hierarchy and tradition?

In January and March 2011 the interviews focused on Khmer identity. Five out of the six educators stressed that it was Angkor Wat and the achievement of the ancestors that gave them a Khmer identity.

Dara: Angkor Wat is an achievement of a previous generation and is very important to the next generation, it represents our culture, it promotes our culture and honour to the world, which shows that Khmer are not weak.

Smei: When I was in the Soviet Union I told them I was Khmer, but no-one knows what this is so I say I am a child of Sihanouk. I could tell them about the achievements of the Khmer people even though there are similar things in neighbouring countries like Thailand or Laos. But if we say we are the children of the people who built Angkor Wat we are definitely Khmer.

Sopheap: Angkor Wat is very important to the next generation it represents almost everything the economy, culture and politics. It shows that the leader was so powerful that he could manage the country.

The quotations from the interviews demonstrate a strong link between what it means to be Khmer and Angkor Wat. The Khmers are proud of Angkor Wat. It features on the national flag. Even when the flag was changed in the DK period Angkor Wat was not rejected in the way other cultural activities were. There is a common Khmer saying 'see Angkor Wat and die'. In a training session with the mathematics educators in 2007 Smei commented, 'of course we know what is correct. We built Angkor Wat'. In January 2003 riots broke out between Cambodia and Thailand. A rumour stated that a Thai popular singer had claimed that Angkor Wat had been stolen from the Thais and was the cause of the riot. Rioters in Phnom Penh bombed Thai hotels and businesses. The Thais responded by evacuating over 500 of their nationals. Angkor Wat appears to be a central element of Khmer culture that almost operates as a double edged sword. The Khmers trace their cultural heritage to a huge empire that they continue to be proud of, despite its decline and the great majority of historical research into the period being conducted by the French. The Khmers have contended with denials that they were even capable of building Angkor Wat and have experienced centuries of hegemony. In the comments of the educators the significance placed on previous generations is also evident as it is in Theravādic philosophy (see Chapter Seven). Historians have argued that the concept of Angkor Wat and its importance to Khmer identity is central to an emerging cultural pattern of tradition and modernity being in a state of constant conflict (Ayres 2000, Chandler 1996). This conflict was evident in project implementation.

From my observations I had noted that Khmer colleagues working on the BETT projects often referred to the traditional and conservative nature of Cambodians and the difficulties involved in making any kind of change. Examples of this could be seen in the issues of modernising school building design. It was difficult for the project architect to suggest a design that differed from the Prime Minister's view of what a school was, taken from his own childhood image. This example also adds evidence to the power relationship between nation and king. In this case the traditional power of the monarchy now appears to operate through the prime minister; probably due to Sihanouk abrogating the throne to become a political leader and thus the power in society was re-positioned. Many other examples of the traditional arose in the writing of children's story books. In discussing how the drinking of tea should be portrayed the director of curriculum development stated that people in the country drank from a coconut and the illustration in the children's book was not culturally correct. The artist and the project team concluded this was a conservative and traditional view for all people in their experience drank tea as was shown in the illustration. This view may suggest the desire to retain the Khmer culture or that the view expressed a lack of knowledge outside of the city. Several historians (Ayres 2000b,) discuss the desire of Cambodia to modernise whilst remaining entrenched in tradition. Sometimes this is attributed to the Khmer desire to be able to reflect back on when it was a great empire, but it could also be linked to the underlying conservative Theravāda philosophy (see Chapter Seven for discussion).

Roth also commented on how important it was for the Khmer to maintain their traditions:

I think that it is because of the pressure in the family that parents want their children to have the same traditions from the previous generation and so parents put pressure on children to follow the same things..... to do this they use violence.....

Another example of the need to retain traditions is evident in the general knowledge test (English Translation, MoEYS December 2006) for entry into teaching training for contract teachers which includes the question 'What reasons cause culture to deteriorate?'

Frieson (1988) writes that the Khmer were hindered in their revolutionary potential because of their loyalty to their god-king Sihanouk. She gives an example; the Cambodians may have believed the Democratic Kampuchea regime represented a call to social justice, reform and return of the monarchy, rather than a revolution (Frieson 1988). The uprising by peasants in 1916 against the crippling French tax system is another example to support Frieson's argument. Sisowath, king at the time was able to persuade the peasants to go home and remain peaceful (Chandler 2000). In the 20th Century attempts were made to limit the power of the king by creating an elected assembly. The reigning King, Norodom Sihanouk, abdicated

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the throne to his father so he could become Prince Norodom Sihanouk, prime minister of Cambodia. Both Osborne (1994) and Vickery (1982) argue that Sihanouk remained king in all but name.

In Southeast Asia there is overwhelming evidence of the cosmological basis of state and kingship ...found in the numerous passages in literature and inscriptions, in the titles of kings, queens and officials....in the layout and structure of capital cities palaces and kings (Heine-Goldern 1942:17).

Cosmology of Angkor Wat highlights the essential themes of traditional Cambodian conceptions of power, absolutism and the primacy of hierarchy (Ayres 2000:1)

Ayres argues that the king was perceived as a God like deity, who had an uncontested right to the throne. This matches Sihanouk's perception of himself (see Osborne (1994) for discussion).

In a group interview with the educators in early 2009 I introduced a discussion on King Sihanouk, the most influential monarch in their living history, to try to establish how they viewed the monarchy. Five out of six of the educators explained that the King had earned a lot of merit in a previous life by doing good things which therefore legitimatised his authority. The adjectives they used to describe Sihanouk were a mixture of attributes and achievements. Attributes included clever, knowledgeable, skilful, powerful, good at foreign affairs and generous whilst his achievements included being a good athlete, a builder of schools, a good actor in films, and making changes in society. Smei did not agree with these overwhelmingly positive features of Sihanouk. He suggested that Sihanouk was in love with himself, that his power led to corruption and he was a weak leader. When Smei expressed these views the others neither agreed nor disagreed, but they did start to justify their own comments. Sopheap justified his choice of clever by saying '*I said he was clever because he demanded independence from France – and according to a documentary film I saw he did a lot of school building activities*'. Roth having described Sihanouk as clever, handsome and a good leader now said '*my points are both negative and positive*'; although they could only be described as positive.

This discussion revealed a general consensus that Sihanouk was deserving of his position because he had been born into it from the merit he earned in a former life and therefore provides some evidence that the social hierarchy is maintained through a philosophy of merit and re-birth (discussed in Chapter Seven). During the 1960s Sihanouk promoted a type of 'Buddhist Socialist' ideology (Chandler 2000). Osborne (1994) writes that Sihanouk, more than any other previous king had access to his people and was encouraged by the French to make visits into the countryside. Sihanouk's visits to rural people possibly raised their feeling of self-

worth and identity with the Cambodian state. However, he was an extravagant spender and this was paid for by taxes from the poor. Youn (1982) suggests that productivity was low because the tools used were primitive and labour was not well used. Rural Khmer are unlikely to have noticed any difference in their treatment than in the previous administrations under the French. Although Sihanouk had invested up to 20% of the national budget in education it had largely only benefited the middle classes.

Historians have synthesised available evidence to draw comparisons between the seventeenth and nineteenth centuries in Cambodia to explore emerging patterns in Khmer culture. From this evidence they conclude that there were two classes of people in Cambodia, the rich (na'uk meeun) and the poor (na'uk krur). Observations of the tax systems from different visitors in different time periods have reported that the poor paid one tenth of anything they took from the water and the land. Tax policy throughout the history of Cambodia has partially defined a relationship between the people and the elite. From the available evidence the historian could conclude that taxes paid by the rural population were never reinvested into the country, but allowed the elite to live a privileged lifestyle. The Cambodian system of patronage and clientelism seeks to ensure the preservation of the elites by the lower ranks. A series of hierarchical relationships saturates Khmer society and determines relationships and politics (Roberts 2001). Vickery (1982) argues that everyone below the king had a fixed dependent status and Roberts (2001) points out that the traditional elite prevented modernisation as it would have placed a threat on their positions.

Heder (2004) refers to *the Khmer having 'a profound formulaicism'*. Maskell (1998) discusses a Khmer rule bound approach and uses lesson planning as an example. The classroom observations recorded by MoEYS in EQIP in Chapter Three provide evidence to support Maskell's argument. 'Rule-bound' observations were noticeable in other aspects of the EQIP projects, for example several librarians interviewed identified the difficulties they had about how a book should be read to pupils. One organisation had taught them to bend the book back so pupils only saw the picture, another to show pupils only the text and a third that pupils should see both picture and text. The librarians discussed feelings of confusion and a reluctance to use the books because they did not know which rule to follow.

Similar issues were noted in the discussions with the BETT trainers on the implementation of the mathematics programme. As part of the training the consultants had introduced the trainers to 'five teaching tools' they could use in the classroom. These included starter questions, models and images, chalkboards, pair work and open questions. In a group

interview in January 2009 Smei challenged the consultants on their use of teaching tools. *'I have seen in the manuals the five teaching tools. They are very good. If the teacher can apply them, it will be a success for the project. But when I take part in the training (with you) I have not seen the use of all these tools in each session. You don't use the tools'*.

This comment can be triangulated against the feedback Smei gives to schools after observation visits. In all seven of the schools he visited in February and March 2009 he made explicit comments about a teaching tool or the five teaching tools in general. I was concerned that as a team of consultants we had ended up becoming the author of another rule that would lead to superficial classroom practice. In the process of developing classroom observation training and the accompanying forms in the implementation of the BETT project we had deliberately avoided the checklist forms that could lead to rules or superficial change in classroom practice. (see The BETT maths project in Chapter Five for discussion), but Smei's comments suggested that for a lesson to be good it now had to have all five tools

Smei's approach differs from the other educators. When I coded and analysed the comments made on summary and lesson observations forms it showed that the educators were not just identifying the lack of a use of a teaching tool but providing explanations as to how that teaching tool could contribute to the learning in the lessons observed. In Chapter Three I presented data collected from observations in the EQIP project to show feedback given by MoEYS officials from teaching and training observations they made. This data can be compared against four of the BETT educators comments summarised from 28 school visits. The educators' comments fall into two broad categories: use of materials (22/28) and comments relating to pedagogy (12/28). Only one comment was made on lesson plans with six comments made explicitly on the explanation of clear learning objectives, but these were all made by Sarom. The content of the comments are significantly different.

The way the comments are made also contrast sharply with the EQIP comments. The comments in EQIP made about child-centred methods were statements commenting on its existence i.e. *'the teacher used a child-centred approach'*. Most comments made by the BETT educators are provided with evidence which means the observer had to understand the connection between the teaching and the learning.

How have the Khmer been able to cope with the tragedy of genocide?

Chime and Roth see Khmer identity as more than Angkor Wat.

Chime: it is difficult to tell what it means to be Khmer. If we mention culture or tradition, way of life there may be a confusion between Thailand and Philippines, but if we mention Khmer Rouge and genocide they know we are Khmer.

Roth: It is not just our ancestors who build the temples but good and bad leaders give benefit to people nowadays. We benefit from tourists who visit our country not just because of the temples but because of their interest in genocide.

Sopheap: The Khmer are nationalist, we believe in others too easily and we are cheated. Some of the notions of being Khmer are fading; so if we look at Khmer in a group it is difficult to identify if they are Khmer or from other nations. So by nationalism I mean that when Khmer live in Cambodia, they do not really want to make friends with each other, but when they go abroad they see other people similar to themselves so they want to know them. Any information related to Khmer they always want to hear and often they know the information about Khmer before the Khmers in Cambodia. For example information about the dispute between the Khmer and Thai at Prey Vihear. But I think this is hard to identify this as Khmer because as humans everyone can be like this. But if we can tell things that other people in other countries do not have this will help them to understand. The Khmer accept new things easily, but forget easily also....so we can eliminate the past. What we accept can also be easily eliminated.

The research interviews and the literature show a strong Khmer identity. It may be that this identity has been strengthened by hegemonic relationships and a turbulent history in the later part of the 20th century which led to policies of nation building which were similar to other countries experiencing genocide. Bosnia and Herzegovina's 2003 framework law on primary and secondary schooling states that the aim of education includes:

developing awareness of ... one's own cultural identity, language and tradition, in a way appropriate to the legacy of the civilization, learning about others and different by respecting the differences and cultivating mutual understanding and solidarity among all people, ethnic groups and communities in [Bosnia and Herzegovina] and in the world' ((Bosnia and Herzegovina Parliamentary Assembly, 2003, p. 2) cited in GMR 2011a:244)

Hinton (1998:118) writes that 'individuals who commit murderous acts....are often motivated by pre-existing cultural models that are ideologically or individually adapted to the genocidal situation'. But Vickery (1984) warns 'I do not believe that discussion of the "Khmer Personality" or Khmer psychology is very useful in an explanation of the DK phenomenon (Vickery 1984:8). François Ponchaud wrote a book in 1977 derived from official radio broadcasts, documentation from DK sources and the personal accounts of refugees. The book provides insight into Cambodia at a specific period of time where little contact was made between Cambodia and the rest of the world. His book was initially challenged with suggestions that it was the American bombing responsible for the human rights issues in Cambodia. He wrote of

himself that he wanted to believe the revolution was moving Cambodia forward, taking them away from the corruption of Lon Nol and Sihanouk's governments. In an explanation of the revolution Ponchaud (1997:139) writes that:

The underlying ideology may come from somewhere else, but the methods employed show every mark of the Cambodian character.....the Khmers are mild and peaceful, but their race is also one of redoubtable warriors.

Heder (2004) writing on Cambodian Communism does not set out to validate the cultural argument advocated by Ponchaud, however he does suggest that although much literature has provided evidence of the Khmer Rouge movement being led by French educated intellectuals in fact much of the ideology was a blue-print of Vietnamese communism and that the Khmer communists did their best to hide any Vietnamese connections. Heder (2004:3) argues that the Khmers remained '*faithful to a profound formulaicism: the pursuit of formulas regardless of the facts, and using violence as general doctrine*'. Evidence shows that violence as part of the Khmer experience had been prevalent throughout the 19th century. Chandler (2000) writes primary sources show that everyday life in the 19th century was filled with torture, executions and massacres.

To study genocide '*requires getting inside the minds of those who commit it, and those who seek to prevent or limit it*' (Jones 2006:261). Jones (2006) deals with four psychological elements he sees as essential to genocide motivations: narcissism, greed, fear and humiliation, where these elements can be the motivations of individual or groups. His chapter on the psychology of perpetrators and rescuers and the experiments he refers to would suggest that the psychological elements associated with perpetrators and rescuers could be linked to a sense of self-worth or early family relationships and that they have no specific connection to any one nationality, religion or ethnicity.

It may not be possible to distinguish between genocides in terms of the personalities that make up a nation. The characteristics of the perpetrator and the rescuer may well be generic across the world. The question rather than centring around the 'how do people participate in genocide?' could be more appropriately focused on how do people construct meanings for their involvement in genocide. Lévi-Strauss (1966) posits a theory of bricolage. The bricoleur creates order out of chaos by using local context and resources to construct meaning (Stahl 2005). How the perpetrator or rescuer constructs meaning in their life, may be as Hinton (2005) suggests, connected to a pre-existing cultural model. So it is not a theory of genocide that provides insight into the particular personality of Khmer culture, but how meaning is

constructed by individuals to explain the genocide and this construction may be linked to the uniqueness of nation. Coates (2005:145) writes:

Cambodia is perhaps doubly cursed because there is no certain line between the guilty and the innocent. Many soldiers were conscripted and robbed of their childhoods...the whole of society suffers including the Khmer Rouge.

Sopheap talked about a teacher who had worked during the Sihanouk regime:

she was not gentle – she was cruel with long finger nails and punished the pupils and the pupils were not happy – during Pol Pot regime the children told the authorities and she was killed. When I became a teacher I always think of this story and even when I am angry with pupils I always control my emotions.

Smei talked to me only briefly about his role as a Khmer Rouge soldier. He discussed the difficulty of the politics, the fear of being in one faction or another and how he saved his own life by changing factions after he became aware there was going to be a coup d'état.

Normally many people think that Pol Pot regime is cruel, communist, but I do not think this affects teachers nowadays as MoEYS try to give pupils a good education and tries to produce teachers that are aware of teaching pupils not by punishing them or forcing them to do something.

What is the role of women in the Khmer education system?

Sopheap was the only educator to talk about gender. He said '*Khmer still distinguish between the roles of men and woman. A woman is not allowed to gossip and she must be gentle*'. Perhaps in the response from Roth we may argue this role difference is still prominent. '*I think that it is a habit that Khmer woman like to gossip, that is why we have a rule for the woman not to be a gossip*'.

There are gender disparities in Cambodia, but in terms of enrolment they appear less prevalent than in other low-income countries. There are Cambodian women in higher positions in the education system, but this is still limited. In Kampot in 2002 there were eight animators, one was a women. Out of the 18 directors of the PTTCs in 2011 there were two women, in the original 20 mathematics educators participating in BETT one was a woman. This may have been related to the subject as mathematics is predominantly male orientated. The Cambodian National Council for Woman (2005) argues that Cambodia has always been matriarchal supporting their claim with a linguistic argument. They explain that the pre-fix of 'mei' put in front of many words, shows that women were very much part of the education system and were social leaders in the country. Examples include mei as a pre-fix on the word learning re'eun to get mei re'eun, lesson and in front of commune chief to get mei-khom. This argument was not supported by my Khmer colleagues working on the project team who stated

that the pre-fix *mei* did not work in the manner that was suggested. An interesting paragraph appears written by the Cambodian National Council for Woman (2005:12)

The present occurrence of discrimination against women is not resulted from the Khmer past, but can be resulted from the foreign cultures and civilizations. The stigmatization of women means the stigmatization and defacement of Khmer culture. The problem Cambodia suffers charging with discrimination against women is likely due to a lot more instabilities and confusions than stabilities in the country since the collapse of Angkor era until the end of twentieth century, which caused insecurity, violence, fears, poverty, separation and escape resulting in the illiteracy among both sexes, especially most of women.

This statement recognises the influences of other nations, but perceives them as negatively affected what was good about Khmer society. It also makes reference to the Angkor era, again suggesting the importance of the re-affirmation of the historical importance of the Khmer. The defence that inequality between genders resulted from external influences is interesting, as this matches with more recent developments where government ministers were beginning to show increasing concern that external influences are not always helpful.

In interviews with the educators there is evidence that mothers had a more powerful influence on their lives than their fathers. Some of the educators when incidentally referring to their parents stated that they were strict. Sopheap refers to how strict his mother was on several occasions during the interviews. *'My mother did not allow me to join in any school activities and I was expected to study all the time. My mother always took control of me'*. Roth mentions his mother, but not his father on a number of occasions. He states it was his mother who insisted he stayed and repeated grade 5 and it was his mother who made him become a teacher. *'Actually I do not like this job but my mother fought me to do this job'*. Dara and Chime assigned more equal roles talking about their parents.

Much of the discussion around gender discrimination has been centred on the *Chhab*, everyday poems about life in Cambodia. There are two versions of the *Chhab*: *Chhab Proh* for male and *Chhab Srey* for female. Both are featured in primary school curriculum and in the graded text books:

Although (the Chhab) has never been turned into official statute law, its influence in Cambodian society remains deep-rooted – it is taught in school at an early age, with boys and girls having to recite it out loud on a daily basis (CEDAW in Action).

The removal of the *Chhab Srey* from school curriculum has been advocated by some NGOs as it is often linked to gender discrimination and domestic violence (Baureksmey & Schuette 2007).

When the educators discussed the Chhab Srey and Chhab Proh, Smei explained he was never formally taught this in school, but remembers his mother chanting sections by heart. He explained how the Chhabs had originally been copied from the Sastra. Sastras are commentary documents written after the original Buddhist texts to provide interpretation. Chime does remember being taught this and learning it by heart. Sarom explained that the Chhabs were still taught today in 2011, but only selected texts that would not have an effect on society. However Sopheap's comments focused on how the Chhab Srey had '*taught women to respect men, but the Chhab Proh did not return this equality, but instead told men they should treat their wives as though they were a mother*'.

On the one hand the government are suggesting that Cambodia was a matriarchal society with external influences affecting how women have been treated, but the NGO argument is that inequalities are deep rooted due to the content of these texts being used in school. The educators, with the exception of Smei, experienced most of their education in not only a turbulent period, but also a time where there was a political effort to remove tradition from society. It was possible in an attempt to re-instate traditions in the face of previous destruction and the hegemonic grip the Vietnamese had on curriculum that the Chhab actually had more status than it did originally. There are several cultural observances in contemporary Cambodia that appear to be deep-rooted, but in fact have arisen since the DK regime such as 'traditions' surrounding weddings. It is not possible in this thesis to explore the role of women in the education system in the depth it deserves, but the arguments above do identify some possible issues and again usefully demonstrate how MoEYS are prepared to defend their culture.

Khmer Teachers

In the last few paragraphs I have concentrated on themes that are unique to Cambodia and illustrated these from interviews with the educators or from the projects. In this next section I want to consider how Cambodia as a nation may have an effect on its teachers.

In May 2010 the following discussion shed some light on teacher identity. Roth talked about how teachers were viewed differently in rural and urban areas:

People in the rural area give value to the teacher. Compared to urban areas where I can say it is a little bit different, especially what they value. Parents send children to higher education this is one factor. Another factor is incomes – when children of parents go to university they get better jobs than teachers.

Smei responded:

For me I think teachers in rural and urban areas are given some value because they educate people, but different value in terms of living standards. In rural areas the living standard of the teacher is the same as other members

of the community, but not in urban areas – it is difficult or worse. This is totally different from 30 years ago. In the 60s/70s teachers were given high value and good salary.

Sarom

Yes, I can see that most people in rural areas respect the teacher, when they walk in front of a class they walk with respectful behaviour.

Sopheap added :

I think both knowledge and salary is important. Today I can say that most people would not want a teacher's position as the salary is low. Those who cannot afford getting knowledge at a higher level end up being a teacher. Sometimes even when they have no choice they don't want to be a teacher. They want other work – to work in a company for example.

Roth:

For me, I don't know what happened much in the past but since I grew up and went to school I believe in 1980 – 1997 Cambodia still gives value to teachers. After 1980s and a period of globalization there is lots of investment in the country so most people have an opportunity to go to work and make money. Teachers are not in a good position now.

Sarom responded:

I can observe that in rural areas people give value to teachers. When I go to rural areas I see that the commune welcomes new teachers especially for those schools lacking teachers.

