Consortium for Research on Educational Access, Transitions and Equity

Small, Multigrade Schools and Increasing Access to Primary Education in India: National Context and NGO Initiatives

Nicole Blum
Rashmi Diwan

CREATE PATHWAYS TO ACCESS
Research Monograph No 17

October 2007

Institute of Education, University of London

National University of Educational Planning and Administration (NUEPA)

Consortium for Research on
Educational Access, Transitions & Equity

Funded by DFID

The Consortium for Educational Access, Transitions and Equity (CREATE) is a Research Programme Consortium supported by the UK Department for International Development (DFID). Its purpose is to undertake research designed to improve access to basic education in developing countries. It seeks to achieve this through generating new knowledge and encouraging its application through effective communication and dissemination to national and international development agencies, national governments, education and development professionals, non-government organisations and other interested stakeholders.

Access to basic education lies at the heart of development. Lack of educational access, and securely acquired knowledge and skill, is both a part of the definition of poverty, and a means for its diminution. Sustained access to meaningful learning that has value is critical to long term improvements in productivity, the reduction of inter-generational cycles of poverty, demographic transition, preventive health care, the empowerment of women, and reductions in inequality.

The CREATE partners

CREATE is developing its research collaboratively with partners in Sub-Saharan Africa and South Asia. The lead partner of CREATE is the Centre for International Education at the University of Sussex. The partners are:

The Centre for International Education, University of Sussex: Professor Keith M Lewin (Director)
The Institute of Education and Development, BRAC University, Dhaka, Bangladesh: Dr Manzoor Ahmed
The National University of Educational Planning and Administration, Delhi, India: Professor R Govinda
The Education Policy Unit, University of the Witwatersrand, South Africa: Dr Shireen Motala
The Universities of Education at Winneba and Cape Coast, Ghana: Professor Jerome Djangmah
The Institute of Education, University of London: Professor Angela W Little
Associate Partner: The Institute of Development Studies at Sussex

Disclaimer

The research on which this paper is based was commissioned by the Consortium for Research on Educational Access, Transitions and Equity (CREATE http://www.create-rpc.org). CREATE is funded by the UK Department for International Development (DFID) for the benefit of developing countries and is coordinated from the Centre for International Education, University of Sussex. The views expressed are those of the author(s) and not necessarily those of DFID, NUEPA, the Institute of Education or the CREATE Team.

ISBN: 0-901881-23-6

Address for correspondence:
CREATE,
Centre for International Education, Sussex School of Education,
University of Sussex, Falmer, Brighton BN1 9QQ,
United Kingdom
Tel: + 44 (0) 1273 678464
Website: http://www.create-rpc.org
Email create@sussex.ac.uk

Author email: n.blum@ioe.ac.uk
rashmidiwan@nuepa.org

Please contact CREATE using the details above if you require a hard copy of this publication.

Small, Multigrade Schools and Increasing Access to Primary Education in India: National Context and NGO Initiatives

Nicole Blum
Rashmi Diwan

CREATE PATHWAYS TO ACCESS
Research Monograph No 17

October 2007

Contents

Acknowledgements iv
Preface v
Summary vi
1 Introduction 1
1.1 The Research Context - Small Schools in India 3
2 Research Strategy and Methods 5
2.1 Literature and Policy Review 5
2.2 Quantitative Research 5
2.3 Qualitative Research 5
2.3.1 Interviews 5
2.3.2 School Case Studies 6
2.4 Analysis 7
3 Primary Education in India 8
3.1 Primary School Infrastructure 12
4 Small Schools Literature 15
4.1 Research Literature in India 15
4.2 Policy on Small Schools and Multigrade Teaching and Learning in India . 17
4.3 Perceptions of Multigrade Teaching and Learning 19
5 National Profile of Small Schools in India 21
5.1 Enrolment Indicators 22
5.2 Teacher Indicators 22
5.3 School and Classroom Indicators 24
5.4 Key Issues for Small Multigrade Schools 25
6 Understanding What Happens in Small Schools 27
6.1 Case study 1: Rishi Valley Institute for Educational Resources, Andhra Pradesh 27
6.1.1 The RIVER Methodology 28
6.1.2 Teachers' Roles in Individual and Community Development 30
6.1.3 Observations from Rishi Valley Schools 31
6.1.4 Scaling Up 32
6.1.5 Educational and Social Impacts 33
6.2 Case Study 2: Bodh Shiksha Samiti, Rajasthan 34
6.2.1 The Bodh Shiksha Samiti Multilevel Approach 35

6.2.2 Observations in Bodh Schools 36
7 Conclusions 40
8 Recommendations 43
8.1 Assessing the Need for Small Schools 43
8.2 Curriculum Reorganisation 43
8.3 Teacher Education 44
8.4 Community and School Networks 44
8.5 Policy Development 45
8.6 Changing Perceptions of Multigrade 45
References 47
Appendix: Selected Photographs of Case Study Schools 52

Acknowledgements

This paper is the result of many months of work both in India and in the UK, and the authors wish to express their gratitude to colleagues at the National University for Educational Planning and Administration (New Delhi, India), the Institute of Education, University of London (UK), and the Centre for International Education, University of Sussex (UK). In particular, our thanks go to Professor Angela Little and Professor R. Govinda for their strong support throughout the research and writing process. We would also like to acknowledge the cooperation of Professor Ved Prakash, Vice Chancellor of the National University for Educational Planning and Administration. Finally, we are deeply grateful to staff at Bodh Shiksha Samiti (Rajasthan, India) and Rishi Valley Institute for Educational Resources (Andhra Pradesh, India) for taking part in the research and granting us access to school sites.

Preface

This research monograph, by Dr. Nicole Blum and Dr. Rashmi Diwan, is one of several in the CREATE Pathways to Access Series that address strategies for improvements in meaningful access to education. It explores the case of small schools in India. In 2004-2005, 55% of all primary schools had 100 or fewer pupils and 78% had three or fewer teachers. Small schools are the norm rather than the exception in India. This monograph describes the policy and practice contexts in which small schools arise, provides an overview of the characteristics of small schools across the country, reviews the Indian literature on small schools and offers detailed insights on the operation of two non-governmental programmes – the Rishi Valley Institute for Educational Resources in Andhra Pradesh and Bodh Shiksha Samiti in Rajasthan.

The monograph is one of the first to have been produced through the direct collaboration of and joint field work by researchers from two of the institutions in the CREATE consortium. A companion CREATE monograph, reviewing issues of school and class size cross-nationally, will be published in 2008.

Professor Angela W. Little
Institute of Education, London
CREATE Partner Institute Convenor

Professor R. Govinda
National University of Educational Planning and Administration, Delhi
CREATE Partner Institute Convenor

Summary

Small schools are a significant feature of the educational landscape in India, with approximately 78% of primary schools having three or fewer teachers to attend to all grade levels, and more than 55% with 100 or fewer students in 2005. These schools are commonly found in impoverished rural communities, where they are often characterised by the need for multigrade classroom management as a result of low enrolment and/or too few teachers, and usually face significant shortages in terms of teaching and learning resources and basic infrastructure. This frequently leads to poor educational quality, student disillusionment, high rates of drop-out and low rates of retention.

Ironically, many of these schools, especially in rural areas, were established in direct response to domestic and international pressure to achieve Education For All and the Millennium Development Goals. As such, they represent an important part of efforts to improve access to primary education for the most marginalised groups.

The teaching and learning which occurs in small schools, however, varies a great deal depending on a number of factors such as local social and economic circumstances, the availability of physical and human resources, curriculum and assessment methods, and type of school management. Yet to date research on small schools in India largely consists of quantitative datasets which attempt to measure their characteristics (class size, number of classrooms, style of management, etc.) and geographical distribution. The qualitative dimension of students', teachers', and policy makers' perspectives and experiences of education in these settings, on the other hand, has remained largely unexplored.

This research therefore applied both qualitative and quantitative methods in order to understand the contemporary context of small schools in India. It included an extensive literature and policy review, and quantitative analysis of data available from India's District Information System for Education (DISE), as well as fieldwork with policy makers in Delhi and in small, multigrade NGO schools in Andhra Pradesh and Rajasthan. This mixture of methods allowed for an exploration of small schools on several levels. At the national level, the influences and impacts of national primary education policy on small schools were examined and a national profile of small schools was created using available data. This national level work was complemented by a local-level exploration of small school initiatives by two NGOs which have shown positive results through innovations in multigrade management, teacher education, and school-community networking.

Small, Multigrade Schools and Increasing Access to Primary Education in India: National Context and NGO Initiatives

In a small government school in the city of Jaipur in Rajasthan, two classes are being conducted at the same time in a single, small room. The children sit in rows, with one group facing one wall with a chalkboard and the others facing the opposite way. Both groups are involved with similar kinds of activities such as loudly reciting poems or reading texts aloud, and one wonders how any of the students could be learning anything at all.

On the rural outskirts of Delhi stands another small, one-storey government school made of brick and mortar walls and with a metal roof. During sunny weather, the roof becomes heated during the day making the interior stifling, and during the rainy season the rain drops loudly, drowning out the voices of teachers and students. One day it is pouring heavily, but the teacher stands at the front of the class reading a lesson from the text book while the children attempt to repeat after her. There is so much noise on the roof that this exchange is barely audible, but the class continues nonetheless. Slowly one child gets up and sneaks out the window, followed by another. The teacher, unaware of the silent departure of her students, keeps reading through the textbook at top of her voice.

1 Introduction

Although the schools described above are located in India, small schools such as these can be found in education systems around the world, and are particularly prevalent in poor, rural regions of developing nations. They are characterised by low enrolment, too few teachers to cover the required grade levels (resulting in multigrade teaching and learning) and a scarcity of resources and support. This often leads to poor educational quality, student disillusionment, and attendant high rates of drop-out and low rates of retention. Little (2006) estimates that around 200 million children experience their primary education in small, multigrade schools worldwide and, were universal primary education to be achieved, that number would increase to around 270 million children. Despite their prevalence in many country contexts, however, national policy makers tend to devote extensive resources in attempting to achieve an idealised model of large, mono-grade schools (i.e. one teacher per class) across their territories. This focus has unfortunately often resulted in a lack of support for the challenges faced by teachers and students in small, multigrade schools. However, in areas with low population density, chronically low enrolment rates, and too few teachers to meet demand, the large, mono-grade model is exceedingly difficult, if not impossible, to achieve. Small, multigrade schools are therefore likely to continue to be a reality in many nations.

These schools warrant particular attention for at least two reasons. Firstly, they are likely to be characterised by the use of multigrade teaching methods, or, in other words, one teacher working with two or more grade groups of children simultaneously. Although multigrade is often dismissed by policy makers and educators as a second-class option, there is growing evidence from around the globe that explicitly chosen and well-supported multigrade techniques can result in positive educational experiences and outcomes (Ames, 2006; Aikmen & el Haj, 2006;

Psacharapoulos et al, 1993). However, the majority of small schools in developing countries are multigrade due to circumstance rather than choice, and most often because of a lack of sufficient teachers or limited enrolment. Teachers in such de-facto multigrade schools are often left with only minimal support in facing the challenges of multigrade management, and educational quality suffers as a result.

Secondly, these small, multigrade schools are most often located in rural communities which are isolated by geography and social differences, and populated by marginal social groups who may lack any meaningful access to education. In order for access to be meaningful, it is not simply defined by increasing enrolment, but also includes the provision of high quality teaching and learning for students once they are enrolled (see Lewin, 2007). In many cases, small schools are the only ones available to children in rural areas. Therefore, in order to achieve the provision and quality targets of Education for All (EFA) and the Millennium Development Goals (MDGs), there is an urgent need to understand the issues which impact upon teachers and students in these contexts. In addition to the challenges of multigrade teaching and learning, for instance, teachers and students may also face a number of additional challenges to completion of the primary cycle, including the impacts of poverty, malnutrition, child labour, and exclusion based on social or economic prejudice.

It was with these concerns in mind that CREATE initiated a study of small schools and multigrade teaching in India. To date, CREATE has identified seven 'zones of exclusion' relating to education (Lewin, 2007):

Zone 0	children who are excluded from pre-schooling
Zone 1	children who have never been to school, and are unlikely to do so
Zone 2	children who enter primary schooling, but drop out before completing the primary cycle
Zone 3	children who enter primary schooling and are enrolled but are 'at risk' of dropping out because of irregular attendance, low achievement, or silent exclusion from worthwhile learning
Zone 4	children who fail to make the transition from primary to secondary schooling
Zone 5	children who enter secondary schooling, but drop out before completing the secondary cycle
Zone 6	children who enter secondary schooling and are enrolled but are 'at risk' of dropping out because of irregular attendance, low achievement or silent exclusion from worthwhile learning

These seven zones are inter-connected and highly inter-dependent, and work on small, multigrade primary schools is linked to all of them to varying degrees. However, most central to this research are the zones related to the primary stage – zones 1 through 4.

Research in the Indian context, however, requires a small additional note on these zones of exclusion. Although there is some degree of variation across states, government-funded elementary education in India is commonly organised into primary (1^{st} to 5^{th} grade, or ages 6 to 10+) and upper primary (6^{th} to 8^{th} grade, or ages 10+ to 13+) sections which may be administered as separate schools or combined into a single school. The key post-primary schooling transition, in this case, is therefore related to what are called 'upper primary' levels (grades 6-8), rather than directly to

secondary schooling (which is further separated into secondary (grades 9-10) and upper secondary (grades 11-12) schools) as indicated in zone 5. This suggests that further zones may be needed in order to provide sufficient detail to these multiple transitions in the Indian education context. Such changes, however, are beyond the scope of this monograph, so the following study instead focuses on issues of access and exclusion from the primary stage (grades 1-5) by examining the case of small, multigrade primary schools in India.

1.1 The Research Context - Small Schools in India

India was an ideal site for this research because small government primary schools are a significant feature of the educational landscape in the country. While the term 'small school' can be defined in many ways, common measures refer to pupil enrolment, the number of teachers and the number of classrooms. An exploration of data available from the country's District Information System for Education (DISE) reveals that in 2005 approximately 78% of primary schools in India had three or fewer teachers to attend to all grade levels, and more than 55% had 100 or fewer students (DISE, 2006). Although they share these particular measurable characteristics, small schools are in fact incredibly diverse due to the very different geographical and social contexts in which they are located. As a result, they face a wide range of issues and concerns. Schools located in agricultural communities will have different concerns to those where other kinds of labour are dominant, for instance. Styles of management also vary, from fully government-funded, to fully NGO-funded, or a mixture of the two. The vast majority of small schools in the Indian context do, however, share at least one fundamental characteristic: they are much more likely to be found in impoverished rural communities, and particularly areas populated by Scheduled Caste (SC), Scheduled Tribe (ST) or Other Backward Class (OBC) groups.

Many of these government primary schools have been established since the 1990s, and represent a concerted effort on the part of the central and state governments to increase access to primary education. Although the presence of so many schools in rural areas may therefore appear positive in terms of access and the quantity of available school places, there are serious concerns about the quality of education which these schools are able to provide. For example, while schools are expected to meet the needs of the national curriculum, teachers often spend a significant amount of time on tasks other than teaching. So, in addition to the inherent difficulties of working in economically deprived areas and with scarce resources, they may also be responsible for completing all of a school's administrative tasks, arranging for the provision of mid-day meals (a nationally-mandated government policy), maintaining records for attendance and periodic medical check-ups, conducting household surveys for the national census, and administering preventative polio medication to each student, among other things. Unlike their counterparts in larger schools, teachers in small schools are also expected to teach more than one grade level at a time. The difficulties of multigrade classroom management, scarcity of teaching and learning support, and problems with sub-standard school and classroom infrastructure, all tend to result in unmotivated teachers, a low standard of education, and high drop-out rates.

Despite a general acknowledgement of these concerns by policy makers and educators in India, very little research has been conducted to examine them. The bulk of existing research on small government primary schools, for example, consists of national

quantitative datasets which measure some of the characteristics of small schools and the geographical extent of the problem. The qualitative dimension of students', teachers', and policy makers' perspectives and experiences of small rural schools, however, has remained largely unexplored. This research therefore applied both qualitative and quantitative methods to develop an understanding of the contemporary context of small, multigrade primary schools in India. In particular, the research sought to understand how small schools fit within existing national policies and practices for provision of primary education in general, and to produce a national profile of small primary schools in order to examine some of the concerns which impact upon them, especially in terms of teaching and learning circumstances, teacher education and curriculum organisation. It also set out to explore the work of two NGOs which have attempted to ameliorate some of these issues through planned multigrade and community development initiatives in small schools. In order to accomplish this, the research included a review of the relevant literature and national policy, quantitative analysis using educational data available from DISE, and fieldwork with policy makers in Delhi and in small NGO schools in Andhra Pradesh and Rajasthan.

2 Research Strategy and Methods

To date, an extensive body of quantitative research (most commonly employing survey methods) on primary education has revealed the large extent of small schools across India, and has pointed to some of the issues of infrastructure and administration which they often face. The literature concerning what happens inside small schools and multigrade classroom settings nationally, and the ways in which this is impacted by the wider social, economic and political contexts in which schools are located, on the other hand, remains somewhat limited. The present research therefore sought to address both the quantitative and qualitative dimensions by utilizing methods from educational and anthropological research. The bulk of the data collection was conducted over 10 weeks beginning in February and ending in April 2007.

