CHAPTER FOUR

RESEARCH DESIGN AND METHODOLOGY

INTRODUCTION

This chapter revisits the purpose of the research and establishes a set of philosophical assumptions to prepare a foundation for the theoretical framework for the research process. The methodological paradigm and the rationale behind the choice of the paradigm follows next. It then describes step by step procedures for collecting the data, their presentation and analysis. There were also some contextual issues in conducting the research which I considered worth mentioning here because of the impact they would have, as much as my own experiences, on the procedure and outcome of the study. These are especially relevant in the context of the Ed.D award.

THE PURPOSE OF THE THESIS AND THE RESEARCH QUESTIONS

The relationship between the purpose of the research and the research questions is implicit in the same set of six areas presented in Chapter One. The purpose of the research was to analyse the way teachers interpreted the curriculum and practised it under varying circumstances. The interests in understanding the practice of curriculum implementation in schools in Bhutan is guided by the Habermasian philosophy, which will be explained a little later.

I have also made a reference to my involvement in the review of the curriculum from 1986 to 1998. The intentions fulfilled by that responsibility are reflected in the key questions outlined in Chapter One. These key questions were determined at the meeting of the committee also alluded to in Chapter One and are used as the basis of investigation in this study. The review and this study had to depend on the same teachers who participated as samples representing the entire teaching population in Bhutan. The same data set and the methods of analysis of the data were used in the review report (Dorji, 1999), although the degree of complexity of analysis is greater in this dissertation. From these six key questions, 54 sub-questions were designed. They are described in the section on the instrument later in this chapter. There were also 15 open questions in the instrument spread between the six key questions, mainly to invite the teachers to write their opinions and ideas freely about the way in which curriculum is being interpreted and practised in the schools. As a result, I was able to collect data for which quantitative and qualitative analysis was necessary. These are explained in the remaining part of the chapter.
An ideal approach to understanding the situation in depth was through participation in what the teachers were actually doing in schools or through non-participatory observations. In both cases, the researcher would have been required to be physically present in the schools. However, owing to the many pressing responsibilities of a full time working person, and not being able to visit schools, the survey questionnaire had to be administered by other colleagues.

Having come thus far, it seems necessary now to look into the theoretical framework that will provide a guideline for the research. The next focus of the chapter, therefore, is the nature of knowledge and philosophical assumptions.

**THE PHILOSOPHICAL ASSUMPTIONS**

As mentioned in Chapter One, this study aims to find out how the curriculum is being interpreted and implemented in schools and the conditions that currently affect teachers’ work. This type of knowledge is useful in making informed decisions that will affect the future development of curriculum policy and guidance in Bhutan and an appropriate teacher education programme. Such knowledge is said to generate from interactions among the people (Grundy, 1987).

Smith and Lovat (1991) also suggest that there are appropriate procedures or methodology, which provide us knowledge of various kinds. For example, empirical measurement is a procedure most appropriate for acquiring knowledge in the physical sciences, while in the human and social science learners become more closely involved with people, including their feelings and emotions. The second procedure is more relevant to this study since the end result has to rely heavily on the ideas and opinions of the teachers. One needs to get to the sources of knowledge in a systematic way, for which certain guidelines are necessary. To be able to do this, certain philosophical assumptions are needed. It has been said that:

An understanding of the philosophic assumptions is important as one begins a research project because questions will come up that were not, perhaps could not be, anticipated (Maykut & Morehouse, 1994:1).

Maykut and Morehouse (1984) also suggested that because qualitative research is relatively new and had not yet established its roots as firmly as quantitative methods, a proper philosophical underpinning becomes necessary.

The philosophical assumptions made for this research are derived from the so called Frankfurt School (Geuss, 1981) in Germany. Jürgen Habermas (1972) as a member of the Frankfurt School, has been recognised as a dominant figure for his contribution to the philosophy of knowledge as duly acknowledged by Thomas McCarthy (1978):
There is scarcely an area of the humanities or social science that has not felt the influence of his (Habermas) thought (quoted in Grundy, 1987:8).

THE THREE COGNITIVE INTERESTS

The proposition was made by Habermas in 1972, that knowledge is underpinned by three 'Knowledge constitutive interests', namely, technical, practical and emancipatory (Grundy, 1987; Smith and Lovat, 1994). "This is a theory about the fundamental human interests which influence how knowledge is constituted or constructed" (Grundy, 1987:7). The fundamental human interest about knowledge is rooted in rationality, which help create and recreate, shape and reshape to construct knowledge, according to Habermas (1972) and Grundy (1987).

(i) The technical interest

The technical interest emanates from the basic human needs to survive and reproduce "both itself and those aspects of human society which are deemed to be of most worth" (Grundy, 1987:11). In order to achieve this end, the environment must be controlled and managed. This, according to Habermas (1972), is similar to the process adopted by the empirical-analytic science whose method of collecting data is grounded in experience, observation, experimentation, and exact measurement. The next step is to deduce rules and laws that are to be followed in learning. As such, a technical interest is "a fundamental interest in controlling the environment through rule-following action based upon empirically grounded law", explains Grundy (1987:12).

The essence of technical interest is it enables us to predict, say, what the weather is going to be like tomorrow, based on our experiences in the study of weather patterns in the past so many years. In order to predict the weather conditions of a time yet to come, we depend on data from our observations of daily weather patterns, data gained from the measurement of rainfall and temperature and wind directions and so on. We follow certain rules in adopting these tools to be able to test and deduce our knowledge about the coming weather. The knowledge thus generated is, in turn, learnt by others as governed by certain physical laws verified by empirical-analytic science.

This premise has most relevance with the physical science, but Grundy also relates technical interests to Aristotle's "human action and the dispositions which inform actions" (Grundy, 1987:23), associated with the action of the craftsman within a certain idea or eidos. I would like to change the analogy, from Grundy's dress-maker, to a traditional scroll painter in the Buddhist world. A scroll painter, in Buddhist belief, performs within the parameters of rules and norms. For instance, he (a scroll painter is normally a man) may have acquired immense skills through years of engaging in the same art and is probably capable of using the imagination and creativity to make different scrolls. However, the artisan is bound by certain norms, which have been
accepted for years and are to be strictly adhered to in the production of scroll paintings. The size of the painting may differ vastly from each other, but the position in which each figure must be drawn in relation to the other and the colours applied to different aspects of the art cannot be altered. In this premise, the artisan's potential for creativity, imagination and subjectivity have not been put to use. This is the world of technically oriented actions or poietike (Grundy, 1987).

Knowledge in physical and technical terms is the knowledge that is "legitimate irrespective of the idiosyncratic interest of particular individuals" (Pring, 1976:6). Perhaps, here lies the problem with knowledge that is oriented to technical interests. There are dogmatic conformity and rule following procedures in the learning process. The artisan does not produce a new painting, he/she simply reproduces one. For Freire (1972) such a process is similar to the concept of banking in which facts were deposited in the learners who received and stored them as if they were depositories in the bank. Creativity and critical faculties have very little role to play.

(ii) The practical interest

The practical interest is informed by a method used for searching the meaning of knowledge by understanding and interacting with the environment. In our social reality experiences are not the same with different people, at different times and in different places. Social experiences such as emotions and feelings could not be studied through observation but only by interaction. The positivistic approach to investigation cannot help us to search for these experiences. The main action in the practical interest, therefore, becomes searching for meaning, and in order to achieve the meaning, the learner must try to explore the inner dimensions, by relating one factor to another. Grundy (1987:14) pointed out:

\[
\text{The practical interest is a fundamental interest in understanding the environment through interaction based upon a consensual interpretation of meaning.}
\]

In the practical interest, we must understand the world we live in rather than be in conflict with it. Grundy argues that human society is essentially governed by consensual norms and reciprocal behaviour. In this instance knowledge is generated by interaction and understanding together rather than by observation from outside. Therefore, the practical interest is informed by the interpretation of meaning through interaction, consensus and interpretation. Access to the facts is provided by understanding the meaning, through dialogues and interaction between the subjects and not through observation, thereby breaking the vertical and linear characteristics like in the objective model of curriculum (for example, Tyler, 1949 and Taba, 1969).

The practical interest energises the mind to ask questions that search for meaning of the situation. So this theory advocates taking the right action (practical action) within a
particular environment. This way of generating knowledge through a meaning-making process was also said to be in line with the "historical-hermeneutic sciences" (Grundy, 1987:13). Facts and information are validated not by observation but by using interpretive methods such as consensual meaning making and subjective interaction. The knowledge acquired by this means can then be internalised.

The knowledge that is informed by practical interests implies action based on understanding and judgement of the experiences amongst humans and between humans and their environment. Grundy endorses Gadamer's (1979) assertion that in trying to understand any textual materials, for instance, we approach with our own predispositions and prejudices. This is important because our prejudices can then be put to test with those of the author of the text. It is then that the text will become meaningful to us. Grundy (1987, 1987:67) writes,

\begin{quote}
The process of understanding or interpreting a text is the process of allowing our own predispositions (pre-judgements) to interact with the meaning that the author of the text intended so that the text becomes meaningful.
\end{quote}

There is active interaction, deliberation and negotiation between the text and the reader each playing the role of subjects rather than one being the subject and the other the object in order to generate meaning. This is where the fundamental human rationality becomes useful. It also becomes obligatory to use the potential in order to establish the knowledge.

(iii) **The emancipatory interest**

In the section on practical interests, I have mentioned Grundy as saying consensual agreement is potentially deceptive and inadequate. Grundy points out that perhaps the most important contribution that Habermas has made to modern philosophy is the emancipatory interest. It is argued that both technical and practical interests lacked the capability of fulfilling the "human orientations towards autonomy and responsibility" (Grundy, 1987: 17). One is coercive and the other deceptive. It is thus important that there is a way out of this trap, and the emancipatory interest comes to the rescue.

In the *emancipatory interest*, the interest stimulated by *reasons* is more fundamental than interests stimulated by inclination or desire. The *practical interest*, for example, is stimulated by inclination. It can be superficial and shallow and susceptible to reversal with a slight problem. The argument is that pure interest, which is oriented to the *emancipatory interest*, is actually grounded in reason. A person truly interested in a certain community's welfare is likely to be driven by reasons rather than simply inclined towards it. In this case there will be more interaction and reflection in order to establish in depth knowledge about the community's background - its history and culture, belief systems, and practices. This way of generating knowledge becomes authentic and
autonomous and so emancipatory, which is free from coercion and deceit, and which is at the heart of Habermas's critical theory.

As can be seen from the foregoing paragraph, the use of reflective power to gain a critical and reflective understanding that leads to the liberation of oneself from ignorance is central to the emancipatory interest. It means "empowerment to engage in autonomous action arising out of authentic, critical insights into the social construction of human society" (Grundy, 1987:19).

THE THEORETICAL ASSUMPTIONS AND WAYS OF KNOWING

The implication of the technical interest as a philosophical assumption for this study has limited benefits. It assumes that obtaining knowledge is possible in a physically controlled environment by counting and measuring as in the positivistic sciences. It also implies that there is no need to interact with the participants, (in this case the teachers) in order to establish some facts about their work. It will suffice to collect the data on some predetermined questions and derive the information one way. However, in a social context, this runs the risk of losing the "idiosyncratic interests" (Pring, 1976) of those who are involved. It cannot capture the emotions, feelings and the nuances that pervade the social phenomena. So the knowledge informed by such a theory is not helpful in understanding a social context such as the school and therefore cannot help to make informed decisions, which is the purpose of this study.

The practical interest, on the other hand, assumes that knowledge is best obtained through interaction and understanding. The inner dimensions of the social life of the teachers – their feelings, anger, confusion and realities can be explored through two-way dialogues.

A method of research that is practically informed, and which allows the participants to express their experiences and share the inner dimensions of their minds will help legitimise the findings of the study. As mentioned above, this way of knowing is based upon consensual interpretation involving researcher and the teachers. The practical interest, thus, carries a tremendous potential for the present study. However, it is also cautioned that the practical interest is not free from an inadequacy to provide a truly authentic knowledge because of the "propensity of the persons to be deceived" (Grundy, 1987:17). This will affect the quality of the knowledge established.

True and authentic knowledge is said to establish when participants are prepared to open the inside of their minds – being honest. The emancipatory interest has this potential. The final knowledge about how curriculum is being interpreted and implemented can be constructed and authenticated through an approach well within the premises of this critical theory. But again, Grundy says there is an apparent lack of
“critical reflection” in the true sense of the word when it comes to this type of negotiation. In the context of this study, it is possible that not all that is expressed by the teachers can be the actual experiences that they would provide. There would be subtleties that might be difficult to capture. It is not as easy as it seems to have questions openly asked to which answers are honestly given. The inner dimensions of the mind such as conscience, willingness to participate, ethics and expertise cannot be taken for granted nor can they be assured.

Having discussed the relevance of the philosophical assumptions, it is now appropriate to decide on a methodology that makes use of the theoretical insights.

**CHOICE OF A PARADIGM AND METHODOLOGY**

A thesis should not start from a methodological point of departure ... (but) rather the methodology should follow from the nature of the problem and the theoretical insights yielded by the conceptual framework (Levin, 1978).

For a novice in such type of work this advice makes a lot of sense, because it is always hard to begin a work as complex as a social research. As Levin quite appropriately points out, the intention of this study is to determine the position of the present school system in Bhutan along the continuum of growth and development discussed in Chapter Three. The theoretical assumptions discussed above, provide the choice of a methodology relevant for the study. Practical interest has a potential for use as a guiding principle for the present study, because it allows the research to employ techniques such as social surveys, historical sources (Burgess, 1985), documents and interviews. It is based on phenomenological considerations whereby the researcher bases the investigation on understanding and perceptions of experiences that occur. Construction of reality is at the heart of research within the practical interest.

It may be appropriate to see what actually is a method and what it does. Methods are the road maps for a researcher and provide guidelines in directing its course of action. Cohen and Manion (1994) describe “methods” as the wide range of approaches used in educational research to gather data that can be used as a basis for interpretation, explanation and prediction. In literature, research methods are usually treated with two point of views, namely, normative and interpretive or quantitative and qualitative.

Qualitative research places emphasis on understanding by interpreting “people's words, actions and records” (Pratt & Loizos, 1992:17) which converges well with the practical orientation to knowing. Through reasons rather than measurement, it attempts to understand a situation as it is constructed by the participants, and captures what they say and do. Qualitative researchers find patterns in the words (and actions) and present those patterns for others to inspect while at the same time staying close to the
construction of the world as the participants originally experienced it (Pratt & Loizos, 1992:18).

Wagner (1994:6-7) suggests that qualitative research requires listening to people in a different way, with heart and head. He was looking for the core values the schools follow and their secrets of success, which are difficult to recognise by quantitative method. As discussed in Chapter Three, whether the teachers are functioning at the stage of Formalism or Meaning, depends upon their own education, training and commitment, but more importantly, on the conditions in which they work every day and their understanding of the contents of the syllabuses and textbooks. These are every day world of realities that affect the way teachers work and the way students learn. Knowledge about these social worlds can be best obtained through the use of qualitative methods, which is informed by the constructivism or practical interest as mentioned above.

Quantitative research (positivism) places emphasis upon measurement, and is consistent with the technical interest. However, in this research the position has been adopted to take a broadly interpretive stance on such data, to treat those as approximations of peoples' constructions rather than to take a quantitative response as precise or as a definitive measurement.

According to Tow (1957), the most important point regarding the choice of methods is its "appropriateness" in investigating the research problems (in Burgess, 1985:3). Thus there is no rigidity involved in the choice of methods that one needs to adopt, but it would rather depend upon theoretical and substantive problems in the research. So, one is left with a wide range of choice, but, nevertheless, choice would be consistent with the knowledge constitutive interest - in this case, the practical.

This study was influenced by two closely related conditions. First, the pressure of my day to day responsibilities as a full time employee could not be avoided. Second, the curriculum review, mentioned in Chapter One and the present study were to use the same instruments, as I was involved in the Education Division's Review as well. The review report was expected as early as possible and was completed in 1999. However, the combination of the review and the present research being based in the same study had important effects on this dissertation. Granting the research in my work, the reality is, however, consistent with Ed.D research at the UNE.