Both salary and knowledge appear to be relative concepts. In urban areas where salary is higher the teacher earns less than other members of society so the teacher becomes de-valued. The same is true of knowledge. If other members of society have more knowledge in urban areas than teachers, teachers are given less value. But in rural areas teachers' salary is on a par with other members of the community so they appear to have more value and respect. The split between values ascribed to urban and rural teachers could be a response to changes in global economies. As the country became increasingly industrialised urban centres expand and more opportunities open up to a society with a growing middle class. However, all the evidence already cited suggests that Cambodia is largely split into two groups, the rural and the urban and those pupils born in rural areas are disadvantaged. This disadvantage is compounded in a global recession. If teachers do not earn a living wage they take up a second job leading to less commitment to school. Often second jobs include some form of private education charged to parents in the community generally reducing their purchasing power. Global recession also has an impact on access to education. As workers in urban areas of Cambodia are made redundant and return to rural areas there is a corresponding loss of income to pay for education (GMR UNESCO 2011). In Cambodia, the reported lack of commitment of teachers is usually linked to the low remuneration for their work and was perceived by the BETT educators as the largest and most difficult barrier to implementing change in the classrooms. The NGO Educational Partnership (NEP 2008) researching teacher

morale and commitment writes that low pay was discussed in every group interview. It has been acknowledged internationally that teacher salary in real terms is diminishing. A recent analysis of primary school teacher salaries showed that in about a third of the countries reviewed, pay had declined substantially in real terms (UNICEF 2010).

This has the potential to affect learning through increased teacher absenteeism and the charging of unofficial fees (UNESCO 2011a:113).

Figure 6.21 shows the average earnings of a primary teacher in some South East Asian countries in 2010.

Figure 6.21 Average earnings of a primary school teachers in South East Asia

	Cambodia	Laos	Vietnam	Thailand	Malaysia	Indonesia	Philippines
Primary Teacher	\$50	\$39-45	\$117	\$417	\$507	\$216	\$348

Source: CITA (2010) *Teachers' Salary and Terms and Condition Position Paper 2010-2012 Cambodia's Independent Teacher Association Phnom Penh, Cambodia*

The RGC considerably raised teachers' salaries over the last two years. In January 2010 the basic salary was increased by 20%. Despite MoEYS efforts salary is still too low.

Salary levels often push teachers below the poverty line, evident from the fact that newly qualified primary school teachers in Cambodia are paid as little as US\$50 per month. The combination of low salaries and their late payment brings financial accountability at district and provincial level into disrepute, with teachers feeling that there is a lack of respect for their welfare. This also affects their position and status in society as they may be unable to make ends meet without supplementing their income by holding a second job, charging informal fees or tutoring in order to survive'. (CITA:6 2010)

The low salary has a knock on affect. As the educators indicated the teacher training courses only attract low qualified student teachers and those doing well in the profession look for jobs in NGOs or local business.

Other issues have also been raised in Cambodia that led to a lack of teacher motivation. The NGO Educational Partnership when conducting interviews with teachers found that in 70% of the interviews weak leadership was cited as de-motivating (NEP 2008). NEP recommendations to MoEYS were focused on increasing teacher salaries and providing training for leadership. Their subsequent list of recommendations included collecting accurate data, measuring teacher performance and introducing standardisation. Unlike the first two recommendations which clearly came from the teachers themselves the remaining recommendations identify how NGOs have become caught up in a neoliberal perspective.

Traditionally since the 1970s Western research on teachers and teacher commitment has focused almost exclusively on the external dimensions that affect teachers, such as school organisation, students, career development and knowledge. Elliot and Crosswell's (2009) research focused on the characteristics of teacher commitment and how they were practiced. They concluded that although teachers were influenced by external factors they also had personal passions which included ideology, beliefs and values. Although much of the research so far on teacher identity has been set in Western contexts the findings of Day (2004) were important to this research. Day (2004) suggests that teacher identity and commitment make a significant impact on the quality of teaching. Florio-Ruane (2002) write that teachers play an active role in developing professional identity and retain sufficient agency to act in new and creative ways. Using this research as a starting point I would argue that there needs to be a better understanding of how teachers respond to external stimuli and how they make choices and decisions.

In Chapter Two under ethical issues I explained why it was not appropriate to talk about politics with the six educators although politics clearly has an effect on how the education system developed and is currently managed. On one occasion near the end of the project the educators did touch on politics. Roth explained that if you want promotion in school you have to be in the CPP and all the other educators agreed with this statement. Chime added that if you were not in the CPP and you needed something, the local authority made it difficult for you. Dara stated that teachers serve political parties, for example they may integrate something that supports a political party into a lesson to influence pupils. Smei and Dara agreed that from Lon Nol onwards the politics in the classroom changed to match the political regime. This was supported by Sopheap who stated that: *'when I was a pupil at school I was taught to say bad words for Sihanouk, Pol Pot, Ing Sary, Sun San and now there is 180 degree turn'*.

The educators disagreed on the level of pressure that a teacher was under to join the ruling party. For Smei there was a historic reason that there were more teachers in the CPP. Given that CPP had been dominate when the country became ROC most teachers were already in the CPP, but for those who were not they had a choice. Chime strongly disagreed. He stated that the school director collected a list of party allegiance in each school and those teachers who did not declare themselves to be in the ruling party were in a difficult position. Smei argued against this by saying that there were enough NGO human rights organisations in Cambodia who would soon report it if this were the case. However, it would appear that political freedom does still remain an issue. CITA (2010) in their policy on teacher pay recommended

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that if the government wanted to attract and retain quality teachers then they needed to prevent teachers from using their professional position to serve political parties and political discrimination against teachers must also be stopped (CITA:16). CITA also point out that while teachers remain civil servants and are not allowed to have contracts or form professional unions they do not have a vehicle for contributing to the development of their own profession.

Concluding Remarks

In this chapter I have discussed the contemporary and historical context of the Khmer education system. This led to the identification of specific cultural factors discussed by historians that I have started to unpack through the voices of the educators and observations during project implementation.

Stigler & Hiebert (1999:85) suggested each country had a '*cultural script*' that makes their approach to teaching and learning unique. Counter arguments focused on the permeation of a world education culture to the extent that there no longer exists a unique '*shared cultural script*'. In this thesis I argue that globalised policy and pedagogy affects Cambodia's education system, but I also demonstrate how this is applied superficially over the top of a unique pre-existing cultural script. Therefore I argue it is not enough for the project designer to have an overview of colonisation and the effects on education systems in general, because certainly in the example I present of Cambodia, the responses made to external powers are not uniform. In Cambodia one of the reoccurring themes is the success the Khmer had in resisting the imposition of external education systems by reverting back to using the wat school system. As a project designer having knowledge of this resistance changes the direction of the project planning. For example now I am asking '*why were the wat schools so successful. If the Khmers were able to resist the hegemony of the invaders in centuries and decades gone by are they still doing the same thing today within the aid agenda?*' As a project designer I need some understanding of what teachers will embrace and what they will resist as well as how far they have choice within the politics of the system to implement the project. For example is the implementation only going to work if it is enforced by the ministry, project monitoring systems and financial incentives or is the sustainability ultimately dependent upon the beliefs and values of the teachers? If the latter is the case, which certainly appeared to be so in the health project, then understanding the beliefs and values of teachers is essential to project design and why the voices of the teacher educators were so essential in understanding the local context and therefore responding to this in the project design.

I have presented evidence to show that many of the historical cultural patterns discussed in this chapter do affect the education system. In the final part of the chapter I examined external factors that affected teachers such as their standard of living and the value given to them by society. Analysing policy and the interview data suggests that as Cambodia has become increasingly globalised less value has been given to teachers, even though I have shown through government policy documents that at least in theory the ROC supports the notion of human capital theory. Again how teachers are positioned in society raises important questions for the project designer. These may be practical in nature around the difference in provision for urban or rural teachers or there could be questions around remuneration through the central salary system or supplements paid for training, but all these decisions need to be made in within a more comprehensive understanding of the education system and development agendas as projects are interrelated.

In this chapter I have started the process of unpacking some of the concepts discussed but will explore them further before drawing more detailed conclusions on how the uniqueness of each nation has to be taken into account in teacher education project design. By examining religion and culture in the next Chapters I show how they affect the classroom practices and behaviours of Khmer teachers and therefore contribute to the notion that there is a Khmer shared cultural script.

Chapter Seven: Is knowledge of religion in Cambodia relevant to the design of an education project?

In Chapter Six I started to focus on what made Cambodia unique. I continue this study in Chapter Seven by using the question: *'is knowledge of religion in Cambodia relevant to the education consultant?'* as a starting point to explore these concepts and arguments further. To respond to this question I went through a number of stages. Firstly, I needed to have an understanding of religion in Cambodia. Then I needed to understand how religion was viewed and practiced in contemporary Khmer society. Once I had established this I then needed to understand how far the values, beliefs and practices permeated into the education system through for example curriculum, school management and the teaching and learning processes.

Any analysis of religion in a single nation is difficult. Religion does not remain static and it is also contextualised in a globalised world. Responses to globalization and its effect on religion take different forms. Some people within nations may find arguments to rationalise religion within the existing frameworks while others return to a religious type of fundamentalism where older cultural practices become more dominant in the lives of individuals and communities (Berkwitz 2003). Whilst any analysis of religion should be viewed with caution researchers have revealed insights into the interconnectedness of education, religion and development.

An understanding of religion was gained by reading academic texts written by historians and religious scholars. This section begins with a summarised literature review of religion in Cambodia which raises several key concepts. These key concepts were then phrased into semi-structured questions for use in individual and group interviews with the six educators. The dialogue is analysed to develop a picture of the relevance of religion to the educators. The interview data is triangulated with observations made as I implemented the projects. This builds up a picture of how religious belief and practices impact on the education system. In the final part of the chapter I use the analysis to show how an understanding of religion in Cambodia is relevant to the consultant in education project design.

Religion in Cambodia

I have argued that Cambodian values can be traced to Theravāda Buddhism where the goal is to gain enlightenment, rather than the goal of Confucianism which is often seen as achieving social harmony. Whilst the Asian values of family ties, authority and hierarchy (Han 2007) may be evident in Cambodian society the values associated with Theravāda Buddhism are very

different from Confucianism and would therefore suggest that the Cambodian identity is more likely to be shared with other nations also practicing Theravāda Buddhism such as Thailand and Myanmar.

Animism was the earliest form of religion in Cambodia. People during the Angkor period believed that spirits lived all around them (Rooney 2005). To some extent these beliefs are still in existence in present day Cambodia. Spirit houses can be found in homes, pagodas and along roadsides. Pchum Ben, an annual festival when Khmers go to the pagoda to make offerings to their dead ancestors, is one of the most important celebrations in Cambodia. At the heart of the festival is the idea that giving generously will appease the spirits and earn merit. Whilst Cambodia is largely described as Buddhist, Animism is not necessarily at odds with Buddhism. Countries practising Theravāda Buddhism have retained their beliefs in gods and spirits (Johnson 1998). Rooney (2005) writes that Taoism and Confucianism did not influence Cambodian kings, but there is evidence in the Buddhist practices of present day Cambodia that they were influenced by India and its Brahmanical gods which points to a developing Hindu-Buddhist culture. Mabbett & Chandler (1995) write that during the Angkor period, Buddhism was intertwined with animism and Hinduism was accepted with the addition of ancient deities. Rooney (2005) uses the reliefs and inscriptions of Angkor Wat to support this argument.

Buddhism originated from Brahmanical Hinduism and was rooted into Indian culture, where it was common to hold beliefs about spirits and demons as well as higher gods. The Hindu devas, from the conception of Buddhism, feature in the Pali Canon (see glossary). Buddha did not deny the existence of these demons, but appeared to attach no significance to them as he viewed their existence irrelevant to the human chain of dependent origination. The chain of dependent origination is described in the Pali Canon as a natural law. This law is unique to the Buddha's teaching and is important in understanding the process of re-birth. Buddha had by reflecting on old age, traced each dependent back to the dependent before. The teachings of the Buddha were initially passed on through the oral tradition, but were recorded in Pali language between 29 and 17 BCE and were later referred to as the Pali Canon. Ling (1981) notes that the Pali Canon was monarchical and nationalist and Johnson (1998) suggests recording the teachings of Buddhism in the Pali language had the effect of internationalising Theravāda Buddhism. The Pali Canon does not include the later sutras recognised by Mahayana followers.

Theravāda Buddhism was adopted in Sri Lanka in 250 BCE but for the next one thousand years remained largely isolated to Sri Lanka and South East India until the 11th century when it was

adopted in Burma and over the next two centuries moved into Thailand, Cambodia and Laos (Gombrich 2006). Originally Mahayana Buddhism was prevalent in Cambodia, evident from statues in Angkor Wat (Rooney 2005), but it was Theravāda Buddhism in the 14th century, which to some extent replaced the traditional Brahmanical Hinduism that had existed up to that point. Buddhism lost its dominance in most of India after the 12th century AD but Theravāda remained prominent in Sri Lanka and Southeast Asia while Mahayana Buddhism developed in large parts of Northern Asia such as Tibet, China, Taiwan, Japan, Korea and some parts of South East Asia such as Vietnam. Most leading texts describe the Buddhism of Thailand, Lao, Myanmar and Cambodia as Theravādadist, (Harris 2005, Gombrich 2006, Ahir 2001).

Three key historical texts provide further insight into Khmer culture and how Buddhism is practiced in Cambodia: the Chhab is a book of poems about everyday life dating back to the sixteenth or seventeenth century (discussed in Chapter Six); the Gatiloke a mixture of Buddhist and native Cambodian stories; the Reamker is a traditional Khmer text based on the Ramayana story. The title Gatiloke is derived from 'gati' which means path and loke which means 'world'. This often leads to the interpretation that the Gatiloke provides '*the right path for people of the world to live by*' (Ayres 2000a, Carrison 1987). Mabbett & Chandler (1995) analyse the Reamker. The text contains some of the Indian story, but refocused so it is written from a Theravāda Buddhist perspective. Mabbett & Chandler (1995:226) discuss how the role of this book is played out in present day Cambodia. They explain that hearing the poem recited or watching parts of it being acted out is a 'quasi-religious' experience for the Khmers and that it has 'supernatural value'. The idea of reciting or acting the poem was to bring the spirits out of the sky.

Historians often attempt to separate the spiritual philosophies of Hinduism and Buddhism, but the Cambodian Ramayana story provides a strong case that these two religions were not only intertwined (Desai 1970, Pou 1992) but that the Khmers also adopted a harmony between the animistic and the Indian philosophical ideas (Choulean 1988). The presence of the Hindu Ramayana story, spread originally from India, is easily identifiable in bas-reliefs (Desai 1970) from the Jayavarman Vth (reign 968 – 1001 AD). Good examples of parts of the story are seen in the bas-reliefs of Angkor Wat, Baphuon and Banteay Srei. The pictures match the written account of the Reamker (Desai 1970, Pou 1992). Research on the Ramayana story shows how it is indigenised, such as the manner in which Rām in the Ramayana story can be seen as a reincarnation of Vishnu, but in the Khmer story becomes assimilated into Buddhist culture

(Pou 1992), so the Reamker was not a simple copy of the Indian version of the story (Harris 2005).

Theravāda in Pali means 'the way of the elders' and thus Theravāda Buddhism is often perceived as more conservative and traditional than Mahayana Buddhism. This may have some bearing on the cultural differences between nations such as Cambodia and Vietnam. The Theravāda tradition tends to be more strictly monastic, unlike its Mahayana counterpart. Mahayana Buddhism describes itself as the greater vehicle as the philosophy is based on the principle that the attainment of Nirvana is possible for everyone. Mahayana Buddhists consequently refer to the Theravādas as the lesser vehicle because of the unlikelihood of a Theravāda Buddhist reaching enlightenment. The purpose of Theravāda Buddhism is to become an '*arhat*', a 'perfect saint' who has reached nirvana and therefore does not need to be reborn. The follower focuses on personal attainment with a requirement that they should renounce the world. In this philosophy Nirvana is perceived as too difficult to attain, if not impossible and therefore the observer tries to attain Nirvana by reaching it in small steps through re-birth. Re-birth into a better life is gained through earning merit.

An understanding of the relationship between people and King (see Chapter Six for discussion) and the Theravāda Buddhist cultural and religious practices that were adopted from the 14th Century onwards provide insight into the later political and educational systems that were developed. Chandler (2000) analyses Kingship from different perspectives and attempts to define the role and relationships that existed. The religion of the nation is given legitimacy through the monarch. For most of the peasantry a monarch was essential to the well being of the country and even to the maintenance of Buddhism. The king had to be properly enthroned and maintain the traditional rituals (Vickers 1982). The cultural significance of these ceremonies was certainly understood by those taking power over Cambodia

The Buddhism practiced by the Cambodians is a mixture of cultural, social and religious beliefs taken from different sources. Wats were and still are a dominant feature of most rural communities. They generally consist of a small temple and a large hall, paid for by the community and provide a home for Buddhist monks. The wat functions as a social and religious centre as well as providing support to orphans and the elderly. The Sangha is a core institution in Buddhism and generally refers to a group of monks or nuns. A monk who stays in the Sangha and studies Buddhism earns merit for his re-birth. Many monks officiating at funerals, Buddhist festivals and community also act as spirit practitioners (Johnson 1998). Ghosts,

spirits, holy days, festivals, monks, medians, re-birth and merit all contribute to an overall understanding of how life should be conducted.

It is important that the role of monks in Khmer society is fully acknowledged. As an outsider to Cambodia the image of peaceful saffron robed monks walking the streets for alms and chanting in the wats could provide a very impoverished view of how monks have contributed to Khmer history. Monks were often the front line of uprisings such as the Umbrella War of 1942 (Harris 2005, Mul 1982, Short 2004) and involved in the nationalist movement (Harris 2005). Buddhist monks were prepared to be active in the modernisation process and if necessary to use violence (Chandler 1991). Gombrich (2006) argues that as new modern value systems emerge the urban state could have adapted Buddhism to suit the state's purposes whilst at the same time supporting traditionalism. Mabbet & Chandler (1995) write that this cannot be the case as this would lead to religious history conflicting with politics. However, Gombrich argues that it is exactly this sort of conflict that religion uses well. Gombrich's argument could be supported by the annihilation of Buddhism during the DK period, to suit the purpose of the state and its re-introduction in the 1980s.

Some Western analysts have suggested that religion has affected development negatively (see Von-Der-Mehden 1981). For example it has been argued that some aspects of Theravāda Buddhism such as fatalism, aestheticism and messianism have led to Buddhist countries being unable to compete with others. Others argue that these concepts ascribed to Buddhism as leading to a lack of competition may be better ascribed to how ruling classes maintain power. Ayres (2000a) writes that the Buddhist notion of the helplessness of individuals and their subservience to state and king prepared them to become a 'slave' in the system. Mabbett & Chandler (1995) in their discussion of the Reamker draw a similar conclusion by demonstrating that the text largely portrayed the lives of the elite, presenting them as models of good behaviour. Because Theravāda Buddhism is based on an understanding of gaining spiritual merit which is linked to power and status the Reamker contributed to keeping the status quo in place. Chandler (1996) draws out two themes from the historic texts; how relationships between rich and poor should be dealt with and that the Khmers must respect the traditions of their ancestors and carry on doing their activities as they have always been done. In this way the texts complements the country's traditional hierarchy.

Whilst many aspects of Hindu religion were accepted in Cambodia and became part of the culture the Indian caste-system was not, but societies built up around Angkor Wat between the 9th and 15th century had a strict hierarchy (Chandler 2000). Hinton's (1998) work focuses

on this hierarchy as forming a basis of a cultural model that he refers to as a model of 'natural inequality'. He argues that the introduction of Buddhism with its concepts of merit and karma reinforced this hierarchical cultural model, thus legitimising social status.

Vickery (1984) argues that Khmer Buddhism is based on a fatalistic doctrine where the actions of this life determine the rebirth into the next. By doing good deeds such as honouring ancestors or donating to the wat Khmers earn merit. The merit they earn is based on the size of the gift and not the personal cost of the sacrifice. This differs from the Christian tradition where merit is relative. In the Synoptic Gospel Mark 12 38-44, Jesus tells the parable of the widow's mite. He says that the widow gives more than the rich man because she is giving half of what she has to live on. This has been interpreted in the Christian tradition to say that giving is relative to what you have. In a Khmer community if you are born rich you have a far better chance of being reborn into a better life.

This brief history of Cambodian Buddhism suggests it is unique. This uniqueness may be based on the intertwining of animism, Buddhism and Hinduism. By taking on aspects of Hinduism and adapting this to Buddhist philosophy certain concepts have arisen that affect cultural behaviours. Merit making, re-birth and appeasing the spirits are significant in the lives of present day Khmers and may suggest a certain level of fatalism and a lack of control over their own existence. As in Chapter Six the literature reviewed in this chapter also suggests it is possible to identify emerging trends and a cultural model that has developed over the centuries. Several historians writing on Cambodia have posited theories related to the ideals that Cambodia has embraced and the actual reality for the Khmer people. Ayres (2000a) argues that Cambodia's conceptual understanding of modernity does not match its traditional, hierarchical and largely rural society and Hinton (1998) identifies a 'cultural model' that permeates through centuries of Khmer history.

The key concepts of Buddhism explored through the perspectives of the educators

I have identified the following key concepts from this summary: the role of monks, merit making and re-birth and community participation. I also want to pick up on the development of wat schools which were raised as a success in the previous chapter. I explore each of these concepts in contemporary Cambodia in interviews with the six educators. The following analysis was drawn from these interviews and triangulated against observations made through project implementation.

Monks

The Chhab presents a view of the relationship between parent and child and teacher and child, centred on authority. The role of the authority figure was to impart their knowledge to the child. Mabbett & Chandler (1995:225) drew out the relationship of teacher (kru) to pupil. They describe the kru as:

genteel authoritarian figures, who were generally, but not always monks..... They were teachers and transmitters of normative values. The teacher – pupil relationship was lopsided, determined by differences in age, learning, merit and status. The teacher bestowed, recited and commanded; the student listened, memorised and obeyed. The proper relationship between the two sprang from their relative positions; protection and knowledge were exchanged for obedience and respect.

When the educators first discussed the role of monks in 2008 they made some interesting comments. Sopheap said that *'The community thinks of monks as educators'*. In response to this Sarom said that *'A monk is traditionally viewed as a teacher, but it has changed because now communities have schools'*. Smei added: *'I just want to give an opinion on the monks. Normally the community respects the monks because they respect the religion. In the Buddhist philosophy monks educate people to do good things so communities like monks, because they give good advice to the community through Buddhist philosophy'*. Smei's comments are interesting in this respect as he is the only educator who said that he was not a Buddhist and only attended the pagoda for the sake of his family, but his statement suggests that despite his non-participation in organised religion that he feels there is a strong link between community, Buddhism and moral education.