2.1 Literature and Policy Review

To begin, an extensive review was undertaken of existing literature on small schools in India. Where appropriate, relevant international literature on small school issues and management was also consulted. In order to situate this small schools literature within the wider national context, a review was also conducted of national policy on the provision of primary education in India more generally.

2.2 Quantitative Research

An analysis was also made of selected parameters which characterise small schools in India using information from the District Information System for Education (DISE). The nature of the DISE data, which is organised into school-, facilities-, enrolment- and teacher-related indicators, allowed for the development of a detailed profile of infrastructure and provision in small schools across rural and urban areas in participating states. However, the DISE monitoring system was initiated in 1994-1995, and at first included just 42 districts across 7 states (DISE, 2007), so it was difficult to produce a historical analysis of changing conditions for small schools over time and in all areas. Coverage has increased significantly since then, however, and during the time of the research data from almost all 35 states and UTs was available for the 2004-2005 academic year[1]. The quantitative analysis therefore focused on the conditions for small schools in India during that time frame. This profile of the contemporary national scene provided a solid frame of reference for understanding the more particular state and local contexts which were later explored through field studies.

2.3 Qualitative Research

The qualitative dimension of the research included a series of interviews with policy makers and educators in Delhi as well as two short case studies of NGO programmes in Andhra Pradesh and Rajasthan.

2.3.1 Interviews

[1] Those not participating include the Andaman & Nicobar Islands, Daman & Diu, Dadra & Nagar Haveli, Goa, Lakshadweep and Manipur. These are relatively small in terms of size and population (0.44% nationally), however, so the data can be treated as reasonably comprehensive even without their inclusion (see DISE, 2006: 9-10).

Over the course of the 10 weeks, a series of formal interviews were conducted with fifteen policy makers and educators in Delhi. Those interviewed included government employees working in Sarva Shiksha Abhiyan and the National Council of Educational Research and Training, staff of international aid organisations such as UNICEF and DFID, and academics at Delhi University and Jawaharlal Nehru University. The interview format was semi-structured according to a planned set of subjects for discussion, but space was provided for discussion of any other related topics which were linked to the interests and expertise of interviewees. Responses were collected through rapid note-taking and then later expanded to fuller, detailed fieldnotes. Each interview began with an introduction to the research project and its key questions, and an explanation of how the information collected would be used in the future. For reasons of confidentiality, throughout the following paper either direct quotations or paraphrased statements taken from these interviews have not been specifically attributed to named individuals unless these have previously appeared in the public domain[2]. In order to provide some context for these statements, however, any relevant details (such as occupation, professional status, or place of employment) have been provided where appropriate.

2.3.2 School Case Studies

Two case studies were also conducted of NGO programmes in small, multigrade schools in Andhra Pradesh and Rajasthan. These studies provided important insights into the issues – especially those related to teaching and learning circumstances, teacher education and curriculum issues – faced by small, rural, multigrade schools supported either fully or in part by NGOs. Two particular NGOs were selected because both have earned very positive reputations for their programmes in small schools in isolated rural areas over a number of years. Despite a number of similarities in programme goals and orientations, however, each of the NGOs employs a distinct style of structures for organisation, funding and teacher education. These similarities and differences, it was felt, could prove instructive.

The first case study, of Rishi Valley Institute for Educational Resources (RIVER) in Andhra Pradesh, was conducted through background research and a one-week site visit. Background research included a review of relevant academic and grey literature, as well as of the programme's own reports and publications. During the site visit, interviews were conducted with the director and a number of educators in the central school (Rishi Valley School), and the co-directors, co-ordinator, and teachers involved directly in the RIVER programme. Visits were also made to three of RIVER's twelve rural satellite schools. In each case, the teacher and students were informally asked a series of questions and observations were made of (i) the school building and grounds, (ii) the classroom set-up, and (iii) any student activities taking place at the time. RIVER's co-ordinator kindly assisted with translations from Telugu to English during these visits. Informal conversations with him while on-site and during travel to the schools were also highly informative.

The second case study, of Bodh Shiksha Samiti (hereafter, Bodh) in Rajasthan, was conducted using a similar research strategy, including background research and a one-week visit to several of Bodh's offices and schools. In Rajasthan, informal interviews

[2] Two different styles have been used to denote direct quotations (in inverted commas) or paraphrased statements (in italics) taken from interview notes. Although passages in italics do not represent direct quotations, they are true to the intent of the conversation in which they took place.

were conducted with Bodh staff in the organisation's central office outside Jaipur. These were further supplemented by discussion with two staff members who generously acted as guides during school visits. The majority of these interactions took place in Hindi, with Rashmi Diwan providing simultaneous translation into English. Visits were also made to a total of five schools associated with Bodh: two urban schools located in slum communities in Jaipur and three rural schools in Thanagazi district. In each site, educators and students were asked a similar series of questions to those posed to their counterparts in Rishi Valley, and observations were made of the schools, grounds, and classroom activities.

Unfortunately, due to the limited time frame of the research, as well as a number of issues regarding research access to schools and programmes, it was not possible to explore the work of other NGOs working on similar issues. Equally, the short time available to conduct the two case studies also has implications for the discussion and analysis to follow. Specifically, only short visits to the school sites were possible, which somewhat restricted opportunities for in-depth observation of how NGO policies and programmes are implemented in practice. Given these circumstances, the research therefore also relied partly on the first-hand accounts and perspectives of teachers and NGO staff who are directly involved in, and often highly committed to, the NGO programmes. It is, of course, impossible for any research project to deal with all possible issues of concern, and further detailed qualitative research in the area would perhaps reveal a number of issues that are not included below. Nevertheless the authors hope that the present work at least helps to raise awareness of the need for greater attention to educational access and quality issues in small schools.

2.4 Analysis

Analysis of the quantitative data and qualitative information collected took place in several phases. As different portions of the research were conducted by different members of the research team, the first imperative was to share and discuss this information, and to use these discussions to help determine the future direction of the research process. This included review of extended fieldnotes and other material from Delhi interviews and case study visits, as well as of information from the literature and policy reviews and of the national profile of small schools and multigrade which emerged from available DISE data. National perspectives arising from both quantitative data and qualitative information, in particular, constituted an important frame of reference for developing an understanding of how the case study NGO initiatives are placed within national discussion, debate and policy. Previous work conducted by Rashmi Diwan which outlined the nature of small, government primary schools in Delhi and Rajasthan (described in the literature review section below) was also an important supplement to the development of understandings of issues within the government-funded schools sector, and was an important resource for comparison between small, multigrade schools funded either by the government or by NGOs.

In these ways, the research sought to examine the current conditions of a variety of types of small, multigrade schools in India as well as to look beyond the school walls in order to see how these schools are located in wider local and national contexts. This broad perspective allowed for a deeper understanding of access issues related to small, multigrade schools, and especially to the potential for these schools to increase enrolment and retention rates, and to create greater access to higher levels of education.

3 Primary Education in India

In order to understand the contemporary context of small schools in India, it is useful to briefly outline the historical development of more general initiatives in primary education in the country. Universal elementary education has been a national policy goal in India since Independence in 1947[3]. It was first legally enshrined in Article 45 of the Constitution (1950), which obligated the state 'to provide, within a period of ten years from the commencement of this constitution, for free and compulsory education for all children until they complete the age of fourteen years'. Education was a central political and social issue at this time, and much of the debate and discussion within the new government centred on decisions about the intended aims and proposed curriculum content and structure of the national education system (see Kumar, 1991). Despite strong philosophical divisions, however, national leaders largely agreed that there was an urgent need to improve the educational infrastructure of the nation in order to both encourage economic development as well as to establish constitutional values of democracy, national unity and equality (Dyer, 2000: 20). This need was particularly pressing because at the time of Independence only an estimated 16% of the population was literate (Govinda & Varghese, 1993: 2).

In addition to Constitutional requirements, further commitments to the universalization of education as well as the legal, administrative and financial frameworks for the state-funded system are found in two main sources. These are the on-going series of Five Year Plans for national development and three National Policies (1968, 1986 and 1992) on education.

Beginning in 1951, a succession of Five Year Plans for national development allocated specific funding and resources for the development and improvement of all levels of education throughout the nation. The First Plan focused almost solely on the creation of more schools as a means to assure universal provision, and this remained the key preoccupation of policy makers throughout the 1950s. By the mid-1960s, this attention to primary school provision was further supplemented by alternative schooling arrangements (for working children and those who had already dropped out or aged out of the formal system) and adult education programmes. A series of national reviews in the early 1960s, however, revealed that the opening of more schools and programmes had not ameliorated the central problems of high drop-out and repetition rates (Govinda & Varghese, 1993: 2-3). As a result, a number of other measures – including a 'no detention' policy and various incentive schemes – were put into place (ibid: 3). Implementation of these policies varied greatly across the nation, however, largely as a result of the diverse, and highly unequal, economic and social circumstances of individual states.

The first comprehensive National Policy on Education was passed in 1968, and was based on the recommendations of the Education Commission (also known as the Kothari Commission, 1964-1966). The policy established the foundations of a common structure for formal education and a national curriculum framework, but it also more widely aimed:

> 'to promote national progress, a sense of common citizenship and culture, and to strengthen *national* integration. It laid stress on the need for a radical

3 The term 'elementary' is usually used to describe schooling from 1st through 8th grade, and encompasses both 'primary' (1^{st}-5^{th}) and 'upper primary' (6^{th}-8^{th}) sections. However, the terms 'universal elementary education' and 'universal primary education' are often used interchangeably.

> reconstruction of the education system, to improve its quality at all stages, and gave much greater attention to science and technology, the cultivation of moral values and a closer relation between education and the life of the people' (GOI, 1992: 2, original emphasis).

In 1971, a national survey of education (the Second All India Educational Survey, or AIES) was conducted which included a full counting of all habitations with schools irrespective of their population size. Based on the findings of the survey, distance norms – requiring a school within 1 km of each habitation with a population of 300 or more – were taken up by the national government which continue to be the guiding framework for expansion of the school system in the present day (see NCERT, 1965).

National leaders had intended for the National Policy on Education to be reassessed and revised every five years, but the first revision did not occur until 1986. By that time, the continuing emphasis on establishing more schools had begun to show significantly positive results. The Fifth All India Educational Survey (AIES) in the same year revealed that approximately 94% of the national population had access to a primary school within 1 km of their habitation (NCERT, 1990). At the same time, there were growing concerns about the existing infrastructure and quality of education in the nation's primary schools. With the government's emphasis almost entirely on the construction of new facilities for the first thirty years of the nation's existence, only limited resources had been allocated for their long-term maintenance and many schools were in increasingly poor condition. There were perhaps a number of reasons for this. Kumar, for instance, suggests that the push to increase the quantity of school places – and accompanying neglect of quality – was the result of the national government's embrace of Nehru's ideas about achieving scientific and technical modernization, and therefore rapid economic development and industrialisation, through universal provision of education (1991: 184-185). Dyer, on the other hand, indicates that the austerity of school buildings was initially justified by the lack of government resources, but that the lack of national standards for schools – in terms of pupil-teacher ratio, rate of teacher pay, and building construction – also played a part in the problem (2000: 22).

Whatever the root causes, alongside achievements in terms of the quantity of available school places, the Fifth AIES also revealed conditions of serious overcrowding (with as many as four or five classes operating simultaneously in either one or two classrooms) in almost two-thirds of government primary schools, and found that almost half of all children to enrol in primary school failed to complete the first five years of schooling (NCERT, 1990). Revisions to the National Policy on Education conducted in 1986, therefore, focused greater attention on the need for improvements to school environments (including building conditions, and the availability of drinking water and toilet facilities for both girls and boys), instructional materials, and teacher training. The Policy also called for the establishment of Minimum Levels of Learning – an agreed set of learning outcomes and competencies for each grade level – in an effort to encourage both equity and quality in primary teaching and learning (Raina, 2002: 177).

The most recent National Policy on Education, produced in 1992, gave similar emphasis to the need to provide quality education to all sectors of Indian society in order to decrease social and economic inequality, and also to provide adequate school facilities and improved learning environments. These concerns are also highlighted within the current Five Year Plan (Tenth Plan, 2002-2007) which outlines a series of

ambitious goals for education. These include: enrolment of all children in schools or alternative education centres by 2003, universal completion of five years of primary schooling by 2007, universal completion of eight years of schooling by 2010, focus on provision of elementary education of satisfactory quality, bridging of all gender and social disparities at primary stage by 2007 and upper primary stage by 2010, and universal retention by 2010 (GOI, 2002: 30).

Responsibilities for the administration and implementation of education policy within the government-funded education system are shared between the national government, the individual states and territories, and regional and local administrative authorities. This system reflects the framework set out in the Constitution which identifies areas that are the sole responsibility of either the national government or of state governments, and 'concurrent subjects' of national interest which are jointly administered. Elementary education, for example, was originally a subject for individual states, but was reassigned as a concurrent subject in 1976 (Dyer, 2000: 18). While some have argued that this constituted an unnecessary and unwelcome intervention from the national government, others suggest that such national oversight is necessary in order to provide a system which is equitable across all states and contexts (ibid: 18). Such struggles between the centre and state governments are characteristic of planning activities in many areas of governance, and are especially strained due to the unequal nature of the relationships involved. Namely, while authorities in Delhi have the power to produce policy, they must rely on states for implementation. On the other hand, while states are largely dependent on funding dispersed by the national government, they can – to a certain extent – determine how that funding is applied.

In administrative terms, the infrastructure of the government school system is similarly distributed over the national, state, regional, and local levels. At the national level are a series of apex institutions which include the National University of Educational Planning and Administration (NUEPA), the National Council of Educational Research and Training (NCERT), the National Council for Teacher Education, the National Institute for Open Schooling, the Central Board of Secondary Education, the All India Council for Technical Education, and the University Commission. States in turn may have their own State Council for Educational Research and Training (SCERT), State Institute of Education Management and Training (SIEMAT), and State Universities[4]. Further institutions exist at lower levels including District Institutes of Education and Training (DIET) which are responsible for pre-service and in-service primary teacher training (secondary teacher training, by contrast, is conducted through university degree courses), as well as block and cluster level resource centres which were established to provide teachers with support and opportunities for exchange of information and experiences. These state, district, block and cluster level institutions were established in the early 1990s as part of the District Primary Education Programme, or DPEP (see Aggarwal, 1998), and were a direct response to concerns about the overwhelming influence wielded by central government through its administration of centralised curricula and control of teacher postings, among other things (Dyer, 2005: 140). They also reflect a more long-standing national political tradition of encouraging local self-government (*Pachayati Raj*) which began in the 1950s and continues in the present day (see Raina, 2002; Dyer, 2005).

[4] The presence of these institutions in each state varies somewhat. Not all states have yet established SCERTs, for instance, but there are plans to do this in the future.

In addition to these movements towards administrative decentralisation, a number of other types of efforts have been initiated to address the problems within the national system of elementary education. These have most often taken the form of specialised, usually time-limited, projects. Some have been organised by government agencies, others have originated from the work of non-governmental organisations or private education consultants, and still others have resulted from collaboration between NGOs and government. There has been a fair amount of variety in terms of the length, size, target issues and geographical coverage of these projects. Three particularly noteworthy large-scale examples of government programmes are Operation Blackboard (1987-88), the District Primary Education Programme (DPEP, begun in 1994) and Sarva Shiksha Abhiyan (SSA, begun in 2001). Of these, SSA is currently operating as an umbrella structure which oversees all aspects of elementary education provision in the country and is responsible for all quality improvements (GOI, 2002: 30). While DPEP and SSA were both intended to bring about large-scale change at the level of the national education system, however, Operation Blackboard was aimed specifically at providing minimum resource levels in elementary schools across the nation – defined as two teachers, two classrooms, and a set of teaching and learning materials (see Dyer, 2000). Other, even more narrowly targeted, national projects include the Mid-day Meal programme initiated in 1995 (more formally known as the National Programme of Nutritional Support for Primary Education, see GOI, 2002: 28), which seeks to provide all primary school children living in economically-deprived areas with either a cooked meal or food rations at school each day, as well as an extended series of Mass Literacy Campaigns which began in 1989 and continue in the present day (Raina, 2002: 116; see also Dighe, 2002).

Individual states have also often taken the lead in providing progressive initiatives for primary education within their own boundaries. One often-cited example is the Lok Jumbish project, established in Rajasthan in 1992 with support from Swedish International Development Cooperation Agency (SIDA), and which began in just a few blocks but has since spread to 100 blocks in 13 districts (Raina, 2002: 116; see also Kishore, 2003). The project has been widely applauded for its innovative use of participatory village mapping techniques and flexible local planning strategies which encouraged community members to take an active role in efforts to improve local schools (PROBE, 1999: 107-109). A number of further projects and initiatives – many of them quite successful and which have subsequently taken up by government agencies either in part or wholly – have been organised by NGOs in other parts of the country (cf. Jagannathan, 2001; PROBE, 1999). The work of two of these NGOs has been explored as part of the present study: the Rishi Valley Institute for Educational Resources in Andhra Pradesh and Bodh Shiksha Samiti in Rajasthan.