The members of the Task Force appointed for the Review were experienced officials having worked in different capacities from being teachers and head teachers to senior officers of the Education Division. Repeated interactions with these members provided an immense opportunity for open discussion on the problems, the types of information to be collected and the choice of research methods and instruments. In fact the decision to look at several related areas that are likely to influence the implementation of
curricula in schools was reached at these discussions. Having done that, there arose some practical difficulties in collecting the data. Each of the members was fully preoccupied in their own responsibilities that needed their full attention. Ethnographic method involved being most of the time engaged in schools, interacting with and understanding the teachers. These had to be sacrificed. The Task Force decided that the survey was the only practical alternative. Unfortunately, after the final discussion on the questionnaire proposed, the Task Force became rather dispersed on its own for want of time. Consequently, as the research progressed there was no opportunity to discuss alternative interpretations and meanings of the data although this had initially been intended as part of the Ed.D.

SURVEY QUESTIONNAIRE

As decided, the data would consist of ratings of various items to indicate the perceptions of teachers and written comments to open questions about their feelings and experiences. Both types of data were to be collected at the same time through a self-completion questionnaire, that is, involving teachers across primary and secondary schools, teaching in urban and rural schools and across all subject areas.

These two types of data, however, could be used as complementary to each other, which have the potential to help establish the validity more than the risk involved. Bird (1992) also found that while she was using the two methods in separate phases, she also used the two sets of data interactive to test the hypotheses, which were refined over the course of the research. Finally, the effective use of two sets of data also lie in the "computer-assisted analysis of transcripts, and the software link in relevant quantitative data" (Quireshi, 1992) to facilitate the analysis. This writer had depended heavily on the computer programmes for the analysis of both kinds of data.

DATA COLLECTION

It has been noted that "there are no rigid rules" (Jameson, 1999:6) for collecting qualitative data. The only rule was to consider carefully the specific situation for the research, define the information necessary to answer the research questions, and then develop strategies to obtain the information needed. Based on the key research areas mentioned in Chapter One, a question matrix was developed indicating the research items for each area and to identify which questions ought to be used for interview and some areas where observation was necessary (see Appendix VII.a). But as explained above, the interview and observations could not materialise and even the items had to be altered in the Task Force meeting. Nevertheless, the matrix provided a reasonable mental map to prepared the instruments (see Appendix VII.b).
The instruments

The Task Force, appointed as a coordinating body of the curriculum review referred to in Chapter One, was able to hold several meetings between October 1997 and March 1998. The first two meetings tried to conceptualise the study in terms of purpose, problems and focus, and the types of instruments to be used. It was agreed that self-completion survey questionnaires would be used to collect data both for the curriculum review for which the task force was constituted and for the research that I was to undertake with the University of New England. The questionnaire contains 54 statements arranged in six parts taken from the research matrix developed for the purpose (see Appendix VII.b). Against each statement the respondents were to choose a rating from 1 to 5 on the Likert scale, which would indicate their perception of the situation. Leedy (1981) had actually advised against using this provision in the questionnaires, and this researcher's first hand experience echoes the same concern. The number of closed and open questions in each key area are set out in Table 4.1 below.

Table 4.1. The main point of the key question and the number of sub-questions

<table>
<thead>
<tr>
<th>No. Key questions</th>
<th>No. of sub-questions</th>
<th>No. of open questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Curriculum Organisation</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>2. Curriculum Practices</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>3. Assessment and Evaluation</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>4. Teacher Preparation</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>5. Management &amp; facilities</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>6. Support from Education Division and Dzongkhag</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>7. Open question (any other)</td>
<td>--</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>15</td>
</tr>
</tbody>
</table>

As mentioned above, the Task Force members met to discuss a rough outline of items for the instruments. Based on the rough outline instruments were designed by this writer and submitted to the Task Force, which again made modifications. The instruments are not based on any other studies, but were based entirely on the concerns and issues raised by the Task Force members. As can be seen, there are some variations
between Appendix VII(a) and VII(b) in the research items. The interview had to be abandoned due to lack of time. The Task Force then approved the final questionnaire for administration by this writer.

Altogether, nine different questions were included to collect information about the teachers, in addition to the above, their qualifications, levels of school they teach, their academic and professional qualification.

**Pilot testing**

There was some rush in the design and administration of the questionnaire instruments. However, pilot testing was done in five primary and two junior high schools in Thimphu where 20 teachers participated. The purpose of this was to see whether there was any item that teachers found difficult to comprehend, which would need to be edited and made clearer and easier. As a result, a small number of items were edited and simplified. There was no major change in the instruments. The introductory letter was included in the pilot and no changes were made.

**Population and Sampling**

The sampling of the population was carefully worked out during 1997. Since teachers were the main users of the curriculum they would be the most suitable people to participate. A random sampling of the teachers was used.

Several factors determined the sampling. First was the coverage of levels. Since data were to be collected from across the primary and secondary school levels covering the general curricula, it was decided that the sample population should represent all levels of schools from PP to class X.

The second factor was the geographical location of the teachers. It was discussed that this study, as much as possible, must give an overview of schools in different locations. So it was decided that all four categories - urban, semi-urban, rural and remote would be used. The location of schools under the four categories was developed by the Education Division in 1997 in order to determine the posting status of teachers in different parts of the Kingdom. A list was drawn up to identify the number of schools that should be included from each category, but not specified which schools should be included. This was left to the officers who were sent to administer the questionnaire.

Teachers who had joined the service after 1995 were not included in the sample. It was the conviction of this researcher and supported by the Task Force, that they needed some time to gain enough experience in the field and their comments would not be unbiased and influenced by senior colleagues or by their recent experiences at the training institutes which may not necessarily be representative of the reality.
Irrespective of their gender and nationality, all teachers, except Dzongkha Lopoens (the Bhutanese language teachers), were included in the sample. Dzongkha lopoens were excluded from this sample as there was a separate study being carried out, simultaneously to this study, in which they were to participate fully. Moreover, the questionnaires were written in English with very little time for translation and these language teachers have no skills to comprehend the English version of the questionnaire.

Altogether, 700 question booklets were printed and distributed to schools. The respondents also had a choice to remain anonymous in case they wished to be very critical (see Appendix VIII questionnaire booklet).

**Ethical issues**

It was vital to this study, as well as to the education system as a whole that teachers respond to the questionnaire as honestly as possible. For this purpose, an introductory letter to the questionnaire very clearly stated that respondents’ anonymity was expected and that information regarding the data would be used strictly for the analysis.

Information about the questionnaires was communicated to the teachers well in advance in the CAPSS Newsletter No.13, distributed in March 1998, giving the purpose of the study and how the teachers should extend their cooperation. No formal permission to carry out the research was required.

The front page of the questionnaire also contained a letter that was made as friendly as possible and without sounding very official (this was necessary in my capacity as the official in-charge of the curriculum at the head office).

**Administering the questionnaires**

Initially, it was intended that the questionnaires be sent to schools by post, and returned through the post, between April and May 1998, stretching over a period of two months. This would have given teachers adequate time to complete the questionnaires on their own. But owing to time pressure for the completion of the review, this plan had to be altered. I had to settle for a flash visit to the schools, using some of my colleagues, between 12 and 28 May 1998. This alteration in the collection of the data did not affect the geographical distribution of the sample population.

Officials from CAPSS, BBE and EMSS then took the self-completion questionnaires to the individual schools. A meeting between the researcher and the visiting officials was organised before the start of the journey. Each of the officials was first asked to fill the questionnaires as if he/she was the respondent. The purpose of this exercise was not to pilot test but to familiarise the officers with the instruments so that they could help
clarify any problems that emerged in schools while administering the questionnaire. Any questions that arose from this attempt were discussed and clarified. No major difficulties emerged in answering any of the items. Then the administration of the instruments was explained.

The head teachers were asked to spare some time of their teachers so that they could answer the questions. In this way the same officials could take the papers back to Thimphu. In very few cases, the questionnaires had to be left behind because the officials did not have sufficient time to wait overnight. In many cases, schools on the roadside were given the questionnaires and briefed. The papers were picked up on the return journey. In addition, the officials who visited the schools to administer the questionnaire also carried a separate letter to the head teacher of the schools (not appended here).

Finally, the questionnaires had started arriving at the office in Thimphu where the numerical data were fed into Excel Spreadsheet and the non-numerical data were transcribed into Microsoft Word for subsequent analysis. Almost three weeks of effort, working nearly 20 hours a day, resulted in the raw data transcribed onto a word processor and put on a floppy disk ready to bring to the University for a contact period of just five weeks during which the entire data were analysed.

Response rate

Out of 700 questionnaire booklets sent to schools, 400 were filled and returned making the response rate 57 percent. This response is acceptable, being well over 30 percent. In many of the community schools there were only two to three teachers. The 300 unanswered papers were returned by the officials, as there were not enough teachers in the schools they visited. Some were absent, some did not wish to participate and some were recent graduates from the training institutes.

Data analysis

The data were processed in two parts. The first part analysed the numerical data produced by the ratings of respondents as per their perception of the 54 items described above. The Statistical Programme for Social Science (SPSS) was used for this analysis. The second part was the analysis of the qualitative data produced by the written comments in response to the open questions. NUD*IST was used for this purpose.

Analysis of the quantitative data

Cross tabulation was used to explore relationships between the different constructs in the questionnaire. Cross tabulation shows joint frequencies for two constructs classified into categories (Rose & Sullivan, 1996:123-7).
As has been mentioned in the preceding section, 54 items were too many to use as dependent variables to identify differences between groups. It regrouped the items in each section of the questionnaire and reduced them into fewer groupings called factors. Initially confirmatory factor analysis was tried (of the six groups of 54 items). The resultant factors were clearly not congruent with the original six groups of items. Then exploratory factor analysis again proved unsatisfactory since factor labels were difficult to determine and a number of items loaded on more than one factor. Since the items in each group had content validity, Rasch analysis was investigated.

Rasch Analysis

The primary use of Quest (ACER, 1996) is in analysing multiple choice test instruments such as likert type scales to Rasch modelling theory (ACER, 1996). "Rasch analysis provides item estimates, case estimates, and fit statistics; and the results from this analysis can be accessed through a variety of informative tables and maps" (ACER, 1996). Respondents (or raters) do not behave homogeneously while rating the items (Tatum, 1998:6-7), and Rasch modelling, via Quest, can be used to determine if a set of items contribute to a unitary scale. Each of the six groups of items were analysed in this way.

The two groups, which showed most promise, were Curriculum Organisation (CO) and Teacher Preparation (TP). The criterion for estimate of reliability is .7 and infit item score should be bounded by infit mean square parameters (Vine, 2000, personal comments). Table 4.2 shows estimates of reliability to be somewhat less than adequate in three out of four cases, but item fit is near excellent in the case of Curriculum Organisation (Table 4.3) and excellent for Teacher Preparation (Table 4.4). Because of the item fit and the good reliability of case estimates, CO and TP scales were used as dependent variables in MANOVA.

Table 4.2. Estimates of cases and items reliability and infit

<table>
<thead>
<tr>
<th>Groups</th>
<th>Rel. of Case Estimates</th>
<th>Rel. of Item Estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Curriculum Organisation</td>
<td>.61</td>
<td>.45</td>
</tr>
<tr>
<td>2. Teacher Preparation</td>
<td>.70</td>
<td>.32</td>
</tr>
</tbody>
</table>
### Table 4.3: Curriculum Organisation SCALE

<table>
<thead>
<tr>
<th>Item Fit</th>
<th>29/11/99 15:23</th>
</tr>
</thead>
<tbody>
<tr>
<td>all on all</td>
<td>(N = 400 L = 12 Probability Level = .50)</td>
</tr>
</tbody>
</table>

**INFIT**

<table>
<thead>
<tr>
<th>MNSQ</th>
<th>.63</th>
<th>.71</th>
<th>.83</th>
<th>1.00</th>
<th>1.20</th>
<th>1.40</th>
<th>1.60</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 item 1</td>
<td>.</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 item 2</td>
<td>.</td>
<td>*</td>
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<td>3 item 3</td>
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<tr>
<td>4 item 4</td>
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<tr>
<td>5 item 5</td>
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<td>6 item 6</td>
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<td>7 item 7</td>
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<td>8 item 8</td>
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<td>9 item 9</td>
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<td>10 item 10</td>
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<td>11 item 11</td>
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<td>12 item 12</td>
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</tbody>
</table>

### Table 4.4: Teacher Preparation SCALE

<table>
<thead>
<tr>
<th>Item Fit</th>
<th>29/11/99 15:31</th>
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</thead>
<tbody>
<tr>
<td>all on all</td>
<td>(N = 400 L = 9 Probability Level = .50)</td>
</tr>
</tbody>
</table>

**INFIT**

<table>
<thead>
<tr>
<th>MNSQ</th>
<th>.63</th>
<th>.71</th>
<th>.83</th>
<th>1.00</th>
<th>1.20</th>
<th>1.40</th>
<th>1.60</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 item 1</td>
<td>.</td>
<td></td>
<td>*</td>
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<tr>
<td>2 item 2</td>
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<tr>
<td>3 item 3</td>
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<tr>
<td>4 item 4</td>
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<tr>
<td>5 item 5</td>
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<tr>
<td>6 item 6</td>
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<tr>
<td>7 item 7</td>
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<td>*</td>
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<tr>
<td>8 item 8</td>
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<tr>
<td>9 item 9</td>
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<td>*</td>
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<td></td>
</tr>
</tbody>
</table>

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99
MANOVA

The data were processed in a three-way interaction of multivariate analysis of variance in three groups using CO and TP as dependent variables (via case estimates): (a) gender, nationality and initial appointment (again used as proxy for age group) as independent variables; (b) the academic and professional qualifications and the number of in-service courses the teachers attended in the last ten years as independent variables; and (c) location of schools, level of class teaching and subject teaching/class teaching as independent variables.

Teachers teaching at primary and secondary levels were significantly different from each other. So a follow-up test was done in the one-way analysis of variance (ANOVA) to see where the significant differences were.

Analysis of Non-numerical data

NUD*IST stands for Non-numerical Unstructured Data Indexing Searching and Theorising (QSR Ltd. 1998). It is a computer software package to help researchers in handling qualitative data analysis by supporting the process of coding data in an index system and then facilitates in searching text or searching patterns of coding and theorising about the data. Responses given in written text (or interview transcripts) and in numerical forms can both be analysed this way. It has been said "... capacity to evaluate the text itself against qualitative variables from the survey has the potential to greatly enrich the interpretation of the data. From the qualitative end, NUD*IST has always encouraged the incorporation of factual data about respondents in the qualitative database" (Bazeley, 1999:281). For example, one can question whether there is a difference between the responses given by different categories such as gender, nationality, or academic qualification. So, it is particularly suited to analysing interviews, dialogues and written texts. In the case of this research the qualitative data consists of the written comments provided in response to the open questions in the self-completion questionnaires.

Indexing and coding the data

Segments of the documents were coded under a number of “nodes”, which are used to store the segments as ideas. Unconnected ideas were coded under “free nodes”. There were six free nodes each representing the different areas: “curriculum organisation (CO)”, “curriculum practice (CP)”, “assessment and evaluation (AE)”, “teacher preparation (TP)”, “management and facilities (MF)”, and “support from education (SE)”.

These nodes together with those containing biographical data were stored in hierarchical order called the Index Tree that helps organise the data, clarify the concepts and
maintain relationships between different concepts and ideas. As the coding of the documents continued, the researcher could edit, re-code and add more nodes and sub-nodes (or children) or delete them depending on the decisions made by looking at the ideas in the document. The researcher can ask questions and decide whether some ideas are connected to a previously coded idea or needed to create a separate node or children. The connected ideas then are coded in the existing node while a different idea could be coded under a new node. There was a tremendous amount of flexibility for the researcher to alter and improve the coding system as one progressed through the documents (see Appendix IX showing a sample of nodes produced by NUD*IST).

Searching through the index system allowed the researcher to make alterations. Some interim results could be browsed and saved in word documents for use in the results. The number of citations for each node and sub-node can be acquired using the index search. The index is then converted to matrix tables to explore the relationships amongst the nodes, which can also be saved in words for use in the results.

**CONCLUSION**

This chapter began by looking at the philosophical assumptions underpinning the research questions and an appropriate choice of methodology. The practical and emancipatory cognitive interests of Habermas having relevance to the research were experienced in the analysis of the data. The written comments were a form of dialogue, which represented teachers’ views on the curriculum and the conditions that affect their work, while the researcher was making sense of each of the comments and reacting by placing the dialogue texts under an appropriate theme node. Although there was no direct face-to-face confrontation, the written communication between the teachers and the researcher seemed at times quite interesting as one could sense the frustrations of teachers as one reads through the part where they write about their own problems. The next chapter presents the results.
CHAPTER FIVE

RESULTS

INTRODUCTION

This chapter will discuss the results using the data processed through quantitative and qualitative software as mentioned in Chapter Four. The quantitative data and the qualitative data will be discussed as complementary to each other.