Merit Making and Re-birth

A key concept in the literature review was the link between ethics, re-birth and merit which I explored with the educators in individual interviews in early 2008. All the educators believed that how you live your life will determine what happens to you in the after life. In individual interviews four out of six educators specifically used the phrase *'do evil receive evil, do good receive good'*, When Sarom talked about Buddhism he started by saying that there was no difference between the Christian and the Buddhist. Both religions say *'do not commit sins or tell lies'*. It was unclear why Sarom introduced Christianity into the interview. It may have been to do with his assumption that I, as the interviewer, was a Christian and he did not want to imply that this was not of equal importance. When Chime talked about Buddhism he also introduced Christianity, but the purpose was clear. He explained that many foreigners came to Cambodia at the end of the 1990s and he converted to Christianity in order to learn English. He then went to church for four years and now goes once a month. He says that the teaching in

the bible is not very different from the Buddhist way of life. Chime added that *'the Buddha did not say other people were forced to respect him, but we should respect our parents. In my understanding Buddha is a symbol that reminds people to do good things'*. He went on to say *'the most important thing is family economy, but I still have a strong Christian faith'*. From these interviews there does appear to be some common values. All educators expressed the view that actions were connected with reward and sanctions. The two educators introducing Christianity did not see any conflicts between the religions. No other religions were mentioned despite there being Cham communities in Cambodia.

In late 2009 in a group interview we discussed re-birth. Smei stated that 'I do not believe in re-birth', whereas Sarom said 'I believe there is re-birth. My youngest brother remembers his previous life. He went to look for the village he had lived in during a previous life and found the grave. He remembered the things that were buried in the ground and when they were dug up he was correct. In 1985 seven Russian people were killed in our village. Two of these were reborn as babies. Even though they were born to Khmer people they looked Russian and everyone said they were Russian'. Dara said 'I believe some things about re-birth. I read a psychology book which says when a person has a road accident and the body dies the soul will leave the body and sit on a tree. When someone comes by the soul will shake the tree to frighten the person because it is demanding to be reborn. According to the theory in order to be re-born in a good place we must do good things and behave well; for example I burn incense to respect my parents'. Roth said 'I am not sure about this (re-birth) – it is too abstract. I do not know just a religious theory'. Chime said 'I do not believe in re-birth. If you live happily in this world, then it is heaven'. Sopheap said 'I am not sure about re-birth but I was interested in my mother telling me that I was reborn. My mother told me that when I was young I could tell her about my previous life. I could tell her that I lived along the Vietnamese border and I was killed because the Vietnamese shot me, because I was a smuggler and took cover in Vietnam. The first time I was asked about this it was during the Pol Pot regime when we were far from the border. My mother saw a mark on my head. I find it hard to believe this and hard to believe in re-birth. I do not know how we could remember, maybe this was a dream from someone else maybe something happened to our brain'.

The discussion around re-birth does not lead to the same consensus that had been evident in earlier discussions. This led me to question whether the previous consensus had been derived from a lack of confidence to present an individual view or possibly a lack of the skills needed to participate in group discussion, rather than that there was a commonly held perspective. To an extent this discussion with elements of reasoning and justification does suggest that educators

were more confident to say their thoughts out loud. This discussion with a mixture of intellectualising and non-questioning also broke away from the usual more repetitive style monologues that were a dominant feature of group interviews up to this point. In this discussion three of the educators appear to try to reason and justify a belief in re-birth, two with re-birth stories and another with the psychology book. The psychology book and the dream appeared to be attempts to explain re-birth but at the same time there was an element of challenge to the belief. This suggests that there are some changes in how re-birth is viewed. Smei's comments were consistent throughout the interviews in 2008-2009. He made it clear that he did not believe in re-birth and that matched the way he expressed his views about King Sihanouk. However, like the other educators he clearly 'bought-in' to the morality and ethics of Buddhism.

Community Participation

Local community participation matches the Theravāda Buddhist philosophy of merit-making. This philosophy is exemplified in each village where the walls of the pagoda records lists of names and the size of the donation made. In Cambodia there was an expectation by officials from the Ministry of Education that the local community will contribute to the education system either by donating money or their labour. Community contributions in Cambodia have always been traditionally substantial (Bredenburg 2002). Pellini (2005) provides a number of illustrations of how communities provide labour, money and materials for schools. The traditional participation of the community matches well with the more participatory methods of development that have been developed over the last decade. This provides further evidence how Theravāda Buddhism is at the heart of community.

What evidence is there that Theravāda Buddhism permeates the education system?

My observations and interview data has provided some evidence that the key concepts identified by historians and scholars of religion are very much evident in contemporary Cambodia. The next stage of the process was to develop understanding of how these concepts rooted into the Khmer culture were played out in the education system.

As a researcher I wanted to understand how the culture, values and beliefs of teachers affected their pedagogical practices. White (2009) analysed and categorised documents published over a ten year period to identify how the educational research community positioned the relationship between the teacher's own conception of religion and how that presented itself in professional practice. White concludes that there was a silence around teachers and their religious assumptions which almost assumes that the teacher is a neutral

agent. A lack of research in this area may be attributed to the difficulties of not being able to examine religious influences in isolation from all the interrelated strands of human existence. Therefore determining how extensively underlying theological concepts are evidenced in individual teacher identity and the effect on pedagogical practice can only provide a partial interpretation.

Teachers and Monks

In the Cambodian context Maskell (1998) considers a Buddhist interpretation of the teachers' role that is similar to a Theravadan monk where the teacher is a transmitter of knowledge and the process of discovery and inquiry beyond the traditional is not encouraged. This perspective is evidence from interviews with the educators in January 2011 and the BETT maths pre-service project evaluation discussed in Chapter Five.

Dara explained that in the wat:

The pupil had to learn by heart. So the knowledge was transferred directly, this means the teacher did not give the pupils a chance to think or analyse. The pupil copies what the teacher taught.

Sopheap responded by saying:

The education in the wat helped preserve the culture, for example during French colonial years if there were no schools in the pagoda there would not be Khmer letters and literature would not exist nowadays.

Roth explained how he only had an understanding of the wat education from his father, but the traditional methods of teaching were still applied in rural areas.

The boy studying in the wat was made to learn by heart. If we look in schools, especially in the rural areas we can see these traditions still exist especially amongst older teachers, but the level of strictness and violence is better now.

Sopheap gave an example of the importance of teacher knowledge. He said that in one of his training sessions the participant had felt the need to test him by 'measuring his knowledge'. When he had answered the question he (the teacher) had not bothered to listen.

Roth:

For me in urban areas what they think about the teacher is their knowledge, it is lower than others who have been in university.

Smei interjected:

For me a teacher is an educator, not someone who just passes on knowledge to other people, but it is about morality, knowledge and society. Teachers are given different values depending at which level they are working i.e. school or MoEYS department. If they have bad behaviour but have good knowledge they are given higher value.

The educators put an emphasis on subject knowledge when discussing the perceptions of teachers in society. Their comments are supported by the research data collected from a sample of 18 trainers from the PTTC and the discussion of the BETT pre-service maths implementation (see Chapter Five). All of the 18 PTTC trainers had received teacher training varying between three months and three years. 55% of the sample had never taught in school. 0.56% had taught in both upper and lower secondary schools; 16.7% had taught in a lower secondary school and 11% had taught in primary schools, however of these trainers they had both only taught for two years. No trainer had ever taught primary grade 1 and 2 pupils, but all the trainers were expected to prepare students for teaching grades 1 to 6. In interviews the trainers at the colleges expressed the opinion that it was more important to have subject knowledge than experience of the primary school. In the finalisation process of the BETT maths pre-service project it was evident that MoEYS felt strongly that the subject knowledge required by a primary school teacher was the content of the grade 10 to 12 text books and that the subject knowledge was linked to a transmission model of teaching.

Smei's perspective is reflected in the RGC (2010) Handbook for Civil Servants. Six sectors are identified, one being education and within each sector four categories (A, B, C, D). The categories are defined by level of education. Category A: Bachelor degree (university Teachers), Category B: Associate Degree (Basic Level Teacher) Category C: High School Diploma Primary School Teacher and Category D: – no qualification listed (no job specified). The salary system in Cambodia rewards teachers of higher grades as they are perceived to need higher qualifications. There are no qualifications available at present to raise the status of lower grade teachers i.e. subject degrees or masters courses.

From the educators' discussion coupled with the policy documents it is possible to identify that value is given to teachers who have knowledge. Smei goes further to suggest that knowledge is rated more highly than behaviour and it varies according to the rank an educator holds. Understanding how teachers are given value in society is important when designing education improvement projects. An example of this is how the World Bank CESSP programme based on improving lower secondary education had to overcome teacher shortage. By up-grading the skills of 2 500 primary teachers they filled the shortfall in lower secondary schools. However, policies like this affect the status position of primary school teachers. The WB website (2010b) refers to the stories of some of the new basic education teachers they have created: *'By being promoted, Sokhunthea also gets better pay and has more time than when he was teaching at primary school to prepare his teaching methods and to continue his university study'*.

In a group interview in 2010 when the educators were asked to consider how Khmer culture influenced education another change in Khmer society becomes apparent.

Sopheap's first response was to say:

Some of the children who are doing wrong things, they behave like gangsters, so their families send them to the wat to be trained as a monk.

In response Dara provided a very interesting account of how the wat functions as a moral regulator in one Siem Reap district, Pouk.

In Pouk district on a Thursday each school invites the monks to give advice to the students and the teachers. They do this because they think schools, families and teachers are connected to each other. Education is not for individuals but for all. But for the new generation when they went to the wat to be connected to the monk the way they behave is different from before. It is negative. What I can see today is most of the monks in the pagoda are children of families with bad behaviour. Even though they have the Buddhist philosophy after one year the behaviour is worse than before they went. Compared to the past monks in the pagoda were given strict regulations. Today regulations are not very strict. The MoEYS policy that invites monks to give advice in school is a problem.

This particular discussion raised a number of interesting issues. It is possible to identify a link between the purpose of the wat and the purpose of school. In this example we can see how there is a national expectation that the monks in the wat should be playing a role to ensure pupils behave well, but at the same time the changes in the way wats recruit, that Dara identifies, is either not acknowledged or not known. It could also be argued that the schools do not see their role as managing pupil behaviour, that this is the role of the family, community or the wat. In many of the classroom observations I made throughout the research period I noticed that pupils who were inattentive and at points sometimes disruptive were never corrected. But Dara argues that the solution to place pupils exhibiting poor behaviour in the wat has not provided a satisfactory solution, nor has the MoEYS policy of inviting monks into schools.

Moral Education and Behaviour

It is interesting that the educators felt that they could discuss issues of poor behaviour. When the story books were written for the BETT ELP several of the developing story lines raised concerns for MoEYS representatives when they felt children in the story books were not exhibiting 'good behaviour'. For example in the book called 'Cooking' mother is cooking and calls out to each of her children in turn to come and help her. All the children in turn reply, 'Wait a minute, mother' and the pictures show what they are busy doing. MoEYS officials raised objections to this story as it was culturally inappropriate for two reasons. Firstly they

claimed that Khmer children are never disobedient and secondly that the story is teaching children to be disobedient. Consultants on the other hand saw the story as providing familiar contexts that children would understand and characters that they could identify with. This reflects two different pedagogies. It would be possible to generalise from the many conversations around the content of story books that many teachers and officials saw books as providing a non-questionable model of good behaviour, as in the Buddhist tradition where the teacher and the materials transmit a particular moral code. The consultants on the other hand saw the books as reflecting children's experiences to lead to discussion and interaction between the teacher, pupils and the text.

My observations that behaviour in school has not been managed are supported by the lack of comments that are made about behaviour in classroom observations by MoEYS officials. In figure 3.8, Chapter Three the nearest comments to pupil behaviour were in brief where three supervisors wrote that '*pupils were brave to answer*'. This appears to contradict the statements of seven out of eight officials commenting that they observed child-centred learning, a pedagogy where you would expect to see interaction between teachers and pupils, therefore '*brave to answer*' should have become a norm and not be worth commenting on. In the Kampot monitoring report (2003) in all the comments made by the cluster and district supervising teams there were none on pupils' behaviour, but the M&E team had identified this as a problem in a 1/3 of the schools visited. In a summary at the end of the report it is written that:

Inappropriate behaviour observed during visits included: pupils poking the teacher in the back; tearing pages in textbooks or spoiling resources, disrupting other pupils; hitting other pupils; unacceptable noise levels; leaving the room without permission through the window; and throwing resources.....Many teachers ignore inappropriate behaviour.....Some teachers have a system of sanctions which they feel are effective. This usually involves speaking to a pupil, then making a pupil stand on one leg for a period of time depending on the number of times the behaviour had been corrected already. Other sanctions include clearing up litter, copying from the blackboard and being sent to the school director.Many teachers have guidelines for pupils and have classroom rules, but these are not usually related to behaviour. Rules are generally associated with pupils' cleanliness, attendance and punctuality and are rarely enforced. There were some examples of pupils being hit for getting answers wrong or misbehaving, but this was rare. In many classes teachers did not correct pupils for talking over the teacher or other pupils. In one grade that has been streamed, a teacher is left with the lowest achieving pupils. These pupils are more difficult to teach and manage. As this is a new practice, the difficulties have not yet been recognised by supervisors and directors. Whereas before she was considered a good teacher, she is now considered to be poor....Some student teachers found behaviour management very difficult (MoEYS 2003a:99).

In observations made by BETT educators on Form C in 2009 only 4 out of 28 recorded school visits had comments on behaviour management. Chime had written '*draw pupils' attention properly*' and Sarom wrote '*your classroom management needs to be organised when using white boards*'. He commented on classroom management in three out of his seven schools. By 2011 comments were more detailed. Roth writes '*you asked too many pupils to come to the board –and they spent a lot of time which made some pupils not want to listen to you any more*' and in another school wrote '*you used good methodology for classroom management*'.

Supporting teachers in recognising that classrooms and pupils' behaviour have to be managed could prove difficult whilst the need for classroom and behaviour management remains unrecognised. In the draft teacher Standards prepared by MoEYS in 2007 there was no mention of either classroom or behaviour management throughout the documents and section four which concentrates on professional ethics appears to be based on human rights and teacher behaviour rather than the skills the teacher needs to manage the classroom (see annex 5 for teacher standards). It appears that there is a culturally entrenched view that teachers in society have an obligation to be a model of good behaviour and that simply presenting a model will allow children to be able to somehow replicate this.

4. PROFESSIONAL ETHICS

Teacher speaks respectfully and encouragingly to students, colleagues and others in the school community.

Teacher shows respect for a student's right to be treated fairly not speaking down to them or punishing them in demeaning or in violent ways.

Teacher works with colleagues and other members of the school community in the best interests of the students

Teacher shows enthusiasm and initiative in all aspects of professional activities.

Teacher demonstrates knowledge of the MoEYS Code of Conduct and Education Law

Teacher is punctual to class and other regular events.

Teacher demonstrates courteous and considerate manners.

Teacher shows respect to students, colleagues and others in the school community.

Teacher demonstrates a positive spirit to students and others in the school.

Teacher demonstrates capability to maintain harmonious relationships

Teacher communicates strong moral values to parents and others in the school.

Teacher demonstrates professional integrity behaving with decency and impartiality.

Teacher gives all students a fair share of the teacher's time and attention, and resources irrespective of gender, ethnicity or ability to pay.

Teacher conducts fair assessments.

Source: MoEYS (2007a) A Draft Teacher Standards Framework for Cambodia Cambodian Education Sector Support Project August 2007, Draft 6, World Bank Project

However, the lack of acknowledgement of behaviour management issues does not rule out the possibility of moral education in the school curriculum, It is notable that the three Pacific-rim countries included in this thesis (Japan, Korea and Singapore) have a clearly defined place for moral education, especially in primary education (Le Métais &Tabberer 1997). So does the Cambodian curriculum (MoEYS 2004:5) with the last two aims stated as:

be active citizens and be aware of social changes, understanding Cambodia's system of government and the rule of law, and demonstrating a spirit of national pride and love of their nation, religion and king; and have an appreciation of and be able to protect and preserve their natural, social and cultural environment.

In order to achieve this aim Cambodian pupils are expected to gain a high level of skills and knowledge in Civics and Moral Education. Pupils will be introduced to moral education from grade 1 onwards with the introduction of personal development. By the time they reach upper secondary school they are expected 'to have acquired a deep knowledge of the national identity and a more complex understanding of morality and civic responsibilities'(MoEYS, Policy for Curriculum Development 2004:11). However, as Tan (2008:54) argues 'there is a tension between the goal of Civics and Morals to create active citizens, and the predominant Cambodian culture of social harmony, conformity and passivity'. Neau (2010:254) writes that traditionally:

the Khmer always brought their children to be educated by Buddhist monks in wat-schools. When their children had completely understood how to read, write, solve arithmetic, and memorise the principles of Buddhism, they were ordained as Buddhist monks. They believed that when their children left the monastery, they would become good citizens and would be respected by the whole community because of their education in the spiritual life, religious counselling, and how to live in harmony in society.

From these quotations it is possible to argue that historically there was an expectation that the wat, as centre of the community, would provide moral guidance for that community. As the role of the wat in providing education was replaced by the school so to was the role of moral education. However, the new curricula approaches to moral education in school once again appear to be global in nature with a focus on human rights and therefore a mismatch between the education presented to pupils and the cultural traditions of the society leads to a lack of success discussed by Tan (2008).

Concluding Remarks

So 'is a knowledge of religion in Cambodia relevant to the education consultant?' I would argue that it is, alongside an understanding of Khmer culture and national priorities. The situations arising around issues of behaviour management are very relevant to education project design

and can in part be related to conflict between a traditional Theravadic approach to teaching and the introduction of global education policies. Osborn writes that Son Ngoc Than, deputy director of the Buddhist institute in the 1920s, was more aware than most of the *'the degree of Buddhist alienation from French educational programmes which sought to limit the traditionally important role of the monastery schools'* (Osborne 1994:29) and maybe that is as relevant in 2012.

It is noticeable that the six educators often refer to change. They talk about how in the past teachers were valued more and how the role of the wat schools has been replaced by the new schools. They link this to the effects of globalization. The development of the education system in Cambodia certainly aligns well with the global policies discussed in the thesis. I would argue though that insufficient account has been taken of what makes Cambodia unique and because of that traditional inequalities in society are not challenged and opportunities such as working with monks and through the wat system have been lost.

A number of researchers have identified the difference between the individualism of the West and the importance of 'being part of a community' in Asian values. As Dara pointed out: *'school invites monks to give advice because they think schools, families and teachers are connected to each other. Education is not for individuals but for all'*. Western learner-centred approaches focus on the individual, however in some cultures such as Namibia, O'Sullivan (2004) argues that the interests of the individual are subsumed by the group. This has also been posited in discussion on Asian values (Le Métais & Tabberer 1997). This chapter has demonstrated how the Theravadic philosophy permeates culture and the school system. It shows that as Cambodia has become increasingly globalised through the policies of donors the traditional comes into conflict with the global.

In Chapter Six I discussed how external factors effected classroom teachers and explored the idea of unique national cultural scripts which I built on in this chapter by examining how a teacher is perceived and how they relate to and manage the pupils they are teaching. In the Chapter Eight I continue this exploration by examining language and literature. Sopheap said *'if it wasn't for the wats Khmer letters and literacy would have been lost'*. The Khmers resisted the education of the French. How far do Khmer teachers have agentic capacities in this decade and how does this affect project implementation?

Chapter Eight: Is knowledge of language and literacy in Cambodia relevant to the design of an education project?

The last theme I discuss in this thesis is language and literacy as they provide a means to explore the uniqueness of Cambodia as a nation in conjunction with global education, economic and development policies. A consistent theme '*within studies of national identity over the last four decades has been the central importance of language in formation*' (Joseph 2004:94). Using an analysis of the BETT ELP project alongside issues raised from the other projects already discussed it is possible to explore both national cultural issues and global education and development issues at the same time. I show through this analysis how the issues of national and global agendas become interwoven and the complexities of trying to manage these different agendas in project design. This contributes to answering all five of my research sub-questions

Literacy is defined as a 'Human Right'. Raising standards in literacy as part of basic aid to education is not a new phenomenon. In the emerging days of UN organisations there was a focus on the eradication of illiteracy which resulted in large scale literacy campaigns. Despite the introduction of EFA goals UNESCO (2011:65) write:

With some justification, literacy has been described as the forgotten goal in the Education for All Framework. Progress towards the goal of halving adult illiteracy rates by 2015 has been disappointing at best, and desultory at worst.

I would argue that insufficient attention has been placed on literacy in Cambodia also and it has only recently become central to development and educational policy. I have also discovered in my involvement in literacy programmes that there has been little research on how pupils learn to read Khmer and this chapter, using the findings from my work, adds new and relevant evidence to this small field.

National identity through Language and Literacy

Language

The English word Cambodia represents the Khmer word Kampuchea. Kampuchea comes from the Sanskrit word Kambuja which means born in the Kambu (Mabbett and Chandler 1995). The study of Khmer from a Western perspective started at the beginning of the 20th Century (Maspero, 1915, Gorgoniyev, 1966 and Huffman, 1970). In the discussion on Theravāda Buddhism I used research to show how Khmer vocabulary originated from Sanskrit and Pali and in modern times was substantially influenced by the French. Khmer retains a structure and basic vocabulary quite different from the languages that have influenced it. Like many other

South East Asian languages it has a huge number of mono-syllabic words that are adjusted in meaning by the addition of pre-fixes and infixes. Polysyllabic words tend to be Sanskrit or Pali (Mabbett and Chandler 1995). Khmer comes from the Mon-Khmer family of languages and is the only Mon-Khmer language with the status of a national language and one of the few with a written script (Smyth, 1995). Khmer is non-tonal, but has similar features to other South East Asian languages, for example word order follows subject, verb, object (Goddard, 2005). A characteristic of the language is that there is a lack of inflections to represent verbs and nouns (Smyth, 1995).

The alphabet is made up of 33 consonants with a large number of consonant clusters used at the beginning of a word. There are a limited number of consonant clusters appearing at the end of a word (Schiller, 1996). As spaces only appear between words to represent punctuation, being able to identify the end of the word becomes an important skill for the reader. When two consonants appear together in a word the second consonant is written in a subscript form of the first, which means pupils have to learn a second shape for the letter.