While these government and privately-funded initiatives have often made quite positive impacts, they have also been limited due to a number of factors. Many of the large government initiatives, such as Operation Blackboard and DPEP, for instance, have suffered from problems of implementation because they have been applied on a large scale without sufficient attention to the diverse contexts, circumstances and challenges encountered in different regions and communities (see Dyer, 2000; Aggarwal, 1998). Many projects have also started as time-limited initiatives complete with their own administrative structures, but have later been, somewhat problematically, absorbed into the existing government bureaucracy. As one government official interviewed for this research in March 2007 noted:

> *Projects like DPEP and SSA are supposed to have their own structures that run parallel to the existing bureaucracy – which many people think is beyond reform – and to 'energise' it and change it, but they usually fail to do this…They either fall apart on their own or they get co-opted by the state and then just become part of the defective bureaucracy. The projects don't last and they don't bring about much change within the system or deal with longer term problems, and they also de-motivate the people already working in bureaucratic institutions and make real reform all that much more difficult.*

These sentiments were echoed by a number of policy makers interviewed in the course of this research, who similarly acknowledged some of the problems inherent in using such a 'project' approach to education improvement. Many also expressed concern about the long-term effectiveness of project interventions. However, as we shall see, it is at the level of the school that the positive and negative impacts of projects and initiatives are most keenly felt.

3.1 Primary School Infrastructure

As noted above, the expansion of primary school facilities across the nation since Independence has been impressive, and has shown an even stronger rate of growth from the early 1990s onwards. This period of expansion was at least partly stimulated by India's commitment to both the Jomtien Declaration on Education for All (EFA) in 1990 and the Delhi Declaration on Education for All in 1993. As in earlier decades, however, there are still continuing concerns about the conditions of many government primary schools and the quality of education provided in them.

What is perhaps most striking about primary schools across India, however, is the incredible diversity of circumstances which they represent. In general terms, schools are located in a wide variety of geographical locations (mountains, coast, forest, desert, plains, urban, rural), and cater to student populations which represent diverse religious (Hindu, Muslim, Sikh, and various local tribal traditions) and linguistic (fourteen official languages, not including Hindi and English) traditions. Teachers thus tackle a range of challenges at the level of the classroom, and they do this with varying levels of support and in often widely differing institutional contexts. In the 2004-2005 academic year, for instance, average state-level pupil-teacher ratios in all schools with primary classes ranged from 15:1 (in Sikkim) to 65:1 (in Bihar), and student-classroom ratios from 16:1 (in Sikkim) to 92:1 (in Bihar) (DISE, 2006: 328, Table 5.7). Current central government policy guidelines require an average pupil-teacher ratio of 40:1, and available state-level data for 2004-2005 show that only four states (Bihar, Jharkhand, Uttar Pradesh and West Bengal) have yet to achieve this (DISE, 2006: 328, Table 5.7). Those states that have achieved the target, however, still reveal significant diversity at the district and block level, so while the state average may satisfy the 40:1 requirement, the reality at the level of the school or community may look very different.

In some cases, even the fundamental elements – such as a school building and a teacher – are not present. DISE data for 2004-2005, for example, reveals a significant percentage of cases where a 'school' has been officially established, but no provision has been made for a building. Nearly 13% of schools in Chhattisgarh (representing 4,603 schools) and 14% in Madhya Pradesh (representing 13,857 schools) fall into this category (DISE, 2006: 41). The percentage of primary schools without a building did decline between 2003 (6.34%) and 2005 (4.37%), but the absolute number of

schools (30,048 schools in 2005) in this category remains considerable. The available data further reveals a significant rural-urban divide, with rural schools tending to have poorer resources such as school infrastructure and teaching materials, fewer teachers per school, and higher drop-out rates. Of the total number of primary schools in the nation without a building, for example, almost 92% are located in rural areas (DISE, 2006: 41).

Research has also revealed significant reason for concern about the number of available primary school teachers, with 18% of schools having only one teacher (19% rural areas, almost 8% urban areas), and a further 59% having either two or three, to cover all five grades (62% rural areas, 37% urban areas) (DISE, 2006: 64). It is also worth noting that an estimated 1.6% of schools across the country do not have a teacher at all (DISE, 2006: 64). It is partly due to this chronic shortage of teachers that multigrade teaching has remained a predominant feature of many primary schools, particularly in areas of low population density where school enrolments are correspondingly low. Some states have attempted to deal with teacher shortages by appointing lesser-trained or untrained individuals – known by a number of titles, including 'parateachers' or *shiksha karmis*. This is a term applied to teachers appointed on a contract basis, usually under conditions of service which vary widely from state to state. The efficacy of such programmes has been seriously questioned, however, due to the very limited training provided for these recruits (often lasting only 10-15 days) and the difficult educational concerns and circumstances which they are expected to negotiate (for an in-depth review of these issues, see Govinda & Josephine, 2004).

Policy makers interviewed for this research suggested that there are likely a number of reasons for on-going problems with teacher recruitment and performance, but they are perhaps especially closely related to the low status granted to primary school teaching as a profession (Seetharamu, 2002; Ramachandran, 2005). While there is no doubt that there are many dedicated primary teachers throughout India working to provide good quality education despite difficult circumstances, it certainly is true that primary teachers do receive a very different (some would say less well-respected) style of training and qualification than their secondary school counterparts. While secondary teachers are trained in B.Ed programmes at the university level, primary teacher training is most commonly conducted by State Councils for Educational Research and Training (SCERTs), Institutes of Education, Institutes of Advanced Studies in Education, and some District institutes of Education and Training (DIETs). Moreover, the lack of a university degree means that primary teachers are typically not considered to be qualified to take up positions within primary education administration or policy making, and therefore have little room for professional advancement, making teaching at the primary level less attractive to potential trainees. Administrative posts are in turn overwhelmingly staffed by professionals whose field of expertise is secondary education, and whose lack of familiarity with the particular issues and concerns of primary education can be problematic.

A range of types of school management are also found across the country. The vast majority of primary education across the country, of course, is provided by government primary schools. A non-formal education scheme (known as the Education Guarantee Scheme, or EGS) was also introduced in 2000 to provide further coverage in small habitations where there are no schools within a one kilometre radius. This programme was a revised version of a much earlier initiative, the Non-Formal Education (NFE) scheme which was introduced in 1977 but which achieved

only limited success (GOI, 2002: 29). The current scheme targets out-of-school children in the 6-14 age group and uses strategies such as bridge courses, back-to-school camps, seasonal hostels, summer camps, mobile teachers and remedial coaching (GOI, 2002: 29). For the last several years, many of these EGS centres (also known as 'alternative schools') have been upgraded to the full status of primary schools, but concerns remain about the quality of education which they offer as well as their long-term sustainability (see Govinda & Bandyopadhyay, 2007: 12-14).

In addition to government-funded provision, the rapid growth of private primary schooling since 1991 has also provided new educational opportunities in both urban and rural areas. There is some concern, however, about the range of educational quality represented by these institutions (cf. Leclercq, 2007; Srivastava, 2006). As a group, private schools represent a diversity of institutions and circumstances, ranging in size from very small (with less than 50 students) to very large (with enrolment in the thousands) and with management organised either by an NGO, a private interest, or a political or religious organisation (cf. Jeffery et al, 2005). Some of these schools receive extra funding from the government (known as 'aided' schools), which may have an impact on their relationships to government (cf. Govinda & Bandyopadhyay, 2007).

Research and writings over the last several decades have suggested that this diversity of opportunities for education in many ways contributes to exacerbate existing inequality, and also has serious implications for efforts to use education as a tool to decrease the gap between the nation's rich and poor (Chopra & Jeffery, 2005; Kumar & Oesterheld, 2007). While there is clearly concern within government and civil society circles about this issue, making the necessary changes remains a challenge. These issues of inequality and access are particularly strikingly highlighted in the context of small, rural schools due both to issues arising from within the schools themselves as well as because of the often harsh social and economic realities of the contexts in which they are located.

4 Small Schools Literature

Although small, there is a rapidly growing international literature regarding small schools and multigrade teaching and learning to which the present project seeks to make a contribution (see www.ioe.ac.uk/multigrade). Issues surrounding appropriate curriculum development and teacher training for these schools, for instance, have attracted research attention in a number of countries, including the US, Finland, Singapore, Colombia, England, Ghana, Malawi, Nepal, Sri Lanka, Sudan, Peru, Turks and Caicos Islands and Vietnam (see Little, 2006; Pridmore, 2007b).

4.1 Research Literature in India

Since the mid-1990s, researchers and policy makers in India have also examined the concerns facing small, multigrade schools across the nation. One of the first studies, conducted by researchers at NCERT in 1996, highlighted the need for increased attention to multigrade instructional strategies, to the design of appropriate multigrade curriculum and instructional materials, and to the need to incorporate multigrade into pre-service and in-service teacher training courses (Gupta et al, 1996). Further studies followed which investigated the impacts of innovative classroom teaching techniques (Bharadway, 1998; Swamalekha, 1999) and strategies for effective multigrade classroom organisation (Kamat, 1998), as well as probing the difficulties which surround multigrade teaching, including the relative lack of official recognition of multigrade teaching, limited academic and financial support for multigrade teaching innovations, and little pre-service or in-service training on multigrade teaching (Muthayan, 1999)[5]. These studies revealed two key sets of issues. The first was that in all of the research sites investigated, innovative, well-planned multigrade strategies produced positive results. Based on these findings, the studies further identified a need to formulate training strategies for teachers working in rural multigrade primary schools, and to provide much greater support in terms of both teaching strategies and professional development.

Another key study, conducted by Professor Yash Aggarwal in the Darrang district of Assam in 1997, examined the subject of small schools with specific reference to increasing access to students who would not otherwise be able to receive an education (Zone 1). The study classified small schools as those having enrolment of 60 or less, and found that small settlements – and thus small schools – are much more likely to be located in states with serious concerns about educational development (1997: 7-8). It also concluded that the number of small schools in impoverished rural areas of the country was likely to increase in the future as schooling facilities were further extended to cover smaller habitations as part of efforts to achieve EFA (1997: 9). Analysis based on more recent data collected by DISE supports Aggarwal's earlier conclusions, and highlights that schools with low enrolment continue to be more concentrated in rural areas of the country (see later sections for further details of the picture revealed by quantitative data).

More recent qualitative work on small, multigrade schools in Rajasthan, conducted by Rashmi Diwan in 2006, supports the findings of these previous studies, and outlines a number of key issues for small primary schools across the country. This exploratory study was carried out in three rural blocks and one urban block of Jaipur city with a view to understanding the functioning of small schools in the state. Visits were made

[5] For a more detailed review of this literature both from India and elsewhere, see Little (2007).

to schools from three categories of management (i) government elementary schools without NGO support, (ii) government schools with support from Bodh Shiksha Samiti, and (iii) schools wholly supported by Bodh Shiksha Samiti (known as *Bodh Shalas*). Issues identified in all schools included concerns about (i) the quality of classroom teaching in practice, especially in terms of the need for effective multigrade teaching and learning techniques, (ii) teachers, the recruitment process and the training they receive, (iii) the lack of sufficient teaching and learning resources in many schools, (iv) the dilapidated condition of many school buildings and classrooms, (v) the amount of time teachers spend conducting non-teaching activities, (vi) insufficient support for schools from block, district, state and central government level administrators, and (vii) issues with student attendance and persistence, and the ways in which this is related to labour and family requirements, as well as gender and caste concerns. These concerns are particularly worrying because they result in school conditions which are less that adequate for provision of quality primary education, especially for first generation learners or for children living in conditions of severe economic and social poverty, and who are therefore more likely to drop out or be pushed out of school (Zones 2 and 3).

These empirical studies focusing on small schools effectively link into a much broader academic and policy literature on education in India more generally. This body of work is too vast to assess in detail here, but for the purposes of this paper it is worth highlighting some of the concerns which are relevant to a study of small, rural, multigrade schools. This includes, for example, work on issues effecting educational quality in many sizes and types of government schools, such as the inadequate provision of facilities and of teaching and learning materials, high teacher absenteeism, the particular difficulties faced by female students and the underlying livelihood insecurity and 'adverse socio-political positioning' of poor families (Jha & Jhingren, 2005; PROBE, 1999). Extensive work has also been conducted on issues surrounding low resource levels in rural areas, the national scarcity of teachers (both trained and untrained), and problems of encouraging parents to enrol and children to attend, among many others (cf. Govinda & Bandyopadhyay, 2007; Jeffrey et al, 2005; Jeffrey et al, 2004; Kingdon & Muzammil, 2003).

Another philosophical and pedagogical reference point for contemporary research on small schools can be found in an older educational literature by Indian educators. This work, set in the mid-1970s, used the term 'nongraded' to describe a set of teaching methods and methodologies which are almost identical to those advocated within current multigrade initiatives from both the government and NGOs. The introduction of the nongraded system was partly catalysed by the Indian Education Commission (1964-66), which recommended it as a measure to improve quality and to reduce the incidence of wastage and stagnation at the primary stage (Jain, 2001; see also GOI, 1971). Ungraded classrooms were subsequently introduced at the primary stage in many states (usually combining classes 1 and 2, and classes 3 and 4), and whole-school experiments were attempted in Maharashtra, Madhya Pradesh, Rajasthan and Delhi (Kaul, 1977: 19; also see Chickermane, 1981). As Jain (2001) recounts:

> The results were reported to be satisfying and encouraging in improving the quality of education along with reducing the incidence of wastage and stagnation particularly at the lower stage (Classes I and II). But such practices and innovative efforts were not continued/sustained by the state governments due to certain administrative reasons.

The nongraded school system operated by abolishing grade levels and attendant end-of-year examinations, and providing in their place a sequenced series of learning units which students could navigate at their own speed and according to their individual abilities. Teachers then used continuous assessment of pupils to evaluate progress. Instruction in these schools did not depend solely on a single teacher lecturing to a class of students – as was most often the case in government schools the 1970s, and still is today – but instead utilized other teaching and learning modes, including group, peer-learning and self-guided activities (Kaul, 1977: 35-48). Teachers and administrators therefore were also expected to take on decidedly different roles as facilitators of learning and community liaisons than those which typically result from more top-down teaching methods (Kaul, 1977: 49-56).

The move to a nongraded system required a substantial change to the existing nature of relationships between teachers, students and community members, and it was therefore regarded as an effective means of reducing existing social and economic inequality. As the noted educationalist G.N. Kaul argued at the time:

> … the nongraded school provides a suitable answer to the fast emerging concept of a new society which is not intended to be graded or elitist in character but is a society which is casteless and classless and presents a composite character. The system provides for individual differences, thus offering a new and refreshing concept of equality of opportunity. It roots out the concept of failure and its aftermath of frustration, self-hate and revenge. It builds on positive ingredients of human psyche. In essentials it is very near to the concept of the indigenous school. The system, therefore, seems to have great promise in the country, particularly at the primary level. (1977: x)

Statements like this one resonate as strongly with discussions about the potential role of education in lessening social and economic inequality in contemporary India as they did thirty years ago, and – as the present research will illustrate in later sections – similar discourses are currently employed by NGOs and government advocates of multigrade methodologies.

4.2 Policy on Small Schools and Multigrade Teaching and Learning in India

Despite such early and on-going attention to these concerns, however, there is as of yet no national government policy on small schools or multigrade teaching in India. As a result, educators at the state, local and school levels have had to seek out their own solutions to meet the particular management, administration and curriculum provision needs of small, multigrade schools. In some cases, collaboration with local NGOs or other supportive groups has been key to improving access and quality in these schools, but the majority of small schools have not had such support and have suffered from the lack of a guiding framework and specifically designed resources.

This is not to say that there has been no attention to small schools at all. In fact, at least some limited recommendations for a nongraded/multigrade system for small, rural government schools have been included in national education policy in India since the mid-1960s. However, a review of the National Education Policies (1968, 1986 and 1992) reveals that even by the time of the earliest national policy (1968), arguments were being made for the establishment of a common school system (denoted 10+2+3) based on a graded model and accompanied by a standardised national curriculum. Discussion of multigrade in particular within national policy has also remained limited, and largely falls within the realm of teacher education

documents and training resources. Two limited efforts to improve in-service training, for example, were established as part of the National Policy on Education 1986: the Programme of Mass Orientation of School Teachers (1986-1990) and the Special Orientation Programme for Primary School Teachers (1993-1997), the second of which included one self-training module on multigrade management (see NCERT, 1995). A few books and booklets have also been produced to provide practical, locally relevant advice for teacher trainers (e.g. Shabnam, 1998; Sinha, 1998), and a theory-based module on multigrade strategies is now included in the teacher training curriculum recommended by NCERT.