TEACHERS’ BIO DATA

Gender

The sample consists of 60 percent male and 40 percent female. Considering the national male-female teacher ratio of 70:30 (ED, November 1997), females in the current study are slightly over represented.

Nationality

Nationality of teachers was considered important because a greater number of the non-Bhutanese teachers are better qualified, while most Bhutanese have relatively low personal education but are trained. The sample consists of 77 percent Bhutanese while 23 percent are non-Bhutanese. However, as the national ratio is 90:10, the sample is somewhat over represented by non-Bhutanese, but the clear majority is Bhutanese.

Seniority by appointment in teaching

Thirty-nine percent of the sample teachers had been working before 1985. So sixty-one percent of the sample teachers began to teach from 1986 onwards when reforms in our curriculum had just begun at the lower primary level. Those teachers who started to teach from 1990 onwards, would have had the taste of the reforms while they were on practice teaching at the pre-service training institutes.

Academic and professional qualifications

Academic and professional qualifications are considered important for this research for reasons that better qualified teachers would be more likely to respond more positively to the changes than less qualified teachers (see p. 60-2).

Table 5.1 shows teachers whose academic qualifications are less than class X are slightly under-represented in the sample. They may be among those teachers who were
appointed before 1982 when shortage of teachers compelled the Education Department to recruit teachers who did not complete secondary education (i.e. class X). About 52 percent of those in the sample had class X (ICSE and equivalent). Together, these two consist of about 64 percent of the total sample population. Teachers with a first degree are over represented in the sample. Broadly, the sample is representative of the population based on academic qualification.

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Sample %</th>
<th>National %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below class X</td>
<td>12.7</td>
<td>20</td>
</tr>
<tr>
<td>ICSE and equivalent</td>
<td>51.7</td>
<td>54</td>
</tr>
<tr>
<td>ISCE or equivalent</td>
<td>11.4</td>
<td>14</td>
</tr>
<tr>
<td>BA &amp; B.Sc.</td>
<td>19.0</td>
<td>7</td>
</tr>
<tr>
<td>Masters</td>
<td>04.0</td>
<td>5</td>
</tr>
<tr>
<td>Others (e.g. PhD)</td>
<td>00.3</td>
<td>Not available</td>
</tr>
</tbody>
</table>


Again, as in the case of academic qualifications, more than two-thirds of the teachers have just two years of training (Table 5.2).

<table>
<thead>
<tr>
<th>Professional Qualifications</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untrained</td>
<td>5 (1.5)</td>
</tr>
<tr>
<td>PTC and equivalent</td>
<td>219 (67.0)</td>
</tr>
<tr>
<td>B.Ed &amp; equivalent</td>
<td>79 (24.0)</td>
</tr>
<tr>
<td>M.Ed. &amp; equivalent</td>
<td>5 (1.5)</td>
</tr>
<tr>
<td>PGCE</td>
<td>20 (6.0)</td>
</tr>
<tr>
<td>Total</td>
<td>328 (100)</td>
</tr>
</tbody>
</table>
The implications concerning levels of general education and training are clear (see above p. 62).

**In-service courses**

In-service courses for teachers (INSET) have become an important tool for teacher development, although they are mainly organized by CAPSS to familiarize teachers to changes in curriculum. Between 1990 and 1998, an average of 15 in-service courses had been conducted annually for more than ten thousand teacher places and at a huge cost of over 20 million Ngultrums (cUS$500,000 at 2000 exchange rate), according to an INSET review (Laird, et al. 1999).

The data shows that between 1986 and 1998, some 25 percent of the sample have attended one in-service course. This is less compared with the findings of Laird et al (1999). Thirty-three percent indicated attending two courses and almost eleven percent indicated attending three. Four teachers (one percent) have attended an in-service programme almost every year since 1986! Ninety-five teachers, consisting of almost 24 percent, indicated that they had not attended INSET. While some of these would have been relatively new in the job, this proportion appears quite high and important during a time of major curriculum change. A recent INSET study found out that 57 percent of the teaching cadre in Bhutan was less than 30 years of age and 40 percent had been in the job for less than five years (Laird et al, 1999:39-40).

**Location of teachers in schools**

Location of sample teachers in schools has implications for the implementation of any new curriculum. Table 5.3 shows the distribution of sample population under four categories of places. While urban teachers are under represented, semi-urban teachers are represented somewhat more. Rural teachers are over represented but remote teachers are also under represented. But when the sample from urban and semi-urban categories are combined, then the sample representation is similar to the national population (79%). Similarly rural and remote schools combined are also represented in the same proportion (21%).
Table 5.3. Distribution of sample teachers in different locations (N=394)

<table>
<thead>
<tr>
<th>Location of schools</th>
<th>Sample %</th>
<th>National %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban schools</td>
<td>36</td>
<td>47</td>
</tr>
<tr>
<td>Semi-urban schools</td>
<td>32</td>
<td>22</td>
</tr>
<tr>
<td>Rural schools</td>
<td>26</td>
<td>19</td>
</tr>
<tr>
<td>Remote schools</td>
<td>06</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>


Level of classes taught by teachers in the sample

Curriculum change initially started with the primary level with NAPE and therefore these teachers have longer experiences of change compared to those in the secondary level. Moreover, primary teachers are all Bhutanese whereas in the secondary level the teaching population is mixed with expatriates from India. Table 5.4 shows more than three quarters of the sample are from primary level.

Table 5.4. Number and percentage of sample population from level of classes

<table>
<thead>
<tr>
<th>Level of classes</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary (PP-VI)</td>
<td>280</td>
<td>78</td>
</tr>
<tr>
<td>Secondary (VII-X)</td>
<td>110</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>390</td>
<td>100</td>
</tr>
</tbody>
</table>

The last question in the bio-data section asked the respondents to indicate whether they were class-teachers or subject teachers. Only 12 teachers (three percent) were class-teachers and 318 (79.5 percent) were subject teachers.

In summary, out of the 2,500 teachers in Bhutan (excluding 70 teachers from private schools who were not included in the sample), the sample represented 16 percent of the
total teacher population. But the sample covered a wide range of teachers from rural and urban and from primary to secondary teachers. The sample shows that the majority of the teachers in Bhutan have only completed secondary schooling with only two years of a primary teacher certificate course. It means that Bhutanese schools have generally low qualified teachers and many had low level of general education as well (indicated by three quarters with class X and below shown in Table 5.1).

THE SIX RESEARCH THEMES

Six key research areas were identified in Chapter One, which were then developed into research questions and data was collected accordingly and analysed as mentioned in Chapter Four. Each of these six key questions has a number of sub-questions. The results of the analysis of 54 items and 15 open questions are presented within the corresponding research areas or themes (teachers’ comments in the last open question (#7) in the questionnaire are used in appropriate key areas).

As mentioned in the quantitative data analysis in Chapter Four, significant differences between personal information as independent variables using factors or scales of the six key research areas as dependent variables were tested in multivariate analysis. Only Curriculum Organisation (CO) and Teacher Preparation (TP) produced scales. When the CO and TP were used as dependent variables in the general linear model (multivariate), that is MANOVA, to determine significant differences between groups, CO did not show any significant differences. So only TP, which showed significant differences between groups, are reported in this chapter. Apart from TP, the quantitative results of the other five areas will be presented using descriptive statistics. The figures in the cells of the descriptive tables for quantitative data based upon analysis of items in each key research area show the percentage of respondents for which a scale of 1 to 5 was used. In the cells these are shown as (1= SDA (strongly disagree), 2= DA (disagree), 3= U (uncertain), 4= A (agree), and 5= SA (strongly agree).

For the purpose of organisation, the key research topics constitute the main themes in the chapter. In each of the main topics, results are again presented in several sub-topics that were derived from the data analysis.

CURRICULUM ORGANISATION

This section is presented under four sub-headings – (i) syllabuses and manuals, (ii) textbooks, (iii) values and (iv) issues in teaching values. In this first key research area, there were twelve items for rating and three open questions for written comments on
syllabus, textbooks and manuals; on different values found in the syllabus; and comments on issues in teaching values in the schools. The syllabuses and manuals were analysed by placing them together in one node of the NUD*IST tree and textbook as separate because they are used directly by teachers for planning their lessons.

(i) **Syllabuses and manuals**

In Table 5.5, 80 percent (or 320 teachers) in the sample agreed or strongly agreed that syllabuses contained defined objectives (item 1), but less teachers (59 percent or 326 teachers) agreed that syllabuses contain clear guidelines on assessment (item 2). Significant figures are highlighted in the table. Twenty-two percent were not sure about item 2. In item 4, more than three-quarters of the teachers agreed that contents in the syllabuses were relevant. However, 50 percent of the sample teachers think there were too many project works to do and 36 percent (144 teachers) think syllabuses were too vast (items 5 & 6). 69 percent think the handbooks for teachers were flexible for use in any part of the country and only 13 percent have problems with them (item 7). The ratings in the descriptive data suggest that teachers' interpretation of the syllabuses is consistently positive in terms of relevance (items 4 & 8) and less positive in terms of actually using the syllabuses (items 5&6).

**Table 5.5. The percentage of ratings on organisation of curriculum (N=400)**

<table>
<thead>
<tr>
<th>No</th>
<th>Questions on curriculum organisation</th>
<th>1 (SDA)</th>
<th>2 (DA)</th>
<th>3 (U)</th>
<th>4 (A)</th>
<th>5 (SA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Syllabuses contain clearly defined objectives</td>
<td>1.8</td>
<td>8.9</td>
<td>9.1</td>
<td>67.3</td>
<td>12.9</td>
</tr>
<tr>
<td>02</td>
<td>Syllabuses contain clear guidelines on how to assess student performance</td>
<td>1.8</td>
<td>17.6</td>
<td>21.7</td>
<td>48.2</td>
<td>10.7</td>
</tr>
<tr>
<td>04</td>
<td>Contents in the syllabuses are relevant for children’s learning needs</td>
<td>1.0</td>
<td>8.1</td>
<td>13.7</td>
<td>59.8</td>
<td>17.3</td>
</tr>
<tr>
<td>05</td>
<td>Project works are too many for students to cope with</td>
<td>6.8</td>
<td>43.0</td>
<td>17.6</td>
<td>21.8</td>
<td>10.8</td>
</tr>
<tr>
<td>06</td>
<td>The present syllabuses are too vast to cover in time</td>
<td>9.2</td>
<td>47.2</td>
<td>6.9</td>
<td>21.8</td>
<td>14.9</td>
</tr>
<tr>
<td>07</td>
<td>Teacher’s handbooks are flexible</td>
<td>2.2</td>
<td>11.1</td>
<td>19.7</td>
<td>58.9</td>
<td>8.1</td>
</tr>
<tr>
<td>08</td>
<td>Contents in the syllabuses are relevant for Bhutanese children</td>
<td>1.5</td>
<td>10.2</td>
<td>13.5</td>
<td>62.1</td>
<td>12.7</td>
</tr>
</tbody>
</table>
195 teachers (54 percent) wrote on the syllabus, while 135 (46 percent) of them wrote on the manuals. In the NUD*IST analysis of syllabuses/textbooks comments, vastness scored the highest with 79 documents coded across the range of syllabuses. For vastness, Math was lengthier in the primary (7 citations) compared to secondary (2 citations). This was the same as English, which was marked to be vast in primary (10 citations) compared to secondary (only 2 citations). In the case of Science and Social Studies, the vastness was said to be more in secondary than in the primary. The problem of vastness was spelled out in the comments quoted below which reflect the general opinions of the teachers.

When we give more attention to check children's written work regularly, the coverage of the text/language structure lessons with many activities becomes a serious issue. Time factor with classes 35-40 periods a week. Our laziness might be a factor. But not that alone (ID 404).

Syllabus[es] especially for classes IX and X are too vast to be covered effectively within the prescribed time (ID 208).

Apart from the content in the syllabus, "in Math for lower primary [classes] more activities are given [making it] difficult to finish in time" (ID 337). A typical comment made on the English syllabus goes like this: "English manual of Classes PP-V have vast content along with so many activities" (ID 342). In science, most of the problem of vastness seems to occur in Classes VII and VIII (A new integrated science was introduced in these two classes between 1999 and 2000, so the concerns of the teachers would be different now.) In Social Studies, the main complaint was about content and activities being too vast for the number of periods given to this subject in the timetable (only 4 periods of 40 minutes each in a week). Vastness in the syllabuses seems to be related to the activities that are required to be done rather than the actual length of the contents.
This seemed especially problematic in History in classes IX and X which also included Citizenship Education.

The syllabuses, textbooks and manuals are relevant [to] the children's learning [needs]. It [gives] equal importance to all the skills and activities that are to be learned by the students (ID 401).

This remark from the teacher also explains a sense of relevance. Invariably, the problem was that although relevant, there was a deficiency in the supply of the books for teachers as well as for children. One comment conveys this idea:

All are relevant and helpful but some textbooks are not sufficient and manuals are not [supplied] in time. Therefore we are forced to use the old ones which [are] outdated" (ID 115).

Insufficient and late supply of the materials was a problem quite commonly expressed in the data. There were 51 documents in this set, which represented only about 13 percent of the total respondents (N=381). Nevertheless, this problem raised a deep concern, since these comments about availability were clearly unsolicited.

Only seven teachers said that there had been too frequent changes in the syllabuses. But 20 documents pointed out that syllabuses did not tally either with the textbooks or manuals. For example: “Syllabuses are relevant but [textbook] contents do not tally with the syllabus (class VI English)” (ID 246) and “the teachers manuals for Math [do] not cover all parts of the chapter” (ID 321). On the other hand, manuals seemed to help teachers (23 documents) in their lessons because they pointed out that “without manuals teachers are also lost” (ID 112).

However, there were several teachers (39 documents) who said manuals needed improvements. “[In the] class I Math manual the objectives are randomly arranged where children get confused (ID 118). Some suggestions to improve the syllabuses include:

In the manuals if an in-depth explanation regarding the skills being practised are given it could help teachers to understand better and implementing could be done better. It pertains to the different years of graduation of different teachers (ID173).

In the beginning of this chapter, the biographical data section showed that there were teachers who were appointed in different times, which were used as proxy for age
groups. One interpretation could be that only the teachers who came recently have learnt newer skills to teach.

It is interesting to note that many citations mentioned the need for manuals to guide the decisions on the standards. Teachers needed readymade information in the manuals, which could be interpreted as a sign of over dependence on the guidelines for classroom teaching. A secondary teacher quoted below represents a general view expressed:

[Manals] give great guidelines for the teachers. Even then I feel, the manuals of class VII and VIII should contain more guidelines [to] improve the standard of students. Teachers can get clear ideas about the teaching part by which he/she can avoid explaining unnecessary points to their level (ID 249).

Manuals in Science do not give any proper answer to the activities (ID 338).

In the lower classes new EVS manuals should be improved.

Too many activities in EVS and objectives are quite simple which we cover in English. After doing too many activities they get little knowledge. There should be textbooks for EVS (ID 341).

This citation, and several others, which they represent, indicates that EVS classes should make use of textbooks along with the manuals, and that too in much greater detail. It appears that the manuals and textbooks, for them, should contain all the answers to the activities. A very important set of problems that emerged in the syllabus section was a request for supply of the materials in time and in sufficient quantity. The syllabuses were either not supplied in time or supplied in insufficient quantities. However, taken overall, these data show that teachers’ comments are more on the difficulties in activities rather than make professional choices.

(ii) Textbooks

In the qualitative data 167 or 46 percent of all citations on Curriculum Organisation were about textbooks. Forty-one teachers (25 percent) made positive remarks on textbooks while 75 percent of them mentioned some problems or difficulties regarding the use of the books. Two representative positive remarks on textbooks are quoted below:

On the happier note, the science teachers appreciate CAPSS efforts in bringing out Biology manual for class VIII quite brilliantly. The paper quality and pictures in our textbooks are also superb (ID 208).
As far as I am concerned there is not any comment to be made. As it is all up to the mark. I had been using the same syllabuses, textbooks and manuals for the their level … I am talking about the NAPE classes (ID 444).

The negative comments were related to difficulty, irrelevance and vastness of content of the books (88 citations), shortage or late supply (22 citations), physical quality of the books (11 citations) and about changing the books (5 citations). Some representative comments about textbooks are quoted below:

The class 7 Biology textbook is a very good work book, as far as subject matter is concerned, [but] sad to say there isn't any content, it is left entirely to the teacher to provide the content (ID 147).