There are two series of consonants with 15 a-koo-sa consonants and 18 koo-sa consonants (Gilbert and Hang, 2004). Children need to be able to identify which series the consonant is assigned to as this determines the sound given to the vowel; for example in the word ក្រមុក pronounced k-a the vowel ្រ sounds like 'a' but in the word ក្រមុក pronounced as dt-ee-a, the vowel sounds like 'ee-a'. Schiller (1994) explains that the adaptation of Khmer into these two series is historical as in the older Khmer script consonants were pronounced differently i.e. aspirated or un-aspirated and it is this change that has led to the complex vowel system. Khmer has one of the most complicated vowel systems of all world languages (Goddard, 2005). The list of vowels is extensive and there is still no agreement on the number of phonemes (Schiller, 1996). In written script the vowels can be positioned to the top, bottom or sides of the consonant and often in a combination of these positions. There are also a number of independent vowels, some of which have fallen into disuse (Filippi et al., 2004).

I was unable to identify any research literature with a focus on how mother tongue pupils learn to read Khmer. There is however, a growing literature on the link between orthography (relationship of symbol to sound) and learning to read. Where one symbol relates consistently to one sound, such as in Italian the orthography is described as transparent (Goswami 2005, Bentolila & Germain 2005). English has an opaque orthography as it is inconsistent. One sound can be represented by several letters or letter combinations. Benuck & Peverly (2004) compare Hebrew and English and conclude that opaque orthography leads to a greater

reliance on context cues when reading. Perfetti and Dunlap (2008) draw on research into a wide range of languages and suggest that the transparency of the *'orthography influences the reading strategies that learners acquire'* (2008:26). They place Khmer close to English as languages that have opaque orthographies and argue that readers of these languages rely less on phonemic than on lexical features (BTC 2011).

In Chapter Six I argued that the growth of education through the Franco-Khmer schools was limited possibly due to instruction in French. The first language of instruction in two of the schools was actually changed to Vietnamese as there were no Khmer students (Clayton 1999). The French began to use the Vietnamese in the civil service as they already had a higher level of administrative skills and were able to communicate in the French language and also in Khmer. The French attempted the romanization of the Khmer alphabet, but met with resistance. As soon as Sihanouk gained independence in 1953 he abrogated two French laws made in 1943 and 1944: the romanization of the Khmer alphabet in official correspondence and he shifted Cambodia's calendar from the system of Gregorian reckoning back to a Buddhist system (Chandler 1991).

In the 1940s Vannsak, a Khmer linguist and scholar of Cambodian literature *'tried to uncover pre-Buddhist and pre-Sanskrit layers of Cambodian vocabulary and culture'* (Chandler 1991:53) so that Cambodia could be cut off from other cultures. Separating Cambodia from other cultures through language has been a re-occurring theme in history. During the DK period *'foreign words were rooted out'* of Cambodian language (Chandler 1996:208). In the new vocabulary hierarchical pronouns were dismantled, and a supposedly peasant language was resurrected with the imposition of politeness on commands (Chandler 1991). During the reconstruction of Cambodia after the DK period the involvement of the Vietnamese was significant. According to Clayton's research nearly all curriculum documents and textbooks were a direct translation from the Vietnamese. In universities and teacher training colleges students were required to study Russian and Vietnamese in order to access the curriculum (Clayton 2000). In 2011 many children's books were translations from other languages and as Khmer project staff often commented even the graded classroom text books *'smelt of translation'*.

Khmer like other South East Asian languages has a number of social registers which means vocabulary varies depending on the status of the speaker. For example the word 'eat' is different if speaking about an animal, a person, a king or a monk. In the last chapter the idea of an emerging national cultural pattern was discussed based on the hierarchical nature of Khmer

society. Language like Theravadic Buddhist practices, provides evidence of this cultural pattern:

Cambodia's language and institutions are suffused with the notions of hierarchy and ranking, defense and command, hegemony and servitude' (Chandler 1996:317)

Literacy

In previous Chapters the three key historical texts of the Reamker, Gatiloke and Chhab have been explored so the starting point of this section is contemporary Khmer literacy and availability of print materials. There are 30 to 40 newspapers that appear in Phnom Penh in Khmer language. They usually consist of four pages and are generally irregular in circulation which varies around public holidays and political events. There are two daily papers: the Rasmei Kampuchea and Koh Santepheap (Hill & Ly 2004).

No newspapers are published outside of Phnom Penh and distribution is almost entirely limited to the principal provincial capitals. Newspapers generally fail to reach the 80 percent of Cambodia's population living in the rural areas (Jarvis and Arfanis 2002:6).

There has, however, been an explosion in the growth of the glossy magazine industry.

Many factors lead to a lack of printed materials and their quality. Authors have to print their own materials, thus there is no reviewing processes. Publishers as such do not exist. Book sellers do not have catalogues to buy from and are not readily able to select stock, nor is it easy for a customer to know about or procure a new title. Book shops as such do not exist as there would be insufficient profit to allow the seller to make a living.

On the occasions I discussed adult titles with the Khmer literacy and maths educators they were able to recall a few novels, but no-one was able to name a contemporary Cambodian author or title. This matches with the findings of Jarvis and Arfanis (2002) who write that there was little familiarity with Cambodian titles except knowledge of a few of best-selling titles written in the 1940s to 1960s. In rural areas there is little to read. A few written signs appear over shop fronts, but often illustrated for clarity. In urban areas there are many more signs, but these are usually written in Khmer script but are a transliteration of the English.

When looking for children's books to stock school libraries at the beginning of 2009 the project only managed to find 158 titles and some of these were very poor quality or inappropriate for pupil use. A range of translated books was available, but most were based on either Khmer traditional stories or stories translated from other countries, stories providing moral and health messages prepared in accordance with the agendas of NGOs or factual books that often

reflected the culture, curriculum and interests of the donor rather than the recipient. Sipar publishing provides one example of an interesting choice of famous people such as Anne Frank, Marie Curie and Martin Luther King. More recently their book collection reflects changes in Cambodian history curriculum with books such as Sentimental Buffalo, Khmeng Salabarang (loosely translated as a child in a French school) and I lived the War in Cambodia (Sipar 2010).

A number of donors and NGOs set up libraries in schools. Room to Read (RtR) built a thousand reading rooms and set up mobile libraries, EQIP invested extensively into library development and book corners. During 2001/02 48% of all schools in Kampot had libraries; with EQIP funds this increased to 91.5% (MoEYS 2002b). BTC at the outset of their programmes contributed to the building and stocking of libraries.

Where teachers were not attached to classes they were often given the role of librarian and EQIP funds were sometimes used to pay a community member to attend the library. Despite the investment libraries were largely under used. In the early 2000s the MoEYS timetable rules were interpreted by school directors to mean that pupils could only use libraries at break time. When MoEYS released the new timetable system where schools could use the library in lesson time library use was increased. Grade 1 children rarely visited the library because teachers said they could not read. Many library activities were not related to books. Librarians spent their time making origami models and demonstrating how to make these to older pupils. Origami was included as a substantial part of a library training programme introduced to the PTTC by a Japanese NGO. The following represents an average comment made about a library by a district supervision team during an EQIP monitoring visit in 2003 as well as demonstrating how policies become practice.

The library needs more books. The director should try to contact some generous people to provide these. There is insufficient room for pupils to play study games. There is no timetable for drawing and paper folding activities. Pupils are disciplined when reading and know how to return the books to the correct places. The EQIP library proposal has been followed (MoEYS 2003a: 80).

Literacy in education development projects

By 2000, in Education for All, literacy was defined as 'the ability to read and write with understanding, a simple statement related to one's daily life. It involves a continuum of reading and writing skills'. However, UNESCO recognised that this definition of literacy was still not broad enough to: 'capture the full complexity of literacy and diversity across the spectrum of its acquisition and application' (2004b: 13) which had led to literacy being re-defined as:

The ability to identify, understand, interpret, create, communicate and compute using printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society' (UNESCO (2003b)

Definition of literacy agreed during a June 2003 meeting organized by the UNESCO Institute for Education, the Basic Education Section of UNESCO and the UIS in Paris).

This definition has become widely accepted in policy writing as a starting point for individual countries to define for themselves what is meant by literacy.

The Global Monitoring Report (UNESCO 2008) drew a parallel analysis of the Universal Primary Education (UPE) rate in a country against their achieving the literacy goal by 2015. The GMR demonstrated that where data was available in 64.3% of countries who had achieved rapid progress in UPE also made progress towards the 2015 literacy goal. Cambodia is on track for achieving UPE but is at serious risk of not reaching the literacy goal. Abdazi (2008) suggests that improving enrolment rates in low-income countries often disguise continuing poor literacy. In the case of Cambodia enrolment in primary schools was 98% in 2004 (UNESCO, 2007), but the high enrolment rate should also be read alongside the primary completion rate at Grade 6 of only 60%. (Seel, 2007). The adult literacy rate in 1995 was 60.5% and in 2005, 72.7% UNESCO (2011b).

The Cambodian national policy for literacy was to increase the literacy rate by 20% in the period between 2001 and 2015. Its key objectives were to ensure that Non-Formal Education programmes will contribute to poverty alleviation through the increase of functional literacy and life skills among disadvantaged groups. Literacy is split into three aspects, functionality, Early Childhood development and continuing education.

I have already discussed how repetition, dropout and enrolment rates are used as a measure of school performance. During my time on the EQIP project there was continual concern about these percentages, despite year on year improvements. Grade 1 repetition rate was slowly reduced which was attributed to the EQIP and PAP project remedial classes, but could also be due to higher enrolment. Classes would become overly subscribed if low achieving pupils were not promoted. The promotion rates were not based on standard assessments and consequently there can be no accurate comparison from school to school, or district to district. The end of year test for grade 1 pupils was a dictation exercise. Having observed the ability level of these pupils and looked at the dictation test it became apparent to me that this test was far too difficult for pupils to pass. In several lessons observed the test was not

administered as a dictation test, but was based on copying. Any pupil with neat handwriting and reasonable eyesight could pass. The grade 1 test was not assessing pupils' ability, yet the whole educational system was based on pupils in grade 1 knowing their alphabet and simple vocabulary before progressing to grade 2.

Whilst working for VSO in EQIP I devised a diagnostic test in literacy for grade 1 with support from a translator to gain more insight into literacy in the early grades (see annex 4). The test sample was random and the test was administered through translators and VSO volunteers in four schools and in fifteen classes. The test was not rigorously designed, but reveals that the percentage achieved on each question shows a similar pattern in results in grade 2 and grade 1. At the end of grade 2 only 50% of pupils were able to recognise simple words from the grade 1 textbook (see annex 4). Most pupils had a grasp of consonants, but results showed they found vowels were more difficult and that pupils had difficulties blending common sounds. The results highlighted that many pupils were not familiar with basic letter patterns and sounds. They also showed that some able pupils were not promoted and some pupils unable to recognise basic letters and sounds were. The assessment system in use was not providing teachers with appropriate outcomes to promote pupils accurately. At a national project workshop I led a discussion with all the animators from the three EQIP provinces about the test and the results. The animators concluded that pupils would need to gain 80% on this test if they were to be able to access the grade 2 curriculum. Although concern was showed no plans were made to tackle the literacy issues.

Despite literacy having been recognised for decades as a key human right and an essential part of primary education in a literature review I found most research was concentrated on adult literacy programmes, second language programmes and English teaching. I found only a small amount of literacy research focused on primary schools. Pretorius & Currin (2009) report on a literacy intervention programme in a poor rural school in South Africa. Although their focus is on language of instruction their conclusions suggests that:

Reading only develops through explicit instruction and immersion in reading activities.....Explicit attention to reading, access to books, motivation and regular opportunities to read are crucial ingredients in reading development yet ones that are typically absent in high poverty, print poor schools. Pretorius & Currin, (2009:18)

Warwick et al (1996) years earlier had commented along similar lines:

An abundant supply of high interest illustrated story books can have a strong impact on children's language growth, provided that teachers ensure that the children interact with the books daily and productivelybooks purchased in

bulk reduced the cost to something in the order of US\$400 per schoolthe cost of ignoring this is surely much greater in the long term.

There is evidence to support the UNESCO (2011) statement that literacy has largely been neglected. In Cambodia when I raised concerns through EQIP they were not taken up. In hindsight I suspect there were a number of reasons why the EQIP PIU did not respond to the issue. The data was not particularly rigorous, it was conducted by VSO volunteers who did not have the same status as international consultants, literacy did not at the time fit into the school effectiveness or development agendas, the results from the tests did not provide evidence of project success, teaching and learning focused on pedagogy rather than content and logframes may have prevented the national EQIP team from engaging in any form of responsive planning.

The BETT ELP Intervention

Fortunately in the last few years there have been growing concerns about pupils' reading in Cambodia which has led to a number of interventions. BTC in 2007, through the national steering committee was requested to introduce a programme to improve literacy in primary schools. Room to Read (RtR) changed policy direction from the provision of reading rooms and the development of books to reading intervention programmes (RtR 2010). Save the Children Fund Norway also began to develop reading intervention programmes after a baseline assessment in February 2010 had revealed that the average language score in the tests they implemented in grades 1, 3 and 6 were as low as 7.17%, 11.13% and 12.28% (Save the Children Fund Norway in Cambodia, February 2010). UNESCO (2004b:5) wrote that:

meeting the goal of literacy for all requires greater political commitment and far more action supported by adequate human and financial resources, what is needed most of all are new approaches to literacy work at the local, national and international levels' and that 'short term, top down interventions divorced from politics and social context were largely unsuccessful.

The introduction to the Khmer curriculum states:

The Khmer language is Cambodia's national language and carries the culture and traditions of Cambodia. Developing an understanding and appreciation of and an ability to effectively use the Khmer language is one of the key purposes of Basic Education. The purposes of learning Khmer are as follows:

- *To develop the knowledge and skills needed to communicate effectively in everyday life;*
- *To be able to use language effectively for learning;*
- *To be able to use language effectively for thinking;*
- *To develop an appreciation of the Khmer language that contributes to the preservation and on-going development of Cambodian culture;*

- *To enable a personal and shared enjoyment of language and communication through reading, writing, speaking and listening.*
(Basic Education Curriculum Khmer (MoEYS, undated), Introduction)

The BETT project from its inception was designed to work with the MoEYS definition of Khmer literacy and to be sensitive to the values and principles of the preservation of Khmer culture. The design of the ELP programme was based on improving the BETT mathematics programme. The successes such as a high level input to the teacher educators were continued and the weaknesses of an over extended curriculum in the mathematics programme was reduced. The implementation of the programme for teachers was more prescribed with activities developed in a repetitive formulaic approach. It was also easier to monitor the implementation. The activity books were designed so teachers would date when they did the activity. At the end of each activity were two evaluative questions. One was focused on teaching and one on learning. All other factors remained the same as the BETT maths project to ensure consistency of implementation and support as both programmes worked with the same schools.

The ELP intervention started with a study of how teachers viewed literacy and language development. A total of 66 teachers from urban, rural and remote schools was interviewed, selected on the basis of experience, gender and grade and in-depth interviews were carried out with eight of the teachers. Many teachers found the relationship between reading and writing hard to distinguish and to explain, although they recognised that they were connected. All the teachers followed the text book which teaches pupils individual letters as the first stage in reading. They taught the sound of the letter. Teachers viewed Khmer as complex in terms of the sound:symbol relationship which led to difficulties when pupils confuse the sounds of different combinations of vowels and consonants.

Pupils have a problem splitting the sound of the word in the sense of reading out the sound of the vowel depending on the consonant. Sometimes they read out the vowels that should be pronounced according to an akusa-consonant in the kusa-way and vice versa (Grade two teacher BTC 2011)

Most teachers were familiar with an approach of teaching where letters were taught with the next nearest shape rather than alphabetically. Many teachers commented that the pupils who had most difficulty were those who came from homes where their parents did not read. They said the only access children were likely to have to printed material outside school was banners, posters on trees, place names, newspapers, or signboards. Most of the teachers used repetition and reinforcement as an important teaching strategy. One of them explained the procedures very clearly.

'First I write something on the board and I read it out to them. Then I ask them to repeat after me. After that I ask any pupil who is good at reading to

read it out and after that I ask all the other pupils to repeat after that pupil. Then I ask them to read again and again' (Grade 2 teacher BTC 2011.)

In this example the teacher is a transmitter of knowledge. Their role is to tell the pupil what to do and to explain the text book. Sometimes this view was evident through what the teachers found hard: *'I have to read out the letters to them slowly and clearly again and again and ask them to be quiet and listen to me' (Grade 2 teacher BTC 2011).* Teachers did feel this practice and resources were limited, but did not have ideas as to how they could be helped.

Based on the research into literacy programmes and the interviews with teachers the international and local team agreed that the ELP would be a book based reading programme which began with producing children's story books. Khmer colleagues noted that children enjoyed series of stories on television and therefore decided on a series of reading books, something not currently available in Cambodia.

I have already argued that language is an important contributor to national identity. It is clear from the history of Cambodia that the Khmer have experienced hegemonic language practices and policy from the French and the Vietnamese as well as the changes to language during the Pol Pot regime so it is therefore not surprising that the use of language in education programmes is sensitive. In the writing of story books cultural and linguistic sensitivities were evident from the beginning. It was planned that the first story book should introduce the family to the readers, but use limited vocabulary so pupils would have a chance at making sense of the text. Immediately there were difficulties. Written and spoken language is different. Many Khmers felt it was completely inappropriate to use informal spoken vocabulary in the written form. This often led to debates about appropriate word use for a young child and the conflict between the purpose of the books and what was considered culturally and linguistically correct.

The same issues were raised in terms of the hierarchical nature of the text as the correct level of formality needs to be used depending on who is addressed. It could be argued that representatives from MoEYS were protecting their national identity when they insisted that all written Khmer should be formally correct. This is evidenced in the many books produced by NGOs that have a simple and traditional context, but use Khmer language that is unfamiliar to the reader. The principles underpinning the development of books were to introduce children to familiar vocabulary that they could read. In order to do this the context of each book had to be carefully planned so it was not challenging cultural and linguistic identity.

A third difficulty I encountered was the linguistic root and the spelling of the words used. Generally many of the Khmers working on the project did not want to use language that was perceived to be non-Khmer, so if the root of the word was Chinese, Thai or French it was often rejected. The problem with this was that pupils were then being introduced to a common item such as a school bag with a word they had never heard. One hundred illustrations of common objects in daily life had been distributed to several schools before the writing process began and pupils were asked to identify the item and the correct spelling. Khmer project staff found there were a large variety of spellings for these items. There is one official dictionary in Cambodia. This dictionary was written by a committee of monks. It is now recognised that some words in this dictionary have spelling errors, but for the sake of uniformity this dictionary is regarded as the ultimate reference source (Jacob and Smythe 1993). The difficulties with word choice and spelling that were experienced in this process match with research texts on Khmer linguistics and again support the idea that national identity in the use of language is strong.

The vocabulary in the text of the reading books was controlled. A limited number of new words were introduced at each level and these were words that were identified by MoEYS as being relevant, high frequency vocabulary. Because the original list of words provided from the ministry was a translation of high frequency words from English and did not necessarily reflect the culture, participants were encouraged to think of high frequency words that could be used from the textbooks. The words eventually selected were considered to have relevance to pupils' experiences, rather than chosen for their phonic regularity. Repetition within the text reinforced literacy learning.

The ELP was designed to support teachers in meeting the literacy needs of pupils in Grade 1 and Grade 2. It was based on the existing Khmer school curriculum, Cambodian teachers' existing pedagogical knowledge and understanding, co-operation and involvement with MoEYS. At each stage of the ELP programme officials from DOE, POE, and MoEYS were active in training and material development sessions. This was to ensure all stakeholders could be part of the planning and development process and contribute their specialist knowledge and expertise. But it was also important that officials were consulted and informed at every stage of the training so they could understand how to support schools. As with the maths programme school directors attended the ELP training, were given additional training on the management of the programme and were also expected to do dual classroom observations with trainers.

The finished set of reading books consisted of levels 1 - 3 for Grade 1 and levels 4 - 6 for Grade 2. Each level had 6 different books, making 36 books in total. In Grade 1 the stories centred around one family and events in their lives, so that pupils become familiar with the characters and identify with the plots. In Grade 2 new characters were introduced and the stories become more complex and longer. Some non-fiction writing was also introduced, often through fact pages at the back of the book linked to the story. As well as the reading books the materials included big books. For several of the books there were sequence cards and sets of picture word cards. There were Activity Manuals for Grade 1 and Grade 2, each containing 100 activities. These activities were designed to be used in the classroom for 10 to 15 minutes three or four times a week. The activities complemented the Khmer curriculum, but did not replace it.

The activities were organised session by session and provided for progression in pupils' literacy development. They demonstrated different approaches to teaching reading. The manual explained the purpose of the activity, how it should be organised and what resources were required. The activities gave clear, step by step procedures. The Early Literacy materials included a set of manuals for trainers. The pedagogy manuals enabled trainers to understand and practise how to use the activities so that they could demonstrate and guide the teachers. The ELP was monitored and evaluated in the same way as the BETT maths programme but in addition pupil assessment was developed. The methods used to collect the data from this assessment were outlined in Chapter Two.

As there was so little research on how pupils learnt to read Khmer and therefore few tried and tested methods to build on when designing an intervention programme I decided that it was important to find a way to try to measure the impact of the literacy intervention programme and to illuminate the reading process. It was difficult to design a test as there was a lack of research in pupils' reading and therefore no patterns could be applied (BTC 2011). The pupil assessment developed was based on the view of literacy which underpins the ELP. Literacy consists of more than the ability to decode. It is essentially a meaning-making activity and readers bring their knowledge of the wider world and their existing language experience to the reading process (Courtney & Gravelle 2013).

The final assessment had four sections. In section A the assessor records how familiar pupils are with books. In section B the pupil is required to recognise features of text such as a consonant, vowel, number, punctuation mark and a word. In Section C a record is made of which words pupils can read. The form has the same text as the assessment book and as the

pupil reads the assessor marks off each word correctly read. This part of the test is looking at how pupils decode words in the context of the story book which has pictures. The final section tests the pupil's comprehension of the book they have just read. If they have been unable to read the words, the assessor reads it to them so that they still have the opportunity to demonstrate their understanding of the text.

How well was the programme implemented?