There is, however, more recent evidence to suggest that a sensitivity towards the particular concerns of small, multigrade schools may be evolving. The government's Janshala Programme, which operated from 1992 until 2005 with active assistance from five UN agencies, for instance, took a particular focus on improving multigrade teaching and learning in small schools (see NCERT, 2007). Efforts as part of the programme included exposing teachers to existing NGO multigrade initiatives, developing locally-appropriate classroom materials, and encouraging peer-to-peer and group learning activities (NCERT, 2007: 37-40). Unfortunately, when funding for Janshala ended in 2005, its replacement – SSA – was unable to take up all of its predecessor's initiatives and many were either reduced in scale or effectively ended (NCERT, 2007: 42). At the same time, a few SSA policy makers interviewed as part of this research expressed a continuing interest in developing a more robust set of training and resource initiatives for small, multigrade schools. As part of this effort, SSA officials have made two visits to the well-respected *Escuela Nueva* programme in Colombia (see Forero et al, 2006) to exchange ideas and discuss common challenges. The Eleventh Five Year Plan currently in draft also includes a 'small school' agenda for the first time, as part of the chapter on Sarva Shiksha Abhiyan:

> In India 54% primary schools (4.17 lakh) have only one or two teachers. The number of primary schools with three or less teachers is 71.5% (5.49 lakh). Our teacher training programmes are oriented towards monograde teaching situations. The textbooks also do not provide enough scope for group and individual work by children. Wherever ***training programmes on multigrade issues*** have been held, they provide some learning organization ideas, but not a comprehensive guideline for teachers who have to teach the entire curriculum to five classes. Apart from training programmes, block and cluster level academic meetings and monthly meetings of teachers could be oriented towards this objective in areas where multigrade situation is common. Use of self and group learning materials, workbooks and organization of children to take over some management functions are some other initiatives that would help in a multigrade situation. It is important that this major issue receives attention.
>
> Also, 31% of primary schools in the country have enrolments less than 60. These schools would have actual student attendance of 40-50 students only, spread over 5 classes. The key to effective teaching-learning practice in such schools is multi-level teaching, using group and self learning materials. There have been several experiments in the country for such school situations. What is required is systematic work for ***appropriate materials and teacher training for 'small school' situations***. This would of course imply development of differentiated training programmes based on school

> situations which is the key to a more result oriented approach to training. (GOI, 2007)[6]

It is difficult to predict, however, whether these scattered initiatives will be taken up more fully within the government education system, particularly in light of their somewhat limited success in the past.

4.3 Perceptions of Multigrade Teaching and Learning

Policy makers interviewed as part of this research suggested that one of the main reasons why multigrade teaching and learning has not received greater attention and support within the government school sector is because the term has often been used by the central government to refer to situations in which teachers must manage very large classes of multiple age or grade levels. The understandable problems which teachers have in dealing with very large class sizes (over 100 in some cases) of multiple age/grade groups have not, however, been addressed with sufficient training or support strategies. As a result, the term has become synonymous with the problems of large, multiple grade classes (rather than small schools), and many both inside and outside of government have come to view multigrade as a means by which the state has attempted to avoid its responsibility to hire sufficient numbers of teachers.

As one leading NCERT policy maker commented:

> *There is a general confusion about multigrade in India. Is it a quality improvement measure – in which case you need skilled teachers working in small schools – or is it just an attempt to make the best of the bad situation which many schools are currently in? The term multigrade has often been used as a means of glossing over the bigger problems – like having huge classes and not enough teachers. People say that it is a cost-effective measure too, but calling it that is a travesty... Asking a teacher in charge of 120 students to use multigrade methods, instead of providing more teachers to teach those children, is just unfair. Multigrade has been offered as a 'quality measure' in large schools as a way of making an unacceptable situation seem more acceptable.*

This sentiment was echoed by many others both in government and outside of it, and interviews suggested that such negative associations with multigrade have had a significant impact on how and where it has been taken up in schools. A teacher educator in Delhi further pointed out that part of the problem has been a lack of sufficient training for teachers:

> *Multigrade has a really negative reputation in India. In many places, both urban and rural, that I have visited, schools have big classes of 80 or more students in each grade. The teachers receive some discussion about how to manage multigrade, but it is really theoretical and it doesn't address all the different situations that teachers may face in their postings… I don't want to blame the teachers, though, because they are simply doing what they have been told to do. Much of the fault is in the training they receive. NCERT has been working on improving training for many years now, but somehow this never translates down to the local level.*

[6] One 'lakh' is equivalent to one hundred thousand in the Indian counting system, therefore the passage indicates that 417,000 schools have only one or two teachers and 549,000 have three or fewer teachers.

As the statements above suggest, there are multiple dimensions to the issue of multigrade teaching and learning within the national context of policy and practice. A prominent NGO activist, who formerly worked within the Ministry of Education, also identified an important international dimension:

> *There is also a feeling against multigrade because many people feel it is being pushed on the country by international donor agencies. Many of these agencies seem to think that since there isn't enough money to provide all the necessary teachers for a monograde model, multigrade is an easy answer. Whenever there is a national meeting to talk about multigrade, there are some vocal people who very strongly resist this kind of external influence… Whether this is what the agencies are actually up to or not, the real problem is that multigrade is simply not well-articulated in policy or discussion. But the fact of the matter is that there will always be schools – with say 50 students in 5 grades – where it will never be feasible to have 5 teachers. So it needs to be made clear that multigrade teaching techniques would be targeted at those small schools and would not just be a blanket approach for all schools. This lack of a clear policy makes people uncomfortable with the idea so it never seems to go anywhere.*

These negative perceptions of multigrade and small schools stand in contrast to the positive approaches to multigrade teaching and learning which NGOs have promoted in small schools in various parts of the country. In fact, a significant body of literature on multigrade issues in India exists as part of a large grey literature generated by these NGO initiatives as well as by international aid agencies working in India, such as UNESCO and UNICEF (cf. Shukla, 1999; Menon & Rao, 2006; Kishore, 2003). Reports from these initiatives indicate that well-planned, intentional multigrade strategies can provide high quality education in small, often rural, schools, and in turn can therefore provide greater future opportunities for students living in impoverished circumstances. This research therefore sought to both understand the contemporary national context of small, multigrade schools in India and also to investigate what lessons might be learned from successful multigrade programmes conducted by two NGOs in two different states.

5 National Profile of Small Schools in India

Popular definitions for what constitutes a 'small school' can be found in the existing international research literature as well as in the policies of many countries and donor agencies. Typically, such definitions are based around measurements such as the number of students enrolled, the number of teachers, and/or the number of classrooms in a school (see Little, 2007 for a fuller discussion).

In India, as elsewhere, however, such measurements often vary depending on the resource consulted or the particular context under discussion. A recent DISE report, for instance, refers to 'small schools' in different passages both as those with less than 25 students (2006: 61) and with less than 100 students (DISE, 2006: 62). One head teacher interviewed for this research, on the other hand, suggested that her school – with over 300 students – was in fact 'small' when compared to many other Indian schools (a not unreasonable claim considering the large size of many urban schools). Perhaps the most useful framework for categorising small schools in India, however, comes from Aggarwal's 1997 study, which classified small schools as those with less than 60 students. This figure was based on the minimum standards established by the National Policy on Education in 1986, which require at least two teachers (one of them female) in all primary schools, with a third teacher to be appointed when enrolment reaches 100 or more (1997: 12).

In addition to setting requirements for the number of teachers in primary schools, the 1986 National Policy on Education also established standards regarding the minimum facilities and resources to be made available. The original text reads:

> Provision will be made of essential facilities in primary schools, including at least two reasonably large rooms that are usable in all weather, and the necessary toys, blackboards, maps, charts, and other learning material. At least two teachers, one of whom a woman, should work in every school, the number increasing as early as possible to one teacher per class. (GOI, 1986: Section 5.7)

These minimum standards are still applied in the present day, and states are expected to provide them in all government primary schools. Due to funding constraints and the on-going shortage of teachers, however, this continues to be a challenge in many areas. For the purposes of the following analysis, therefore, the term 'small school' is used in reference to both the existing research literature and these minimum national standards. As such, the term denotes primary schools with enrolment of 100 or less, three or fewer teachers, and/or two or fewer all-weather classrooms.

It is also important at this point to clarify that the term 'primary school' throughout this section (and indeed the rest of the paper) refers to what in India are sometimes called 'independent primary schools' or schools which offer only grades 1 through 5. Many composite schools do also operate throughout the country, however, where grade offerings may include primary levels as well as upper primary and even secondary grades. Where these schools have been included in the data presented, this has been indicated.

In addition, unless otherwise noted, references to 'all primary schools' refers to data regarding both government and privately-funded schools. While it is possible to examine government and private schools separately using DISE data, for the purposes of a national profile, it seemed appropriate to include all schools falling into the category of 'small'. Of course, the standard and quality of education offered in these

many diverse schools varies widely, and where appropriate, specific reference has been made to these issues.

5.1 Enrolment Indicators

The first key indicator to explore as part of a national profile of small schools in India is enrolment. In 2005, average primary school enrolment at the national level was 116 pupils (DISE, 2006: 62), but this varied substantially from state to state. Average primary school enrolment at the state level, for example, ranged from a low of 41 in Jammu & Kashmir to a high of 368 in Delhi (DISE, 2006: 63, Table 2.33). Of all states and UTs, seven had an average primary school enrolment of between 40 and 70 pupils (Arunachal Pradesh, Himachel Pradesh, Jammu & Kashmir, Karnataka, Meghalaya, Sikkim, Uttaranchal), eleven had an average enrolment between 71-100 (Andhra Pradesh, Assam, Chhattisgarh, Gujarat, Madhya Pradesh, Maharashtra, Mizoram, Nagaland, Orissa, Rajasthan, Tripura), a further nine had an average enrolment between 101-200 (Bihar, Haryana, Jharkhand, Kerala, Pondicherry, Punjab, Tamil Nadu, Uttar Pradesh, West Bengal), and only two had an average enrolment over 300 (Chandigarh at 312 and Delhi at 368). Even taking into consideration the likelihood of significant variations across districts within individual states, this still suggests that at least 18 states, and probably others, have substantial numbers of small schools within their borders.

In terms of the distribution of small schools, the DISE data also shows that at the national level the largest percentage of primary schools, nearly 28% in 2004-2005, had enrolment of between 51-100 students, followed by those with enrolment of between 26-50 students (almost 20%) (DISE, 2006: 60, Figure 2.29). Furthermore, as a group, primary schools with 100 or fewer enrolled students accounted for nearly 55% of all primary schools across the country (DISE, 2006: 59, Table B21)[7].

Small schools also represent a significantly higher percentage of primary schools in rural areas (approximately 47%) as opposed to urban ones (only 26%) (DISE, 2006: 59). This is especially significant because rural enrolment also accounts for the vast majority of students nationally, with rural enrolment representing nearly 85% of total enrolment in all primary schools in 2005. In fact, 91% of the total number of primary schools (693,030) nationally are located in rural areas (DISE, 2006: 106). The percentage of girls' enrolment in rural primary schools in the same year was almost equal to that of their urban counterparts (47.75% and 47.87% respectively), but a higher percentage of girls across the nation were enrolled in government primary schools (48%) than in privately managed ones (44%) (DISE, 2006: 103, Table D2). As rural areas across India are often highly populated by socially and economically marginalised groups, and due to continuing concerns about girls' enrolment, provision of high quality education in these small, rural schools could play an important role in ameliorating poverty, inequality and their attendant problems.

5.2 Teacher Indicators

DISE data collected for the 2004-2005 school year shows that nationally 18% of primary schools have only one teacher, representing nearly 13% of total enrolment

[7] The picture is slightly different when also accounting for schools offering primary grades alongside upper primary and/or secondary grades.

across the country (DISE, 2006: 64 and 305, Table 4.12). A further 59% of primary schools have either two (41%) or three (18%) teachers to provide instruction for all five grades (DISE, 2006: 64). It is likely that the predominance of two-teacher schools is the result of the Operation Blackboard scheme, which was put in place to implement the minimum standards recommended by the 1986 National Policy on Education (see Dyer, 2000). If a 'small school' is defined as one with three or fewer teachers, therefore, 78% of all primary schools nationally fall under this category.

The available data suggests, however, that these trends are not equally distributed across all states. There are, for example, a significantly higher percentage of single teacher primary schools in Rajasthan (40%), Arunachal Pradesh (38%), Chhattisgarh (28%), Madhya Pradesh (27%) and Uttaranchal (26%) than in any other states (DISE, 2006: 254, Table 2.23). As with the enrolment indicators discussed above, there is also a noticeable difference between the circumstances regarding teachers in urban and rural areas. Of the total number (137,704) of single-teacher schools across the country, for example, slightly more than 96% are located in rural areas (DISE, 2006: 65). Furthermore, approximately 62% of rural primary schools have either two or three teachers, while only roughly 37% of urban primary schools do (DISE, 2006: 64, Table B23).

These teachers are not only conducting classes in widely varying settings, they also have quite different levels of training to draw upon. The expansive growth of schools over the last few decades has stimulated on-going demand for more teachers, and this has resulted in the increasing trend towards hiring 'parateachers'. Decentralisation of educational management has simultaneously allowed state and district authorities to set the required qualifications for teaching posts, and in many cases this has been drastically reduced in order to increase the potential pool of candidates. DISE data shows that around 379,000 of these 'parateachers' were employed across the country in 2004-2005, with about 65% of these posted in primary schools (DISE, 2006: 183). This suggests that more than 13% of all primary school teachers in the country are parateachers (ibid: 183). As perhaps would be expected, parateachers are not evenly distributed across the nation, and a significant percentage are found in the states which are commonly identified as having serious educational concerns: Andhra Pradesh, Chhattisgarh, Bihar, Himachal Pradesh, Jammu and Kashmir, Madhya Pradesh and Rajasthan (DISE, 2006: 183). Although some states show signs of stabilising enrolment, trends of growth in other states, coupled with the requirement for at least 2 teachers per primary school, is likely to result in continuing demand for more teachers, and in turn to the increasing appointment of parateachers in the future (see Govinda & Josephine, 2004 for a fuller discussion of these issues).

Another facet of the national teacher scene which is strongly connected to issues of educational access in schools is gender. National standards require at least one female teacher in each primary school, but DISE data shows that in 2004-2005 more than 35% of primary schools with two or more teachers did not have a female teacher on staff (DISE, 2006: 167, Table E7). As perhaps would be expected, this percentage is much higher in rural areas (38%), than in urban ones (13%). Female teachers may find it particularly difficult to be posted to rural areas when there are issues around safe transport and accommodation, or around personal safety more generally. The lack of a female teacher, however, presents a real stumbling block for many female students, especially as they approach adolescence. As girls' enrolment continues to be of serious concern in India, this is an area which deserves more attention.

5.3 School and Classroom Indicators

As stated above, in addition to teacher requirements, national policy standards also require provision of at least two all-weather classrooms as well as a blackboard and a minimum set of necessary toys, maps, charts, and other learning material in all government primary schools. Encouragingly, DISE data suggests that the national averages in terms of classrooms are well above this figure, in both urban and rural areas, and from both government and privately-funded institutions (see DISE, 2006: 47, Table B15). Of all primary schools nationally, the largest percentage (35%) also have two classrooms, while nearly 15% have only one classroom, and 10% have no classroom at all (DISE, 2006: 49, Table B16). Similarly to the requirement for two teachers per school, the predominance of primary schools with two classrooms is likely the result of efforts associated with Operation Blackboard.

The average number of classrooms found in primary schools in each state varies widely, however, ranging from 1.9 classrooms per school in Assam to 7.4 in Delhi (DISE, 2006: 233, Table 2.16). For all school management types (i.e. primary alongside upper primary or secondary), the corresponding figures are 2.8 in Assam and 17.2 in Delhi. This difference is likely due to the much higher number of classrooms typically found in schools offering a mixture of primary, upper primary and secondary grade levels (see DISE, 2006: 233, Table 2.16).

As with the other indicators discussed so far, there is also a significant difference between urban and rural schools with regard to classrooms. Whereas the greatest proportion (almost 29%) of all schools providing teaching in the primary grades in rural areas have two classrooms, in urban areas the largest proportion of schools (27%) have between four and six (DISE, 2006: 49, Table B16).

While the availability of substantial numbers of classrooms in many areas is certainly a positive step, the reported condition of these classrooms is often rather poor, particularly in impoverished communities. The minimum facilities available in schools are also often quite limited, including the availability of drinking water, toilets (especially for girls), electricity, books, computers, and blackboards. Just over 21% of primary schools in 2004-2005 did not have drinking water available on-site, for example, while only about 41% of primary schools had a toilet, and only 24% had a separate toilet for girls (DISE, 2006: 78-82, Tables C5, C7 and C8). Although there was little differentiation between rural and urban primary schools in reference to drinking water (78% and 81% could provide it, respectively) in that year, the availability of toilet facilities did show a marked difference (40% and 57% having a common toilet, respectively; 22% and 44% providing separate toilets for girls). The same was true in terms of electricity, with only 17% of all primary schools having a connection nationally. Of these, a much higher percentage of urban schools (52%) have it than their rural counterparts (14%) (DISE, 2006: 84, Table C9).

Interestingly, this discrepancy between rural and urban contexts does not extend quite so strongly to indicators of teaching resources such as books and blackboards. In 2004-2005, for example, just over 7% of primary schools did not have a blackboard, with both rural and urban schools falling just to either side of that national average (6.95% and 7.98%, respectively) (DISE, 2006: 85, Table C10). A similar pattern applies to library resources (or ‘book banks’) in primary schools, with nearly 42% of schools having some of these resources, including 42% in rural areas and 44% in urban areas (DISE, 2006: 88, Table C12). In terms of computer resources, on the

other hand, just over 4% of all primary schools nationally have a computer on-site, but this disaggregates to just under 3% of rural schools and over 13% of urban schools (DISE, 2006: 90, Table C13).