Math textbooks for class IV and V are too vast. Words are not relevant to the standard of the students who are studying in the remote areas (ID 159).

Textbook - IX and X Maths has less examples to enable students to learn them selves, too many questions. Manuals? No manuals (ID 193).

Textbooks like Social Studies for class IV - V and Science textbook for class IV -VI contain very less background information for the children (ID 231).

Textbook contains less information but many activities or questions. There is hardly any examples based on the topic (ID 255).

Language of the textbooks is very tough for students to understand. Language should be simple (ID 294).

The citations above convey two main messages. First, the textbooks do not have enough information and background information and examples for children to do the activities. Second, the language and vocabularies are too tough for the students’ comprehension.

Too-frequent changes of textbooks is generally at the secondary level as illustrated by this representative quote:

The textbook for class IX and X seem to be changing [too frequently]. For example. 'Julius Caesar' stayed for a longer period but 'As You Like It' got [replaced] within a short period. Now we have 'Merchant of Venice', [then] (it says 'As You Like It' after two years) (ID 216).
Comments about the supply are generally like the ones quoted below:

All are relevant and helpful but some textbooks are not sufficient and manuals are not reaching in time. Therefore we are force to use the old ones which is outdated (ID 115).

Most of the time the supply of textbooks, manuals and syllabuses are supplied in inadequate or not supplied at all in time (121).

Insufficient supply of textbooks cause major problems especially to schools which do not have boarding. In our school in class VII students still do not have Geography textbooks and almost all other subjects are on sharing basis (ID 280).

Comments about the physical quality of the books varied from bindings ‘not durable’ for primary classes and quality of papers and pictures in the books as not attractive.

To summarise, apart from the language being tough for students, the problems faced by teachers are generally the questions and activities that require children to search for information from sources other than textbooks. Frequent changes in books happen usually at classes IX and X as these classes were following Indian syllabuses where changes of books occur almost every two years. Untimely supply of books has caused difficulties for teachers especially when they have large number of students. In the data, supply is a general problem across all types of schools irrespective of their locations.

(iii) Values

There were two items on values in the quantitative data (Table 5.6 below). Item 3 asked whether “traditional values were adequately covered in the syllabus” while item 9 asked whether “Bhutanese values are adequately given in the textbooks”. A little over 50 percent agreed that values were covered adequately in both syllabuses and textbooks. And a little over 20 percent in both cases disagreed. This clearly showed that there was some kind of consistency in the way teachers respond to both items, but it also showed that values education coverage appeared was contested by about one-fifth of teachers. Another one-fifth to one-quarter of teachers were uncertain about Bhutanese values (items 3 & 4).
Table 5.6. Percentage of responses to values in curriculum (N=400)

<table>
<thead>
<tr>
<th>No</th>
<th>Questions on values</th>
<th>1 (SDA)</th>
<th>2 (DA)</th>
<th>3 (U)</th>
<th>4 (A)</th>
<th>5 (SA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>03</td>
<td>Traditional values are adequately covered in the syllabuses</td>
<td>4.1</td>
<td>21.3</td>
<td>21.9</td>
<td>41.1</td>
<td>11.6</td>
</tr>
<tr>
<td>09</td>
<td>Present textbooks deal with Bhutanese values adequately</td>
<td>3.4</td>
<td>19.0</td>
<td>26.4</td>
<td>42.5</td>
<td>8.7</td>
</tr>
<tr>
<td>10</td>
<td>Games and sports are given less importance at present *</td>
<td>18.6</td>
<td>35.5</td>
<td>10.7</td>
<td>25.3</td>
<td>9.9</td>
</tr>
</tbody>
</table>

*Note: this item did not appear as a theme, so there it is not presented in the results.

In the qualitative data analysis, 345 documents (teachers) were cited in this sub-section which represented almost 86 percent of the total respondents. In presenting the data, the values were sorted out into seven different categories. These included national values, for example, learning about the country, the King and the people, dresses, language, study of the country’s history, and symbols like the flag, anthem, national animals, flowers, bird and so on. The cultural values included the study of festivals and code of ethics. Religious and moral included learning about saints, monastery and merits of virtues and good deeds. Social and work value included living together, thinking for the good of others and dignity of labour, while personal and environmental values included health, discipline, and values of wildlife and importance of forest conservation in mountainous regions.

In Table 5.7 the figures in the columns indicate the number of citations against each type of value at the two levels of schools – primary and secondary. Although this difference was not shown in the quantitative data, the qualitative data at primary level showed proportionately higher citations in national, cultural and environmental values. Across the system, cultural values represent the highest number. This indicates that primary curriculum has more Bhutanese values compared to secondary curriculum.
Table 5.7. Number of respondents for different values across primary and secondary teachers (N=373)

<table>
<thead>
<tr>
<th>Types of Values</th>
<th>Primary (N=280)</th>
<th>Secondary (N=110)</th>
<th>Total (N=390)</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>74</td>
<td>15</td>
<td>89</td>
</tr>
<tr>
<td>Cultural</td>
<td>94</td>
<td>20</td>
<td>114</td>
</tr>
<tr>
<td>Religious</td>
<td>39</td>
<td>12</td>
<td>51</td>
</tr>
<tr>
<td>Social</td>
<td>48</td>
<td>14</td>
<td>62</td>
</tr>
<tr>
<td>Work</td>
<td>21</td>
<td>6</td>
<td>27</td>
</tr>
<tr>
<td>Personal</td>
<td>9</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>Environmental</td>
<td>11</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>296</td>
<td>77</td>
<td>373</td>
</tr>
</tbody>
</table>

The qualitative data also indicated various sources of these values (102 citations), as illustrated in the following representative quotes:

The topics like your family [and] our neighbours in class V social studies prove some very important values to the children. The CAPSS newsletter sometimes provides explanation and illustration on some of the values. ‘Your family’- this topic makes the children aware of the value of helping each other and so on. But provision of Bhutanese values in our syllabuses is inadequate (ID110).

The Education Bulletin [is] being prepared and sent to schools. From this we could see and share [values]. Through CAPSS Newsletter we can observe some Bhutanese values. For morning and evening prayers, the prayer books were circulated [to] the school. Traditional story and song books were printed and supplied to the schools. Some chapters from the textbooks [mention] Driglam Namzha (etiquette). Also the textbooks cover the chham (Mask Dances)(ID372).

Other sources were mentioned as fables and stories in language subjects as well as teachers as role models for the children.
In brief, traditional and moral values were included in the curriculum. Although more primary teachers said that syllabuses and textbooks included values than secondary teachers, when it was viewed across the system (Table 5.7) the citations were relatively smaller on different values. This is consistent with the quantitative data (Table 5.6) where responses for items 3 and 9 were just about 50 percent. This means, not all the teachers saw the values explicit in the curriculum.

(iv) Main issues in value teaching

The third part of the open question on curriculum organisation was that of the issues related to value education. There were 312 documents coded in this sub-section. About ten issues were identified from these documents which are: parental guidance, youth problems, bad influence such as media (in urban areas), peers, other people, lack of exposure and awareness, lack of teachers (and therefore lack of proper care to children), relationship with other people, abuses, discipline and materialism. Of these, parental guidance, youth problems and lack of teachers were the main concerns. Some comments are cited below to reflect these concerns in the teachers’ own words:

The result of learning is students seem poor due to family background. Most of the parents think that they have completed their duties by sending their children to the school and they pay less attention to their children at home. As being a day school after they [go] home they are on their own without any guide and depend fully on spoon feeding from the teacher (ID 188).

“Students do not get the opportunity to learn [and practice] values other than in classrooms” (ID 394). This would happen if teachers think of being the role model for their students and to also express a clear dissatisfaction with parents’ roles. With regard to the youth problems, teachers generally point at drug abuses such as smoking at an early age as well as peer and media influences. Some even feel that social values are overshadowed by modernisation.

Some other causes of difficulties in teaching values education were mentioned as lack of resources and infrastructure, overcrowding of classroom and shortage of teachers. Issues in values education were common problems related to youth. Parental care as an issue was something to be concerned about, according to the teachers.

Summary of Curriculum Organisation

In summarising, syllabuses and textbooks provided to schools appeared to be generally relevant for Bhutanese children. The main problem in these materials was the vastness
of some apparently caused by the numerous activities and enquiry-based questions that were given for children to find information for themselves. This indicated another problem, which was the teachers’ interpretation of the materials. This means that there was a gap between what was intended and what was implemented. The manuals and textbooks were the basis upon which planned lessons should build the knowledge and skills of children under the guidance of the teacher. The data indicated that teachers needed more detailed information for all activities indicating teachers’ choice of completing the entire activities rather than selecting the relevant ones by making professional judgements. Some other problems were related to supply of syllabuses, textbooks and manuals in time or shortage, which affected the children. A lot of values were apparently incorporated into the syllabuses, but common problems related to youth and parental negligence affected their impact on the children.

CURRICULUM PRACTICE

As with curriculum organisation, descriptive data will be used for the purpose of understanding the practice of curriculum (or teaching) in the classroom. Similar to the earlier section on curriculum organisation, the quantitative data are divided into two for presentation of the items in relevant sub-sections. The qualitative data analysis on this section is presented to augment the quantitative data. There were 376 documents for this (which is about 94 percent participation). The comments in this section will be presented under four sub-headings - (i) satisfactory teaching, (ii) professional development in schools, (iii) difficulties experienced in teaching, and (iv) issues affecting teaching in schools.

(i) Satisfactory teaching

In Table 5.8, more than 60 percent of the respondents disagreed or strongly disagreed they did not depend on textbooks to teach their lessons (item 1). About the same proportion of teachers say even as they gained experience they needed to make lesson plans (item 2). It is interesting to note that in some way, these ratings reinforce the concerns expressed in the previous section on “inadequate information in the textbooks”, where the qualitative data indicated that teachers were rather dependent on textbooks. The data indicate strong teacher support for memorisation (items 3 in Table 5.8).
Table 5.8. Curriculum practices (or teaching) in schools (N=400)

<table>
<thead>
<tr>
<th>No</th>
<th>Questions on curriculum practices</th>
<th>1 (SDA)</th>
<th>2 (DA)</th>
<th>3 (U)</th>
<th>4 (A)</th>
<th>5 (SA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>I do not depend on textbooks for all my lessons</td>
<td>12.4</td>
<td>53.2</td>
<td>7.1</td>
<td>23.8</td>
<td>3.5</td>
</tr>
<tr>
<td>02</td>
<td>As I gain experiences there is no need for lesson plans</td>
<td>26.0</td>
<td>46.0</td>
<td>6.3</td>
<td>14.9</td>
<td>6.8</td>
</tr>
<tr>
<td>03</td>
<td>Learning by memorisation is good</td>
<td>29.6</td>
<td>37.0</td>
<td>19.2</td>
<td>12.2</td>
<td>2.0</td>
</tr>
<tr>
<td>06</td>
<td>Children should be given more time in school</td>
<td>6.6</td>
<td>20.3</td>
<td>18.0</td>
<td>47.6</td>
<td>7.6</td>
</tr>
<tr>
<td>07</td>
<td>I believe child centred teaching is good for Bhutan</td>
<td>2.3</td>
<td>8.1</td>
<td>18.1</td>
<td>47.8</td>
<td>23.2</td>
</tr>
</tbody>
</table>

Table 5.9 indicates different types of satisfactory teaching taking place in the schools overall, according to the teachers. One-eighth of teachers thought their good teaching was activity based and about the same proportion thought their good teaching was formal. There was a good relationship between the teacher and students, according to some teachers. It is evident from the comments that most teachers thought students learnt better and paid more attention to teaching when there were activities and when they used examples that were related to their lives.
Table 5.9. Number of documents showing good teaching in classrooms across all levels of schools
(N=203)

<table>
<thead>
<tr>
<th>Types of good teaching.</th>
<th>PP-III (N=142)</th>
<th>IV-VI (N=125)</th>
<th>VII-VIII (N=56)</th>
<th>IX-X (N=50)</th>
<th>Total (N=373)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity lessons</td>
<td>32</td>
<td>7</td>
<td>4</td>
<td>8</td>
<td>51</td>
</tr>
<tr>
<td>Field work</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Good rapport</td>
<td>13</td>
<td>8</td>
<td>3</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>Formal teaching</td>
<td>16</td>
<td>16</td>
<td>6</td>
<td>12</td>
<td>50</td>
</tr>
<tr>
<td>Question/answer</td>
<td>3</td>
<td>8</td>
<td>1</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Making impact on learning.</td>
<td>23</td>
<td>19</td>
<td>9</td>
<td>8</td>
<td>59</td>
</tr>
<tr>
<td>Total</td>
<td>88</td>
<td>60</td>
<td>23</td>
<td>32</td>
<td>203</td>
</tr>
</tbody>
</table>

There were evidently more activities in the primary level, and a corresponding good rapport between the teacher and the students, compared to the secondary level. Formal teaching is proportionately higher in the secondary level. Indeed, the relatively less citations on activity lessons show a disagreement with the rating for item 5 in Table 5.10 (under heading (iii) below) wherein almost two-thirds of teachers disagreed or strongly disagreed that “activity based teaching is very difficult in my school”. Three citations of good teaching are quoted below as representative of many comments,

I am a PP teacher [and also teach] Class VI History. Though we are not being provided with adequate materials, but I feel quite proud when I find my students responding to my questions and write so well (ID 119).

The students are interested in the lesson, when it is activity based. Class IX and X Economics provides ample opportunity for this type of teaching. Project work seems to arouse interest of the students (ID 203).

In contrast, this teacher gets satisfaction from a different source:
The children are learning a lot daily. I am satisfied with my teaching as the children are responding correctly in the class and during the written tests (ID 218).

These comments indicate that children were definitely interested in activity based teaching. But good teaching for some teachers was when children answered their questions well. So asking questions related to a lesson taught or a written test was used to gauge the effectiveness of one’s teaching in some teachers’ opinions, while in others it was more active learning.

But what was contributing to good teaching? There were only 13 documents (teachers) that said infrastructure such as spacious classrooms, new buildings and adequate furniture enhanced good teaching. In spite of the problems, some teachers said that they were taking some initiatives which included providing additional information to enrich the lessons in areas such as moral lessons, counselling, and adjusting somehow with whatever was available, and encouraged participation from students.

According to the teachers, their efforts paid off in the form of good examination results at the end of the year (20 documents). Another 16 documents were coded as saying they aimed at completing the syllabuses, and (12 of them) followed the guidelines provided in the manuals and syllabuses. These were accounted for as good teaching in some of the schools and they were also good examples of the Formal Stage teaching discussed in Chapter Three. Perhaps this notion of self-contentment became a reason for no further development in the profession. On the other hand, what criteria contributed to good teaching in Bhutan is not clear.

Several primary teachers also commented.

As I am a PP teacher I enjoy teaching small kids and the children also enjoy learning new things [through] activities during the school hours. They love doing new things like drawing, writing, colouring, matching and the most interesting in singing, learning through activities (ID 117).

My children interact with me freely during my teaching. I understand individually as I have brought them from class I. Now we are in class IV. I know their learning ability individually. They respect me and others and listen and do what I say (ID 131).
The last citation depicts a very interesting and unique feature of what may well be an effective classroom. As mentioned in Chapter Three, a good teacher staying longer periods with the students would be more effective in enabling students to learn. On the other hand, a mediocre teacher or worse was likely to make students as low achievers when they reached higher classes if the teacher taught the same group for longer periods.

In summary, this sub-section presented evidence suggesting that although teachers say students enjoyed activity oriented lessons other indicators seem to contradict this claim. Although half the teachers have said teaching is satisfactory, the data clearly indicate that good teaching in teachers’ views means both teacher talk or activity-based lessons. Teachers’ comments also suggest that teaching is considered effective when students respond to their questions and write well in the tests. The number of those who mention activity based lessons and fieldwork is very small. Moreover, vastness of syllabuses, lack of information and shortage of textbooks were noted as hindrances to activity based lessons in the previous section.

(ii) **Professional development in schools**

This had 41 citations with interesting comments. The professional development of teachers was carried out in two ways: informal, which included discussion and sharing with colleagues whenever time permitted, and the formal, which included deliberate discussion through SBIP, and inter-vision rounds, which some schools were apparently organising. Some kind of professional development also occurred when they became mentors to the novice colleagues as one teacher mentions:

> Professional interaction with colleagues through SBIP, inter-vision, gaining experiences in new methods of teaching through assessment of the teacher trainees from the training institute (ID 173).