In January 2009 consultants and trainers observed ELP lessons in schools in Siem Reap. Early concerns were the length of time it took the teachers to organise the activities and some teachers experienced difficulties when pupils became excited. Only a small number of activities were completed in the first few months of the school year, but this was partially due to grade one teachers following the UNICEF Readiness programme which was a good foundation for the BETT programme. By May 2009 the implementation had increased in frequency, activities were introduced at a faster pace with less difficulty in organisation and classroom management. I noted from looking at the activity books that once teachers had delivered approximately 15 activities they seemed to become more confident leading to more regular implementation. A teacher survey was completed in November 2009 by 490 teachers and was used to gain teachers' impressions of the ELP. Teachers were asked if they agreed or disagreed with a number of statements. In terms of the implementation the teachers' responses suggest that nearly 100% of them found the ELP easy to implement. The teacher survey also revealed some issues with implementation. Teacher turnover in grade 1 and 2 was particularly high, with a significant number of contract teachers being placed in lower grades and then not being sent on training because they were not permanent staff. Figure 8.22 provides a picture of the deployment of grade 1 and 2 teachers.

Figure 8.22: Table identifying teacher deployment in the BTC target provinces in November 2009

Province and Grade	Siem Reap Grade 1	Siem Reap Grade 2	Otdar Meanchey Grade 1	Otdar Meanchey Grade 2	Kampong Cham Grade 1	Kampong Cham Grade 2
New Contract Teachers	6.67%	8.57	0	0	5.67%	8.16%
Experienced contract teachers new to grade 1/2	4.16%	0	0	0	1.89%	0
Contract teachers with experience in grade 1/2	9.17%	7.62%	0	0	2.83%	2.04%
Total Contract Teachers	20%	16.19%	0	0	10.39%	10.2%

Newly Qualified Teachers	15.83%	11.43%	22.58%	17.86%	18.87%	14.29%
Experienced teachers new to grade 1/2	8.33%	8.57%	16.13%	21.43%	11.32%	7.14%
Total of teachers new to grade 1 & 2	24.16%	20.00%	38.71%	39.29%	30.19%	21.43%
TOTAL Contract, new and inexperienced in grade 1/2	44.16%	36.19%	38.71%	39.29%	40.58%	31.63%

Source: Data from Teacher Survey in target provinces November 2009

It is possible to conclude from this data that little value is placed on early grades. Teachers wanted to be 'promoted' up the school (see Chapter Seven for discussion). BETT staff calculated that within four years there would be no ELP trained teachers in grade 1 or 2. More training was given to accommodate new teachers and discussions began about the possibilities of integrating the ELP into the PTTCs. This is another example of why teacher education design needs to be pre-service and in-service concurrently.

Because of the way the BETT ELP programme had been structured it was possible to measure the implementation by monitoring the number of activities completed by each teacher. This was then averaged for each school. The results in figure 8.23 are based on the 35 schools tracked. The implementation was more successful in grade 1 than grade 2 classes. There was little difference between core or satellite schools or between schools supported by other donors as well as BETT. The implementation in urban schools was lower. This data supports comments made by the literacy trainers and Khmer project staff that urban schools were less responsive to project implementation because they felt they were doing better and did not need project interventions, which in turn reflects some of the views expressed by the maths educators on the differences between urban and rural teachers. The result from this tracking process suggests that the project structure met with some of the teachers' needs evidenced through their commitment to the implementation.

Figure 8.23 Average number of ELP activities implemented in tracked schools in 2010

Location	Grade 1	Grade 2
Remote	73	50
Urban	59	49
Rural	71	62
NGO/Donor involvement in the school	68	60
No NGO/Donor involvement in the school	70	61
Satellite school	66	61
Core school	76	62

Teachers

In a last monitoring visit in April 2011 the project team was impressed by the quality of the lessons observed and the commitment and interest of the teachers. One school director summarised the programme by explaining that *'pupils have increased confidence and reading fluency, the ELP fitted with the MoEYS curriculum and the ELP trainers had been very supportive'*.

The activity book had been a useful document to monitor the extent to which the project had been implemented but it also showed teachers found it difficult to evaluate their teaching. When faced with evaluative questions teachers were likely to repeat the question in the answer. For example:

How did you get the pupils involved?'I encourage them to get involved in activities then I walked around the room to check',

or

*'How did you help and encourage pupils?'I asked them to follow me so they could recognise the words – I instructed them to know the alphabet'
(Translation of teacher activity books)*

The trainers used samples of activity books in training sessions to explore what evidence there was to show how teachers were able to assess pupils' learning and evaluate their own practice. This activity was only implemented at the end of the project and in hindsight it would have been more useful to have implemented it earlier. The trainers had understood the purposes of the questions and had, to some extent, been able to convey this in their training, but they had not seen the usefulness of following this up in the classroom or using it as a tool to support the teachers.

The activity book indicated to the project team how far the implementation had progressed. It did not provide any evidence of the effect of the implementation. It did provide some indication as to the teacher's understanding of the ELP, mostly revealing that although the activities were generally implemented as intended and the teachers could do this well, they were not yet observing their classes in sufficient enough detail to comment on pupil learning or their own teaching. Despite this the teacher survey shows that teachers were overwhelmingly positive about how answering the questions had affected their development as teachers (see figure 8.24).

Figure 8.24: How teachers evaluated the support of the activity book in helping them improve their teaching and learning.

Teachers	Answering the questions at the end of each activity helped me improve							
	My Teaching				My ability to assess what pupils learned			
	Strongly agree	Agree	Disagree	Strongly Disagree	Strongly agree	Agree	Disagree	Strongly Disagree
Grade 1	29.7	68.96	0.67	0	35.7	60.9	2.2	0
Grade 2	27.67	66.39	2.27	0	28.62	68.63	2.47	0

Source: Data from Teacher Survey in target provinces November 2009

The ELP implementation provides substantial evidence that despite the circumstances in which teachers work, for grade 1 and 2 teachers at least, there was a commitment and motivation to implement the programme, maybe as this NEP report (2008:13) suggests:

A very strong motivator for teachers in Cambodia, which figured strongly in both the focus groups and the individual interviews, is the desire to help the future of the country and preserve its cultural traditions. As one teacher expressed it: 'Children [must] understand the literature and culture of the nation. When the literature vanishes, the nation vanishes.'

Pupil Outcomes

The results from the pupil assessment were analysed by Courtney & Gravelle (2013). The results in all four sections for grade 1 students in the intervention target schools were highly significant when compared with the control groups (see figure 8.25). The difference in score for attitudes towards books suggests that where pupils in the control group only had access to the textbook and possibly the occasional library book, they were less confident in how to use or talk about a book (see figure 8.26). The difference that the intervention appears to have made is also illustrated in pupils' responses to features of text, although the differences are less marked. Whereas almost 40% of pupils in the sample schools scored four or five out of five, identifying consonants and vowels and reading high frequency words accurately, it was only 20% in the control schools (see figure 8.27). Again comprehension, which included talking about the characters and retelling the story, was stronger in the target sample schools (see figure 9.28).

Figure 8.25 Results from grade one test 2010 comparing intervention group scores with control group

	Sample Intervention group mean score	Control group mean score
Attitudes towards books	6.1	4.3
Features of text	3.1	2.6
Comprehension	4.7	2.3

The results from the section of the test on decoding in context were also significant. In the control schools in which pupils had been taught exclusively through the Khmer curriculum 73% of pupils could read none of the words (see figure 9.30). In the sample target schools 50% of pupils could read at least some of the words. Pupils who had the intervention, including listening to books read aloud, using pictures to gain meaning from text, re-telling and discussion about stories had a higher level of understanding than those who had only used the Khmer textbooks' (Courtney & Gravelle 2012). It is clear from the results that the pupils in the BTC intervention sample performed significantly better in all aspects of the test.

Adding to what is known about how Khmer pupils read

What is not known from these results is what strategies the pupils were using to read. It could be hypothesised that the pupils from the target schools had a wider range of strategies after the intervention programme and that is why they achieved better results. In order to shed more light on this hypothesis I interrogated the success rate for individual words. It was not possible to analyse success rates for grade 1 as so few pupils could read whole words, so I used the results of the decoding in context that had been completed by grade 2 pupils on the assessment text '*Football*'.

The pupil assessment was limited in how far the data generated could be analysed to try to predict what strategies pupils were using to read, but I noted some general trends. The graph for both the intervention group and the control groups (see figure 8.34) shows a general decline in words read between the beginning and end of the assessment book. There are also clear dips in the success rate on some words that are reflected in both groups which is worth further analysis. If pupils were using an entirely phonetic approach it is likely that the Standard Deviation would be more consistent between words in the intervention group as it is in the control group.

Figure 8.26: A Comparison of the scores gained by the intervention and control group on attitudes towards books.

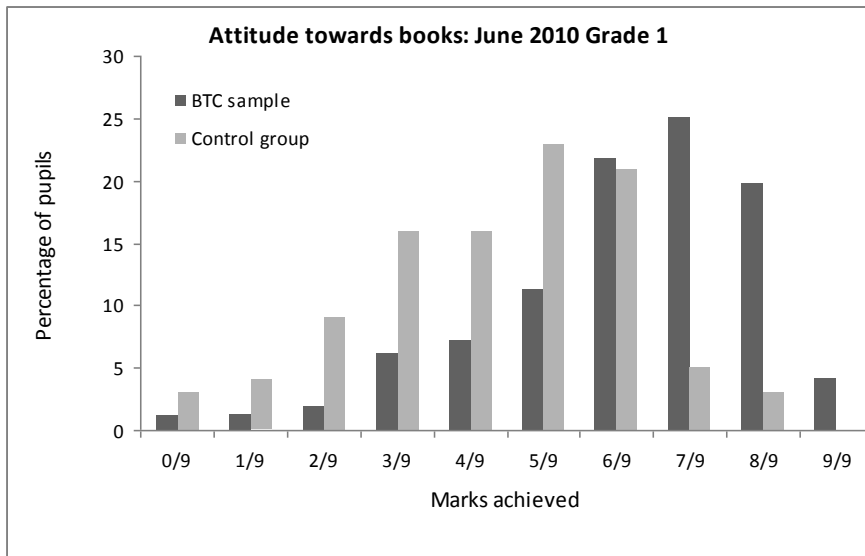


Figure 8.28: A Comparison of the scores gained by the intervention and control group on comprehension

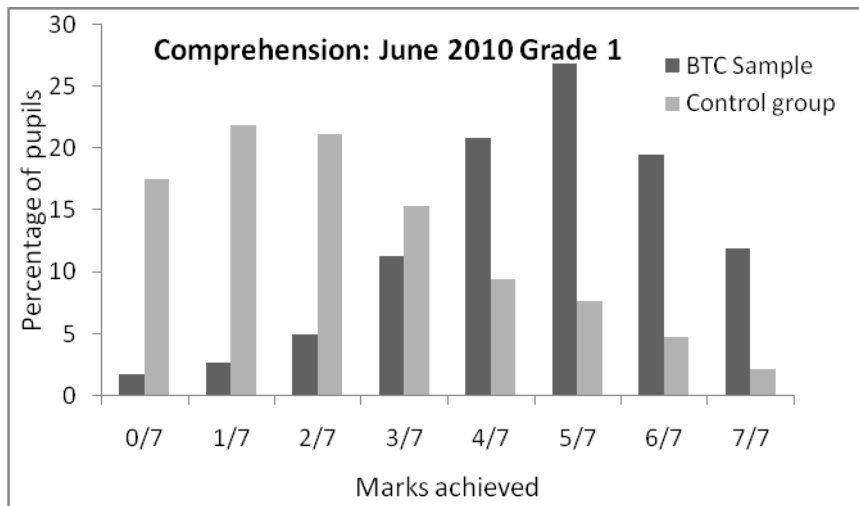


Figure 8.27: A Comparison of the scores gained by the intervention and control group on features of text.

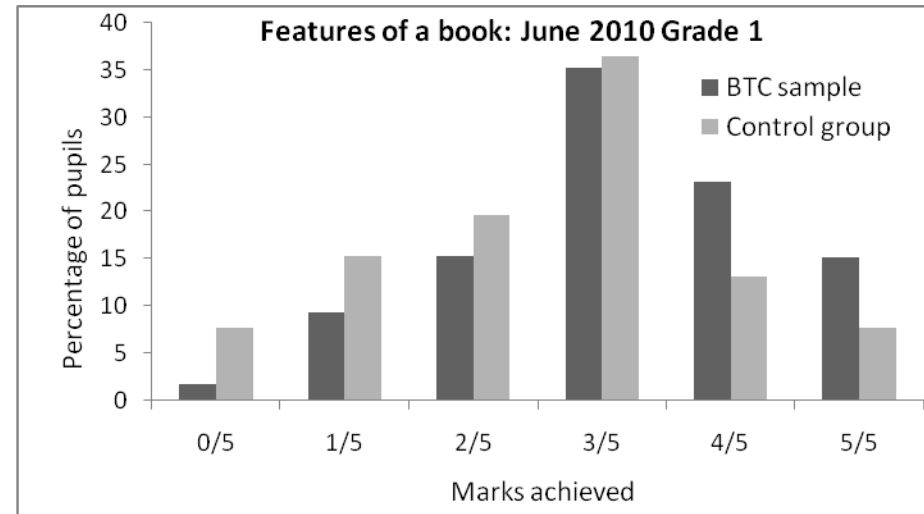
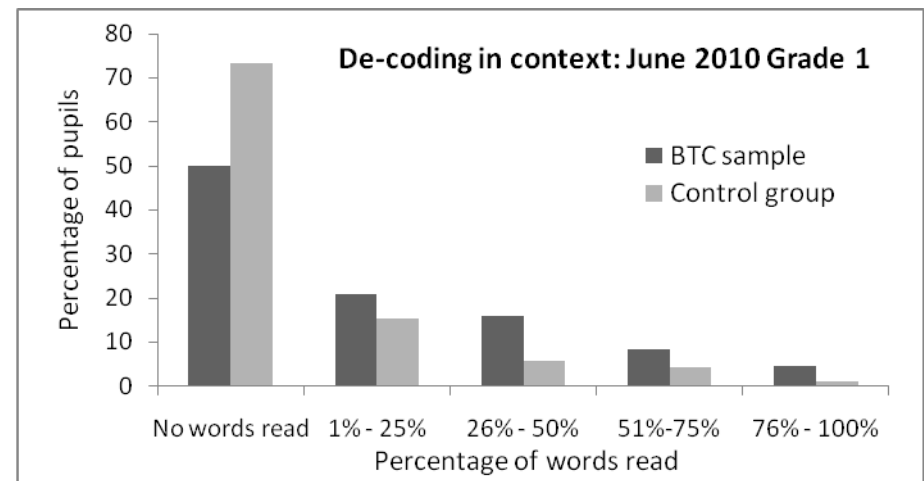


Figure 8.29: A Comparison of the scores gained by the intervention and control group on decoding in context



The word បាល់ (ball) is used in three different places in the assessment book. As it is a noun it can be easily illustrated giving the pupils picture clues. The word is familiar to all of the pupils. The letters in this word are taught during the early stages of grade 1 and it appears in the core textbook. However, there are some difficulties that pupils could encounter when reading this word.

The starting letter (b) ប changes shape to ផ when the vowel (a) ា is added. This affects letter recognition. Pupils may not be familiar with the aspiration on the top of (l) ល់. The reading of the words was examined in three groups, the sample intervention group from Siem Reap (SR) and Kampong Cham (KPC) provinces and the control group. In figure 8.30 it can be seen that there is a variation in the control group with a gradual decline in the successful reading of this word. This is in common with reading the book in general where fewer words were read at the end. It also matches the results in the other two provinces. A picture of a ball did appear in all three cases, but in third picture the ball as the subject was not so clear. Both SR and KPC pupils were less successful at reading the word on the second and third occasions. This suggests again that the word was not always phonetically read by the pupils.

Figure 8.30: Variance in reading a common noun

Province	បាល់	បាល់	បាល់	Standard Deviation
Siem Reap	26.39	18.75	17.71	4.739721
Kampong Cham	58.44	48.44	46.25	6.497696
Control	17.15	14.23	12.04	2.563419

If the word របស់ (personal pronoun) in figure 8.31 is now considered in the same way it can be seen that the Standard Deviation in all three groups is low. This would suggest that pupils who successfully read this word are familiar with it or can read it phonetically and context is not contributing to the reading.

Figure 8.31: Variance in reading a word used for possession of

Province	របស់	របស់	របស់	Standard Deviation
Siem Reap	10.07	11.81	10.42	0.918664
Kampong Cham	39.06	37.50	39.06	0.90211
Control	12.77	11.68	12.41	0.557491

In figure 8.32 another interesting pair of words to consider is ទៅ (in/at) and ទៅ (go). These words share the same vowel sound and one consonant. If pupils were successfully reading phonetically you would expect them to read both of these words, but in most groups this is not the case. If the difficulties of reading these words are now considered it could be noted that it is easier for pupils to read a verb rather than a preposition in terms of making meaning. Additionally the sound of the vowel is matched to the fact that both these letters are second series consonants. Teachers in original interviews referred to the difficulties of teaching pupils the change in the vowel sound when a consonant for a different series is used.

This may be part of the argument, but in this case both these words sound similar as both consonants are in the second series. The other interesting result in this set of words is that it is the only place where the success rate increases. This may be related to the pupils' understanding there is some repetition in how the sentences were written and therefore some pupils at least have been able to access this pattern.

Figure 8.32: Variance in reading a preposition

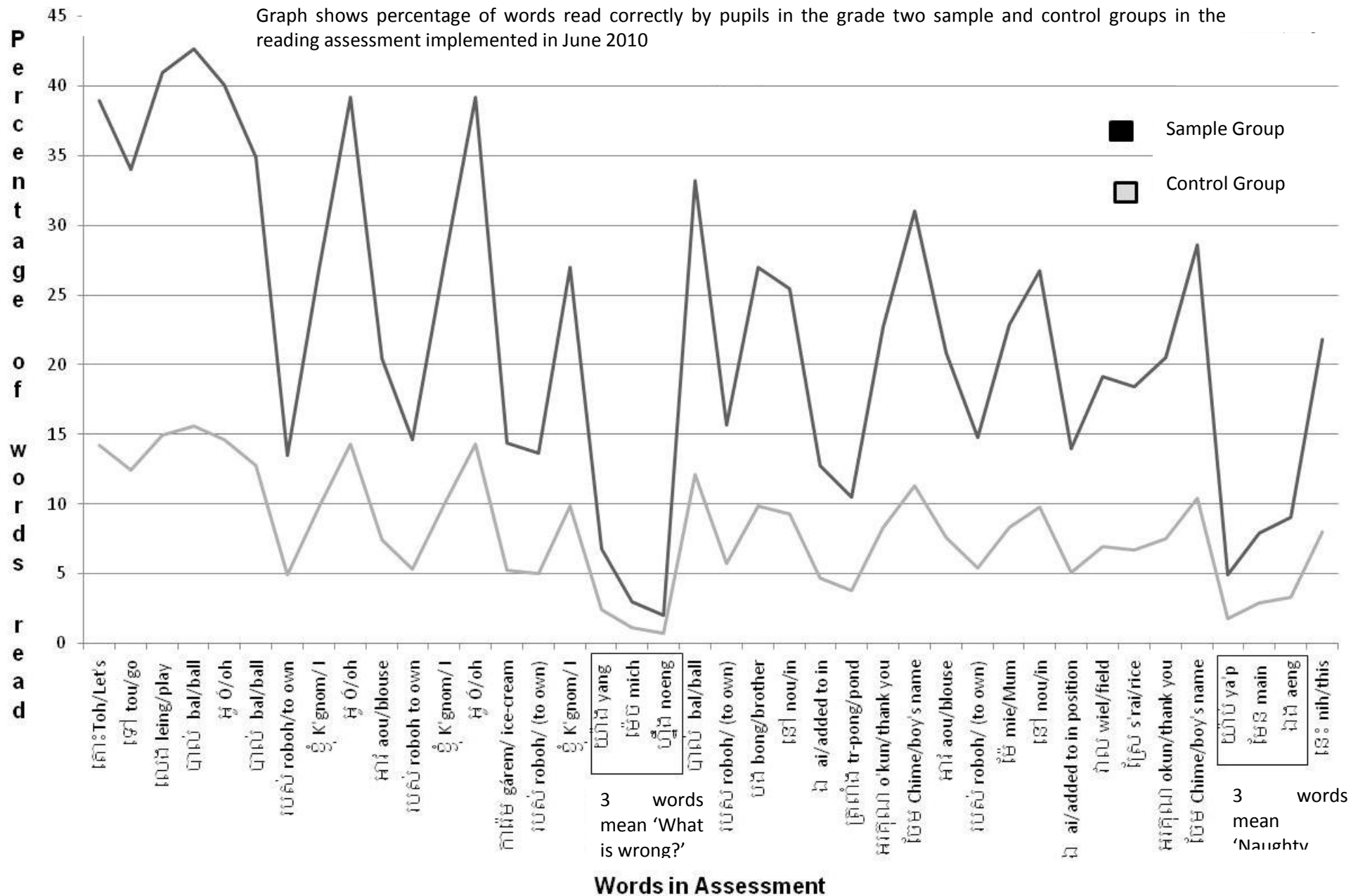
Province	ទៅ	ទៅ	Difference	ទៅ	ទៅ	Difference
Siem Reap	16.67	9.38	7.29	9.38	10.76	-1.38
Kampong Cham	50.31	39.06	11.25	39.06	40.63	-1.57
Control	15.33	6.93	8.4	6.93	8.39	-1.46

The last set of words is presented in figure 8.33 provide a contrast យ៉ាង ម៉េច ហ្នឹង (what is wrong?) Pupils in all groups were unsuccessful at reading these words. This could be because these words are both less familiar and more difficult to read. The picture clues were also less obvious. However, if a good reader was successfully and exclusively using phonics to read it could be expected that the success rate would have been higher. Clearly this is not the case. The Standard Deviation between the results across all the groups are lower than with a more familiar word such as (ball) which was examined earlier. This could suggest that in fact Khmer pupils are not relying exclusively on phonetics to read and that some pupils are engaging with text through both a word building (phonics) and a whole word reading approach.