5.4 Key Issues for Small Multigrade Schools

The national profile above and the existing research literature on small multigrade schools in India highlight several sets of concerns for policy makers, teachers, students, and parents in these settings. It is these particular concerns which this research sought to further explore through qualitative field research in Andhra Pradesh and Rajasthan. In particular, they relate to the circumstances in which teaching and learning take place, and the need for innovations in teacher education and curriculum organisation for small schools and multigrade settings.

The term 'teaching-learning circumstances' refers to a number of factors which combine to either enhance or detract from the learning taking place in a school or classroom environment. Such factors may be largely physical in nature or they may be more closely linked to the social relationships which occur in classroom and school settings. In terms of physical factors, this includes many of the issues outlined in the national profile – limited numbers of teaching staff, the poor physical condition of many school buildings (and even the lack of a building at all in some places), and the lack of both appropriate teaching and learning materials and facilities.

All of these physical factors have an undeniable impact on teaching and learning in schools and classrooms, as do a number of other, less tangible, issues. The social and economic conditions of the communities in which schools are located, for example, have significant impacts on students' ability to learn and achieve. Poor communities in which children suffer from malnutrition and ill health, who may not be able to purchase basic school materials, or whose parents either cannot or will not send students (often especially girls) to school present a distinct set of challenges for any teacher (see Pridmore, 2007a on health and access). The relationships between primary teachers, students and parents who attempt to negotiate these challenges are also often further complicated by caste, class and gender divisions. These may be particularly daunting for teachers posted to small, remote communities in which these relationships are intensified by close contact.

Interactions between teachers and students in classroom settings can also be problematic. In addition to the caste, class and gender divisions mentioned above, the nature that this interaction takes is also both heavily rooted in, and impacted by, the content and orientation of teacher education programmes and the organisation of the curriculum. For instance, trainee teachers generally receive a largely theoretical and conceptual understanding of the profession through government-accredited schemes. Nationally, training requirements are set out in the National Curriculum Framework for Teacher Education, which is created and administered by the National Council for Teacher Education. The standard pre-service course includes foundation papers on sociological, psychological and pedagogical issues (see NCERT, 2006). Practice teaching experience is included in these programmes, but tends to be of relatively short duration, and is most commonly conducted in urban settings near the sites of the training courses. In-service programmes also neglect to provide support regarding the specific managerial needs and requirements of small or rural schools, or of multigrade settings. As a result, teachers are often simply left to use whatever strategies they are able to devise themselves. Most commonly, teachers in these settings resort to

dividing their class(es) into grade groups and then dividing their time amongst them. As a result, while the teacher is attending to one group, the remaining students may be left with either work to simply keep them busy or nothing to occupy them at all. This effectively amounts to each grade group receiving only a portion of the allocated teaching day.

Furthermore, despite a growing awareness of the concerns of small, multigrade schools, the national curriculum in India is still modelled on a vision of schools with large enrolment and a teacher for each class. The highly-structured and content-driven nature of the national curriculum, as well as the pressure placed on teachers to adequately prepare students for content-based national exams, means that the teaching method most commonly employed in government primary schools is recitation and memorisation of textbook material. Learning over the school year thus follows the structured chapters of the required texts, with little room for experimentation or creative development. The role of the teacher thus becomes a rather functional matter of passing on facts and information to students, with students given few opportunities for questioning or independent exploration. This tendency has been well-documented within India (see Kumar, 1991; Sarangapani, 2003), and has been the subject of much long-term critique. Such reliance on rote learning methods, and the top-down nature of teaching-learning interactions, tends to result in boredom and discomfort in the classroom, uneven achievement among students, and professional dissatisfaction for teachers. Moreover, students who miss school due to illness or family obligations, or who fail to comprehend the material in a particular lesson – due to language difficulties, for example, or because the lesson content is foreign to local contexts – are unlikely to be able to make long-term progress and therefore more likely to drop out of school.

Attendance is also a key issue in many small schools, both for students and teachers. Student absences in rural areas are often due to family needs, especially for agricultural or other labour, as well as illness, but may also be the result of disappointment with the quality of available educational opportunities. Teacher absences, on the other hand, may be due to difficulties in access and transportation (especially in isolated areas), family commitments outside the community, or professional isolation and an attendant lack of motivation. Teachers are also often present in a school, but absent from the classroom, usually because of the high number of non-teaching commitments required of government primary school teachers, such as organisation of mid-day meals and health checks, record-keeping, inspections, as well as census data collection and election duties.

It is these concerns, among many others, which a number of NGOs in India have attempted to address through initiatives in impoverished communities. It is to two examples of NGO work in this area that the paper now turns.

6 Understanding What Happens in Small Schools

The national profile for small schools above provides an outline of the extent of schools in India which share a certain set of characteristics to do with schools, teachers and enrolment, and also identifies some of the issues and concerns that these schools often face. However, it cannot fully account for the variety of teaching-learning circumstances or the many diverse issues of access and quality which are encountered in small schools. This kind of understanding requires a more qualitative approach which explores issues and concerns in a particular context.

The research therefore focused on two case studies of NGO programmes in small, multigrade schools in Andhra Pradesh and Rajasthan. These NGOs offer different types of programme support, either by funding and operating small schools themselves or by providing support for existing small government schools. In both cases, the studies raised a number of particular issues which resonate with other small, multigrade schools organised both by the government and by NGOs. In particular, this includes: existing teaching and learning circumstances in small schools, teachers' role(s) in schools and communities, teacher education provision, and curriculum organisation for multigrade settings. The following sections address these issues, in turn, for each of the NGO programmes. They also set out the state-level contexts in which the NGOs and their programmes operate.

6.1 Case study 1: Rishi Valley Institute for Educational Resources, Andhra Pradesh

Andhra Pradesh, the fifth largest state of India, was established in 1956 and is situated in the southeast of the country on the Bay of Bengal. Although perhaps most well-known for its connections to the international IT industry, chiefly located in Hyderabad, much of the state's population continues to depend on agricultural production for survival. As in many other states, therefore, the economic disparities between urban and rural areas are marked. Nearly 49% of schools in the state have enrolment of 50 or fewer students (DISE, 2006: 61, Figure 2.30), and the average primary school enrolment is 87 students. (DISE, 2006: 63, Figure 2.33). In 2004-2005, just over 83% of schools in the state were located in rural areas, representing 71% of total student enrolment (11,122,940 students, DISE 2007a and 2007b). With an average drop-out rate across the five grades of primary education at just over 22%, Andhra Pradesh also has the nation's highest drop-out rate at the primary level (DISE, 2006: 139, Table D28). As such, the issue of rural small schools is particularly relevant to education provision in the state. One group that has worked on these issues for the last several decades is located in a region known as Rishi Valley.

The Rishi Valley Education Centre, established in 1931, is located in a sheltered valley in Chittoor District, Andhra Pradesh about 15 km from the nearest town of Madanapalle, and about 140 km north-east of Bangalore. Rishi Valley is located in the rural interior of South India, in an area of chronic drought. The valley and surrounding area are populated by marginal farmers, shepherds and daily wage labourers. The Rishi Valley Education Centre itself is composed of several units of activity, including a central fee-paying school (Rishi Valley School, RVS), a rural education centre and a rural health clinic. The entire organisation is run by the Krishnamurti Foundation India, and takes its holistic educational philosophy from the work of its founder, Jiddu Krishnamurti (see Thapan, 1991). This philosophy calls for a non-competitive style of education which encourages students to explore and freely

question both the world around them as well as their inner being, and inculcates a love of nature and respect for all forms of life. It is as part of the school's commitment to Krishnamurti's teachings that administrators and teachers at RVS work with neighbouring villages to provide basic education and health services. According to the school's current director, Radhika Herzberger, this work started more than 20 years ago, when RVS staff began to look at the poverty effecting neighbouring communities and to think about how they could support them: *Krishnamurti did not want the [fee-paying] school to be an ivory tower, separate from everything around it. We are located in one of the poorest areas of the country, so we really have to think about who our neighbours are.*

The rural education centre – known as the Rishi Valley Institute for Educational Resources (RIVER) – was first established in the late 1970s in order to provide schooling for the children of RVS employees from nearby villages. In the early 1980s, the current organisers, Padmanabha and Rama Rao, were hired to organise and expand the rural education programme. An assessment of the existing government schools in near-by villages uncovered serious issues with their management and with the quality of education on offer. The small size of these settlements resulted in *de facto* 'small schools' that were unlikely to ever have enough students to justify the establishment of schools based on the standard monograde model. In 1987, RIVER received a grant from the Department of Education (Government of India) to develop an alternative model of education in order to address existing problems in these schools. As a result, RIVER began to develop a locally-sensitive, child-centred multigrade teaching methodology which would suit the needs of rural students, teachers and parents.

The first version of the resulting 'School in a Box' was published in Telugu (the dominant local language) in 1993. An internal evaluation suggested that the programme had significantly reduced drop-out rates, increased interest in academics from students and parents, increased enrolment in class six, and resulted in high pass results of the class six examination (P. Rao interview, 12 March 2007). RIVER now runs 12 one-room 'satellite' schools in neighbouring communities, and has continued to revise and reformulate its rural, multigrade teaching programme in response to local needs (see André 2005). Interest in the programme has since also grown both in other parts of India and internationally. RIVER has helped to develop and implement similar multigrade systems in a number of states, including Tamil Nadu, Kerala, Uttar Pradesh, Assam and Maharashtra, and plans are currently underway to develop locally-relevant programmes in Ethiopia, Germany, China, Sierra Leone, Nepal, Sri Lanka, Mexico, Kenya and Pakistan. In 2003, an agreement was also established between RIVER, the government of India, and UNICEF to implement the Rishi Valley methodology in 12,000 government schools in 12 states.

6.1.1 The RIVER Methodology

When the programme began in 1987, staff at RIVER identified a series of problems in local primary schools which needed to be addressed. These included:

- Heavy concentration of the student population in the early stages of learning (especially class one and two) due to high drop-out and retention rates
- Most local schools had only one or two teachers to provide learning for all five primary grade levels – a *de facto* multigrade, multilevel situation

- Teachers commonly used a highly teacher-directed teaching style which focused on mastery of information in the approved textbooks, and which left little room for individual learning speeds and learning styles among students
- Although teachers adhered to the mandated state curriculum, its content was often utterly foreign to students in terms of the language/dialect used, and their experiences of life in the local context, so it was therefore difficult both to teach and to learn
- Teachers expressed serious frustration at the lack of support and appropriate teaching materials for teaching in multigrade, multilevel situations

In response, educators at RIVER began to develop a set of materials that would be appropriate to the language and local customs of the community, as well as for teaching in a multigrade classroom. The existing state textbook was deconstructed, and the required subject content of each chapter reorganised into a set of activities. The material presented in these activities drew on local folk and oral traditions. For example, local stories or images were used as tools for learning to read, to understand new vocabulary, or to make calculations. The activities are arranged in a sequence of five types – introductory, reinforcement, evaluation, remedial and enrichment – which students follow at their own pace. The end of each sequence (nominally a chapter of the nationally-mandated textbook) denotes a 'milestone', and a series of milestones forms a 'learning ladder'. There are four sets of learning ladders which cover the primary curriculum from class 1 to class 4, with separate ladders for language, mathematics and environmental studies at each level. Teaching and learning in class 5 is organised slightly differently, however, with about half of the work using activity-based learning techniques and the other half organised in a more traditional textbook mode, in order to begin preparing students for the transition to government upper primary schools.

Although students often do complete an entire learning ladder over the course of one academic year, there is no pressure for them to do so. Students may progress more quickly in some subjects than in others, for example, and it is up to the teacher to keep track of individual student's movement through the milestones. The system is thus designed to allow for individual learning development. It also allows students who may be absent for extended periods due to illness or family commitments (including festivals or required agricultural labour) to take up their studies where they left off without having missed the teaching of particular content.

Learning ladders are posted prominently in the classroom, and the activities shown on them are coded with colours and familiar symbols (animals and plants) so that students can keep track of their own progress. The coded activities match a set of activity cards, which students can find and complete in their own time. The activities are sequenced so that several styles of learning are encouraged. Introductory activities, for instance, are more heavily teacher-led because they introduce new concepts and ideas, whereas the activities to follow are student, group or pair-led. The classroom is organised into five groups to correspond to these learning styles: completely teacher-supported, partially teacher-supported, completely peer-supported, partially peer-supported, and self-learning. Classrooms are furnished with five low tables, each of which is designated for one of these kinds of learning styles. Symbols are placed on each table to correspond to those on the activity cards so that children can match their current activity with the place in the room where they should complete it. This means that students of varying age and ability levels circulate

around the room, interacting with the teacher and supporting each other in their assigned tasks. Teachers are thus able to monitor both individual progress and classroom interaction. Individual progress is also assessed through designated activities which are located near the end of each milestone. In order to avoid undue stress, students are not told that these activities are assessments, but the teacher observes each student as they complete this activity and determines whether they are ready to move to the next milestone or if they should complete further activities in the current milestone. Each child's progress is recorded in a folder which contains the teacher's notes about their progress and examples of their work.

6.1.2 Teachers' Roles in Individual and Community Development

Teachers using the RIVER methodology thus have a significantly different role to that commonly noted in primary teachers in India (cf. Sarangapani, 2003). Rather than taking an authoritative role as the holder of knowledge and facts which must be passed on to students (as noted in Freire, 1972), teachers become facilitators and create an environment in which students can learn and ask questions freely. RIVER also views its teachers as having a much wider role in the communities in which they work. Teachers are expected to draw on local resources to enrich the curriculum and also to plan learning activities outside the school, including field trips, village surveys, and metric *melas*[8]. In this way, the community is drawn into the life of the school and parents are able to both assess their children's educational experience and to easily interact with teachers about any problems they encounter.

RIVER seeks to involve each community in the life of the school in other ways as well, and to cultivate a sense of community ownership. This begins as part of the process of establishing a new school. RIVER provides building materials, a trained teacher, classroom furnishings and supplies, and a set of teaching and learning materials for each school, but the village is asked to provide the plot of land on which it will be built and to participate in landscaping the school grounds and cultivating plants and trees. The participation of local women is particularly heavily encouraged through formation of 'mothers' committees' which conduct a range of activities, including cooking the mid-day meal, organising forums for discussion of health and hygiene, identifying potential teacher trainees and substitutes, and consulting with the teacher about at-risk children and devising strategies to prevent drop-out (Rao & Rao, 2006).

The role of the teacher in organising these schools and their community links can therefore be quite a demanding one. When RIVER first began developing its methodology in the late 1980s, educators noted that local teachers – most of whom lived outside the village where they worked – were often frustrated and un-motivated by the commonly-used style of rote learning and by a lack of access to resources for dealing with multigrade and multilevel situations. High absenteeism was common, as a result of teachers either taking approved or unapproved leave, or because they encountered significant problems arranging daily transportation to isolated villages. To counter these issues, RIVER began to recruit and train young people with minimal qualifications living in the villages. It was felt that these young people would have a

[8] A type of festival created by RIVER in which students invite community members to participate in activities that reinforce learning of mathematics skills (measuring height and weight, counting money, competing to complete activities in a certain amount of time, keeping track of food bought and sold, etc.).

greater commitment and enthusiasm to working in their own communities, that practical problems such as transportation would not be a problem, and that they would have greater accountability to local students and parents (Rao & Rao, 2006). During the course of the research, visits were made to three of the Rishi Valley Schools in order to observe the teachers and students at work (see Appendix for photos).

6.1.3 Observations from Rishi Valley Schools

Perhaps the first thing you notice when arriving at one of the Rishi Valley schools is their tidy and calm environment (see Appendix, photos 1-3). In contrast to the dry and dusty countryside surrounding them, the school grounds at all three schools were neatly landscaped with native trees and plants (including an herb garden coordinated by a trained Ayurveda professional employed by RVS, who also plays a central role in the work of the rural health centre), and populated with play equipment made from recycled materials, including a tire swing, a see-saw made of reclaimed wood, and a slide of reclaimed metal. The school buildings are simple, white-washed, one-room constructions, with concrete floors and metal roofs. In all three of the schools visited, there were two buildings on site – one for the main classroom, and another, smaller round building with half-walls and a thatched roof for independent play and/or activities for pre-school age children. The entire complex is surrounded either by a fence or a boundary wall, which provides for the safety and security of the children.

Beyond the physical infrastructure, the teachers and students encountered in each school were also calmly and cheerfully going about their day. Inside the classroom at the first school visited, for example, the children were quite confidently and independently following the learning ladders and completing activities either on their own or with assistance from other students or the teacher. The guide on the visit, the RIVER coordinator, commented that this school was established 11 years ago and is now in the capable hands of one of Rishi Valley's most respected teachers. She was first introduced to the method when she attended one of RIVER's satellite schools as a child, and she later decided to train to become a teacher herself. While talking to her about the techniques she uses in her classroom, it was possible to observe her gentle and supportive interactions with students and her evident commitment to the programme.