One of the respondents below suggests sharing and discussing with colleagues greatly helped them improve their teaching. This was the essence of the inter-vision cycle introduced in some schools in the early 1990s. One teacher points out that

> Co-operation among the teachers as well as subject teachers [is important].

> Discussion among the subject teachers [takes place] if any one finds [something] difficult (ID 146).

One citations says that
We have [an] inter-vision team in each department. The team meets quite frequently to discuss problems and strategies of teaching. ... The inter-vision [members] also observe each other['s] lesson and discuss [it afterwards] (ID 210).

Because of the benefit of the reflection in inter-vision cycles, one teacher suggests that “it is really necessary to have at least one or two periods free during a day for each teachers” (ID 380).

Teachers suggested that CAPSS should organise NBIP every two years on specific subjects, which schools would follow up through their inter-vision cycle. Several of the documents mentioned that if there was any development professionally, it was from school based programmes and from their friends (teachers). This seems to indicate that SBIP was more effective compared to other forms of in-service programmes, namely NBIP.

In brief, forms of SBIP, including intervision, seemed to be working, but only in small number of schools, beside some informal discussions that helped clarify some problems confronted by teachers. Again there was no mention of using any outside expertise in the SBIPs, but instead, they depended upon the expertise within their school. It is not clear whether NBIP has been of any help in their SBIP.

**(iii) Difficulties experienced in teaching**

Table 5.10, which is related to Table 5.8 presented above, shows the percentage of responses for difficulties in teaching. Item five has an overwhelming 90 percent or 360 teachers in the sample agree or strongly agree that overcrowded classrooms were causing difficulty for them to interact with their students. In contrast, more than 60 percent disagree that activity based teaching was difficult for them, but about one-third of them agree that activity oriented teaching was difficult (item 5). One possible interpretation of these data is that activity and interaction may mean simply answering teachers’ questions or giving students something to draw and write as ID 117 says (quoted under sub-section (i) above.
Table 5.10. Percentage of responses for difficulties in teaching (N=400)

<table>
<thead>
<tr>
<th>No</th>
<th>Questions on difficulties in teaching</th>
<th>1 (SDA)</th>
<th>2 (DA)</th>
<th>3 (U)</th>
<th>4 (A)</th>
<th>5 (SA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>04</td>
<td>Overcrowded classrooms hamper teacher-student interaction</td>
<td>4.0</td>
<td>3.5</td>
<td>2.3</td>
<td>30.5</td>
<td>59.7</td>
</tr>
<tr>
<td>05</td>
<td>Activity based teaching is very difficult in my school</td>
<td>12.1</td>
<td>50.3</td>
<td>6.1</td>
<td>25.8</td>
<td>5.8</td>
</tr>
</tbody>
</table>

To emphasise, there were 376 teachers (over 90 percent) who encountered difficulties. This section of the qualitative data is presented under three sub-headings – (i) time constraints and teacher shortage, (ii) overcrowded classrooms and (iii) resource constraints.

(a) Time constraints and teacher shortage

Teacher shortage was particularly commented on in 79 documents, which represented about 20 percent of sample teachers. They generally felt that an adequate number of teachers was necessary to be able to teach the curriculum effectively. In addition, 20 teachers said that those who were in the school had to cover the shortfall of teachers, which meant that their workloads increased. The following quotations present the scenario better.

The present curriculum is really beneficial for the students provided the teachers can really [teach] them. But due to shortage of time because of more work, we are unable to [do] our best for each student (ID 139).

More teaching periods, more workload. Difficulty [in] covering syllabuses in time due to time constraints [and more] work load. These workloads are due to shortage of teachers (ID205).

[As a] subject teacher, as in the case of history, [I have] to teach all the 12 sections of [class] IX and X covering the total strength of 450 students. Any amount of experiences and the efficiency possessed by a teacher would [make] him to be very [in]effective if one person has to handle too many sections (ID207).

We have to complete the prescribed course within stipulated time. Consequently, our beautiful [and innovative] ideas, which we learnt in our training [institute] are not always [put] into practice (ID 458).
In addition to the comments linking time and teacher shortage, there were 58 citations pointing out the problem of time constraints. The reasons were the large number of students and the more than 40 periods a week for teachers. There were very few periods for reflection. This was further exacerbated by a lengthy syllabus mentioned in the previous section, and the "importance of covering the syllabus" (ID 192). Surprisingly, some citations showed that revision of the course was necessary for which they were not getting time. Other causes of time constraints were teachers’ involvement in co-curricular (out of classroom) activities and other ad hoc activities as well as marking the large numbers of papers from continuous assessment. One teacher described the matter rather succinctly when he/she says “there won’t be any issues if [a] sufficient [number of] teachers is appointed” (ID 357).

Shortfall of teachers in proportion to the increasing number of students was the main cause of time constraints for teachers. The concern for the examinations was greater for teachers who thought revision of the lessons was necessary, in spite of time constraints.

(b) Overcrowded classrooms

The next problem was the overcrowded classrooms the teachers experienced. This had 83 citations, which represented about one-fifth of the teachers in the sample. Overcrowding the classroom was mainly caused by two factors - increasing enrolment of students and the large number of students put in relatively smaller classrooms. 32 citations pointed out that their classrooms were overcrowded because the rooms were too small for the large number of students. Many classrooms across the country were apparently built for a smaller number of students (about 35 children but now there were over 45 in these rooms (see above, p.79).

It was mentioned in Chapter Three that the new syllabuses and textbooks introduced both in the primary and secondary classes required teachers to change their style of teaching. These assumed that there was a manageable class size for the teacher to be able to provide proper guidance and individual attention. But the data indicated that conditions in the schools were far from this required condition. Three citations quoted below will reflect, in general, the opinions of the sample population.

I experienced difficulties like gaining children's attention, as the classes are overcrowded. We don't get time to plan and to make teaching (ID 164).

Because of large number of students and small classroom, teaching becomes less activity based and classroom organization cannot be carried out (ID 276).
Student crowded in a small classroom is the main difficulty in my school. In class VII [for example, there are] 58 to 62 students in each section (ID 328).

Overcrowded classrooms did not facilitate group work, individual monitoring or children doing some activities individually. The quantitative data in Table 5.10 also supported this notion.

(c) Resource constraints

These reflect the problems already identified in curriculum organisation (see above p.110-1). The other main difficulties expressed by the teachers were the resource constraints such as lack of books and stationery, laboratory and lab equipment, and teaching materials. 108 documents were coded in this, representing about one-quarter of the sample population. Among others, the problems related to books and teaching materials were rated very high (80 and 60 citations respectively). The following citations speak volumes on this problem and they are representative of the general comments.

- Shortage of teaching equipment, shortage of stationery, timely supply of manuals and syllabuses, no postman, water supply, insufficient furniture, no typewriter, no duplicating machine (ID 351).

- The [problem] ... is that we don't have adequate supply of textbooks or other reading articles... A few numbers of library books are not enough for the students (ID 183).

- Finding resources book for explanation. To provide more information regarding the lesson, there should be enough resource book, or charts, or diagrams (ID 317).

- The department is neglecting some of the schools without sending the equipment especially for the science experiments (ID 448).

In addition to these there were other shortages such as lack of furniture for students and teachers (30 citations), and those that were available were also of poor quality. Some students were apparently working on the floor all day while “some classroom furniture were not appropriate for doing group work” (ID 410) as required by the NAPE. Many classrooms were furnished with narrow benches and desks arranged in rows to face the
teacher in front of the classroom. Science labs were without equipment and science experiments were not possible without equipment and chemicals.

Time constraints to cover the vast syllabuses, to revise the lessons, overcrowded classrooms, and shortage and irregular supply of books, stationery, equipment, and inappropriate design of furniture are hampering the activity based teaching in the schools.

(iv) **Issues affecting teaching in schools**

Issues affecting teaching in schools had as many as 302 citations. The results are presented in three sub-headings – (a) staffing in schools, (b) timely monitoring from CAPSS and others, and (c) students’ performances and standards.

**(a) Staffing in schools**

In this section, the issues reflected similar problems expressed earlier. Proper deployment of teachers was one of them (63 citations). Sometimes, teacher deployment was not based on the school situation.

But after the teacher gets trained, he/she is transferred to another school, which is a serious shortcoming of the Dzongkhag as well as Education Division (ID261).

To some extent such difficulties can have an explanation. For example, the situation is not entirely in the hands of the Education or Dzongkhag. This writer’s personal experience had been that when individuals approached authorities with genuine reasons for transfer, the Department or the Dzongkhag were usually compelled to consider it even though the school needed teachers. Although the Department of Education managed to get extra financial benefits for teachers working in rural and remote schools and gave them priorities in sending for training abroad, there were still many who were reluctant to work in difficult areas.

Teachers suggested that deployment of teaching staff should be based on teachers’ expertise in subject areas and the school’s need. But the shortage of staff in the schools compelled schools and districts to employ young teachers on a temporary basis just to keep the children occupied.

Sometimes teachers had to teach subjects they had never been taught before or subjects they were not prepared to teach (9 citations). For example, “a few subjects are new to
me as I had never taught them before in other schools” (ID 244) and, “shortage of science teacher compels me to even [teach] science subjects” (ID 492).

Unbalanced distribution of teachers, untimely transfer of teachers, and teachers’ preference of working in some places to others were the main problems in the staffing of the school.

(b) Timely monitoring from CAPSS and others

Thirty-nine teachers suggested officers of CAPSS visit schools from time to time and see how the teachers used the materials, and train teachers on the use of materials. In the process, they suggested CAPSS could get feedback from teachers. Some concerns are quoted below:

- Short workshops and seminars for concerned teachers on the curriculum [will] a positive step. Secondly getting feed back on the present curriculum from the teacher at large [will be] greatly effect the implementation of the curriculum (ID 307).

- SBIP [in schools] must strictly be held at least once in a month. Staff meetings [should] discuss the achievements in the curricular … at least once in a month. Time to time guidelines must be provided by the CAPSS to each school for the effective implementation of the curricula (ID 314).

- CAPSS and the teachers should [work] hand in hand; manuals should be made by the teachers of the different grades. Proper monitoring should be done by the CAPSS with experimentation before implementing new ideas for nation wide teaching. It should be implemented in one of the schools in Thimphu and one of the remotest schools of the country at least for three years (ID 270).

Sometimes officers from CAPSS and other sections in the Department should “visit classrooms and discuss problems” with teachers, or “conduct SBIP for a cluster of schools” together (ID 379). These were useful for teachers, they said. These comments reminded the CAPSS officers that the existing support was not enough if teachers were to teach better and imply, together with data above, that NBIPs were not as effective as they might have been.

Visit to individual schools and discussions of classroom related problems with teachers and workshops at school or cluster level by officials from the headquarters were indicated as highly useful exercises by the teachers.
Students’ inability to perform satisfactorily was noted as a pertinent issue, although there were only 40 citations in this node. Some of the reasons the teachers gave for the poor performance were as follows. Firstly, the students were either shy, or not interested in studies or not able to cope with the studies (17 citations). Secondly, according to the respondents, the change of school, change of classes from lower to the upper, and change of teachers (15 citations) were the main reasons. The third reason was lack of parental guidance as many students came from rural backgrounds and their parents were not literate themselves (12 citations). For example, “many children leave their books in the school and go home. This may be because the parents do not ask them about the books and the home work” (ID 136).

As the following citations suggest, standards in the lower classes affected the progress in higher classes.

> Majority of students has a very weak base by the time they reach class 9 (in Math & Science). In class 9, I concentrate more on consolidating the basics in Mathematics rather the going by the textbooks (ID 143).

There were also other reasons which were not prominent, but which deserved equal attention, as they also reflected a reality in the school.

> Some things given in guidelines [and] textbooks are very difficult due to lack of cooperation, [when] visiting eg. Hospital, Agriculture, Forestry or the Animal Husbandry Department, and then we are generally not expected to take the students out during periods (ID 201)

Although not a very significant number but nonetheless important, 10 citations indicated that teachers’ own dedication and commitment also affected the effective implementation of the curriculum. They doubted some teachers’ dedication to their profession.

To sum up, untimely transfer of teachers and teachers’ preference of work place led to an unbalanced distribution of staff in schools. This is further aggravated by low level of interest and performance and caused by teachers and students frequently changing schools.
SUMMARY OF CURRICULUM PRACTICE

This sub-section presented evidence suggesting that teachers’ claim satisfactory teaching means teacher talk where students respond to their questions and write well in the tests. This is supported by more evidence indicating problems such as time constraints to cover the vast syllabuses, to revise the lessons, overcrowded classrooms, and shortage and irregular supply of books, stationery, equipment, and inappropriate design of furniture.

Only a small number of schools have inter-vision cycles and informal discussions as helping them to learn about teaching, but untimely transfer of teachers, and teachers’ preference of working in some places to others also hindered their work. Interaction with CAPSS officers would have been highly beneficial but very little was happening. The evidence suggests that child-centred teaching is neither possible nor being practised in schools. An important determinant of this was the lack of an adequate supply of teachers.

ASSESSMENT AND EVALUATION IN SCHOOLS

The quantitative data in this section has nine items. Again, as in the case of curriculum practice, Rasch modelling did not produce a scale and neither did factor analysis produce factors. So descriptive statistics, which are split into smaller parts, are used in appropriate sub headings.

In the qualitative data, there were 353 documents recorded for the open questions, which represents about 90 percent of the respondents. The result is presented under three sub-headings – (i) teachers’ views on assessment and evaluation, (ii) current practices in continuous assessment and (iii) problems in conducting assessment.

(i) Teachers’ views on assessment and evaluation

In the quantitative data (Table 5.11), about 50 percent of the teachers at least disagree that continuous assessment at present is confusing while about a quarter of them agree that it is confusing (item 4). The examination is not seen as more effective than continuous assessment by 47 percent while more than one-third of the teachers indicate that examination is more effective (item 5). At the same time about 81 percent of the respondents (N=324) indicate that project works enhance learning for students (item 6). These variations in opinion, especially in items four and five, seem to suggest that the benefits of continuous assessment are not a shared idea among teachers, although most think project work enhance learning.
Table 5.11. Percentage of respondents on their views on assessment and evaluation (N=400)

<table>
<thead>
<tr>
<th>No</th>
<th>Questions on assessment and evaluation</th>
<th>1 (SDA)</th>
<th>2 (DA)</th>
<th>3 (U)</th>
<th>4 (A)</th>
<th>5 (SA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>04</td>
<td>At present continuous assessment is in confusion</td>
<td>7.4</td>
<td>44.3</td>
<td>12.0</td>
<td>27.0</td>
<td>9.4</td>
</tr>
<tr>
<td>05</td>
<td>I find examination more effective than continuous assessment</td>
<td>5.6</td>
<td>42.6</td>
<td>15.1</td>
<td>25.6</td>
<td>11.0</td>
</tr>
<tr>
<td>06</td>
<td>Project works enhance student learning</td>
<td>1.0</td>
<td>9.0</td>
<td>9.3</td>
<td>60.1</td>
<td>20.6</td>
</tr>
</tbody>
</table>

Qualitative data had 241 citations (68 percent) expressing teachers’ views on continuous assessment out of which 53 citations suggest it is worthwhile considerably less than the number indicated by item five in Table 5.11. In this group, continuous assessment is also viewed as unclear (20 citations), and not very helpful (16 citations). Two representative documents of the latter are quoted below.

As there is no clear guidelines, there [is] a lot of confusion. Proper guidelines and instruction must be adopted by CAPSS, so it can be a effective and uniform throughout the country (ID 105).

I think the main thing is we are not clear about it ... there should be some workshops on this topic. Of course we are conducting assessment taking test on every topic. I have not seen anybody conducting continuous assessment only taking written or oral test (ID 309).

In Table 5.12 below, assessment as a feedback mechanism for teaching has highly polarised opinions. 60 percent of teachers indicate that evaluation reveals problems in the teaching (item 7) while assessment helps reveal problems in syllabuses has 38 percent disagreeing and 41 percent agreeing and 21 percent staying neutral (item 8).
Table 5.12. Percentage of respondents indicating practice and feedback mechanism (N=400)

<table>
<thead>
<tr>
<th>No</th>
<th>Questions on assessment feedback</th>
<th>1 (SDA)</th>
<th>2 (DA)</th>
<th>3 (U)</th>
<th>4 (A)</th>
<th>5 (SA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>07</td>
<td>Evaluation of student work can reveal problems in teaching practice</td>
<td>2.3</td>
<td>23.4</td>
<td>13.9</td>
<td>47.3</td>
<td>13.1</td>
</tr>
<tr>
<td>08</td>
<td>Evaluation of student work can reveal problems in the syllabuses</td>
<td>6.0</td>
<td>31.9</td>
<td>21.0</td>
<td>34.8</td>
<td>6.2</td>
</tr>
</tbody>
</table>

The qualitative data have fewer documents commenting on feedback (16 citations) and continuous assessment being helpful to students and teachers have 16 citations. The lesser number of citations on the merits of continuous assessment tend to support findings about confusion. Nevertheless, these citations suggest that day-to-day assessment has helped both teachers and students to get feedback about the lessons in a small number of classrooms. They were able to identify students who needed help, and whether their own lessons were effective or not. Two representative comments are quoted below.