Figure 8.33: Variance in reading less familiar vocabulary

Province	យ៉ាង	ម៉េច	ហ្នឹង	បាល់
Siem Reap	3.13	0.35	0.00	26.39
Kampong Cham	9.69	4.69	3.44	58.44
Control	3.65	1.82	0.36	17.15
Standard Deviation	3.22306	2.475535	1.877043	17.84284

Figure 8.34: A comparison of words correctly decoded between the sample intervention and the control group



The graph in figure 8.34 clearly demonstrates a very similar pattern in reading success for both the control and intervention group suggesting that all pupils make use of a range of strategies to read, but those pupils who are most successful are formally taught how to use a variety of strategies.

The changing trends of globalised pedagogies

Throughout the thesis I have demonstrated the existence of world education policies based on neoliberalism and school effectiveness agendas. However, trends in education change as policies are adopted and adapted across the globe. In Chapter One I discussed how the achievements of pupils in mathematics in high-income Asian states had affected the practices of England who introduced the National Numeracy Strategy with a related pedagogy based on whole class teaching. Similar changes have been seen with the introduction of Systematic Synthetic Phonics and their associated schemes and pedagogies. I use the following example from Cambodia to suggest that the Systematic Synthetic Phonics approach is now becoming a new global policy.

The World Bank introduced the Early Grade Reading Assessment (EGRA) in Cambodia in 2010. The EGRA test has been adapted to Khmer language by an RTI assessment consultant. RTI (2010) writes:

EGRA can be adapted to fit most alphabetic languages and cultural contexts and is gaining momentum as an instrument for quickly diagnosing children's literacy. USAID and the World Bank have backed pilot studies of EGRA across the globewith EGRA, we are taking proven methodologies that have been applied in the U.S. and Europe for about 10 years and adapting that to the needs of developing countries.

I have discussed how global influences affect curriculum through international test design. The EGRA is another example. The EGRA (2009) handbook acknowledges the debate between a 'whole word approach' and a 'phonics based' approach to teaching early reading:

Nonetheless, the evidence for reading acquisition in English points to a comprehensive approach, based on five essential components identified by the U.S. National Reading Panelphonics, phonemic awareness, vocabulary, fluency, and comprehension. EGRA utilizes each of these components, emphasizing the foundation skills of reading acquisition (EGRA Toolkit, 2009: 4)

The authors of the toolkit write that:

One of the reasons for the high level of interest in the EGRA tool is the direct link to advances in both reading and cognitive development research. While much of this research stems from working with children in high-income countries, the basis for such research lies with advances in neuroscience and thus has relevant lessons for low-income countries (EGRA Toolkit, 2009:3).

The result of testing processes such as the development of EGRA is that while the test itself was not set up to determine the teaching content and methodology it is likely that as it becomes more globally prevalent it will do just that.

A visit by Helen Abadzi, Senior Education Specialist, Education For All Fast Track Initiative (FTI) in February 2010 emphasised this new agenda. The specialist requested to meet with MoEYS officials and with the FTI local education group to discuss the issues pertinent to monitoring fluency and comprehension. She conducted a few school visits to learn how Khmer language was taught and then presented to MoEYS and the donor communities on what was known about reading fluency, including issues of scripts. During her visit she planned to discuss sampling designs for measuring fluency and look at instructional implications for raising fluency and comprehension (*Letter addressed to HE Im Sethy, from the WB Cambodian Office, January 2010a*). In her presentation Abadzi (2010) suggested that governments had introduced word based approaches to reading '*to be modern*'. In Malawi she argued they had previously had an effective phonics-based grade 1 textbook which was changed to a whole-word approach. Abadzi was a key contributor to the EGRA Toolkit (2009) and although it stated in that document that the concern was not how pupils were taught, this example shows that in practice the presentation emphasised a phonics based approach to reading by suggesting the word based approach had failed; no evidence was provided for either methods. A further thrust to Abadzi's argument was that children must be able to read at least 45 to 60 words a minute to obtain any fluency and therefore be able to comprehend the text. Abadzi makes it clear that the phonics based approach is advocated because of the recent developments in an understanding of neuroscience.

Following the visit and advice of Abadzi (2010) EGRA was implemented with 24,000 pupils in Grades 1–6 in 40 schools in 18 of the 24 Provinces. Nath Bunreoun, Secretary of State for Education presented the results which revealed that 46.6% of children could read, but did not understand what they read, 33% could not read at all and 28% of pupils could not recognise basic vowels and consonants. Unfortunately these are accumulated results for all grade groups who took the same test so it is not possible to ascertain how well pupils from grades 5 and 6 did and they appear to say that nobody reads with understanding. Nath Bunreoun went on to say that the teaching of reading was to be a national priority and that a draft grade 1 text book was to be based on important methods in teaching reading. In June 2010 the textbook was developed based on use of phonetic letter combinations. The new text book was trialled and the results showed that in a self reported test in the first quarter of target schools for grade 1 pupils that 74% of pupils could read more than 50% of the text compared with the 46.8% of

the control group. I have already discussed how unreliable testing is in Cambodia, yet no official test was used. In May 2011 it was planned for Abadzi to provide further assistance in revising the textbook which would then go into circulation nation wide (Bunreoun 2011).

What is interesting about this process is the EGRA test has quickly underpinned the methodology by which future teaching and textbook content is established. A Summary report of EGR Assistance in March 2012 recorded:

When the new school year started in October 2011 all Grade 1 Teachers in the country began to use the new reading program and Grade 2 teachers in the original Grade 1 target school began to use the new Grade 2 reading programme.....Dr. Abadzi (had) explained that the current method of teaching reading was not suitable for a language as complex as Khmer. She advised a return to a traditional way of teaching which started with combinations of vowels and consonants. This is known as the Chet Chhem method.

The Chet Chhem method to teach reading was prevalent in Cambodia in the 1970s. What is not clear from this explanation of approaches is what is different from the textbooks that the country was using in 2010 and the new textbook that was introduced in 2011. The grade 1 Khmer literacy textbook had only recently been re-written already with the support of UNICEF in 2008. The results from the original EGRA test do not appear to have been analysed, despite the manual emphasising that the EGRA test was a diagnostic tool. Abadzi continues to advise on the use of a phonics-based approach that appears to be justified by links to neuroscience and not on current educational practices in Cambodia. The textbooks have been reproduced for national coverage before an analysis of the trial has taken place. The methodologies for teaching are based on what has been successful in the West, there appears to be no research undertaken by the WB on how pupils learn to read Khmer. The test was a translation from English. MoEYS believe they are moving away from a globalised pedagogy which they had began to have concerns about towards a traditional approach based on learning Khmer. I would argue that their direction of travel has been manipulated by the WB and they are following the latest global trend.

In addressing the issues I raised at the beginning of this chapter I have shown that a lack of research on how pupils learn to read Khmer, coupled with a lack of donor and government interest in developing literacy has probably affected Cambodia's low literacy rate. From the research I conducted I have shown that access to reading materials introduced in the classroom through a structured programme can make a significant difference to pupils' reading. However, new global approaches to literacy policy may mean that the ELP approach is not considered to be valid. For example an intervention that requires books is costly and the

complexity of developing books which are culturally and linguistically sensitive is time consuming. The final print run for the BETT books was 17 cents for a 12 page book and 21 cents for a 24 page book. To provide a set of materials for schools consisting of 20 copies of each of the 36 books, 6 big books and supporting materials cost US\$720.

The largest costs for BETT had been the development of the materials. If these book sets were now used by other donors they would save substantial costs. However, when these costs were presented at the national dissemination work shops they were considered to be too high a price to pay for the large donors and iNGOs and there was a general view that books were not necessary to address the issue. The popularity of intensive phonics programmes may partly reflect the cheapness of implementation. The training can be delivered to teachers through national textbook orientation and only a textbook is required. However, this does not address the print-poor environment in Cambodia and goes against the little research I have already cited. The systematic phonics approaches written in the West may well be a different approach to the previous few decades for the West, but they are not introduced in print poor environments with untrained teachers. Besides, Cambodia like many other low-income countries has been using almost exclusively phonics based approaches for decades with little success. The new phonics approach and associated pedagogy introduced by the WB is not much different from the phonics teaching already practiced. My research would suggest that changing the order of how the letters and sound:symbol relationship is to be taught with the same pedagogy in the same classrooms with the same teachers will not produce significantly different results.

Concluding Remarks

I end this chapter by summarising the ELP in the context of development and economic agendas. In a dissemination conference at the end of ELP I noted that larger iNGOs and donors such as SCNiC, RtR, UNICEF and WB did not want to be associated with the books and materials produced by BETT, possibly because of cost, but also because they were not based on a phonics only approach which had become the new trend. But many smaller NGOs and international schools did. Ten NGOs and three international schools bought into the BETT print run and sent their trainers for training with BETT. I would suggest that the smaller NGOs were able to become involved for a number of reasons. They had more power to act independently as they were not involved in partnership with MoEYS in the same way as larger donors. They were more likely to be based in the field and had a better understanding of local needs. They were less tied to verifiable objective indicators and logframes. They had their own qualitative data to suggest BETT materials made an impact on teaching and learning. VSO was the only

larger organisation that did work with BETT materials. The pressure to use the materials came from volunteers who had to convince the national project staff of their value.

When I positioned this thesis in the field of CIE I noted that there had been a call from the research community for more examination of the roles that bi-lateral donors and iNGOs play in shaping educational debate and policy (Crossley 2002, Watson 2001). Cook et al's (2004) research showed that the most influential organisations were WB and the multilateral donors. In figure 1.1 I presented evidence from analysing the PRSPs in Cambodia that bi-lateral donors have become increasingly uncomfortable with the policies of the multilateral donors and were often sidelined in the policy process. This thesis has not been the place for an in-depth analysis of donor relationships, but it has shown through project examples that there are hierarchies and power alignments in play.

If the ELP is examined in the context of donor relationships it can be seen that the WB policies adopted by MoEYS of standardisation and accountability and the phonics agenda are a driving force in Cambodia. I have argued that larger iNGOs in Cambodia have aligned themselves to these policies. More research is needed to explain why, but I hypothesise that because the project managers are national they are under more pressure to implement government practices. RtR and SCNiC fit into this category. VSO would have made the same choice, but pressure from volunteers prevented this from happening. Smaller local NGOs that are financed by public donation from the registering country such as Pepy Ride and Caring for Cambodia appear to be unthreatened by national and global developments. Nor are they a threat to these agendas as they are not in a position to scale up their projects. Interestingly through this example and others in the thesis I would argue that it appears bi-lateral donors have little power to influence policy and yet through SWAPs and PRSPs they do try to implement MoEYS priorities. Using BTC as a specific example it may be possible to argue that because it was based in Siem Reap away from the centre of donor and MoEYS discussions it limited its own involvement in influencing and contributing to policy development. However, I doubt from my observations, that against the strength of WB policy, BTC would have been able to influence educational development had it been more centrally involved in discussions. Additionally once there was a mandate to end BTC's work in Cambodia it had no financial powers of persuasion. I would conclude that BTC was better off working at a distance and showing that there were alternative models to developing education even if at the time of the programmes' closure much of the findings were not accepted. Being based in Siem Reap had not prevented BTC from working with MoEYS and developing high quality materials which had all be signed off as official MoEYS documents for use in the TTCs.

It is easy to become engrossed in how global issues are enacted out nationally and locally and forget that whatever policy is made the practices implemented are dependent upon how teachers, teacher educators and national project staff act. In the first example I show how two teachers implementing the ELP were able to stand up for their beliefs that the programme was worthwhile. MoEYS representatives went to view the ELP in practice. They observed two teachers who had both got to the end of the implementation. MoEYS asked the teachers if they were confused by the implementation of the ELP compared with the way they were used to teaching Khmer. Both teachers explained that this was not the case. They said that the new methodologies introduced by the ELP had been effective and influenced the way they were now teaching the Khmer curriculum for the better. The MoEYS interview was fairly interrogative of the teachers, but they did not shift from their opinions. MoEYS also wanted to know from the teachers what the relationship between ELP and the Khmer textbook was and if there was time to implement both. Project staff pointed out that this school along with others were able to implement all 100 activities and complete the textbook with time left over.

Another example of the power individuals have was of the national technical assistant in BTC who moved to another iNGO knowing that BTC would no longer be operational in Cambodia. In his new position he supported the Chet Chhem approach and the work of EGRA enthusiastically. But, when he took two weeks annual leave it was to specifically take the BETT reading materials back to his local village to work with children in the community because he *'wanted the children to learn to read'*.

And finally in returning to the teacher educators at the end of this chapter I argue that the long term investment for maths and ELP ultimately led to considerable success. The BETT educators remained committed to the projects throughout and were the keenest advocates in the schools. They built up relationships to a point that schools would call them for additional support. They were also in popular demand at the end of the project with a number of them being employed by local NGOs to continue the work. Two of the maths educators were employed by a PTTC, breaking the tradition that they had to have a maths degree.

Chapter Nine: The way forward for teacher education project design

The research presented in this thesis originated from the concerns I had when I encountered education and development issues in a low-income country for the first time. In formulating my concerns as five research questions I examined the design of teacher education projects in the contexts in which they were implemented. I analysed my growing experience of projects and identified key areas of knowledge that I then demonstrated led to an improvement in the design of teacher development projects. Through an examination of the research literature and the projects I have been able to make an in-depth study of project design and show how it is affected by global, regional, national and local contexts, a process that has enabled me to make further improvements on project design. My responses to the original research questions are interrelated so rather than deal with each of them individually in this final chapter I have written a summary in two parts. The first part shows the importance of the project designer understanding 'development agendas' and 'world education culture' in order to interact and respond to them and in the second part I draw some conclusions as to what specific country knowledge is relevant to teacher education project design and therefore what should be taken into account at the planning stages.

Development Agendas and World Education Culture

I have argued that the dominant global economic perspective based on investment in human capital and equated with economic growth has led to national governments becoming increasingly limited in making their own choices. Global external experts; in this case economic planners, are imposing their ideologies on nations and these ideologies do not necessarily match with local needs. Through government policy documents I have demonstrated how education in Cambodia as in many other countries continues to be based on human capital theory.

Wallerstein's (2004) theory discussed in Chapter One was based on the idea that a particular relationship exists between periphery and core states. I have demonstrated the periphery core relationship is evident in the way Cambodia interacts with multilateral agencies. Frank (1991) suggested that high-income countries engineer the economy to their advantage. If this is the case then how far development aid in the form of education projects contributes to the elimination of poverty may be debateable. As Sheth (2008:330) points out '*the economy is growing in volume but...its impact on removing poverty and unemployment is negligible*'. A reflection on the theory surrounding international development has thrown some light on this situation. Modernisation theory based on the idea that there is a linear route from the

undeveloped to the developed assumes that each nation is independent and autonomous, but the data in this thesis shows this is not the case, making dependency theory a likelier proposition. But dependency theory, like World Systems Analysis, is based on economics which I have concluded takes insufficient account of the individual culture of each nation. Clayton (2000) based on Wallersteins' world system theory argues that '*periphery*' countries such as Cambodia have to balance educational assistance from the '*core nations*' with the ideological impositions that they bring on a daily basis.

I have argued that external experts impose their pedagogies and ideologies on the recipient countries and I have retained my initial concern that I too was caught up in this process. However, I conclude that the concept of 'expert' is unavoidable where populations have vastly different educational opportunities and economic powers. I acknowledged at the beginning of the thesis that I had been fortunate enough to receive an education that had given me opportunities that my Khmer colleagues did not have and as such I was an 'expert' in teacher education. The only way to prevent this situation continuing was to give the Khmers greater educational opportunities to develop their own expertise. The interview data I have used throughout the thesis presents evidence that the BETT maths project design provided sufficient opportunities for the six educators to develop skills of analysis and reflection that were not evident at the beginning of the project. This narrowed the gap of educational advantage between the consultants and the educators and improved the quality of discussions and therefore decisions made on local educational needs. I also argue that whilst I did make impositions through the BTC projects and the KSHP they were carefully considered, based on Khmer culture and the continued discussion between the national project staff and teacher educators. The structured nature of the ELP for example was not based on a particular view of education, if anything it was an antithesis to what the consultants believed education was about. Instead the structure was designed to match the Khmer teachers' views and understanding of education and meet the needs of these teachers and the conditions in their classrooms.

When the projects are analysed it becomes clear that the majority of the imposition of external practices is generated from a global education management culture that is both economically influenced by a multilateral donor perspective and a pedagogic perspective based on ideas that what works in the West will work in the East. The EQIP project was a good example of how global school effectiveness and child-centred approaches were embedded in project design. From the evidence presented throughout the thesis I have demonstrated how the project designer must be aware of these agendas and through the project design be able

to respond to them. For example in the BETT maths project the training was devised so that in time the maths trainers were able to discuss and compare different pedagogic approaches to teaching and learning and therefore make decisions about what was appropriate for Khmer teachers themselves.

I argued that in the late 20th and early 21st century the prevailing pedagogy which I loosely referred to as constructivism in the West and 'child-centred learning' in development paradigms has been detrimental to the teaching and learning process in Cambodia. It requires a high degree of interaction between the teacher and the pupils, active participation of the pupils in the learning process and the development of pupils' thinking. The learner-centred approaches advocated by donors have undermined the traditional style of teaching. Because 'globalised pedagogy' has been implemented on top of an existing pedagogy rather than evolved through changes in practice, it has led to unpredicted results, such as issues with pupil behaviour. The problem of managing pupils' behaviour is compounded by the notion that Khmer children do not misbehave and therefore nothing is done to support teachers having difficulties. I consider that this is an example of global policy conflicting with national and local culture.

I have also shown that from the mid 1990s until 2008 teacher training, both in-service and pre-service has focused on introducing child-centred learning which operates in conflict with the increasingly standardised and accountability driven education system. MoEYS more recently appears to resist these imposed global child-centred policies and may perceive that it has more autonomy by going back to a traditional approach to the teaching of Khmer. I would argue that this is not the case and MoEYS are coerced by the funding and conditions of multilateral donors into following the latest global trend. For example the wide scale introduction of a form of systematic synthetic phonics that lends itself to a particular type of pedagogy is now evident in many countries. I would argue that this policy is driven by global agendas and it is not the 'return to traditional Khmer teaching' that MoEYS believes it has had control over.

Because pedagogies are transferred in different time frames it also means that a country supported by donors from all over the world is likely to receive mixed messages. Examples of pedagogic transfer in this thesis included how constructivist pedagogies in the West diminished in favour of Asia rim whole class policies. At the end of the maths project in a discussion with colleagues from JICA it was clear that JICA were moving to a more instrumental understanding in the teaching of mathematics and referred to the work of Skemp (1978).

Japanese colleagues discussed how they were moving from rote learning to a creative problem based curriculum and that was why they were interested in sustaining the work from BETT. At the same time as projects are implemented by JICA and BETT, global phonics policies are introduced which by default promote rote learning and memorisation. Cambodia, relying on finance from external sources, is inevitably drawn to the highest bidder, in this case the World Bank. This is a somewhat simplistic picture of pedagogic transfer and its effects in a low-income country and would benefit from further research.

The exporting of ideology and pedagogy also influences the relationships formed between nations and multilateral and bi-lateral donors and therefore has an effect on ownership, partnership and sustainability. I have already argued that whilst multi lateral donors develop policies, such as PRSP, based on a concept of partnership and ownership, in practice this is rarely achieved. The recent shift to the partnership approach could be contextualised within the neoliberal structure in which it exists. As Gould et al (2005) write after conceptualising partnership by examining its historical definitions: *'Partnership is commonly invoked when the more powerful party to an asymmetrical relationship feels threatened by impending hostilities and confrontation'* (Gould et al 2007:7). In this thesis I have shown through the ELP and the KSHP that partnership working is difficult to achieve, is rarely balanced and ownership is actually based on owning the policies of the external experts rather than nationally generated policy. Because one policy is rejected in favour of the next and because partnership and ownership are not achieved this weakens the possibility of sustainability at the national level.

The arguments I have just presented may suggest that development is almost impossible to achieve and there are writers who would advocate that it is not aid that will make the difference to poverty but trade (Mayo 2010, Bolton, 2007). However in the next section I argue that if policy actually takes into account the uniqueness of nation then some of the issues I have discussed can be addressed in project design and lead to small successes.

Teacher Education and National Identity

It is noticeable that the global picture described in this thesis provides little evidence that the low-income nation can contribute to global agendas or that the unique context of a nation is taken into account when global agendas are applied. An assumption could be made from this that globalization undermines national identity. As George & Lewis (2011:723) point out: *'A global education agenda fashioned from a distance by powerful agencies and intended to be adopted by developing countries is inherently unrealistic.'*

After the Cambodian genocide the earliest educational assistance to Cambodia was provided by the Vietnamese, but with that came an imposed ideology that the Khmer were expected to accept along with the assistance. The Vietnamese-Cambodian relationship demonstrated an extreme case of hegemonic aid assistance; but is that much different to aid support from the *'world education managers'* of later years?

However, in Cambodia there are also examples of resistance to global educational hegemony. Resistance to French colonisation led to the more popular wat schools gaining prominence over the modern Franco-Khmer schools. Sihanouk's investments in education in the 1950s went against the advice of UNESCO. Lon Nol in his short period of authority had tried to remove the Westernisation of education. In the DK period nearly all forms of education were wiped out. Education began to be rebuilt in the early 1980s and the evidence shows that community involvement was high where education was filtered through the wats, possibly because the local education system was embedded with the hegemonic practices of the Vietnamese.

From the evidence presented in this thesis it is clear that both global pedagogies and development practices have permeated Cambodia. However, I have also demonstrated that within Khmer classrooms influences of national values and Theravāda Buddhism are very much a part of the education system. Chandler (1996) showed how the Chhab's emphasis on hierarchy, rote learning and tradition was an actual reflection of the life people led; supporting the argument with the knowledge that Khmer language is rich in hierarchical structure. Both the style of teaching and the messages the key historic texts provided were important influences in the development of the Cambodian culture. For this reason I argue it is not possible to create a generic model of teacher education.