The classrooms themselves are also designed to support and encourage creativity and learning of many different kinds. The walls are covered with students' artwork and pieces of writing, as well as charts for weather observation, for instance, and further student work hangs from strings attached to the ceiling. The lower half of all of the room's walls are also covered with a blackboard surface, and each student is given a section of the wall which they may use in any way they like. Many had chosen to draw pictures or practice writing letters and words, for example, and proudly displayed their work to interested visitors. This obvious confidence on the part of many students was apparent in all of the schools visited. In another school, for example, a group of students sat working on independent-learning activities and were happy to chat – even to visiting strangers – about their work. One of the young girls, a child of about 7 years, read several pages of Telugu text without any hesitation, and then promptly asked us to join the group in singing a song. In the third school, a similarly confident group of young children gave a guided tour of their school grounds, pointing out and naming various plants and trees.

The teacher in that school commented that the children had been encouraged to learn to identify these plants in other parts of the village as well, especially as part of their work in environmental studies. The school day runs from 8am until 4pm, so she arranged her daily schedule to provide language and mathematics learning in the morning and environmental studies and arts and crafts in the afternoon. These afternoons were therefore often used for field trips into the village where students are given tasks such as to observe (and later write about) plants and animals, to identify and count a particular item, or to watch a parent going about their daily work. The teacher had also invited parents to come into the school to speak to the children about the jobs they do, or to see their children's schoolwork.

In two of the three schools visited, the main teacher (all three of whom were female) was also supported in her work by a trainee (both were male) who would eventually either join her as a full-time co-teacher or be posted to another school. Both the RIVER coordinator and the directors said that this hands-on approach is central to how they provide teacher training for their schools and for visitors who wish to implement the RIVER methodology elsewhere.

6.1.4 Scaling Up

The apparent success of the RIVER programme has been appealing to many educators and administrators in India who face similar problems with small, rural schools. Although it has already been taken up in a number of areas, RIVER has attempted to manage its application carefully. As Padmanabha Rao commented in March 2007:

> *You can't just take the 'School in a Box' and use it somewhere else. Different communities have different needs in terms of language and local customs. This is sometimes even true within a single state, where each district might have very different needs. Whenever we have a request for a new programme, we insist that a group come to visit Rishi Valley to see the schools at work and to begin developing their own materials using the RIVER structure.*

RIVER's coordinator later commented further that interested policy makers usually make a short (2-3 day) visit to see the programme at work, and will then send a large group of teachers (approximately 50) for a 10-day training programme. During the 10-day course, teachers are resident at RIVER where they make school visits and then begin developing their own teaching and learning materials using local language and resources relevant to their home schools.

Rao has two 'non-negotiables' when it comes to this training. Firstly, groups with an interest in implementing RIVER's techniques elsewhere must include a mixture of actors, including policy makers, teachers and community activists. Groups of people who need to cooperate to make the project work, he added, are in this way encouraged to start working together from the very beginning. Secondly, all programmes must start on a small scale, with only a few schools, for the first two years. This allows educators to develop and revise the new, locally-relevant teaching and learning materials based on a substantial period of experience, and it also gives teachers time to adjust to a style of teaching which is often very different from any previous training they have received. State supervisors have to receive training as well, Rao added, so that they understand how to give positive support to teachers as they make the transition, instead of simply arriving in schools and telling them what they are doing wrong.

This small-scale and rather personalised approach to training has helped the RIVER team to convince many critics of the value and effectiveness of the programme. Rao recounted how one visitor, a representative from a state teaching union, was 'ready to have an argument with me from the minute he arrived'. The representative was apparently concerned that RIVER's multigrade methodology was just another method that the state was pushing on teachers trying to deal with large classes of students. 'I convinced him to give it a chance, though, and by the end of the three days, he was sold on the idea…. It helped that we specifically require a pupil-teacher ratio around 30:1, so it's not just about getting teachers to take on even more students per class', he concluded.

These concerns about multigrade teaching echoed those of many policy makers and educators consulted in the course of this research. As noted previously, many of those interviewed commented that the idea of 'multigrade' has long been used within government discussion to describe a way for one teacher to work with very large groups of students. As a result, many felt that 'multigrade' techniques were simply a way for the government to escape its responsibility to hire and train sufficient numbers of teachers. Unfortunately, such negative perceptions of multigrade teaching have resulted in significant resistance to their application in government schools in India.

However, during the time of this research efforts were also underway to apply the RIVER approach in large schools. The methodology was being adapted to large urban schools in Chennai, for example, under the guidance of RIVER educators. Under the initiative, a pilot group of large, urban schools reorganised their traditional, graded structure into several small, multigrade groupings. In each classroom, therefore, a mixed grade level group is managed by a single teacher in the same style as RIVER's rural, one teacher primary schools. A set of learning ladders and activity cards were developed which were appropriate to the local context and language, and teachers were given training in RIVER teaching strategies and management techniques. In addition to the benefits of RIVER's innovative approach, teachers in these settings also benefit from opportunities for collaboration and support with colleagues in their schools.

Such efforts to extend RIVER's work to new contexts and settings reflect a fundamental conviction from the programme's organisers that creative multigrade approaches provide higher quality education than traditional monograde organisation and learning by rote. In this sense, the work addresses wider concerns in India about the types of teaching and learning occurring in primary schools, and the potential impacts of that learning (both positive and negative) on both the individual development of students and the wider development of communities and the nation. It also raises echoes of earlier work on 'nongraded' schools, and of advocates' arguments that such a system could help to reduce poverty, and social and economic inequality (see section 4.1).

6.1.5 Educational and Social Impacts

Indeed, since the first 'School in a Box' programme was established in 1993, evidence has suggested that the programme has not only positive educational impacts, but also social ones. In educational terms, RIVER reports that the Rishi Valley satellite schools have significantly reduced drop-out rates and increased enrolment in the upper age groups, and also that higher percentages of students now pass the class six

government exam. Other states that have taken up the methodology have reported similarly positive results. In Tamil Nadu, for example, only a few schools originally implemented the programme, but positive improvements led the state to take it up in all schools. According to Rao, after only one year of implementation, approximately 75% of students in the programme test within expected competencies for their age group, as opposed to only 25% of their counterparts in government schools (P. Rao interview, 12 March 2007).

In Rishi Valley, educators at RIVER and in the satellite schools also point to the positive social impacts of the programme. This includes indications that growing community involvement in the schools has resulted in marked improvement to adult literacy rates, health and welfare in the villages. Furthermore, the 'most telling indicators are the well turned out, healthy, and bright children in our schools who are sons and daughters of some of our own ex-students' (Rao & Rao, 2006). These impacts have reportedly been particularly significant for local women, with RIVER educators noting that the children of women who have attended their schools in the past have noticeably improved health and welfare and are more likely to regularly attend and stay in school themselves. The environmental conditions in many villages in the valley have also improved over the last 20 years, especially where the satellite schools have turned wastelands into productive school grounds. According to Rishi Valley's Ayurvedic doctor, the herbal gardens maintained on school grounds have also raised interest in traditional (Ayurvedic) treatments, and in health and nutrition more generally.

Unfortunately, much of the evidence of these positive impacts has yet to be thoroughly researched. Of particular interest in the future would be more systematic assessments of changing levels of access to education in primary and higher levels, as would attention to changes in local equity issues, especially in terms of gender dynamics and their impacts on child health and welfare. The development of alternative standards and tools for evaluating children's learning in these contexts would, in fact, be useful for many NGO and government initiatives across the country.

6.2 Case Study 2: Bodh Shiksha Samiti, Rajasthan

Rajasthan, India's largest state in terms of area, is situated southwest of Delhi and on the border with Pakistan. It is a largely desert terrain, deficient in water as well as other social and economic infrastructure. The population is sparsely distributed across this large territory, with the majority engaged in agricultural labour or as labourers and marginal workers. Available data shows that in the 2004-2005 academic year, 40% of all primary schools in the state were single-teacher institutions (DISE, 2006: 254, Table 2.23), representing a more than 27% share of total enrolment (DISE, 2006: 305, Table 4.12). During the same year, and similarly to Andhra Pradesh, Rajasthan had one of the highest drop-out rates in the country – averaging just over 15% across the first five years of schooling (DISE, 2006: 139, Table D28). This was accompanied by an average repetition rate of nearly 12% across the first five years of schooling, which suggests that high drop-out rates are unlikely to improve until the factors behind repetition are fully addressed (DISE, 2006: 139-141). In addition, almost 89% of the total number of schools in the state in 2004-2005 were located in rural areas, representing 85% of total enrolment in the state, or nearly 10 million students (calculations based on DISE, 2007a and 2007b). This set of circumstances highlights

the importance of small, rural schools in the state's educational infrastructure and indicates a real need to understand how they work.

Bodh Shiksha Samiti has been working in education in Rajasthan since 1987, when it was officially registered as an NGO. Although it began through the efforts of a very small group of local activists, by the time of this research the organisation had grown to count on a staff of 500 employees, including NGO staff and teachers posted in schools, and was in the process of hiring an additional 300 teachers. Initially, the NGO relied heavily on state and central government funds to organise projects, but more recently has received substantial funding from a number of international organisations, including the Aga Khan Development Network, the European Commission, the American India Foundation and UNICEF. The organisation's work is divided between schools in urban slums in and around the city of Jaipur (where its main offices are located) and rural schools in the neighbouring district of Alwar (organised from a district office in the town of Thanagazi). Bodh both provides support – usually in the form of a 'resource teacher' and teaching and learning materials – for existing government schools and also organises schools under its own management. Teachers employed by Bodh in either circumstance receive training in the NGO's multilevel teaching methods, and are expected to reside full-time in the community in which they work (often this means living in the school building itself). In addition to focusing on providing quality education for underprivileged students, the organisation also works particularly to increase educational opportunities for girls and young women. Work in this area has included organising after-school and evening classes for adolescent girls and, in 2005, the establishment of a residential secondary school for girls in a rural area of Alwar district.

6.2.1 The Bodh Shiksha Samiti Multilevel Approach

Bodh's philosophy and approach to education is rooted in the work of respected Indian thinkers such as Tagore, Krishnamurti and Gandhi. Its overall mission, furthermore, 'is to participate in the formation of an egalitarian, progressive and enlightened society by contributing in the evolution of a system of equitable and quality education and development for all children' (see www.bodh.org/philosophy.htm). The organisation aims to do this by providing a child-centred, active pedagogy which engages young, often first generation, learners and encourages them to stay in school, as well as by promoting the involvement of communities in the work of local schools. Rather than using the common term 'multigrade', Bodh staff use the term 'multilevel' to indicate that the NGOs pedagogy is designed to provide for the individual learning styles and needs of students. As one staff member explained during the visit in April 2007:

> *The term 'grade' has negative associations… so rather than focusing on whether a student passes from one grade to the other at the end of the academic year, our teachers keep track of where each student is in his or her progress in each subject. Also, a student might be at one level in one subject and another level in a second one, so it's more effective to monitor the children this way instead of lumping all the subjects together into one grade.*

Classes in the first four years of primary education in Bodh schools, therefore, are divided not into grades, but into levels of ability. Teachers in each school agree a set of central capabilities which students are expected to achieve at each level, and in each subject area (including mathematics, language skills and environmental studies,

among other subjects). Assessment of student progress in these capabilities for the first four levels is continuous, rather than based on examinations. Teachers keep daily record files for each student which contain their written work (worksheets, papers, etc.), along with a notebook containing a monthly record of comments on each student's progress. Based on these records, teachers then plan the school day to fit the needs of each student. Time is set aside in the timetable each day to allow teachers to maintain records and do any necessary planning. Teaching and learning in the basic subjects is also supplemented with art, music and drama lessons as part of the NGO's commitment to helping children to develop a range of skills and capabilities. All activities in the classroom are explicitly oriented to the life experiences of students in either slum communities or rural areas, in order to better support their learning and development.

Beginning in the 5th level, teachers also begin familiarising older students with government exam procedures, forms, and assessment styles so that they are prepared to take the required examinations at the end of fifth, eighth, and twelfth grades/levels, and can earn official certificates. This both allows students to satisfy bureaucratic requirements for admission to government schools if they should move to a new community or a new school, and also supports them as they shift from the alternative style of learning used in Bodh schools to the often rote and textbook-dependent teaching approaches found in most government upper primary and secondary schools.

To prepare teachers for this work, Bodh provides an initial 6-month training programme which familiarises them with the approach, philosophy, and teaching and learning materials they will utilise. Some teachers are hired after completing an MA or B.Ed degree, while others may have significantly less preparation (the minimum requirement for employment with Bodh is a secondary school qualification), but all teachers are expected to complete the initial training programme. This is because the NGO recognises that even highly qualified teachers are unlikely to have had any previous training or experience with multigrade/multilevel techniques. Bodh provides further in-service training opportunities for teachers twice each month and through a month-long programme held each year during the summer holidays. These workshops provide opportunities for discussion of pedagogical, management and skill development issues, as well as a space for teachers to share experiences and to help one another to solve problems in their respective schools and classrooms.

In-service training is also provided to offer teachers new ideas for classroom and individual learning activities. Examples of equipment and ideas encountered during school visits for this research included a set of surveying equipment which the students used each year to do a survey and map their village, and sets of small handheld blackboards marked with graph lines that students can use to make graphs of a given set of co-ordinates or to fill in multiplication tables. There were also sets of cardboard game boards which are used to play word games, and cardboard frames with inset pieces (squares or strips) of foam which are used to make visual representations of fractions and equations. Through these active and student-led learning activities, the NGO hopes to encourage independent thinking skills and also to allow students to develop at their own pace.

6.2.2 Observations in Bodh Schools

As in the RIVER system, Bodh expects its teachers to take an active role in the life of the community in which they work. In many of the schools visited in the course of the

research, teachers had played a central role in promoting enrolment and encouraging parents to participate in activities and to support the school in its work more generally. In one very remote OBC community located in Thanagazi block, for instance, the school's active parents' committee told us about the founding of their school and how Bodh's support had made a difference in their community (see Appendix, photos 4 and 5).

A one-room school had been established in the community in 1976, with the help of a local benefactor who had also arranged for the school to be registered with state government authorities. As a formally recognised school, the school was therefore eligible to be allocated a government-paid teacher. Although this happened, the teacher (male) lived in Alwar and only came to the school about 4 times a month. This high level of absenteeism was largely an issue of geographical access because the village is located at the extreme end of Thanagazi block. None of the local buses reach as far as this particular village, although one does stop at a nearby village once in the morning and again in the late evening. So, although the community had really wanted a school in their village, without a regular teacher it was for all practical purposes not operational. About four years ago, a local leader became interested in Bodh's work in other communities and suggested that they visit the village. Representatives from the NGO came to offer an additional teacher and resources, and it was agreed that Bodh would appoint a 'resource teacher' to live and work at the school.

We were all illiterate here, the committee spokesman said, *but Bodh has helped us to understand why education is important*. Community members credited this increased awareness of the importance of education to the community meetings organised by Bodh teachers and staff. There they discussed the social and economic importance of education, and focused especially on the issue of gender equity. In addition to the community's primary school aged children, for example, there were also a number of 12 and 13 year old girls who had not had access to education. Discussion of this led the school to start an adolescent girls programme which provides evening classes from 4pm-7pm. Since the programme began, some of the young women have now passed out of sixth grade/level and are continuing their studies at Bodh's rural residential campus for women; a few have gone on to finish eighth and tenth grade. Like other Bodh schools across the state, the school also has a rotating 'mother teacher' system through which each year a local mother is designated as the community's representative in the school. The position carries a small salary and duties revolve around overseeing mid-day meal distribution, looking after any visiting guests, and liaising with other parents about events and activities in the school and children's progress. Local mothers commented on the positive impacts of this role, including providing educational opportunities for individual mothers – many of whom were able to learn to read or to study during their time in the post – and support for the community's women more generally.

In addition to raising issues around gender, Bodh has also been instrumental in helping the community to engage with local politicians to provide services, to build a wall around the school, and in 2005 to achieve an upgrade of the school from primary (grades 1-5) to upper primary (grades 1-8). The school also now has toilets for both boys and girls, and has extended the building to include seven classrooms. Total enrolment at the time of the visit had risen to 136 students (60 girls and 76 boys), and according to the head teacher this included every school-age child in the village. Attendance of both students and teachers is carefully monitored, and any issues or

concerns are raised at monthly meetings between the head teacher, teachers and parents.

At the same time, local parents identified a number of significant issues which continue to trouble the community. While some of these were not strictly related to local education, they certainly have an impact upon it. This included the need for basic medical care in the village (easily treatable ailments often keep children out of school), requests to extend the government's mid-day meal programme to include pre-primary age children, and the need to hire and keep a female teacher (quite difficult given the isolated location and the need to ensure transport and personal safety) in order to support older girls who wish to continue their studies. It was clear from discussion with parents at the school that there is a strong desire to provide quality educational opportunities for all local children. As one mother commented:

> *We find it really hard to educate our daughters. Hard, but worthwhile… I have five children, and two of my daughters attend the school. So now I'm doing all the work at home myself.... It's really hard. But we [the women of the village] all want our daughters to have better lives than we do. We can't read, so if we go to the city and get lost, we can't find our own way because we can't read the signs. We just have to sit down and wait for someone to come along and help us.... If our daughters have education, then they can be like you and travel and see things.*

It is worth noting here that the current size of this school would – by some definitions – exclude it from being classified as 'small'. However, because of its geographical location, the social makeup of the community, and its historical marginalisation, it clearly suffers from many of the problems which face schools that fall more neatly under pre-defined limits (of enrolment of 100 students or less, for example, or with three or fewer classrooms). This reality supports Bray's (1987) assertion that policies for 'small schools' should not rely solely on pre-determined measurements, but must take local circumstances into account.