I feel that the current assessment and evaluation are very helpful for both the teacher and the student. After the assessment and evaluation, we come to know how much the children have understood the lesson. Which area [needs] planning. It helps us to [improve] our classroom management and teaching skills. From continuous assessment we find pitfalls to avoid [and to choose] better ways of [teaching] that works well and [to] know the individual [performance of students] (ID 164).

It helps [us] to know the child's standard. It helps the child to rectify his/her mistakes immediately. It [especially] helps the weaker ones (ID174).

In summary, although a small number of teachers think the system of assessing students on a continuous basis is helpful in getting feedback about their own lessons and about learning problems in students, the majority of teachers appear confused about it. They are also not very sure about the merits of continuous assessment as shown by the percentage of ratings in the quantitative data and the fewer number of comments in the qualitative data.
(ii) **Current practices in continuous assessment**

Table 5.13 shows that 86 percent (344 teachers) say assessment is a part of their daily lessons (item 1). On the other hand, there is a great variation in the emphasis on “written tests and home work” for assessing the students learning (item 2). Again, just about 58 percent (232 teachers) say they have enough time for conducting continuous assessment (item 3). Item three is brought up again in the next sub-section. Here again there is some variation in their practices. These data indicate that the NAPE strategies (homework and continuous assessment) are not strongly followed by at least one third of teachers.

<table>
<thead>
<tr>
<th>No.</th>
<th>Questions on assessment and evaluation</th>
<th>1 (SDA)</th>
<th>2 (DA)</th>
<th>3 (U)</th>
<th>4 (A)</th>
<th>5 (SA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Assessment is a part of my daily lessons</td>
<td>1.8</td>
<td>7.8</td>
<td>4.1</td>
<td>58.5</td>
<td>27.8</td>
</tr>
<tr>
<td>02</td>
<td>I put more stress on written tests than on homework</td>
<td>6.6</td>
<td>39.0</td>
<td>14.4</td>
<td>31.6</td>
<td>8.4</td>
</tr>
<tr>
<td>03</td>
<td>I do not have enough time to conduct continuous assessment</td>
<td>15.0</td>
<td>43.1</td>
<td>5.8</td>
<td>27.2</td>
<td>8.9</td>
</tr>
</tbody>
</table>

Table 5.14 shows the type of assessment carried out by teachers (in number) as reported in the open ended responses. The extreme right column shows the total of teachers in each type of assessment has very few citations. However, when the number is calculated according to level of classes, the scenario improves somewhat. Teachers support that the current practice of assessment is generally done on a continuous basis using homework, class work and project work, although there are some formal tests like the oral and class test. However, the interpretation of these data is difficult given the apparent confusion about continuous assessment shown in the previous sub-section. Broadly, from Table 5.14 we can see that teachers did not support many different types of assessment.
Table 5.14. Types of assessment carried out in schools
by number of documents (N=187)

<table>
<thead>
<tr>
<th>How are they doing?</th>
<th>PP-III (N=142)</th>
<th>IV-VI (N=125)</th>
<th>VII-VIII (N=56)</th>
<th>IX-X (N=50)</th>
<th>Total (N=374)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home work</td>
<td>7</td>
<td>10</td>
<td>7</td>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>Class Work</td>
<td>9</td>
<td>7</td>
<td>5</td>
<td>11</td>
<td>32</td>
</tr>
<tr>
<td>Project Work</td>
<td>6</td>
<td>7</td>
<td>3</td>
<td>5</td>
<td>21</td>
</tr>
<tr>
<td>Oral test</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Behaviour</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Class attendance</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>As per directives</td>
<td>11</td>
<td>14</td>
<td>2</td>
<td>1</td>
<td>28</td>
</tr>
<tr>
<td>Participation</td>
<td>7</td>
<td>6</td>
<td>3</td>
<td>7</td>
<td>23</td>
</tr>
<tr>
<td>Class tests</td>
<td>10</td>
<td>5</td>
<td>9</td>
<td>7</td>
<td>31</td>
</tr>
<tr>
<td>Total</td>
<td>63</td>
<td>53</td>
<td>32</td>
<td>39</td>
<td>187</td>
</tr>
</tbody>
</table>

The representative comments quoted below explain how assessment is being practised in schools. The focus is mainly on class work, homework and project work and then maintaining records, which is then used to decide on the overall marks that children get at the end. These also point to the fact that continuous assessment takes the form of repeated tests contributing to summative assessment, as the following quotes show.

I maintain a register to record the continuous assessment marks of my class on three different headings. Home work, class work and project works. However, most record is on homework as well as class work, only. Both class and homework are being assessed out of 5% marks each time. At the end of the term the marks are added up and then worked out of 5% for each heading (ID 121).

We assess the children in fact daily in every block. We give class work, homework and project work. We check how cooperative, attentive and how a student is able to do the task given to him [or her]. We keep in mind how he [or she] behaves in and out of the classroom. We also consider how student takes care of the school's property like books (ID 183).
I put more stress on assessment of class works than home assignments, because while doing the home works some students are trying to copy (ID 190)

Assessing students through class work, home work and project work is in line with the initial guidelines provided by BBE and CAPSS. As indicated in the third comment, above, class work seems to be more commonly practised among the teachers. There is less emphasis on homework and project works mainly because teachers think parents do the work for children or children copy from their friends.

To sum up, continuous assessment is generally focussed on class work, homework and project work, although other aspects of a student’s character are being looked into. For some reason, teachers tend to doubt the authenticity of homework and project works, so they tend to stress class work. It is also pertinent to point out that the number of those who actually say they do is very few, which only indicates that not many teachers are assessing students on continuous basis. Those who are doing continuous assessment are all suggestive of summative assessment purposes in doing so.

(iii) Problems in conducting assessment

In Table 5.13 above, more than three-quarters of the teachers have indicated “assessment is a part of my daily lessons” (item 1). But only 232 (58 percent) teachers in the sample have enough time for continuous assessment (item 3). Time constraints are given by a similar number (42 percent) in the qualitative data. This shows that although not all the teachers have time constraints in conducting assessment a small majority say they can afford time. The important point identified here is that this is a clear likely indication of a more general problem of a response set (teachers providing answers perceived as wanted). Here, as elsewhere, written comments are given more importance.

Table 5.15 shows the different types of problems confronted by teachers in assessing students (data summarised from the NUD*IST analysis). Teachers often nominated more than one problem. The bottom row of the table shows the number of problems total is different from the total of sample for each level of school. The percentages in the brackets are calculated from the samples of teachers at that level of school Note: small numbers are not calculated as a percentage).
Table 5.15. Types of problems faced in continuous assessment by level of classes, shown in numbers (N=378)

<table>
<thead>
<tr>
<th>Types of problems</th>
<th>PP-III (N=142)</th>
<th>IV-VI (N=126)</th>
<th>VII-VIII (N=56)</th>
<th>IX-X (N=50)</th>
<th>Total (N=374)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N(%)</td>
<td>N(%)</td>
<td>N(%)</td>
<td>N(%)</td>
<td>N(%)</td>
</tr>
<tr>
<td>Time constraints</td>
<td>67 (47)</td>
<td>49 (39)</td>
<td>22 (39)</td>
<td>19 (38)</td>
<td>157 (42)</td>
</tr>
<tr>
<td>Large number of students</td>
<td>53 (37)</td>
<td>41 (33)</td>
<td>23 (41)</td>
<td>17 (34)</td>
<td>134 (36)</td>
</tr>
<tr>
<td>Copying works *</td>
<td>5</td>
<td>9</td>
<td>7 (13)</td>
<td>7 (14)</td>
<td>28 (7)</td>
</tr>
<tr>
<td>More responsibilities*</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Students absentees*</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>Less material available*</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Unfair marks by teachers*</td>
<td>4</td>
<td>10 (8)</td>
<td>7 (13)</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>141</td>
<td>123</td>
<td>65</td>
<td>49</td>
<td>378</td>
</tr>
</tbody>
</table>

Large numbers of students in the class (134 citations) and time constraints (157 citations) resulting in teachers’ overwork characterise the problems expressed by teachers in doing continuous assessment. Authenticity of the works produced by students (28 citations) is another issue. In the section on curriculum practice, teachers mentioned about looking at project work, homework, class work and maintaining proper records as problematic. Teachers have lots of other activities and responsibilities to attend to, apart from teaching and assessing the students’ daily work. Table 5.15 also shows that time constraints were experienced almost similarly both in the primary and secondary schools, and so the problem of students numbers in their classes (approximately one-third of teachers in both). It is interesting to observe that teachers in classes VII-VIII indicate larger number of students in their classes are slightly more evident as problems (as indicated by 23 out of 56 citations), than time constraints.

Teachers also say CAPSS had not developed proper criteria for assessment and did not include skills other than academic study in the guidelines. The other main problem was that due to the leniency of many teachers in their assessment many children were
getting promoted to higher classes because marks allotted were not based on actual performance. This was said to be responsible for children not being able to cope with the standards in higher classes (see citation by ID 492 below). Children were promoted to the next higher class even if they were poor in written work also, if the “ongoing mark reduced [weighting on continuous assessment] we can expect good results in higher classes” (ID 177). The documents below also reflects different understanding of the nature and purposes of assessment.

I also found that teachers give undesirable high internal assessment marks to poor students appearing common examination in order to get [hundred] percent to uplift the name of the school. I feel that weighting for class VI is too high. I suggest if internal assessment could be brought down to 30 percent (ID 492).

It is interesting to observe in the citation below that the brighter students helping their weaker friends is also seen as a problem.

Absent during a particularly class work, or homework day some students are sick. So I have to conduct the examination for them again some questions I have to give from the portion before. Homework is not fair at all. The weaker students get help from the brighter ones. They get full marks (ID 204).

The citation below depicts a situation that pervades many of our schools across the country and speaks a lot about the practical difficulty that teachers face.

We check written works regularly [but] it consumes much time. Then the coverage of many activities suggested in manuals becomes a problem. As a result, a [choice] of more important language objectives become necessary. [It is] also because we have an average of 35 -40 periods a week (I have 37). Some children are pushed [up to higher classes?]. Some join other schools with very low standard. It also seems children forget many things. As might be also we fail as teachers [and] are ineffective in imparting the lessons. [These] various factors make on-going assessment not an easy task (ID 404).

For many, the assessment was carried out just as suggested in the guidelines in manuals and syllabuses.

Due to large number of students it is difficult to maintain the class. If a teacher is evaluating a group others disturb and make [it] difficult for the teacher. Besides, it takes time to evaluate all 60-62 students for three four subjects. Some
times we [stay behind to work]. We cannot go according to our early plan and have to rush with [more lessons] (ID 323).

Of course, there are lots of problems while conducting students’ assessment in the class, but then I have never reflected on those problems. Here I mention few lines only. It takes long time to finish [reading] the assessments. Due to [large] number of children in the class. Classrooms are smaller. [We] cannot do assessment keeping all the children in the class [idle]. If we send [them] outside, they disturb other classes (ID 463).

Time constraints, overcrowded classrooms, unfair judgement of students’ performance and teachers’ leniency with the students’ marking are considered problematic. It also appears that authenticity of the work that students produced was viewed with suspicion especially when brighter students help their weaker friends. The data indicates teachers’ lack of clarity about the purposes of different forms of assessment. More so, the evidence indicates that assessments are invariably summative in nature rather than, or as well as, formative and progressive.

**Summary of Assessment and Evaluation**

Only 53 out of 241 teachers who made open comments consider the system of assessing students on a continuous basis is helpful in getting feedback about their own lessons and about learning problems that students have. For most teachers there are problems and confusion. There is a general feeling that teachers do not yet know how to conduct assessment other than for creating marks for final grades. Variations in their response in the quantitative data, particularly on two items “assessment as a part of daily lessons” (86 percent) and “having enough time” (58 percent) and polarised opinion on other items indicated that there is a lack of clarity.

Assessment of students’ performances was mainly in their class work, home work and project work. But teachers generally show preference to class work for reasons that they could monitor and help children’s work authentically. All evidence point out that in general, students’ work is graded and given weighting in the final assessment, which suggests that continuous assessment is more summative than formative in nature. There is very little evidence to suggest that teachers identify learning problems in the students in order to assist them.

The major problems were similar to those presented before. Time constraints for teachers owing to the large number of students in the class, overcrowded classrooms hampering teachers from monitoring individual children in their work.
Teacher preparation

There are variations in the way people of different gender and nationality look at teacher preparation. Using the single scales of Teacher Preparation and Curriculum Organisation as dependent variables, a general linear model multivariate analysis with personal characteristics of gender, nationality and initial appointment (as proxy for age) was carried out. The result produced a significant interaction effect \( F=4.062, \text{ df}=2.000, \text{ sig.}<05 \) for Teacher Preparation but no significant effect for Curriculum Organisation. Figure 5.1 shows the follow ANOVA results that Bhutanese males had significantly higher scores compared to non-Bhutanese males and Bhutanese females had lower score than non-Bhutanese females, but higher than non-Bhutanese males.

![Figure 5.1](image)

**Figure 5.1. Scores by nationality and gender**

The figure also shows that the difference between Bhutanese males and females is not as significant as it is between non-Bhutanese males and females. On this interesting phenomena, it has been speculated that perhaps Bhutanese have a greater tolerance of what exists in the system in their own country (Laird et al, 1999).

On exploring further, Bhutanese teachers tend to look at pre-service teacher education more positively than their expatriate counterparts. It is not surprising because almost every Bhutanese has to have a pre-service training certificate to be permanently
employed as teachers, whereas non-Bhutanese teachers do not have to fulfil this condition. It also appears that Bhutanese females perceive they benefit relatively less from teacher education compared to Bhutanese males. But it is surprising to find that non-Bhutanese females say they have benefited more from teacher education than Bhutanese females. An uncertainty at this stage is whether the benefit is from the in-service course they have attended or whether they already have had pre-service training from their home country, India. From personal experiences in India, females generally look for teaching jobs and therefore get into teacher training colleges as they graduate from schools and degree colleges. Getting a B.Ed. in addition to their first degree is also an additional advantage to getting a good spouse.

Again Teacher Preparation and Curriculum Organisation as an independent variable was tested in a general linear model multivariate analysis with structural elements, location of schools (urban and rural) and level of schools (primary and secondary) as dependent variables. There was no interaction and no significant difference in the case of location of schools, but the level of school produced significant main effect \( [F=7.788, \text{df}=1, \text{sig}<.05] \) for Teacher Preparation. This analysis is extended in Table 5.16 below (from the follow up (ANOVA), which shows that primary teachers perceive Teacher Preparation more positively than secondary teachers.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level of school</th>
<th>Mean score</th>
<th>SD</th>
<th>(N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Preparation</td>
<td>Primary level</td>
<td>.8852</td>
<td>1.1</td>
<td>261</td>
</tr>
<tr>
<td></td>
<td>Secondary level</td>
<td>.8477</td>
<td>.80</td>
<td>117</td>
</tr>
</tbody>
</table>

Qualitative data in this section is presented in three themes on teacher preparation – (i) pre-service teacher education, (ii) in-service teacher education and (iii) implementation of the skills from INSET and training.

(i) Pre-service teacher education

Ninety-five primary and 25 secondary teachers out of 238 documents represent the qualitative data for this sub-section for Teacher Preparation. They indicate that pre-service teacher education has helped them gain more confidence. Two representative comments are quoted below that explains the teachers’ opinions better.
Pre-service teacher training has improved my teaching confidence. It provided me with adequate teaching skills. Every teacher should be given pre-service teacher training opportunity. Teaching is one of the processes of learning. I feel satisfied when children respond positively (ID 131).

It helps to develop skills and methods of teaching. It helps to develop the understanding capacity of teachers for the student's sake. It enhances the ability of the teachers to understand the psychology of the students to make his teaching effective (ID 197).