In this thesis I have shown there is little evidence that teacher development programmes have led to improved quality of education in the classroom or improved pupil outcomes. There was not a strong correlation between teacher development and improved pupil outcomes in the EQIP project, in the BETT maths project this aspect of development was not measured so I cannot argue whether it made an effect or not, however the evidence from the BETT ELP project does support the view that teacher development can be correlated with pupil outcomes. The pupil outcomes from the BETT ELP project matched with the qualitative observations of improved practice during the implementation. Over a year after BTC withdrew from Cambodia there is still evidence of project sustainability through the support of VSO:

Generally it can be stated that the implementation of the BETT material in the practice schools of the PTTC Battambang has been successful. Over 3000 students in grade 1 and 2 have benefited from the new materials and according to the directors of the schools have a higher level in speaking, listening, reading and writing. At least 20 teachers in grade 1 and 2 have more knowledge about the reading process and helped their colleagues to understand this and almost 100 teachers know better how to give a more effective and engaging reading lesson' (Lok, (2012) VSO Volunteer, August 2012)

I have stated throughout this thesis that the BETT ELP and mathematics programmes had some successes. For the maths programme I argue the greatest success was in the development of the teacher educators and in the ELP the success was in how the project was implemented in the classroom and that pupils in the target schools achieved better outcomes than those in the control group. The content and specific features of these programmes that I have identified as contributors to success have already been dealt with at length in the thesis so a summary here would not add to the argument. Instead I have identified generic activities that should work anywhere in the world and a set of orientation questions that could be used to guide project design.

The examples of generic activities in figure 9.35 are focused on the project designer putting their project into a wider agenda and at the same time focusing on what is unique about the country they are working in. These activities do not form an exhaustive list but I do believe that for me they have been key in helping to develop an understanding of what is needed in teacher education project design. I would use them again as a starting point in another country.

Figure 9.35: Generic Activities

<p>Classroom Observation (in as many different contexts as possible)</p>	<p>This activity should be implemented with colleagues. An emphasis should be placed on the observation and the discussion of what you and your colleagues saw and how each individual interpreted what they saw. This is a useful starting point for exploring the educational values and beliefs of colleagues and your values in relationship to your colleagues. Understanding the beliefs and values of teachers and how they will respond to the developments you propose is essential. My research showed that even in strong political systems teachers can choose to resist or embrace new developments from projects.</p>
<p>Interviewing (a focus group from start to finish)</p>	<p>Interviewing is often used at the beginning and end of projects, but I would recommend that it is used throughout, if possible with an identified focus group as this provides a measure of progress and a means to overcome some of the misunderstandings that arise between national and international teams. I found that interviews at the beginning of the project provided limited information, but by the end it was possible to discuss more difficult issues and both national</p>

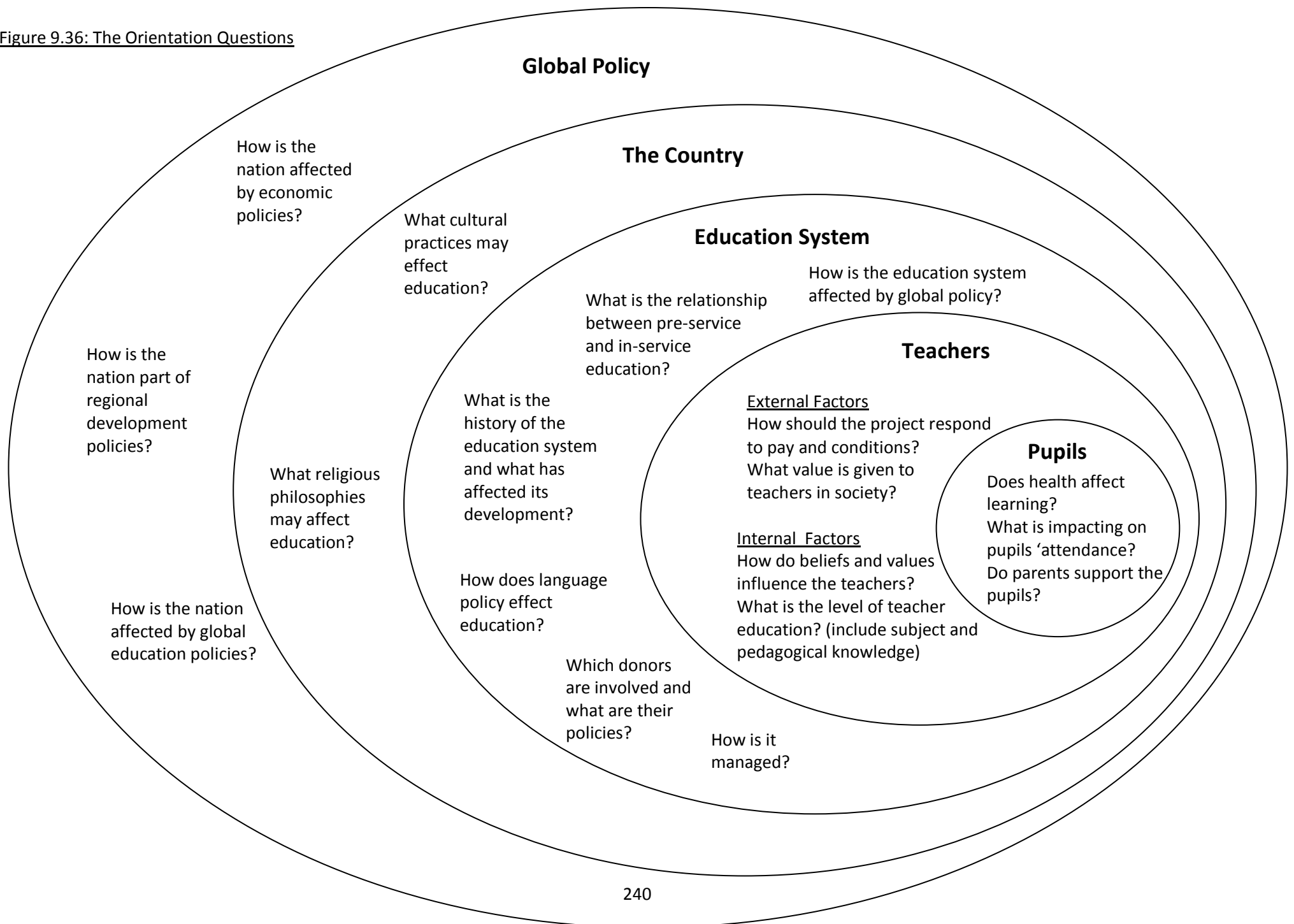
	and international colleagues were able to bring ideas that could be developed in harmony.
Identify the relationships between the projects that are being implemented	Understanding the positioning of a project within a donor community is essential. It affects how ownership, partnership and sustainability are developed and the relationships you form with ministry, NGOs/iNGOs, bi-lateral and multilateral donors.
Identify the agents of change and how they can be supported.	From my research I have shown that teachers, teacher educators and school directors ultimately made the difference in the quality of the educational experience. It may not be possible with resource limitations to focus on all of your target groups equally. However, putting mechanisms in place to support the links between the groups that develop a system of respect and mutual support does make a difference to the implementation.
Identify differences between your education system and the one you are working in.	What makes the country you are working in different? Concentrate on the differences you identify from your own education system and use these to help you think about what will and what will not work from generic development and education principles. I found that the role of religion, language and culture in society is unique and that they do impact on the education system and as a project designer it was possible to respond to this.
External experts	It is important to know where your expertise lies and what you could contribute to someone else's education system and what you cannot. I would argue that having expertise can be of great benefit to a recipient nation but only if the expert does not lose sight of the uniqueness of each nation and is prepared to challenge their beliefs and values.
Components of training	My experience suggests that a wide variety of components improve the teaching and learning process. I have already mentioned the importance of classroom observation and interviewing that undoubtedly made a large contribution to the understanding of the six maths educators. Like other researchers I found practice teaching and coaching particularly useful in developing skills. It is difficult to tell how far the different success levels of the various components reflected the Khmer educators specifically and therefore I am not able present a generic model of what works and what does not. I would suggest that within the initial project design a mechanism is created so the effect of the components introduced on learning and teaching can be evaluated and adapted throughout the project cycle.

In the introduction I posed five questions to help me structure the thesis. Having analysed the projects I have drawn up a new structured and more comprehensive list of orientation questions that I would certainly use as a starting point should I be a project designer in another low-income country. The questions are presented as a diagram in figure 9.36. I have put the orientation questions around the pupils in the centre because in order for teaching and learning to happen pupils must attend and be healthy. It does not mean that this element has to be included in the project design as it could be addressed by other donors working with the target schools but it is a prerequisite for success.

However getting pupils to attend and making them healthy does not necessarily mean they will gain from schooling either as has been evidenced from research on scholarship programmes. I would argue that it is teachers and teacher educators who will bring about change. As a project designer it is not enough to understand the global and national agendas that effect teachers but also you need to understand their beliefs and values and what they may choose to resist or embrace in a project. In the following three parts of the diagram I pose questions that enable the designer to think about how their project fits into the wider agenda and the relationships they will need to develop in order for the project to become sustainable.

There are no simple solutions for teacher development, but there is some evidence that it can make a difference to the quality of education.

Figure 9.36: The Orientation Questions



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Annex 1: Overview of Projects

Project	Aim	My Role	Research	Time Frame	Funders	Coverage	Research Participants
EQIP Education Quality Improvement Project	To use quality improvement grants to support the institutional strengthening and capacity building of Cambodia's education sector.	Initially a volunteer and then a lead technical assistant. I operated within the parameters of the project implementation laid out by WB.	Based on data analysis collected from the EQIP project implementation and evaluation exercise in 2003	Project 1999-2004 My involvement 2001 - 2003	World Bank DFID, VSO	All schools in three provinces, Kandal, Takeo, Kampot	<i>Research from a sample of 15 schools.</i>
KSHP Kampot School Health Programme <i>(Implemented within EQIP project)</i>	To train teachers to deliver simple health messages to primary school pupils.	Working with colleagues from EQIP and NGOs based in Kampot to provide a structure for the delivery of the programme	Based on data collected from the project implementation and a follow-up questionnaire exploring sustainability.	2002-2003	World Bank GTZ, DED, & VSO	All schools in Kampot province.	<i>Questionnaire results from 106 schools.</i>
KMP Kampot Mathematics Project <i>(Implemented alongside EQIP)</i>	To develop the skills of 8 teachers to become teacher educators to train teachers in grade 1 and 2	I part funded, designed and evaluated the project.	Analysed project results.	2002-2003	Donations from school links in UK Buy in from schools through EQIP	Some schools in Kampot. School directors chose whether to have involvement in this project	Project evaluations only
KLP Kampot Literacy Project <i>(Implemented alongside EQIP)</i>	To develop a training course for provincial educators to use in schools with grade 1 and 2 teachers based on books and materials.	I designed the reading books and support materials in conjunction with my Khmer translator. I part funded, designed and evaluated the project.	Implemented small scale testing of competency in basic skills in literacy before starting this project.	2002-2003	The author Donations from school links in UK Buy in from schools through EQIP	Some schools across Kampot. All schools in Chhouk district. School directors chose whether to have involvement in this project	Project evaluations only

Project	Aim	My Role	Research	Time Frame	Funders	Coverage	Research Participants
BETT Maths Mathematics (In-Service)	To develop a group of maths educators who would support teacher development through training and school support	I led on the design of the programme, supported the implementation and evaluated the outcomes.	Lesson observations of teachers and educators. Semi-structured group and individual interviews with six maths educators	2006 -2011	BTC	Remote and rural schools in the provinces of Kompong Cham, Otdar Meanchey & Siem Reap	<i>Six maths educators selected at project outset. All maths trainers in group.</i>
BETT Maths Mathematics (Pre-Service)	To upgrade the subject and pedagogical skills of in-service teacher educators in mathematics.	I led on the design of the programme, supported the implementation and evaluated the outcomes.	Interviews and observations of student teachers. Interviews and questionnaires with one trainer from each of the colleges.	2008 -2011	BTC	18 national provincial training colleges for primary school teachers 8 regional training colleges for secondary teachers	<i>1 maths pre-service trainer from each primary training college</i>
BETT ELP Early Literacy (In-service)	To develop a group of Khmer Literacy educators who would support teacher development through training and school support To develop books and support materials for the teaching of literacy in grades 1 and 2.	Lead consultant. I led on the design of the programme supported in the implementation and evaluated the outcomes. I led on the design of the supporting materials	Lesson observations of teachers and educators. An analysis of individual pupil outcomes from the control and intervention groups.	2007 -2011	BTC	Target schools in Kompong Cham Otdar Meanchey, Siem Reap. Teachers of grade 1 and 2	<i>66 teachers 8 teachers for in-depth interviews 1280 pupils in intervention schools & 600 pupils from control group in grade 1 and 2 for three consecutive years</i>
BETT BLS Basic Literacy Strategy (Pre-service)	To upgrade the subject and pedagogical skills of in-service teacher educators in literacy.	Lead consultant. I led on the design of the programme supported in the implementation and evaluated the outcomes.	Project evaluation	2010 -2011	BTC	18 national provincial training colleges for primary school teachers	<i>Evaluation reports only.</i>

Annex 2: Monitoring and Evaluation Tools

Classroom Observation Form (used by CST) – Descriptors only, EQIP project

Specific measure descriptors		
Classroom		
Display	5	There are learning displays on the walls. Student work is displayed on walls in an organised and attractive way
	4	There are learning displays on the wall. Some pupil work is displayed on the walls.
	3	There are some pictures and posters on the wall. There is no pupil work on the walls.
	2	Few pictures on the walls.
	1	There are no wall decorations.
Hygiene	5	Classroom is maintained well. It is very clean: no dirt, litter or food. Furniture is clean.
	4	Desks are clean and provide a free working area. The floor is clean.
	3	The floor is clean and most desks are clean. Desks do not provide a free working area.
	2	There is some litter and food on the floor. Most desks are not clean.
	1	There is litter and food on the classroom floor and desks.
Materials	5	All pupils have paper and pencils/pens.
	4	Most pupils have paper and pencils.
	3	More than half of pupils have paper and pencils.
	2	Less than half of the pupils have paper and pencils.
	1	Only a few pupils have paper and pencil.
Textbooks	5	All pupils have their own textbooks.
	4	Most pupils have their own textbooks. Some pupils are sharing textbooks in pairs.
	3	Some pupils have their own textbooks. Most pupils are sharing textbooks in groups of 2 or 3.
	2	All pupils are sharing the textbooks in groups of 2 and 3. Some pupils do not have access to a textbook.
	1	Most pupils do not have access to a textbooks of their own or by sharing.
Classroom Organisation	5	Desks are organised well to support pupil learning. Desks provide a clean and uncluttered work area.
	4	Desks are organised well. Most desks are uncluttered. Classroom is not used as storage room.
	3	Desks organised but not well. Most desks are uncluttered. Some items stored in classroom, like unused desks.
	2	Teacher does not use all available floor space to organise pupils' desks. Some items are stored in classroom. Most desks are cluttered.
	1	The area in the classroom is badly organised. Classroom is used for storage for unused desks, wood, rice, tiles, etc. Desks are cluttered with bags and dishes.
Attendance	5	Attendance records are up-to-date and accurate.
	4	Attendance records are mostly accurate and up-to-date.
	3	Attendance records are recorded daily, but they are not accurate.
	2	Attendance records are not accurately kept. Records are not always recorded daily.
	1	There are no attendance records

Specific measure descriptors		
Teaching		
Learning intention	5	Teacher explains learning intention of lesson and monitors it throughout lesson. Pupils understand learning intention. The learning intention is achieved.
	4	Teacher states learning intention of lesson. Pupils understand the learning intention. Teacher monitors if learning intention is achieved.
	3	Teacher tells the learning intention. Most pupils understand it. There is no monitoring therefore it is not clear if learning intention was achieved.
	2	The learning intention is not clear to the teacher or pupils. Teacher does not monitor pupil learning. The learning intention is not achieved.
	1	Teacher has no learning intention for pupils.
Lesson Plan	5	Lesson plan is well structured and clear. Plan is followed throughout lesson.
	4	Teacher has clear lesson plan. The plan is followed through most of the lesson.
	3	Teacher has a complete up-to-date lesson plan. Teacher does not follow plan throughout lesson.
	2	Teacher has incomplete lesson plan. Teacher does not follow plan
	1	There is no lesson plan.
Slow Learners	5	Teacher has a plan to support slow learners in the classroom and uses it.
	4	Teacher has identified slow learners and has a plan to help them.
	3	Teacher has identified slow learners. She has no plan to help them
	2	Teacher knows there are some slow learners in the class, but does not know how to give them extra support.
	1	No support given to slow learners or no awareness of them.
Teaching Aids	5	Teacher uses teaching aids appropriately to support learning intentions.
	4	Teacher uses teaching aids, and they are related to learning intention.
	3	Teacher uses teaching aids, but they are not necessary. They do not effectively support learning intention.
	2	Teacher has chosen material that is inappropriate for the lesson. The material does not support the learning intention.
	1	Teacher does not use teaching aids when it would have been useful.
Task	5	Task has a clear objective, and the objective supports the learning intention. The task matches the different abilities of the pupils.
	4	Task is appropriate to learning intention. It has a clear objective. Most pupils are able to achieve the task.
	3	The task was not appropriate for the learning intention, but it has an objective. Most pupils able to complete task.
	2	Most students are unable to complete task. Task did not match learning intention. The objective is not clear.
	1	Task is not appropriate for the learning intention and does not have an objective. Pupils are not able to do the task.

Teacher's questions	5	Teacher uses questions for various purposes – for example, checking pupils' understanding and eliciting information from pupils.
	4	Teacher uses questions to check pupils' understanding and follow up to pupils' responses.
	3	Teacher asks questions to check pupils' understanding but cannot follow up the response.
	2	Teacher asks questions of the pupils, but the questions do not check understanding. Pupils are not given time to respond to questions completely.
	1	Teacher does not use questions.
Expectations/ Interest	5	Teacher has high expectations for pupil achievement
	4	Teacher has expectations for pupil achievement
	3	Teacher has some expectations for pupil achievement
	2	Teacher has few expectations for pupil achievement.
	1	Teacher has no expectations for pupils.

Specific measure descriptors		
Learning		
Learning Materials (pupils' use)	5	All pupils use learning materials when necessary at their own initiative. Most pupils own some learning materials.
	4	All pupils have access to learning material to manipulate, but only use when instructed to do so.
	3	Most pupils have access to learning material sometimes
	2	Pupils rarely have access to learning materials.
	1	Pupils have no access to learning material they can manipulate.
Groupings	5	All pupils participate actively in different groupings: individually, pairs, small groups and whole class. Groupings are related to the objective of the task and learning intention.
	4	Pupils work in different groupings, mostly involved in task. Groupings are related to the objective of the task and learning intention.
	3	Pupils work in groups but not all group members are involved in task. Groups may be too large. The grouping is related to the objective of the task and learning intention.
	2	Pupils are sitting in groups, but work independently. The grouping is not related to the objective of the task, but it is related to the learning intention.
	1	Pupils are only in one grouping when more than one would have been more useful. The grouping is not related to objective of the task.
Pupils' questions	5	Pupils ask questions for various purposes to teacher and other pupils. Pupils are supported in their questioning.
	4	Pupils ask questions for help and clarification of other pupils or teacher.
	3	Some pupils ask questions for help
	2	Pupils rarely ask questions to clarify instructions and task.
	1	Pupils are not encouraged to ask questions.
Involvement in the lesson	5	Pupils are actively involved and enthusiastic.
	4	Most pupils participate and are interested.
	3	Some pupils are interested but do not participate actively in the lesson.
	2	Some pupils participate some of the time, but most pupils are not motivated.
	1	Pupils do not participate in the lesson. They are not motivated or interested.

Regular feedback during lesson time	5	Teacher gives pupils regular feedback on their progress in lesson. The teacher monitors throughout the lesson for pupil understanding.
	4	Questions are used in class to find out what pupils have learned. Comments on pupil class work are made to give encouragement.
	3	Teacher asks questions, but they do not always explain to pupils why their answers are good or not.
	2	Teacher does not check for understanding during the lesson.
	1	Pupils receive little or no feedback.
Pupils' notebooks	5	All pupils' notebooks are covered and clean. Teacher gives clear directions for organising the notebooks. Teacher marks and comments on written work of the pupils.
	4	Most pupils' notebooks are cared for: covered and clean. Teacher gives clear directions for organising the notebook. Teacher regularly marks the notebook but without written comments.
	3	Most notebooks are cared for: covered and clean, but the content is not clearly organized. The teacher regularly marks the notebooks.
	2	Most notebooks are uncared for: uncovered and dirty. There is some evidence of teacher marking.
	1	Most notebooks are uncared for: uncovered and dirty. There is no evidence of teacher marking.
Homework	5	Homework is purposeful and supports learning intention. Homework is unfinished work or an extension activity. Homework is corrected and comments are given.
	4	Homework is supports the learning intention and is purposeful. Homework is corrected, but no written comments.
	3	Homework is related to the learning intention but it is not purposeful. Homework is not corrected.
	2	Homework is given, but does not relate the learning intention. It is not corrected.
	1	Students do not receive homework.

School Effectiveness Evaluation Report (section 4 only), EQIP project

4. Teaching Learning Processes	
Specific measure	Descriptors
Varied teaching strategies	<ol style="list-style-type: none"> 5. Teachers use varied methods and teaching materials are widely used. Pupils are active learners. 4. Most teachers vary their methods: using some group work and some whole class teaching. Pupils are asked to respond in various ways – working at the board, writing, talking in groups, etc. Pupils ask questions. 3. The teaching in this school is sometimes traditional but some teachers use child-centred strategies. 2. Most teaching is traditional but some teachers use teaching materials. Not too much variation in teaching occurs. 1. Teaching in all classes seems to be the same. Teachers talk and children listen or copy.
Frequent homework	<ol style="list-style-type: none"> 5. Regular homework is set and marked. Parents are encouraged to read with their children. 4. Relevant homework is given often by teachers who mark and return it quickly. Unnecessary or irrelevant homework is not given. 3. Homework is given from time to time if work is not completed in class. The teacher does not always check homework. 2. Homework is rarely given, but pupils are occasionally asked to prepare something for the next day. 1. No homework is given.
Time on task	<ol style="list-style-type: none"> 5. Teachers focus on learning tasks; classrooms are busy places. 4. Most teachers ensure pupils focus on set tasks; activities have a learning goal. 3. Teachers vary in how much emphasis they give to learning tasks; on average; this school is fairly task oriented. 2. Not all lessons focus on learning tasks; sometimes lessons are not well taught or pupils are not attentive to their work. 1. Pupils are distracted readily by boring lessons.
Regular assessment and feedback	<ol style="list-style-type: none"> 5. Teachers give pupils regular feedback on their progress in lesson and through marking work. The teacher assesses throughout the lesson for understanding, adapting the delivery where appropriate. Teachers keep excellent pupil records. 4. Questions are used in class to find out what pupils have learned. Class work is marked and comments are made. Pupil records are kept. 3. Teachers ask questions, but they do not always explain to pupils why their answers are good or not. Some tests are used to assess understanding. Class work is marked. 2. Teachers do not check for understanding during the lesson, but mark work in pupils' books Teachers do ask some questions in class. 1. Pupils receive little or no feedback. Class work is not marked. Tests may be unrelated to learning.