Consider, for example, the case of another Bodh school visited as part of the research – this one with lower enrolment (105 students) and fewer classrooms (two) – but facing many of the same concerns. The school was established by Bodh in 2000, and is located in an isolated OBC community in another part of Thanagazi block in Alwar district (see Appendix, photo 6). It took almost an hour by car to reach the school from Bodh's office in the town of Thanagazi, travelling slowly through agricultural countryside over unpaved, narrow and highly uneven dirt roads. We arrived at the school just as the lunch break was ending, and so were able to observe the school's three teachers – two female and one male – as they began their afternoon sessions. As the small building had only two classrooms, the third teacher took his students out to the front of the school to sit on mats under a sheltering tree.

In one of the classrooms, the children were seated in two groups on mats on the dirt floor, with the teacher moving back and forth between them. While one group worked independently with texts and notebooks on a set of mathematics exercises (taking measurements of angles, length, width, etc.), the other group listened quietly as the teacher read them a story in English. She then leaned a small blackboard against a table, wrote the story out in chalk, and asked the students to copy it down in their notebooks. While the group was occupied with that activity, she spent some time with the first group, going from child to child and answering their questions about the work in their books. The teacher explained that she plans such multilevel teaching strategies

one day in advance, after thinking through the progress of each student and what needs to be covered for the next day.

Like their counterparts in other Bodh schools, these three young teachers had received training in multilevel methods from the NGO – one following graduation and the other two after postgraduate studies. Although their enthusiasm for their work was unmistakeable, our guide from Bodh commented that it is often hard to keep teachers in these posts for more than a few years. The geographical isolation of such rural small schools makes it particularly difficult for teachers, especially in terms of access and family life. At this school, for instance, the male teacher resides at the school, while both female teachers must walk several kilometres from their residences to reach the school each day. Because Bodh requires its teachers to live in the communities where they teach, female teachers often have to leave their posts when they marry unless they are able to settle nearby. Teachers may also feel isolated and frustrated by their lack of familiarity with the local language in the area where they are posted, but must be prepared to manage instructing the youngest students in the local dialect before they make the transition into instruction in Hindi.

Many teachers in rural areas across the country also complain about professional isolation because they are often based quite far away from other colleagues (this is especially true in one-teacher schools). Bodh has attempted to remedy this to some extent by providing in-service training and support (as outlined previously), access to an array of teaching and learning resources, and close supervision. Teachers in this particular school, for example, had access to resource material provided by NCERT, Rajasthan's SCERT, and Bodh itself. This included puzzles, building blocks, charts and a globe, among other things. The school also had a small collection of books on-site, and teachers could access a library at Bodh's office in Thanagazi. For the purpose of supervision, the district had been divided into nine clusters and each had been assigned an officer responsible for providing supervision and teacher support for quality improvement. The teachers in schools we visited clearly had strong relationships with Bodh co-ordinators, likely because of this high level of supervision and support.

In spite of the availability of such positive support, however, the teachers commented that they felt that it is the attitude and behaviour of teachers themselves which has the greatest effect on both the quality of small schools and their impacts on communities. This sense of teachers' central responsibility for both a school's and each students' success was similarly reflected in discussions with Bodh staff, and – as in the case of Rishi Valley – suggests a very different role for teachers than is often ascribed to them in the existing literature on Indian primary schools (cf. Kumar, 2005; Sarangapani, 2003).

Certain problems are beyond the scope of classroom teachers, of course, such as wider economic trends which impact on communities or long-standing concerns about how best to support students both before and after the primary level. In recent years, however, Bodh has begun to address this second issue by expanding its school provision to include pre-primary and upper primary levels. In the latter case, it is thought that this will help to ease the transition from Bodh's alternative teaching pedagogy to more 'traditional' government schools. Concerns about how to support students in this transition are, in fact, shared by many NGOs working in impoverished rural areas of the country, and finding approaches that work are an important part of efforts to increase access to education more generally.

7 Conclusions

The case studies above show both some similarities and some divergences in approaches to managing small, rural schools. In both cases, however, the NGOs have a sustained interest in increasing access to schooling as well as providing good quality education once students are enrolled. In order to provide this, both RIVER and Bodh have made a commitment to (i) maintaining small teaching groups, (ii) providing learning that addresses the diversity of students' abilities and is relevant to local knowledge and contexts, and (iii) supporting teachers through pre-service and in-service training and professional development. The fact that both organisations have taken on the highly labour-intensive task of re-organising the standard monograde curriculum in order to make it appropriate for multigrade contexts has been especially central to these efforts. Furthermore, they have devoted significant energy to creating and maintaining strong links between schools and communities, and to redefining the role of teachers as not simply providers of information from textbooks but as classroom facilitators and community organisers. In doing so, the organisations have emphasised the important role that schools can have as centres for local development – a role which further indicates their importance to national development and underlines the need for much greater attention to small, rural schools in policy and practice at the national level.

Both organisations have also sought to address the key issues facing small schools which were identified through the review of existing literature (see section 5.4 above). In particular, these include improvements to the circumstances in which teaching and learning take place, and the need for innovations in teacher education and curriculum organisation for small schools and multigrade settings.

Teaching and learning circumstances have been addressed from multiple directions by the two NGO programmes, for instance, and efforts have included high levels of support for teachers from NGO staff, provision of adequate and appropriate teaching and learning materials, and the development of strong school-community links through programmes such as Bodh's 'mother teacher' initiative and both organisations' active encouragement of parental participation in school events and concerns. RIVER's strategic choice to train and employ local residents as teachers in primary schools has also had the added benefit of decreasing the potential for conflict and miscommunication between teachers, students and parents due to differences of caste and language. Similarly, both organisations' attentiveness to issues of gender and schooling has notably increased the opportunities for girls and young women in marginalised communities to attend school and to remain in school for longer.

Support for teachers has also been shown to be particularly important to efforts to improve teaching and learning because, as the cases recounted above show, the successes and failures of small schools often rest principally on the abilities and enthusiasm of individual teachers. This is particularly the case in one-teacher schools, where a single teacher is responsible for all of the activities taking place. Absenteeism, illness or a lack of professional engagement can have a profound effect in all small school settings, and innovative programmes for pre-service and in-service training for teachers in small schools and multigrade settings, therefore, are potentially very significant. In practice, these NGO programmes have proven largely positive, with teachers consulted through the case studies expressing confidence with a range of student-, peer- and group-led teaching strategies. Teacher confidence with continuous, formative assessment methods (as opposed to more traditional summative

assessment through national examinations) in these settings has, from the available evidence, also proven effective both in terms of better student monitoring and students' long-term school achievement.

There is also evidence from the NGO schools visited in Rajasthan and Andhra Pradesh that one of the key factors in their improvement has been the active involvement of parents and communities. Important community contributions noted in the case study research included the donation of land, landscaping of school grounds and cultivation of trees and plants, and the more general development of schools into village resource centres. Community participation has also been key to the provision and maintenance of basic physical facilities in schools such as toilets (especially for girls), drinking water, and clean, light, well-constructed classrooms. Parental participation has also been encouraged in a range of activities such as conducting learning exercises with children (often with the knock-on effect of providing basic education skills to parents), working as community teachers and advocates (especially in terms of health and hygiene practices), providing help in the organization of classrooms and schools, and helping teachers in preparing teaching aids. As the NGO cases illustrate, active community engagement in these areas can be a highly positive resource and can have significant impacts on children's learning achievements, health and welfare.

Teaching and learning circumstances in the NGO schools have also reportedly been improved through the provision of better access to teaching and learning materials. Furthermore, teachers stated that, with appropriate training they were better able to effectively use those materials which were available to them. It should be noted that these resources did not necessarily represent a huge investment in advanced technologies (computers, internet, etc.), but rather were often quite simple and inexpensive learning materials – such as activity cards, games, maps and books – which can be used flexibly to encourage the development of a range of learning styles (i.e. individual, pair, or group-led) and skills, as well as student confidence. Given the interest in many nations in preparing students for employment in fast-moving, contemporary industries, any move away from dependence on rote-learning, memorization, and textbook- or teacher-dependent learning must surely be seen as positive.

Finally, and perhaps most importantly, the re-organisation of the monograde curriculum into a system which is appropriate to multigrade settings and which encourages active learning is central to the work of both NGOs. In this, there is some divergence between the two organisations – with RIVER employing a series of learning ladders and activity cards, as well as a particular style of classroom organisation, and Bodh using its own set of activity-based learning activities and system of monitoring individual student progress. At the heart of both approaches, however, is the basic acknowledgement of students' individual learning speeds and styles, and recognition of the need for schools to be more flexible to them. In a sense, these programmes expect the curriculum to bend to fit the needs and lives of students, rather than asking students to conform to the strict demands of the education system. In inverting the relationship in this way, both NGOs have opened new potential avenues of meaningful access for children who for reasons of family circumstances, ill health, or poverty might not otherwise persist or succeed in school.

In relation to CREATE's framework specifically, the research suggests that approaches to small, multigrade schools such as those used by RIVER and Bodh help

to provide not just access, but *meaningful* access to education for children living in poverty. Evidence suggests, for example, that students in schools supported by these organisations are more likely to enrol and attend school (Zone 1), to stay in school throughout the primary cycle (Zones 2 and 3), and to successfully make the transition to upper primary/secondary schooling (Zone 4). As such, lessons learned by these NGOS, as well as others experienced in this area in India, provide potentially useful material for consideration in small schools across the country. This is not to suggest that such approaches can be applied indiscriminately in all schools. In fact, the need for curricula to be locally-appropriate and sensitive to particular local economic and social conditions mediates against such a simplistic solution. At the same time, research into NGO approaches does highlight some specific areas to which other small schools in India – either run by the government or by private funders – can look for advice and assistance in improving the quality of education they offer.

8 Recommendations

8.1 Assessing the Need for Small Schools

Firstly, in very broad financial terms there is a need to assess the cost-effectiveness of small schools in India in the long term. The explosive growth of such schools in the last 10 years, in particular, needs further investigation to determine how many of these schools are actually effectively operating. There is some evidence to suggest, for instance, that a significant number of schools in the country either have no building, no teacher, or no enrolment. It is not known at this point what proportion of these schools are small schools, and although such an investigation was beyond the scope of this work, it is an issue that deserves greater attention.

Any future financial analysis of the need for small schools, however, must consider not only the 'per-unit' costs of these schools (the traditional measurement), but also account for the perhaps even greater long-term economic and social costs which result from a large number of children having no meaningful access to education. Financial analysis of schools' feasibility should also be paired with analysis of the context-specific impacts of small schools. While 'smallness' may provide educational and social advantages in some contexts, for example, it may also indirectly result in further complications. Schools located in hamlets that are distant from larger village settlements, in particular, are likely to be relatively homogenous in terms of caste. Therefore policy on school location which encourages the growth of small schools may also result in schools that are segregated by caste, leading to further concerns about equity.

As the national profile above shows, there will continue to be areas in which such small schools are a necessity due to low population and geographical isolation, so there is a real need to understand what happens in these schools in order to give them the support they need.

8.2 Curriculum Reorganisation

Key to any future improvements in education in small, rural schools is the need to re-organise the curriculum to make it appropriate for multigrade settings. Both RIVER and Bodh provide examples of how activity-based and peer-learning techniques can be usefully employed to promote a high quality and inclusive style of education in small primary schools, and the international literature on multigrade teaching and learning further supports these findings. The in-built flexibility of multigrade lessons in these programmes also allows children who might otherwise fall behind in school because of family commitments, illness, or the need for their labour in the household to make progress at their own pace and according to their own needs. Such techniques, however, cannot be used in isolation, but should be paired with the kind of appropriate assessment techniques which the NGOs have also employed – such as the maintenance of individual progress notes and continuous assessment of learning progress. Some limited efforts from the government sector, most commonly in the shape of pilot projects, have attempted to implement similar efforts for multigrade and marginalised student populations in the past, but these remain fragmented and a more concerted effort is needed to bring about the intended results.

Indeed, recent curriculum and textbook reform at the national level in India has included a critical focus on the tendency of all government schools – both big and

small – to use methods which rely on rote-memorization and examinations for assessment. Academics and policy makers in the country have argued that the curriculum should instead be oriented around more child-centred and activity-based learning techniques, as well as including more locally-relevant learning materials. The reforms, and larger debates surrounding the implementation of the national curriculum and the implications for quality improvements in government primary schools, therefore, are tightly linked to issues of concern to small schools. As such, lessons about access and quality learned in small schools are also likely to be relevant to primary schooling in many other kinds of contexts in India and elsewhere.

8.3 Teacher Education

A revitalised curriculum in turn requires an effective cadre of teaching professionals with appropriate training to facilitate it. Interviews with policy makers conducted for this research raised a number of issues around teacher education in the country, however. In many cases, interviewees suggested specifically that improvements to teacher training and support for government primary school teachers would help to develop a more positive professional image for teachers individually, and would also have the knock-on effect of promoting more positive images of schooling with parents and communities. As the case studies above show, such support can have potentially very positive effects on educational access and quality in small schools. The further strengthening of government training support institutions such as DIETs and block and cluster resource centres, many of which struggle with a lack of resources and the need for more internal training for administrators, for instance, is one potential area for improvement. These changes will require the central government to continue to divest responsibilities and provide greater financial and administrative support to state governments and institutions, a decentralisation process which has already begun but will need continuing emphasis.

In the short-term, state governments already have the power to take policy decisions regarding the re-organization of pre-service training to provide teachers with skills in the management of diversity in terms of the levels, interests and needs of students. Special efforts can also be made to better familiarize teachers with learning materials such as science kits and mathematics resources which are already provided by the states and through central schemes. Since such initiatives fall within the established rules and regulations of the government, it should be possible to implement them relatively quickly in small school environments.

8.4 Community and School Networks

Efforts to more strongly connect small schools to the communities in which they are located have also been key to the NGO approaches described above. The case studies show how high levels of community involvement can help to increase the level of both physical and human resources upon which teachers and students can draw. NGO models for encouraging parental participation, therefore, could prove a useful resource for other NGOs and government policy makers at all levels.

The studies also show that managing small schools within supportive networks rather than treating them as stand-alone institutions can be highly effective. These networks include not only the direct work of NGO staff in terms of support and training opportunities, but also provide teachers with opportunities to interact with fellow teachers working in similar circumstances in order to provide support, suggestions

and insights, and give parents (and especially mothers) opportunities for interaction with parents in other communities facing similar difficulties.

Similar efforts to develop school networks through the use of block and cluster resource centres, for example, have already been enthusiastically taken up in some states, but remain limited at the national level. Nevertheless, such efforts represent a potentially useful movement towards developing strong community and school support networks. As noted above, the further strengthening of these institutions, both financially and in terms of human resources, could provide much needed support for small, isolated schools and teachers.

8.5 Policy Development

To date, there is no national policy which specifically addresses the needs of small, multigrade schools in India. While the existence of some small initiatives and the inclusion of small schools in the draft of the upcoming Five Year Plan suggest a positive movement towards greater attention to these issues, much more substantial policy and planning for these schools is needed. Policy makers interviewed for the research were able to identify key individuals in central government institutions with an interest in the development of new policy and programmes, but as yet these individuals often work in isolation. There is a real need for policy makers, educators, and NGO activists to develop strong networks around common concerns. This potentially includes not only those with an interest in small schools or multigrade pedagogy, but also those with wider interests in quality improvements and the promotion of educational equality.

Furthermore, once a framework of policy and programmes has been created, a concerted effort will need to be made to effectively implement it. There has been a historical tendency in India (as in many other countries) to create sound policy and then either not implement it effectively (see, for example, Dyer, 2000 on the problems of Operation Blackboard) or to neglect to apply it at all (see, for instance, Juneja, 2005 on campaigns to force private schools to reserve places for students from economically weaker sections of society). A careful and systematic attention to meeting the needs of small, rural, multigrade, schools is therefore required in terms of both policy development and accompanying resource allocation.

8.6 Changing Perceptions of Multigrade

One of the other central concerns which this research highlighted was the need to alter prevailing perceptions of multigrade teaching and learning in India. This is particularly important because, as the NGO case studies and the international literature suggest, multigrade teaching techniques can encourage more flexible learning and the use of group and peer work, and can also promote less hierarchy in the classroom, all of which are potentially important to reducing social and economic inequality. The policy and practical recommendations discussed above, therefore, will need to be accompanied by initiatives to raise awareness about the need for multigrade teaching and learning in a significant proportion of India's primary schools.

This will, however, require a real shift to the way in which teaching and learning currently happen, particularly within the government primary education sector. Classroom and grade hierarchies have long-standing roots within schooling in the

country, and such historical traditions strongly underpin the educational system as a whole. At the same time, long-standing traditions of pedagogy which promote social and economic equality co-exist alongside these, especially including the concept of nongraded schooling discussed previously (see Kaul, 1977). The work of NGOs such as RIVER and Bodh, in many ways, underscore the potential effectiveness of implementing such emancipatory pedagogies and suggest that further change in the future is possible.

References

Aggarwal, Y. (1998) Access and Retention under DPEP: A National Overview. Unpublished research report. New Delhi: National Institute of Educational Planning and Administration [NIEPA]. Available online: http://www.dpepmis.org/downloads/ar98.pdf [Accessed March, 2007].