Because of the advantage of gaining confidence through pre-service education, some even suggest that it should be made compulsory for all teachers, as there were some teachers who did not have any training before, particularly the non-Bhutanese expatriates from India. Other merits gained through the programmes were the skills in teaching skills, planning lessons, management of classrooms, dealing with learning problems and presenting subject matter. They also indicate understanding the children better through the use of their knowledge about children’s learning problems in subjects like Educational Psychology. One teacher says:

I wouldn’t have been in a position to teach my students if I had not undergone training before taking up my job as a teacher. As I joined and continued teaching over the last couple of years, I found and still find it interesting and challenging (ID 121).

However, to teach or not to teach using the skills and ideas gained during the pre-service education depends on the teacher concerned. As one teacher rightly points out “a person without interest can never [be a] teacher even after [rigorous] training. It is like flogging a dead horse” (ID 109). Although pre-service teacher education is useful, a close linkage is necessary to develop programmes that are useful and provide experiences of the realities for the student teachers, as one complains:

However the teaching skills (pedagogy) alone does not make one a teacher. It is in the schools that teacher comes to understand the requirements of the students since he is in the real situation. Teaching as a profession is something more than just teaching students in the classroom. It requires hard work, dedication and love towards the profession (ID 456).

Yet, only about one quarter of the teachers said pre-service education was helpful, though twelve citations call for modification in the pre-service education courses. They
suggested that the duration of the course should be longer and emphasis put on mastery of the subject rather than just on methodology, because, “pre-service teacher education programmes [were] mostly theory and less practice in our time” (ID 310). This reflects the generally low level of academic education of teachers in Bhutan. In a separate issue, 48 citations indicate that teachers felt this was a satisfying job, though, at times “neglected by the department, one really feels disheartened” (ID 140) and the 48 represent only one-eighth of the sample population.

In summing up, pre-service teacher education has been found generally helpful by a minority of teachers, but is needs to be more practically related to school situations. In the school, a teacher may or may not make use of the pedagogical skills acquired in training.

(ii) **In-service teacher education**

Since the late 1980s and for the entire duration of the 1990s, there has been a series of in-service education for teachers (INSET). There were 51 citations from the qualitative data. INSET programmes are said to benefit teachers in a number of ways such as exchange of views and ideas with their colleagues and updating themselves on the new development. Two teachers were rather gratified about the emergence of in-service education in Bhutan in these words:

> I got my pre-service training in 1983-84 from NIE Samtse. NAPE and multi-grade teaching are new methods. Had there been no NAPE and multi-grade teaching workshops or training organised over the past years, old teachers like me must have found present curriculum a difficult one (ID 447).

> [In-service] teacher education programmes seem quite helpful to the teachers. It really gives [an] opportunity to upgrade our stale knowledge and to keep ourselves up to date. So, I feel all the teachers be given chance [from] time to time, at least once in a year to attend the [in]-service teacher education programmes (ID 188).

About 16 citations indicate that in-service INSET programmes should be regular. The frequency varied from once every year to once in three to four years. There were also indications that senior and experienced teachers should be called as resource persons during the INSET workshops. About 18 citations said that INSET should be organised for updating on specific subjects and should be on the basis of schools needs (17 citations). Teachers also say that INSET programmes should be a regular feature and a representative comment below points out why this is necessary.
If a teacher is trained 20 years back I think he may need more in-service training to cope up with the present teaching programmes [changed curriculum?]. If you keep calling the teachers for in-service workshop I think they can always improve in their teaching as a profession (ID 167).

In-service teacher education is again viewed as helpful in giving teachers an opportunity to share experiences and problems with colleagues from other schools. The longer a teacher has worked, the more in-service courses should be provided. Teachers also say the courses should be organised regularly but there was only one-eighth of teachers indicating INSET was helpful. However, as mentioned above, INSET in the form of NBIPs is a regular, costly feature during the winter vacations for teachers in Bhutan. The lack of volunteered positive comment is noteworthy.

**(iii) Implementation of the Skills from INSET and Training**

There were 92 citations mentioning the implementation of various skills learnt at the training institutes. Thirty-three documents indicated they were making use of the skills acquired during training courses, while 15 were saying they were trying. The first of the citations below shows a strong positive response, the second indicates inadequacy and the third explains difficulty in the life after training.

I am aware of teaching methods and I can easily adapt to any teaching method according to the need of the children. Those skills also helped me to be patient and understanding in teaching (ID 320).

Though I have attended 2 or 3 workshops, I felt that the period was short and we just browsed over some finer points by skimming or scanning them (ID 109).

Not all skills seem to be applicable in the field. For example if we do according to the system we learnt during the training period we are not able to complete even the syllabus on the stipulated time. At the same time lack of adequate resources and materials is another obstacle (ID 209).

The problem of lack of resources, poor infrastructure and an increasing numbers of students packed into small classrooms was posing challenges to teachers.

In summary, application of the knowledge and skills for a teacher in classroom was a different story. First, INSET courses were shorter, then the skills were not applicable and then classroom situations were different. In short, INSET benefits could not reach the classrooms fully.
Summary of teacher preparation

Pre-service and in-service teacher education are generally seen to be more helpful for Bhutanese primary teachers than the secondary teachers because they helped in boosting confidence and capability in teachers and updated the knowledge and skills of those who were already in service. For these reasons, teachers would appreciate if the INSET programmes were offered regularly. But there were problems in applying the newly acquired ideas in the schools. Firstly, the contents of the pre-service and in-service did not match with what the schools actually wanted. Secondly, the situation in schools was difficult for a teacher to transfer what he/she learnt from the training camps into the classrooms. The generally low number of positive responses indicates lack of strong support for Teacher Preparation.

MANAGEMENT AND FACILITIES

This section of the data is presented under two sub-headings – (i) facilities and (ii) management.

(i) Facilities

Items 6 to 8 are in Table 5.17 as these were related to facilities. The remaining items are in Table 5.19 and discussed under the sub-heading “school management”. As explained in Chapter Four, for both tables, the ratings range from 1 or strongly disagree (SDA) to 5 or strongly agree (SA) in the top row of the tables.

In Table 5.17, items 6 to 8 show percentage of teachers’ responses regarding facilities in schools. The table shows that nearly 59 percent (236 teachers) agree that they had a shortage of furniture in their schools, only one-third of the sample said they did not have a shortage in furniture (item 6). Likewise, about the same number of teachers (59 percent) indicated they had inadequate supply of learning materials (item 7), but about one third again agreed or strongly agreed the supply was adequate. About 60 percent of the sample indicated that rooms were too small for the number of children in his/her class (item 8), and once more about one-third disagreed or strongly disagreed.
Table 5.17. Showing percentage of responses regarding facilities (N=400)

<table>
<thead>
<tr>
<th>No</th>
<th>Questions regarding facilities</th>
<th>1 (SDA)</th>
<th>2 (DA)</th>
<th>3 (U)</th>
<th>4 (A)</th>
<th>5 (SA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>06</td>
<td>My school has acute shortage of furniture</td>
<td>5.9</td>
<td>28.6</td>
<td>6.4</td>
<td>28.6</td>
<td>30.4</td>
</tr>
<tr>
<td>07</td>
<td>There is adequate supply of learning materials in my school</td>
<td>11.1</td>
<td>47.8</td>
<td>10.8</td>
<td>23.9</td>
<td>6.4</td>
</tr>
<tr>
<td>08</td>
<td>The room is too small for the number of children in my class</td>
<td>5.9</td>
<td>27.6</td>
<td>5.7</td>
<td>33.5</td>
<td>27.3</td>
</tr>
</tbody>
</table>

In the qualitative data, there were 113 documents from teachers (approximately 25 percent) that said schools had sufficient facilities in terms of spacious classroom and learning materials. All the learning materials were not available, but this did not have adverse effect on their work. On the other hand, there were 147 citations (about 40 percent) that pointed out some sort of shortages in their schools. Either the books were not sufficient or not available, or there was no furniture, or not enough classrooms. Table 5.18 shows that for some reason, schools in rural areas, rather than remote, were more neglected in terms of facilities provided. They showed a relatively lower percentage regarding sufficiency. The infrastructure facilities (73 citations) such as furniture, classrooms, drinking water, toilets, and maintenance, which they thought were the responsibility of the local authority - the Dzongkhag (districts) - were also lacking. Regarding shortages and needing more facilities also showed a higher side. Out of 40 citations indicating dilapidated conditions of schools, more than half (23 citations) came from rural schools.
Table 5.18. Teachers’ response about facilities by location of schools (N=487)

<table>
<thead>
<tr>
<th>Facilities &amp; Furniture</th>
<th>Urban (N=142)</th>
<th>S. Urban (N=126)</th>
<th>Rural (N=102)</th>
<th>Remote (N=24)</th>
<th>Total (N=394)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N(%)</td>
<td>N(%)</td>
<td>N(%)</td>
<td>N(%)</td>
<td>N(%)</td>
<td>N(%)</td>
</tr>
<tr>
<td>Sufficient</td>
<td>47 (33)</td>
<td>37 (29)</td>
<td>21 (20)</td>
<td>8 (33)</td>
<td>113 (29)</td>
</tr>
<tr>
<td>Shortage</td>
<td>45 (32)</td>
<td>41 (32)</td>
<td>54 (53)</td>
<td>7 (29)</td>
<td>147 (37)</td>
</tr>
<tr>
<td>Needed</td>
<td>33 (23)</td>
<td>23 (18)</td>
<td>34 (33)</td>
<td>7 (29)</td>
<td>97 (25)</td>
</tr>
<tr>
<td>Water &amp; furniture.</td>
<td>22 (15)</td>
<td>16 (13)</td>
<td>30 (29)</td>
<td>5 (13)</td>
<td>73 (19)</td>
</tr>
<tr>
<td>Not useful</td>
<td>6 (4)</td>
<td>6 (5)</td>
<td>4 (4)</td>
<td>0</td>
<td>16 (4)</td>
</tr>
<tr>
<td>Dilapidated</td>
<td>12 (8)</td>
<td>4 (3)</td>
<td>23 (23)</td>
<td>1</td>
<td>40 (10)</td>
</tr>
<tr>
<td>Total</td>
<td>165</td>
<td>127</td>
<td>166</td>
<td>28</td>
<td>487</td>
</tr>
</tbody>
</table>

Note: percentages are calculated from the number of samples in the top row, as teachers could nominate more than one response for facilities.

Surprisingly, no citations have been found to say remote schools have things that are not useful, although the number from other areas is also very small, remote schools seem to be in relatively better condition. It may be perhaps they are recently made and local people maintain the schools from time to time. Two representative comments are quoted here.

Students are enjoying free supply of exercise books, pencils, eraser, geometry box etc. They also have facilities for games like badminton, volleyball, throw ball, basketball and table tennis (ID 178).

The school has a beautiful building with following facilities: auditorium, science lab, volleyball ground, kitchen garden, hostels, kitchen, classrooms, qualified teachers (ID 197).
Some schools managed to make something out of local materials.

With the mobilisation of this community we have made enough squatting desks (two seaters). However, they are not superior in quality, that is, durability and physical look due to lack of carpentry skills (ID 221).

Some schools had a library equipped with some books both for teachers and students. They also had some newspapers in the library, which the teachers could borrow. Some schools were relatively new and had good buildings constructed with the support of the United Nations Council for Development Fund (UNCDF) and furniture provided by UNICEF.

As mentioned above, shortage of supplies and the need for more materials scored consistently more across the country, particularly by rural schools.

Textbooks are not supplied adequately. Syllabuses are not available. Classrooms and office furniture are not adequate. Things like, glue, paper, fevicol and cellotape are not sufficient (ID 120).

We don't have [a playing] field to conduct any Co-curricular activities. There is no proper toilet. There is no proper ventilation in the class. There is inadequate supply of furniture (ID 131).

The library is inadequately stocked. We do not have enough reference books. The duplicating machine in this school is barely serviceable. It always breaks down during most critical moments. We have very poorly equipped science laboratories (physics, chemistry and biology) (ID 147).

In Table 5.18, teachers indicated that many schools in the rural and urban areas are in need of renovation (40 citations). These could be those schools built many years ago and, therefore, “old and not at all good for primary school” (ID 187). Another is a Very old school with tiny classrooms and broken furniture. Some classrooms [are] without any furniture, [a] toilet for teachers, and dark class rooms without any electricity (ID 324).

These contrast with most schools in remote communities, which were relatively new and were built by local communities. Most shortages and needs for items were teaching and learning materials.
It appeared that small classrooms, large number of pupils, lack of maintenance of school property and shortage of schools were some of the factors that affected the way schools functioned. In 1997, ten primary schools were upgraded to junior high schools (up to class VIII) and 3 junior high to high schools (up to class X) as part of the 8th Five Year Plan. However, the comment below shows a recently upgraded school was still waiting for materials:

[Our school] is upgraded to Junior School but we do not have sufficient teachers, furniture, games and sports materials, library books and reference books. With the limited facilities we are managing to teach or run the daily routine which is not helpful in teaching learning process (ID 310).

Schools that have enough basic facilities are relatively less than those that are facing shortage. Rural schools are more neglected in the provision of facilities. Their buildings were in dilapidated condition and apparently needed immediate attention.

Both the quantitative and the qualitative data revealed that about one-fourth of the schools had sufficient facilities for use while about two-third said there were shortages. It seemed that rural schools were relatively poorer in terms of supply of materials and the condition of their school buildings. Remote schools, on the other hand were relatively better.

(ii) School management

All seven items in the quantitative data (see Table 5.19 below) show that management in the school was up to the satisfaction of the majority of teachers in the sample. In the qualitative data, about 181 documents commented on management of the school. Most of the latter seem to indicate that routine work without much disturbances from outside was considered good management. So this was further probed and about nine different factors that contributed to their concept of good management emerged.

There were 150 documents that mentioned several reasons contributing to good management in Bhutanese schools. These factors were cooperation among teachers; committees in schools and delegation of responsibilities; head teachers’ leadership; discipline among staff and student; planning time; and guidance and support from authorities.
Table 5.19. Showing percentage of responses regarding management in schools

<table>
<thead>
<tr>
<th>No</th>
<th>Questions regarding management in schools</th>
<th>1 (SDA)</th>
<th>2 (DA)</th>
<th>3 (U)</th>
<th>4 (A)</th>
<th>5 (SA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>I have well defined responsibilities apart from teaching</td>
<td>0.8</td>
<td>3.3</td>
<td>3.1</td>
<td>54.5</td>
<td>38.4</td>
</tr>
<tr>
<td>02</td>
<td>The head teacher has helped me improve my teaching</td>
<td>3.2</td>
<td>9.4</td>
<td>12.4</td>
<td>61.6</td>
<td>13.4</td>
</tr>
<tr>
<td>03</td>
<td>My school has high expectations of students</td>
<td>1.0</td>
<td>2.1</td>
<td>6.4</td>
<td>60.3</td>
<td>30.2</td>
</tr>
<tr>
<td>04</td>
<td>We usually tell our students about those expectations.</td>
<td>0.8</td>
<td>2.8</td>
<td>5.2</td>
<td>66.1</td>
<td>25.1</td>
</tr>
<tr>
<td>05</td>
<td>I have to give progress reports on my works to the head teacher once in a term</td>
<td>1.6</td>
<td>11.2</td>
<td>4.5</td>
<td>54.1</td>
<td>28.5</td>
</tr>
<tr>
<td>09</td>
<td>Working atmosphere in my present school is pleasant</td>
<td>1.5</td>
<td>4.8</td>
<td>3.8</td>
<td>63.0</td>
<td>26.8</td>
</tr>
<tr>
<td>10</td>
<td>There is a mutual respect among the teachers in this school</td>
<td>1.3</td>
<td>1.3</td>
<td>3.6</td>
<td>54.7</td>
<td>39.1</td>
</tr>
</tbody>
</table>

Cooperation among the staff members and sometimes with the community had 54 documents, followed by a good and benign head teacher with 20 citations. For instance,

> We have very good cooperation among all the teachers. We have limited facilities, but still we are happy. We are happy because we have learnt to live with little things than to have a great deal (ID 148).

> We plan together, we bring problems in the group and talk about it during SBIP and we discuss the difficulties and try some [of] it. Ask help from other teachers (ID 309).

A small number of teachers also thought management of their school was attributed to delegation of responsibilities. A small number also thought that some jobs handled through committees were helping the schools to run properly. The citation below is not representative, but it gives a good picture of how one school was being managed.