BETT Lesson Observation Form

Classroom Observation Form Learning						
Province		District		School	Teacher	Observer
Date	Lesson starts	Lesson ends	Grade	No of pupils on register/present	Subject	
What is the lesson about?						
Criteria				Evidence		
<p>Do pupils?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Look interested and engaged in their work <input type="checkbox"/> Know what they have to do <input type="checkbox"/> Use resources to help them learn <input type="checkbox"/> Co-operate and work well together <input type="checkbox"/> Work throughout the lesson <input type="checkbox"/> Learn something new 						

Discuss and take action

Strengths	Ideas for Development

Classroom Observation Form Teaching	
Criteria	Evidence
<p>Does the teacher?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Tell pupils what they will learn <input type="checkbox"/> Explain the methods/activities clearly <input type="checkbox"/> Use different types of questions <input type="checkbox"/> Use resources effectively <input type="checkbox"/> Provide different activities <input type="checkbox"/> Use all of the time available <input type="checkbox"/> Talk to pupils to explain how they can improve <input type="checkbox"/> Help pupils who are having difficulties <input type="checkbox"/> Provide additional work for pupils who finish before the end of the lesson <input type="checkbox"/> Provide homework relevant to the lesson <input type="checkbox"/> Mark pupils' work. 	

Discuss and take action

Strengths	Ideas for Development

តែសស្តង់សិស្សថ្នាក់ទី១

ភាសាខ្មែរ (A)

ឈ្មោះ: កាលបរិច្ឆេទ:

ពិន្ទុ:

ខេត្ត ស្រុក

កំរង សាលា

ថ្នាក់ ថ្នាក់ទី

ភេទ ស្រី/ប្រុស អាយុ

ចំនួនដងនៃការត្រួតថ្នាក់ 0 1 2 3

រៀនសាលាមត្តេយ្យ បាទ ចាំ/ទេ

រៀនថ្នាក់បំប៉នរបស់ EQIP បាទ ចាំ/ទេ

រៀនថ្នាក់បំប៉នរបស់ PAP បាទ ចាំ/ទេ

ការពណ៌នាពីវត្តមាន

រៀងរាល់ថ្ងៃ ច្រើនថ្ងៃបំផុត ថ្ងៃខ្លះ

ការពណ៌នាពីសុខភាព

មិនល្អ មធ្យម ល្អ

មូលហេតុនៃការក្រចូលរៀន

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ទា ឆ្មា
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ប៉ា	ស្រី
បាយ	អាន
ប្រុស	អារ
សរសេរ	ម៉ែ
យាយ	ដាំ
ខោ	តា

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Annex 3: Baseline Assessment Early Literacy Programme Grade 1, BETT project

Province	District	School	Grade
Teacher	Assessor	Date	What was the last activity recorded in the teacher activity book

PART 1 (<i>Attitude towards books</i>)	Name of Pupil	Name of Pupil
	Age: M/F	Age: M/F
<i>Watch pupils' behaviour to complete this section using tick (✓) or cross (x).</i>		
Handles book appropriately		
Appears confident with book		
Concentrates for several minutes		
Looks at book page by page		
Looks at pictures		
Looks at writing		
Talk to one another about the book		
Do the pupils know the children's names? (Turn to page 5 and show pupils the pictures of Chime and his family).		
Can you tell me about one Chime story? (Accept any Chime book title or short description of a Chime story).		

PART 2 (<i>Decoding</i>)		
Can identify a consonant (Ask a pupil to point to a consonant and say its name)		
Can identify a vowel (Ask a pupil to point to a vowel and say its name)		
Can identify a number (Turn to the back of the book. Ask a pupil to point to a number and say its name)		
Can identify a word (Ask the pupil to read a word they know.)		
Can identify a question. (Show a pupil a question mark and ask what it means).		

Ask one pupil at a time to read the assessment book. Tick the words as the pupil reads correctly. Cross any words read incorrectly. If the pupil does not attempt the word leave the record blank.

Record of reading Pupil 1

គោះទៅលេងបាល់។ អូ! បាល់របស់ខ្ញុំ។ អូ! អាររបស់ខ្ញុំ។ អូ! កាដឹមរបស់ខ្ញុំ។ យ៉ាងម៉េចហ្នឹង? បាល់របស់បងនៅឯត្រពាំង។ អរគុណចែម។ អាររបស់ម៉ែនៅឯវាលស្រែ។ អរគុណចែម។ យ៉ាប់មែនឯងនេះ!

Record of reading Pupil 2

តោះទៅលេងបាល់។ អូ! បាល់របស់ខ្ញុំ។ អូ! អរោបស់ខ្ញុំ។ អូ! ភរិយារបស់ខ្ញុំ។ យ៉ាងម៉េចហ្នឹង?
 បាល់របស់បងនៅបត្រពាំង។ អាគុណេថែម។ អរោបស់ម៉ែនៅបត្រពាំង។ អាគុណេថែម។ យ៉ាប់មែនបងនេះ!

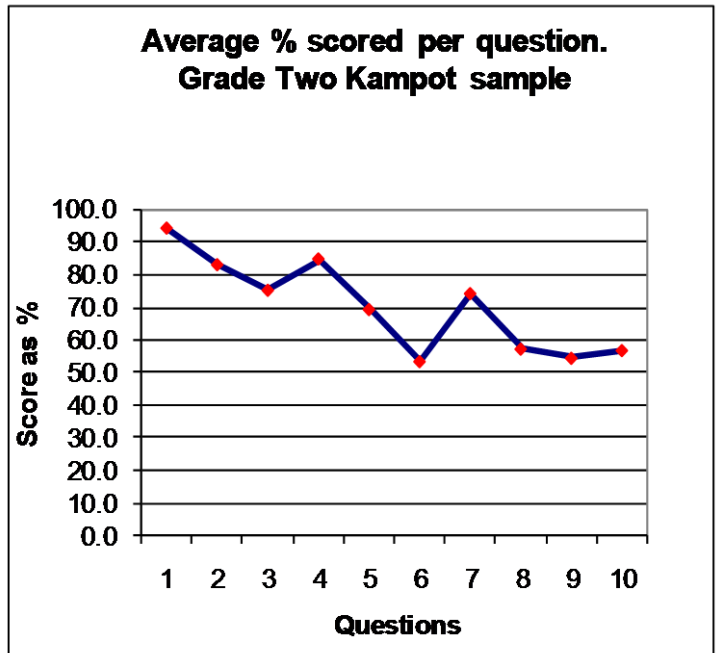
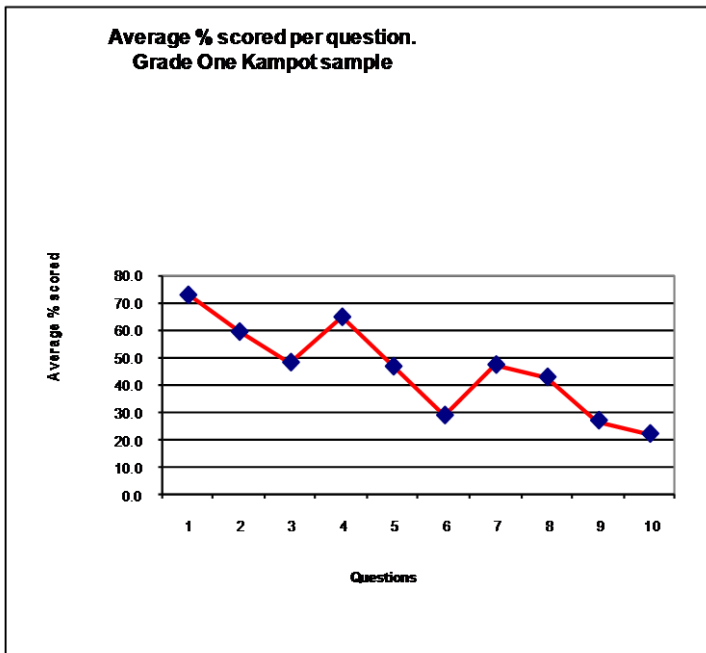
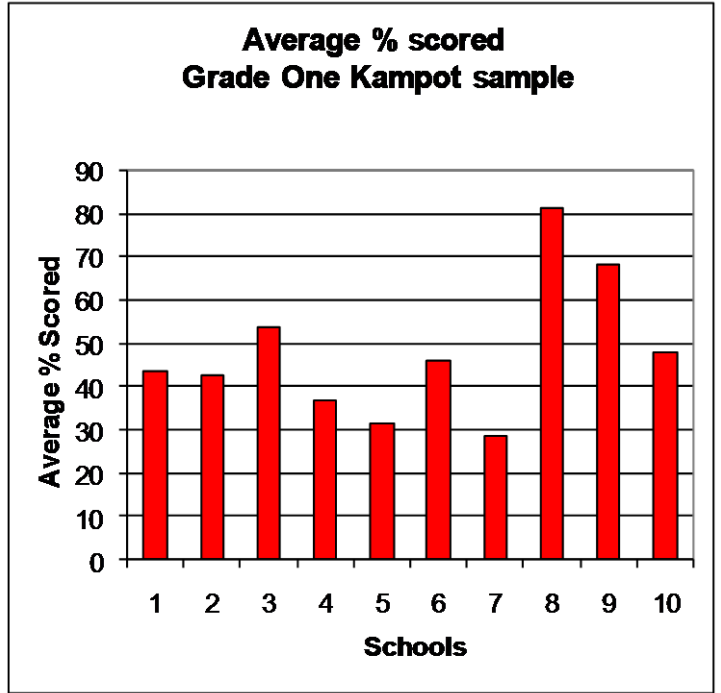
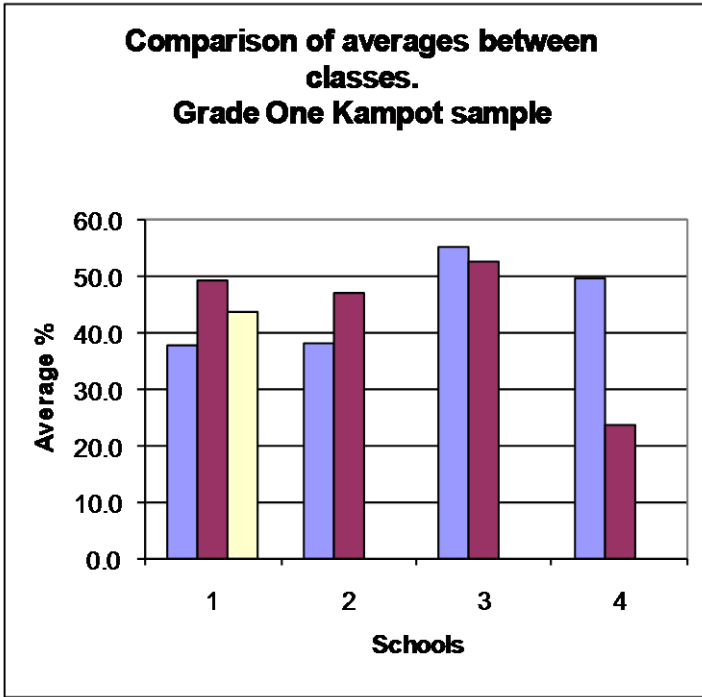
PART 3 (Comprehension skills)

If the pupils were unable to read the book you need to read the story to them to complete this section of the form. Read the story as you have been taught in your training, then close the book. Take the books away from the pupils.

<p>Can identify key character <i>(Key character Chime and other members of Chime’s family. If pupil is not familiar with the names accept relationship e.g ‘sister’, ‘mother’ or boy, girl, dog)</i></p>		
<p>Can say what happened in the story <i>(For example; The children were going to play ball but the dog stopped the game. Chime chased the dog and got back some things.)</i></p>		
<p>Can interpret characters’ feelings <i>(Point to page 2 – ask ‘how Chime is feeling?’ Point to page 6– ask ‘how is Dara feeling?’)</i></p>		
<p>Can relate personal experiences <i>(Ask pupils individually if they have ever had something taken. Follow-up their response with further questions.)</i></p>		
<p>Can give reasons for preferences. <i>(Ask pupils individually to point to their favourite part of the story. Ask pupils to give reasons for their choice.)</i></p>		
<p>Can retell the story in their own words <i>(Encourage a creative re-telling – not memorisation)</i></p>		
<p>Can extend the story <i>(Point to page 8 ask ‘what might happen now?’)</i></p>		

Annex 4: Testing Grade 1 and 2 Pupils in Kampot Khmer Language - Sample Only

- 10 Schools (core and satellite schools, across 4 districts)
- 4 Schools had more than one class
- 15 classes in total



Promotion Rates and Scores Kampot 2002

Grade 1 Pupils

Promoted

85.6% of pupils were promoted
The average score was 51.4%
The score range was 2% - 100%
25.2% with scores less than 30%

Not promoted

14.4% of pupils were not promoted
The average score was 21.5%
9.1% had scores more than 50%
The score range was 0% - 86%

Grade 2 Pupils

Promoted

91.9% of children were promoted
The average score was 72.6%
The score range was 20% - 100%

Not promoted

8.1% of pupils were not promoted
The average score was 42.2%.
The score range was 24% - 58%

Source:

Annual Report Year 3 Kampot August 1st 2001 – July 31st 2002EQIP Provincial Project
Implementation Unit (PPIU)supported by International Development Association IDA Credit
No. 3283-KH

Annex 5: Teacher Standard Competencies, Draft 2007, MoEYS

TEACHER SELF-APPRAISAL CHECKLIST:

[Key Competencies are highlighted. Every teacher should meet these standards. A school director may also nominate other competencies which the teacher should meet.]

REF N°	COMPETENCIES	CHECK YES/NO
1	PROFESSIONAL KNOWLEDGE	
1.1	<i>Knowledge about students</i>	
1.1.1	Teacher lists students by name Teacher lists student learning capacities	
1.1.2	Teacher describes student learning histories Teacher describes student attitudes Teacher describes home circumstances of students	
1.1.3	Teacher describes how gender influences student learning Teacher describes how economic background influences learning Teacher describes how ethnicity influences student learning Teacher describes how to deal with these factors	
1.2	<i>Knowledge of Learning Content</i>	
1.2.1	Teacher describes educational policies;	
1.2.2	Teacher prepares learning objectives Teacher describes teaching methods Teacher uses appropriate student assessment strategies	
1.2.3	Teacher outlines content of programme to be taught Teacher teaches content clearly.	
1.2.4	Teacher describes ways in which knowledge and skills from this subject is integrated with other subjects and real life.	
1.3	<i>Knowledge of how students learn</i>	
1.3.1	Teacher describes classroom context Teacher describes school community context Teacher describes education culture of school	
1.3.2	Teacher describes one or more theory of how students learn.	
1.3.4	Teacher explains differences in student ability Teacher explains difference in rates of learning Teacher explains differences in student learning styles	
2	PROFESSIONAL PRACTICE	
2.1	<i>Planning and assessing</i>	
2.1.1	Teacher prepares a lesson plan with clear learning objective(s). Teacher prepares a lesson plan which shows clearly how student learning will be assessed. Teacher prepares a lesson plan which shows clearly student activities which support the learning objective(s).	
2.1.2	Teacher prepares relevant teaching aids to achieve student learning; Teacher prepares relevant student materials to achieve student learning.	
2.1.3	Teacher shows copies of tests and student responses and describes approach used.	
2.1.4	Teacher monitors student participation Teacher maintains records of student progress;	
2.1.5	Teacher gives clear feedback to students Teacher gives clear feedback to parents or guardians	
2.2	<i>Managing the Learning Environment</i>	
2.2.1	Teacher and students show positive relations	

REF N°	COMPETENCIES	CHECK YES/NO
	Teacher provides activities which are challenging for all students	
2.2.2	Teacher demonstrates ways in which students can be encouraged to take responsibility for own learning	
	Teacher shows examples of student work	
2.2.3	Teacher lists activities s/he participated in.	
2.3	Teaching Strategies	
2.3.1	Teacher demonstrates a range of teaching methods	
	Teacher describes the range of methods used	
2.3.2	Teacher uses a range of teaching methods which cater for diverse learning styles	
	Teacher describes how teaching methods cater for different learning styles	
2.3.3	Teacher demonstrates use of critical thinking in classroom lesson	
	Teacher describes how critical thinking is used in the classroom	
2.3.4	Teacher describes own knowledge and skills in ICT and how to use them to make student learning more effective	
3	PROFESSIONAL LEARNING	
3.1	Self-learning and reflection on and evaluation of own practice	
3.1.1	Teacher describes personal professional strengths and needs	
3.1.2	Teacher prepares a personal PD plan	
3.1.3	Teacher describes own skills and provides certification	
	Teacher teaches students using ICT	
3.1.4	Teacher demonstrates improved communication skills with students	
	Teacher demonstrates improved communication skills with colleagues	
	Teacher demonstrates improved communication skills with parents and school community	
3.2	Engagement in the teaching profession	
3.2.1	Teacher describes reading s/he has done and how it has helped teaching to improve	
	Teacher demonstrates in a lesson how the reading has helped	
3.2.2	Teacher lists meetings attended.	
	Teacher explains how meetings helped them to learn about their teaching	
4	PROFESSIONAL ETHICS	
4.1.	Teacher speaks respectfully and encouragingly to students, colleagues and others in the school community.	
	Teacher show respect for a student's right to be treated fairly not speaking down to them or punishing them in demeaning or in violent ways.	
	Teacher works with colleagues and other members of the school community in the best interests of the students	
	Teacher shows enthusiasm and initiative in all aspects of professional activities.	
	Teacher demonstrates knowledge of the MoEYS Code of Conduct and Education Law	
4.2	Teacher is punctual to class and other regular events.	
	Teacher demonstrates courteous and considerate manners.	
	Teacher shows respect to students, colleagues and others in the school community.	
4.3	Teacher demonstrates a positive spirit to students and others in the school.	
	Teacher demonstrates capability to maintain harmonious relationships	
	Teacher communicates strong moral values to parents and others in the school..	
4.4	Teacher demonstrates professional integrity behaving with decency and impartiality.	
	Teacher gives all students a fair share of the teacher's time and attention, and resources irrespective of gender, ethnicity or ability to pay.	
	Teacher conducts fair assessments	

Source:MoEYS (2007)A Draft Teacher Standards Framework for Cambodia Cambodian Education Sector Support ProjectAugust 2007, Draft 6, World Bank Project

Annex 6: Extracts from Logframes for BETT projects

Extract 1 from BTC Log Frame

Specific objective: To contribute to improved quality of and equitable access to basic education in the provinces of Kampong Cham (KPC), Siem Reap (SR) and Otdar Meanchey (OM) within the framework of the Education Sector Support Programme.						Progress: Satisfactory (B)
Indicators	E	G	Baseline (02-03)	Progress year (09-10)	Comments	Indicators
Reduced drop-out in primary education (overall)			KCM:	13.29 (19.80)	8.90 (9.74)	-4.39 (-9.34)
			SRP:	14.24 (15.07)	9.70 (8.08)	-4.54 (-6.99)
			OMC:	15.14 (24.37)	10.30 (9.23)	-4.84 (-15.14)
Reduced drop-out in primary education (girls)			KCM:	13.49 (17.89)	8.50 (9.23)	-4.99 (-8.66)
			SRP:	14.23 (16.79)	9.30 (7.90)	-4.93 (-8.89)
			OMC:	16.75 (16.39)	10.80 (8.02)	-5.95 (-8.37)
Reduced drop-out in lower secondary education (overall)			KCM:	25.56 (34.15)	20.40 (19.92)	-5.16 (-14.23)
			SRP:	23.87 (34.17)	19.30 (19.50)	-4.57 (-14.67)
			OMC:	19.33 (34.99)	22.80 (19.01)	+3.47 (-15.98)
Reduced drop-out in lower secondary education (girls)			KCM:	26.78 (37.66)	21.00 (20.30)	-5.78 (-17.36)
			SRP:	18.53 (37.17)	19.70 (19.65)	+1.17 (-17.52)
			OMC:	25.60 (34.09)	22.60 (20.26)	-3.00 (-13.83)
The number of G9 pupils in the target schools passing the G9 achievement test is increased by 10% as compared to the baseline year			KCM: 0.48		0.75	+0.27
			SRP: 0.49		0.73	+0.24
			OMC: 0.50		0.69	+0.19
Number of drop-outs in primary target schools shows a 10% decrease.			KCM: 19.08		9.74	-9.34
			SRP: 15.07		8.08	-6.99
			OMC: 24.37		9.23	-15.14
Number of drop-outs in lower secondary target schools shows a 10% decrease.			KCM: 17.89		9.23	-8.66
			SRP: 16.79		7.90	-8.88
			OMC: 16.39		8.02	-8.37

Source:

Adapted from CTB Annual Report 2010 Basic Project KAM 02 005 11 Basic Education and Teacher Training (BETT) Agence Belge De Développement

Extract 2 from BTC Log Frame

Result: The quality of basic education is improved				Progress: Satisfactory (B)
Indicators	E	G	Baseline (02-03)	Progress year (09-10)
At least 50% of all teachers trained through INSET employed improved teaching skills at least 30% of their teaching time, particularly regarding the application of learner-centred (active learning) methods.			Math:	<p>Selected indicators for improved teaching skills are:</p> <ol style="list-style-type: none"> 1) At least 35' of the 45' teaching period has been spent on task (on actual teaching and learning of subject matter to be covered). 2) The children are using chalkboards to show their work. 3) The teacher walks around to help students or check on their work (for at least 5 minutes). 4) Students working in pairs or groups on an assignment related to the lesson for at least 7 -10 minutes 5) The teacher or students using any materials that support teaching and learning. <p>District monitoring results of December 2010 show that: 62% of teachers observed apply at least 4 of the above during announce and unannounced visits. 36% of teachers observed apply at least 3 of the above. 1% of teachers observed apply only 2 or less of the above.</p>
			Literacy:	<p>Selected indicator for improved teaching skills is the number of learning conducted on a weekly basis.</p> <p>District monitoring results of December 2010 show that: 20% of teachers using the activities at least 3 times a week 27% of teachers using the activities at least 2 times a week 27% of teachers using the activities at least 1 times a week 24% of teachers using the activities (almost) never</p>

Source: Adapted from CTB Annual Report 2010 Basic Project KAM 02 005 11 Basic Education and Teacher Training (BETT) Agence Belge De Développement