Aggarwal, Y. (1997) Small Schools: Issues in Policy and Planning. NIEPA Occasional Paper 23. New Delhi: NIEPA.

Aikmen, S. and el Haj, H. (2006) EFA for Pastoralists in North Sudan: A mobile multigrade model of schooling. In Little, A. (ed.) *Education for All and Multigrade Teaching: Challenges and Opportunities*. Dordrect: Springer.

Ames, P. (2006) A Multigrade Approach to Literacy in the Amazon, Peru: School and community perspectives. In Little, A. (ed.) *Education for All and Multigrade Teaching: Challenges and Opportunities*. Dordrect: Springer.

André, R. (2005) School Without Walls. Documentary, produced by Mosaic Films.

Bharadway, N.S. and Boda, A. (1998) Multigrade Teaching in Small Schools. Paper presented at the Conference on Learning Organisation, Community Participation and School Effectiveness at Primary Stage: International Perspectives. New Delhi: National Council of Educational Research and Training [NCERT].

Bray, M. (1987) *Are Small Schools the Answer? Cost-Effective Strategies for Rural School Provision*. London: Commonwealth Secretariat.

Chickermane, D.V. (1981) *Arresting Stagnation in Small One-Teacher Rural Primary Schools in an Indian Experiment in Non-Grading.* Paris: UNESCO

Chopra, R. and Jeffery, P. (eds.) (2005) *Educational Regimes in Contemporary India*. New Delhi: Sage Publications.

Dighe, A. (2002) Social Mobilization and Total Literacy Campaigns. In Govinda, R. (ed.) *India Education Report: A Profile of Basic Education*. New Delhi, NIEPA.

DISE (2006) *Elementary Education in India: Progress towards UEE, Analytical Report 2004-2005.* New Delhi: NIEPA.

DISE (2007) *Elementary Education in India: Progress towards UEE, Analytical Report 2005-2006.* New Delhi: NIEPA.

DISE (2007a) *Elementary Education in Rural India: Where do we stand?* New Delhi: National University for Educational Planning and Administration [NUEPA].

DISE (2007b) *Elementary Education in Urban India: Where do we stand?* New Delhi: NUEPA.

Dyer, C. (2000) *Operation Blackboard: Policy Implementation in Indian Elementary Education*. Oxford: Symposium Books.

Dyer, C. (2005) Decentralisation to Improve Teacher Quality? District Institutes of Education and Training in India. *Compare* 35(2): 139-152.

Freire, P. (1972) *Pedagogy of the Oppressed*. Middlesex: Penguin Books Ltd.

Forero, C., Escobar-Rodriguez, D. and Molina, D. (2006) Escuela Nueva's Impact on the Peaceful Social Interaction of Children in Colombia. In Little, A. (ed.) *Education for All and Multigrade Teaching: Challenges and Opportunities*. Dordrecht: Springer.

GOI [Government of India] (2007) Report of the Working Group on Elementary Education and Literacy for the 11th Five Year Plan. Unpublished draft report, Planning Commission, New Delhi.

GOI (2002) *Tenth Five-Year Plan*. New Delhi: Government of India.

GOI (1992) *National Policy on Education 1992*. New Delhi: Government of India.

GOI (1986) *National Policy on Education 1986*. New Delhi: Government of India.

GOI (1971) *Education and National Development: Report of the Education Commission, 1964-1966*. New Delhi: NCERT.

Govinda, R. and Bandyopadhyay, M. (2007) *Access to Elementary Education in India: Country Analytical Review*. CREATE Country Analytic Review. Brighton: University of Sussex.

Govinda, R. (2002) *India Education Report: A Profile of Basic Education*. New Delhi, NIEPA.

Govinda, R. and Josephine, Y. (2004) Parateachers in India: A Review. Unpublished draft paper for UNESCO/IIEP. Available online: http://www.unesco.org/iiep/eng/research/basic/PDF/teachers5.pdf [Accessed March, 2007].

Govinda, R. and Varghese, N.V. (1993) *Quality of Primary Schooling in India: A Case Study of Madhya Pradesh*. Paris: International Institute for Educational Planning, and New Delhi: NIEPA.

Gupta, D., Jain, M. and Bala, N. (1996) Multigrade Teaching: Status and implications. Unpublished research paper. New Delhi: National Council of Educational Research and Training.

Jain, M. (1997) Initiatives in Multilevel Teaching at the Primary Stage. Unpublished paper. New Delhi: NCERT. Available online: http://ncert.nic.in/sites/publication/ptchap7.htm [Accessed March, 2007].

Jain, M. (2001) Multiage Classrooms at Primary Stages – Some Initiatives. *Primary Teacher Journal*, Vol. XVVI, No.1. Also available online: http://ncert.nic.in/sites/publication/ptchap7.htm [Accessed March, 2007].

Jagannathan, S. (2001) The Role of Nongovernmental Organizations in Primary Education: A study of six NGOs in India. Policy Research Working Paper #2530. Washington, D.C.: World Bank.

Jeffery, R., Jeffery, P. and Jeffrey, C. (2005) Social inequalities and the privatisation of secondary schooling in North India. In Chopra, R. and Jeffery, P. (eds.), *Educational Regimes in Contemporary India*. New Delhi: Sage Publications.

Jeffrey, C., Jeffery, P. and Jeffrey, C. (2005) Reproducing Difference? Schooling, Jobs, and Empowerment in Uttar Pradesh, India. *World Development* 33(12): 2085-2101.

Jeffrey, C., Jeffery, R. and Jeffery, P. (2004) Degrees Without Freedom: Assessing the impact of formal education on Dalit young men in north India. *Development and Change*, 35(5): 963-986.

Jha, J. and Jhingran, D. (2005) Elementary Education for the Poorest and Most Deprived Groups: The Real Challenge of Universalization. New Delhi: Manohar Publishers and Distributors.

Juneja, N. (2005) Exclusive Schools in Delhi: Their Land and the Law'. *Economic and Political Weekly*, 40(33): 3685-3690.

Kamat, K. N. (1998) Management and Organisation of Learning in Multilevel/Multigrade Situations for School Effectiveness. Paper delivered at the Seminar on Studies on Learning Organisation, Community Participation and School Effectiveness at Primary Stage: International Perspectives. New Delhi: NCERT.

Kaul, G. N. (1977) *The Non-Graded School in India*. New Delhi: Sterling Publishers.

Kingdon, G. and Muzammil, M. (2003) *The Political Economy of Education in India: Teacher Politics in Uttar Pradesh*. Delhi: Oxford University Press.

Kishore, L. (2003) Multigrade Teaching in India: A study of selected practices. Unpublished research paper. New Delhi: UNESCO.

Kumar, K. (1991) *Political Agenda of Education: A Study of Colonialist and Nationalist Ideas*. New Delhi: Sage.

Kumar, K. and Oesterheld, J. (2007) *Education and Social Change in South Asia*. New Delhi: Orient Longman.

Leclercq, F. (2007) Decentralisation of School Management and Quality Teaching. In Kumar, K. and Oesterheld, J. (eds.), *Education and Social Change in South Asia*. New Delhi: Orient Longman.

Lewin, K. (2007) *Improving Access, Equity and Transitions in Education: Creating a Research Agenda*. CREATE Pathways To Access Series, Research Monograph No 1. Brighton: University of Sussex.

Little, A.W. (ed.) (2006) *Education for All and Multigrade Teaching: Challenges and Opportunities*. Dordrecht: Springer.

Menon, L. and Rao, Y.A.P. (2006) Multi-grade for Remote and Disadvantaged Schools. In L. Cornish (ed.), *Reaching EFA Through Multi-grade Teaching: Issues, Contexts and Practices*. Armidale, Australia: Kardoorair Press, Inc.

Muthayan, S. (1999) Case Studies of Multigrade Teaching in India and Canada: Implications for improving primary school effectiveness. Paper presented at the International Seminar of Researches in School Effectiveness at Primary Level. New Delhi: NCERT.

NCERT [National Council of Educational Research and Training] (2007) *Janshala Experiences for Improving Quality of Elementary Education Under SSA (Report of the National Seminar)*. New Delhi: NCERT.

NCERT (2006) National Curriculum Framework for Teacher Education – DRAFT. Available online http://ncte-in.org/curriculum250906.pdf [accessed 5 March 2007].

NCERT (1995) *Self-Instructional Package for Special Orientation Programme for Primary School Teachers*. New Delhi: NCERT.

NCERT (1965) *Second All-India Educational Survey*. New Delhi: NCERT.

NCERT (1990) *Fifth All-India Educational Survey*. New Delhi: NCERT.

Pridmore, P. (2007a) *Impact of Health on Education Access and Achievement: A Cross-National Review of the Research Evidence*. CREATE Pathways To Access Series, Research Monograph No 2. London: Institute of Education.

Pridmore, P. (2007b) 'Adapting the Primary School Curriculum for Multigrade Classes in Developing Countries: A five-step plan and an agenda for change' *Journal of Curriculum Studies* 39(5): 559-576.

Psacharapoulos, G., Rojas, C. and Velez, E. (1993) 'Achievement Evaluation of Colombia's *Escuela Nueva*: Is multigrade the answer?' *Comparative Education Review* 37(3): 163-276.

PROBE Team (1999). *Public Report on Basic Education in India*. Delhi: Oxford University Press.

Raina, V. (2002) Decentralization of Education. In Govinda, R. (ed.) *India Education Report: A Profile of Basic Education*. New Delhi: NIEPA.

Ramachandran, V., Pal, M., Jain, S., Shekar, S. and Sharma, J. (2005) Teacher Motivation in India. Discussion Paper. Bangalore: Azim Premji Foundation.

Rao, Y. A. P. and Rao, A. R. (2006) Community-based Education at Rishi Valley. Paper presented to the International Conference on Local Governance, Texts and Contexts: Perspectives from South Asia. 1-2 February 2006, Lahore, Pakistan.

Sarangapani, P. (2003) *Constructing School Knowledge: An Ethnography of Learning in an Indian Village*. Thousand Oaks, California: Sage Publications.

Seetharamu, A.S. (2002) Status of Elementary Teachers in India: A review. In Govinda, R. (ed.) *India Education Report: A Profile of Basic Education*. New Delhi: NIEPA.

Shukla, S. (1999) A Brief Note on Efforts to Address Multi-grade Teaching in India. Unpublished report. Available online at: http://www1.worldbank.org/education/est/resources/case%20studies/India%20-%20multigrade.doc [Accessed March, 2007].

Sinha, S. (1998) *Vidhi Mein Nidhi (A Trainer's Handbook on Multigrade Teaching)*. Bihar, India: NCERT.

Srivastava, P. (2006) Private Schooling and Mental Models About Girls' Schooling in India. *Compare* 36(4): 497-514.

Swarnalekha, N. (1999) Application of Multiple Interventions for Reducing the Work Load of Teachers and Enhancement in Attainment of Competencies in Students of Rural Multigrade Primary Schools. Paper presented at the International Seminar in Researches in School Effectiveness at Primary Level. New Delhi: NCERT.

Thapan, M. (1991) *Life at School: An Ethnographic Study*. Delhi: Oxford University Press.

Appendix: Selected Photographs of Case Study Schools

Photo 1: Students outside RIVER school, Chittoor District, Andhra Pradesh

Photo 2: Student completing self-led learning activity, RIVER school, Chittoor District, Andhra Pradesh

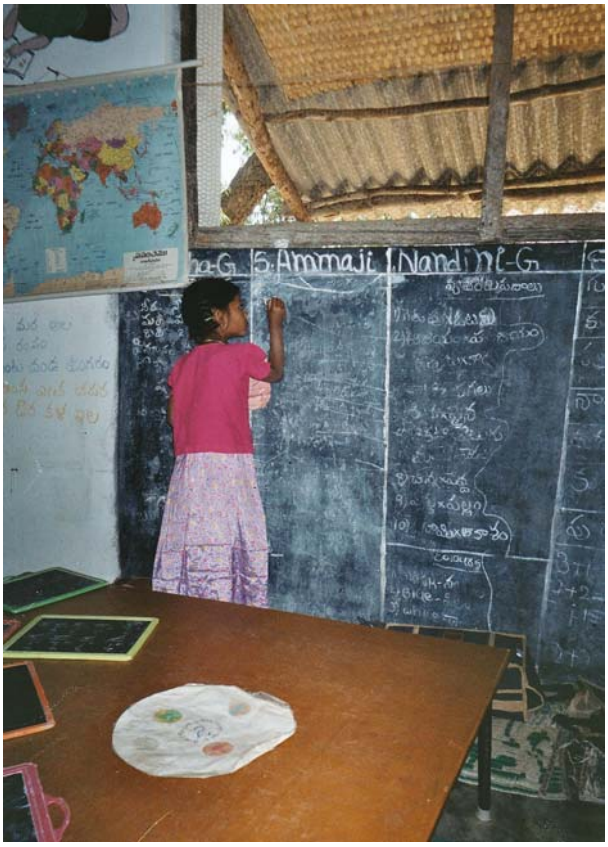

Photo 3: Student writing on her personal blackboard space, RIVER school, Chittoor District, Andhra Pradesh

Photo 4: Government school supported by Bodh Shiksha Samiti, Alwar District, Rajasthan

Photo 5: Students and parents from government school (above), Alwar District, Rajasthan

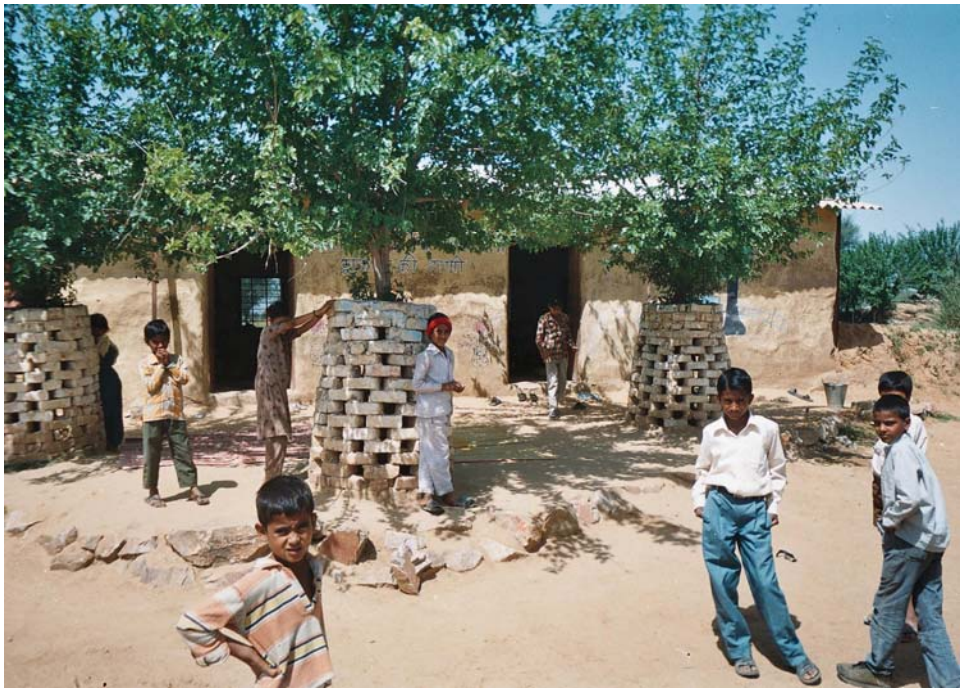

Photo 6: Bodh Shiksha Samiti school, Alwar District, Rajasthan

Consortium for Research on Educational Access, Transitions & Equity

Funded by DFID

Report Summary:
Small schools are a significant feature of the educational landscape in India. These schools are commonly found in impoverished rural communities, where they are often characterised by the need for multigrade classroom management as a result of low enrolment and/or too few teachers, and usually face significant shortages in terms of teaching and learning resources and basic infrastructure. This frequently leads to poor educational quality, student disillusionment, high rates of drop-out and low rates of retention. Ironically, many of these schools, especially in rural areas, were established in direct response to domestic and international pressure to achieve Education For All and the Millennium Development Goals. As such, they represent an important part of efforts to improve access to primary education for the most marginalised students. Current research on small schools in India largely consists of quantitative datasets, while the qualitative dimension of students', teachers', and policy makers' perspectives and experiences has remained largely unexplored. This research therefore applied both qualitative and quantitative research methods in order to develop an understanding of the contemporary context of small schools in India, and gave particular attention to NGO programmes attempting to improve access and quality of education in small school settings.

Author Notes:
Nicole Blum is a Postdoctoral Research Fellow at the Institute of Education, University of London. She completed her PhD in Social Anthropology at the University of Sussex in 2006. Her work over the last several years has included an interest in the ethnography of education, participation and access, education and development, Education for All, and environmental education and sustainable development.

Rashmi Diwan is an Associate Professor in the Department of School and Non-Formal Education at the National University of Educational Planning and Administration, New Delhi. She has worked extensively on critical issues in school and tertiary levels of education, adult literacy and educational management, and policy research.

Address for Correspondence:
CREATE, Centre for International Education
Sussex School of Education, University of Sussex
Brighton BN1 9QQ, UK.
Website: http://www.create-rpc.org
Email: create@sussex.ac.uk