> Whole management is divided into four boards of disciplines. Academic block, general offices, school discipline office, school service office. Each office has a
coordinator. Academic office has activities which are academic [in nature], literary activities. General office has one activity. School discipline has one activity. School service has one activity. Under each coordinator, there are many associate teachers to help and to run the activities smoothly which are defined. On top of all these [the] school has school diary with academic calendar and other functions [for] the school decided at the [staff] meeting [chaired] by the principal. This is done every year in the beginning of the session (ID 197).

A number of teachers thought that planning, with guidance both from the Education Department and local education officers was helping the schools to function better (15 citations each). Discipline not only among the students, but also among the teachers was another element that contributed to good management. Of course, then these would allow some efficient teaching in the school. Some representative citations are quoted below:

The school is managed in the best possible manner by our benign principal. He understands the problem of both teachers and students, which is necessary for the smooth running of a school (ID 136).

Our headmaster gives chances to all the teachers equally. He never does things on his own. Whatever it is he discuss it with the staff and even with the students (ID 288).

Schools that are managed well also have their schedules in place from the beginning of the year, which they call annual planning. The last factor which contributes to good schools management is guidance from the Department, local education officers and the heads of school. Although the number of responses regarding management was relatively very small across the system, there was no citation at all commenting negatively on the management in schools. This is a further indication of another form of response set evident in these data.

To sum up, only about one-third of the teachers thought management in their schools was going very well although about four-fifth (Table 5.19) say management was good. They gave several factors contributing to efficient management in their schools. Broadly, however, the differences between the two sets of data suggest that management was not a priority among the teachers or this indicates that they see the daily routine following without problems.
SUMMARY OF MANAGEMENT AND FACILITIES

Not all schools have adequate facilities. Some schools have things that fulfil their basic requirements like books, stationery, furniture, and classrooms. But other schools complain about shortage and late supply, dilapidated conditions of school buildings and old furniture inappropriate for activity oriented lessons. Rural schools are more affected by these problems.

Management was indicated as going on smoothly and very well by a majority of teachers mainly because of cooperation that existed among the staff and between the staff and head teacher. Delegation of responsibilities to committees, good leadership and guidance from authorities is also effective in the management. There were surprisingly no negative comments on school management. However, the data also indicate that school management is not a priority among the teachers.

SUPPORT FROM THE EDUCATION DIVISION, DZONGKHAG & PARENTS

As in the case of other sections discussed earlier, Rasch or factor analysis did not produce any scales or factors respectively for variables in this section. So, in this case also descriptive data will be used. Again the quantitative data table was split into “line of communication” and “professional support” and discussed under appropriate headings in the sections that follow.

The results in this section are presented under three sub-headings – (i) line of communication, (ii) material support, and (iii) professional support.

(i) Line of communication

Item two in Table 5.20 shows a majority of 348 teachers (87 percent) that guidelines from Education headquarters were clear. About 64 percent of the teachers indicated that they knew whom to contact in the Department in case of any problems (item 7). Item nine is shifted from the section on “assessment” earlier as it is relevant for this sub-set. This item indicates that 252 teachers (63 percent) in the sample were communicating with CAPSS regarding any problems with syllabus, while more than a quarter said they did not. This response is somewhat surprising, as this writer is aware of very little such communication.

Table 5.20 shows three items related to line of communication that existed between schools and Education.
Table 5.20. Percentage of responses on the line of communication (N=400)

<table>
<thead>
<tr>
<th>No</th>
<th>Questions on the line of communication</th>
<th>1 (SDA)</th>
<th>2 (DA)</th>
<th>3 (U)</th>
<th>4 (A)</th>
<th>5 (SA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>Guidelines and instructions from headquarters are clear</td>
<td>0.5</td>
<td>3.9</td>
<td>8.5</td>
<td>70.5</td>
<td>16.6</td>
</tr>
<tr>
<td>07</td>
<td>I know who to write to about the various problems that we face in the school</td>
<td>3.9</td>
<td>7.3</td>
<td>25.1</td>
<td>46.4</td>
<td>17.4</td>
</tr>
<tr>
<td>09</td>
<td>I communicate problems related to syllabuses to the CAPSS</td>
<td>3.5</td>
<td>26.9</td>
<td>16.8</td>
<td>45.9</td>
<td>17.4</td>
</tr>
</tbody>
</table>

There was a very small number of 20 citations on communication that focussed mainly on link between CAPSS and schools. The comments were mainly calling for information flow from CAPSS regarding change in syllabuses and latest development.

Senior teachers should be informed and consulted regarding the text or change of syllabuses (ID 190).

CAPSS should keep in touch with the schools all the time (ID 401).

Since the responsibility of a teacher is not limited to the four walls of the classrooms, teachers would like to know the latest pulse of the Education Department. Of late, CAPSS Newsletter has been much awaited as it provides enough information for the teachers about the changes that occur in the curriculum and in the Department (ID lost).

Teachers would also like the CAPSS Newsletter to be monthly or weekly instead of quarterly. Two citations quoted below are representative.

Teaching materials or change in the curriculum are to be intimated in time. Visits and suggestions to modify or improve my work is highly appreciated (ID 181).

If the CAPSS Newsletter [is] supplied weekly instead of [quarterly], we can get more of fresh ideas/skills, which we can make use of in our daily teaching (ID 444).
Although negligible with only 20 citations, nevertheless very important from teachers’ point of view, at least for those who thought about it, there should be created a “clear communication and feedback system between the school and the department” (ID 173).

Although a large number of teachers indicated that guidelines from headquarters were clear, they expect the line of communication between the Education Department and schools to improve, particularly with CAPSS. Increased circulation of newsletters, frequent visits followed by discussions with teachers in the schools on their problems and about certain directives were some of the modes of communication suggested.

(ii) **Material support**

From the 267 citations (67 percent of sample) three groups of material were mentioned although they were really closely interrelated. The first group was the materials for teaching and learning in the classrooms such as library, reference books, writing materials and other stationery for classrooms as expressed in 171 documents, which represented almost two-third of the respondents in this sub-set. Only two documents indicated that sufficient materials had been supplied, and one of them stated that quality of the goods supplied needed attention. The types of learning materials they asked for were additional syllabuses, manuals, guidebooks, for example, in the following manner:

> We expect teaching materials like sufficient textbooks for children. Manuals and handbooks for teachers and other materials like chart paper, duplicating paper, marker pens, glue, thread, etc. which is important for the children. Handbooks on different teaching skills, games and songs [are needed] (ID115).

The documents pointed out that they were supplied, but despite their requisition in advance, neither the quantity was satisfactory nor they were supplied in time.

The second type was the textbook (53 citations). Textbooks should be sent in sufficient and in right quantity, teachers argued. The third type was the learning equipment such as science laboratories, science equipment, games equipment and office equipment (very few of them) given in 43 citations. These were expected from the Education Division. At this point, reference is made to Table 5.19 in this chapter in which the availability of facilities was presented. A lesser number of teacher (113 citations) had commented on availability of facilities while more teachers (147) had commented on shortage.

Table 5.21 shows the number of teachers responding regarding the material support needed. The percentage is calculated on the basis of respondents given in the top row of
the table and not the total documents in the bottom, which is often more than the number of respondents. This is because one teacher could nominate more than one response. Similar to Table 5.19, this table also shows that teachers in rural schools expressed relatively more in terms of materials required, except in the case of textbooks.

Table 5.21. Showing numbers and types of materials required in schools at different locations (N=340)

<table>
<thead>
<tr>
<th>Material</th>
<th>Urban (N=142)</th>
<th>Semi-urban (N=126)</th>
<th>Rural (N=102)</th>
<th>Remote (N=24)</th>
<th>Total (N=394)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N(%)</td>
<td>N(%)</td>
<td>N(%)</td>
<td>N(%)</td>
<td>N(%)</td>
</tr>
<tr>
<td>Resource books</td>
<td>59 (42)</td>
<td>55 (44)</td>
<td>49 (48)</td>
<td>8 (33)</td>
<td>171 (43)</td>
</tr>
<tr>
<td>Text books</td>
<td>16 (11)</td>
<td>24 (19)</td>
<td>10 (10)</td>
<td>3 (13)</td>
<td>53 (13)</td>
</tr>
<tr>
<td>Learning equipment</td>
<td>8 (6)</td>
<td>13 (10)</td>
<td>19 (19)</td>
<td>3 (13)</td>
<td>43 (9)</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td>92</td>
<td>78</td>
<td>14</td>
<td>267</td>
</tr>
</tbody>
</table>

Teachers commented that supply of these materials in time and in sufficient quantities would be necessary, as this representative citation points out.

> It would be highly appreciated if the Education Division could try and …

provide the schools with enough reading materials in English and in Dzongkha.

The students in Bhutan don't seem to have enough reading materials so in order to encourage reading if variety of reading materials could be supplied (ID 319).

In summary, the main support that teachers ask for is to enhance the supply of basic materials in time and sufficient quantity. Again, more rural schools indicated the need for improvement of supply.

(iii) Professional support

Quantitative data in Table 5.22 shows that teachers’ requests usually responded to by Education Division has just about 50 percent (item 1), but qualitative data did not indicate any such request. As can be seen, hard work was recognised by Education was more on the negative side (item 3), while parents being cooperative scored a little over 50 percent (item 4). 90 percent of the teachers said they had too many things to do in
schools (item 5). In the table, visits of officials to provide guidance scored almost 88 percent, indicating that teachers would like help (item 6).

Table 5.22. Percentage of responses of professional support from Education, DEO & parents (N=400)

<table>
<thead>
<tr>
<th>No</th>
<th>Questions regarding professional support</th>
<th>1 (SDA)</th>
<th>2 (DA)</th>
<th>3 (U)</th>
<th>4 (A)</th>
<th>5 (SA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>My requests are usually responded to by Education Division</td>
<td>4.2</td>
<td>16.3</td>
<td>27.6</td>
<td>47.5</td>
<td>4.5</td>
</tr>
<tr>
<td>03</td>
<td>My hard works are recognised by Education Division</td>
<td><strong>12.6</strong></td>
<td><strong>26.5</strong></td>
<td><strong>32.9</strong></td>
<td><strong>22.9</strong></td>
<td><strong>5.1</strong></td>
</tr>
<tr>
<td>04</td>
<td>Parents are cooperative in school development activities</td>
<td>6.2</td>
<td>19.8</td>
<td>21.9</td>
<td><strong>41.2</strong></td>
<td><strong>10.8</strong></td>
</tr>
<tr>
<td>05</td>
<td>We have too many things to do in the school</td>
<td>0</td>
<td>4.9</td>
<td>5.1</td>
<td><strong>58.9</strong></td>
<td><strong>31.1</strong></td>
</tr>
<tr>
<td>06</td>
<td>I would like more officials from Education and Dzongkhag to visit us in the school</td>
<td>0.8</td>
<td>2.8</td>
<td>7.9</td>
<td><strong>52.0</strong></td>
<td><strong>35.6</strong></td>
</tr>
</tbody>
</table>

From the qualitative data, 20 teachers said they would like to take opportunities of distance education at the National Institute of Education to upgrade their knowledge and skills. (The distance education course was started in 1996 to promote professional development among the primary teachers, particularly those who had less training and academic qualification.)

The next group of 136 citations in this set pointed out that national based in-service programmes (NBIP) could help teachers to learn about the latest development, to upgrade themselves in teaching methods, and to share experiences with their colleagues. At the same time, they would also like to get opportunities for further studies to improve their academic qualification (51 documents). Some teachers had indicated that by not attending in-service programs they not only became outdated, but were also discouraged for not getting the opportunity to do so. A comment made by a teacher pointed out that even:
School Based In-service program could be initiated by Education Division so that the teachers are involved in their subjects respectively for the professional development. Such programs could be conducted either quarterly or half yearly (ID155).

Many teachers (48 citations) would prefer their training to be abroad mainly for exposure and to learn from other systems. It is to be noted here that through bilateral and multilateral relations, the Royal Government of Bhutan had been able to get scholarship offers for short term and long term courses for teachers in recent years. This opportunity had certainly boosted the morale of many teachers, but apparently affected many more adversely. For example, thirty-seven citations were coded as stating that teachers who put in a lot of effort should be given their due recognition. Many of them even suggested that “hard working teachers should be recognised and [and rewarded by] giving them [a chance to go] abroad” (ID107). Of course, the other reward would be promotion to the next higher grade (salary level), although many seemed to indicate promotion to be a natural right.

Some teachers (54 citations) suggested that, “some competent people from headquarters as well as Dzongkhag, should visit the schools and sort out who need support either by asking the head teacher [or by talking to] teachers themselves” (ID121). They thought that this visit and timely guidance in their work would help them a great deal in proper implementation of the curriculum and other policy matters in the schools. The citation below represents most of the respondents because it has all the materials mentioned by others.

Distance education to upgrade qualification, in-service programmes for professional development, study tour to other schools in country and outside the country. Recognition for hard works, in-service training abroad. Visit from education and dzongkhag for professional guidance and support and to establish rapport with the department. Further study to update qualification. Promotion in time, and appointment of more teachers. Education and dzongkhag should keep in touch with teachers (ID deleted).

In summary, distance education, in-service education on new development, further enhancement of academic qualifications and training abroad were some of the types of professional support teachers needed. Recognition of the hard work of teachers and frequent visits by officials from Education for discussion with the teachers were indicated to be desirable.
Summary of Support from Education and Dzongkhag

This section revealed that the line of communication between the schools and the Education Division and the district offices should be improved. It goes without saying that material and professional support was one of the most essential components in the efficient running of schools. This very essential component was experienced as a shortfall. The data also indicated that support from CAPSS and DEO was not provided satisfactorily both in terms of material supply and professional development. These needed to be enhanced.

CONCLUDING SUMMARY

The results of the quantitative and qualitative data analysis were presented as complementary to each other. They definitely threw some light, particularly the qualitative data, on the actual situation in most of our schools. Main valuable findings are given below:

1. In using the curriculum, teachers appeared to be more dependent upon the textbooks and manuals. When the textbooks and manuals did not contain the complete information, or when materials were not adequately supplied, there was very little they could do to help children learn.

2. Activity based teaching appeared to be rather shallow and described children drawing a picture, colouring, writing something. Teacher pupil interaction was equated with a situation where students gave answers to the questions asked by the teacher. Classrooms were generally overcrowded and lacked appropriate materials and furniture to support the NAPE style of teaching. The teacher shortage further aggravated the matter by increasing the workload of those already working.

3. Assessment was indicated as generally problematic. It was confusing to teachers (for want of a uniform format) and it was exhausting and time-consuming because of the shortage of teachers and the growing number of students in classes. Consequently, teachers were not able to provide individual guidance to improve the pupils’ performance, which was the main purpose of continuous assessment. Again, the practices, including grading and marking, of continuous assessment appeared to be small units of summative assessment.

4. A minority of the teachers saw that teacher education programmes were worthwhile as they helped them to gain confidence, more so in the primary, than at the secondary level. But in general the link between pre-service teacher
education and school realities was rather weak, and the impact of in-service programmes did not reach the classrooms. There was also an indication that teacher education lacked the required support. The adverse conditions in the schools such as the large number of students, teacher shortage and lack of learning materials appeared as the main reasons.

5. Management was indicated to be good across the country by a majority of teachers. The comments were, however, indicative of 'daily routine following'. In terms of facilities, schools in rural areas, for some unknown reasons tended to be relatively neglected with regard to furniture, buildings, water supply and toilets. Books and other learning materials were not distributed equally among schools and on time.

6. The data show that the line of communication between the CAPSS and the schools regarding curriculum change was weak and should be improved. In terms of material support teachers ask for an adequate quantity and timely supply of books, stationery and equipment. In terms of professional support, teachers ask for regular in-service courses, distance education, frequent visit from Education headquarters and district offices, as well as recognition of their hard work.

Finally, the new curriculum found less enthusiasm among the teachers as well as from those who prepared the new change at the centre. There was neither immediate support from the local authorities (Dzongkhag) nor from the central authorities. The limitations were mainly due to lack of support for materials, inadequate supply of teachers, training of teachers in service and guidance as well as pressure that was necessary at the initial stage of implementing the new curriculum.

Lack of teachers and smaller classrooms for a proportionately larger number of students were the other factors responsible for the less effective implementation of the new curriculum in the schools. It is not sufficient to produce new syllabus and textbooks and open a new school. It is equally important to improve the conditions in the schools first, and then improve the capacity of the teachers to confront the new challenge through initial training and continued support and pressure until the change is fully institutionalised. These are some of the issues to which we shall turn in Chapter Six.