9. Formal education in Shigar

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9.1 Introduction

Pakistan's education system is considered to be one of the least developed through-out South Asia. Following official statistical data of the United Nations Educational, Scientific and Cultural Organization (UNESCO), the national adult literacy rate for the year 2006 is estimated at a level of 54.3%. In contrast, the literacy rate in neighbouring India is estimated at 65.2% and in Sri Lanka even at 90.8% (UNESCO 2006). The literacy rate in the Northern Areas, however, reaches only 38% (GOP MINISTRY OF KASHMIR AFFAIRS AND NORTHERN AREAS 2006:65), although nowadays education plays a significant role in the development of the Northern Areas and is also eagerly demanded by parents.

Despite the low literacy rate in the Northern Areas one has to bear in mind the considerable progress in the field of education during the past decades. Until the 1970s, as the Government under leadership of Zulfiqar Ali Bhutto abandoned the small principalities of the Mirs and Rajas, formal education was almost non-existent in the Northern Areas. In 1981 the average literacy rate was about 15%, whereas 26% of the males but only three per cent of the females were literate (WORLD BANK 1997:2). During the 1990s several projects were launched, aiming at the improvement of educational facilities in the Northern Areas in order to increase the general school enrolment as well as the literacy rate. This development was also facilitated through a rapid establishment of private schools during the past years.

Despite developments and improvements achieved during the past years, the Northern Areas still face several problems in the education sector, such as lack of schools and teachers, long walking distances to schools, poor school infrastructure, cultural and gender-related constraints which especially discriminate against girls, economic deficits and poverty. One of the central problems is the lack of quality education (GOP 2004:10).

9.2 Design and objective of the study

During the past decades quality of education has become a central focus in international discussions on education, particularly since the Education for All Movement (EFA) was launched at the World Conference on Education for All in 1990. Under the leadership of UNESCO the movement set up several goals with the overall objective of reducing illiteracy by the end of the decade. This goal, however, was still not achieved ten years later. In the year 2000 the international community held a meeting in Dakar, Senegal, reaffirming the goals of the EFA movement and defining new goals to be achieved by 2015, eventually recognizing the importance of quality of education. With this new emphasis the international community agreed upon "improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills" (WORLD EDUCATION FORUM 2000:8). Also Pakistan was among the participating states. In the following years Pakistan intensified its emphasis on quality education, particularly on the quality of primary education (cf. GOP

MINISTRY OF EDUCATION 2003b). In this regard, our study focuses on the quality of elementary schools[51] in Shigar and assesses the present situation of these schools.
Nevertheless, the analysis or assessment of quality requires a definition of the term "quality education". Since the concept of "quality education" is depending on relational viewpoints and perceptions, there is a need to develop a set of indicators in order to parameterise the term.[52] The crucial indicator for quality education is the personal and academic qualification of the teacher, since he or she is the central person imparting knowledge to the students. Another important indicator is the availability of teacher trainings or refresher courses, ensuring the professional development of the teacher's qualification and skills. Further indicators are adequate teaching and learning environment, which means the condition of the school building and class rooms, as well as the availability of teaching material such as teacher manuals, student's textbooks, supplementary reading material, maps, posters, and charts. Support from government, community and parents, respectively, is also an indicator reflecting the interest in and also the attention to education. A minor indicator is the school's contribution to students' health, nutrition and motivation. Regarding the nutrition of students it is assumed, however, that the school is not in the position to cater for its students. Other significant indicators for quality education are based on quantitative analysis such as the teacher-student ratio[53] as well as the drop-out[54] and survival-rates[55].
In brief, the following indicators were assessed during the field visit:

- personal and academic qualification of the teachers
- availability of teacher trainings or refresher courses
- adequate teaching and learning environment
- availability of teaching material
- support from government and community/ parents
- school's contribution to students' nutrition and motivation
- teacher-student ratio
- drop-out and survival-rates

9.3 Methodology

During the latest study all 24 schools in Shigar were visited. Beside participatory observations in the schools, standardised interviews with head teachers or teachers were conducted, in order to collect data and information according to the above mentioned indicators.

[51] In this report we use the expression "elementary schools" as a collective term for primary and middle schools.

[52] The list of indicators used in this study does not claim to be comprehensive, and other possible indicators such as learning outcomes, a clear definition of learning objectives, a relevant curriculum, monitoring of school activities by government institutions, content of textbooks, teaching methodology, and reputation of the institution could have been included.

[53] Average number of students per teacher

[54] Rate of students leaving school ("dropping out") during the course of a certain school level

[55] Rate of students persisting on the course of a certain school level

9.4 Results of the field visit

9.4.1 General findings

At present, 24 schools are located in Shigar which comprise primary, middle, and high schools as well as one college. The number and level of all schools are illustrated in Figure 9.1.[56] With regard to the target group for our study, there are 18 elementary schools. More than 50% of all schools are primary schools. With regard to the total number of schools, girls' schools slightly outnumber boys' schools. Thus, the availability of schools for boys and girls is equal and gender balanced. This trend can also be observed at the primary level. Moreover, coeducation at primary, middle and high school level is also available, although separate education still prevails.

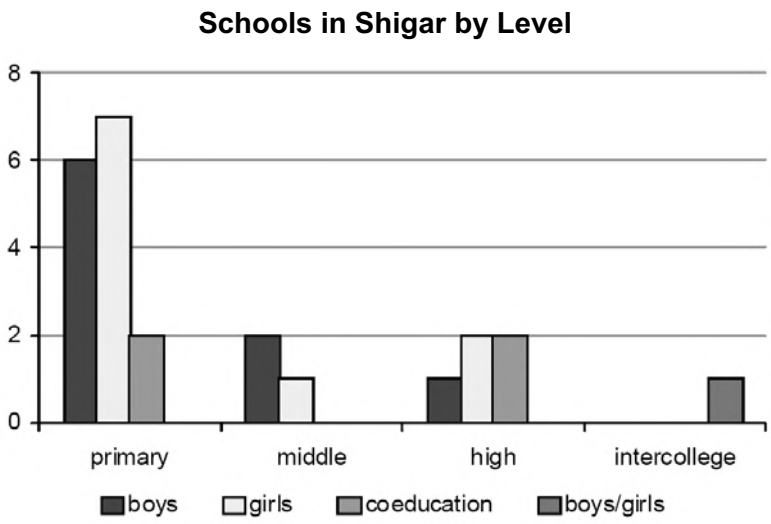


Figure 9.1 Schools by level
Data: Survey by Benz, Mahrwald & Neutz 2008

The existing schools can be classified by type of provider as government, community and private schools, also known as public schools. Government schools constitute the majority of schools in Shigar (Figure 9.2). Nevertheless, it is worth to note that the number of private schools has increased during the recent years, not only in Shigar but also in the Northern Areas and in Pakistan respectively.

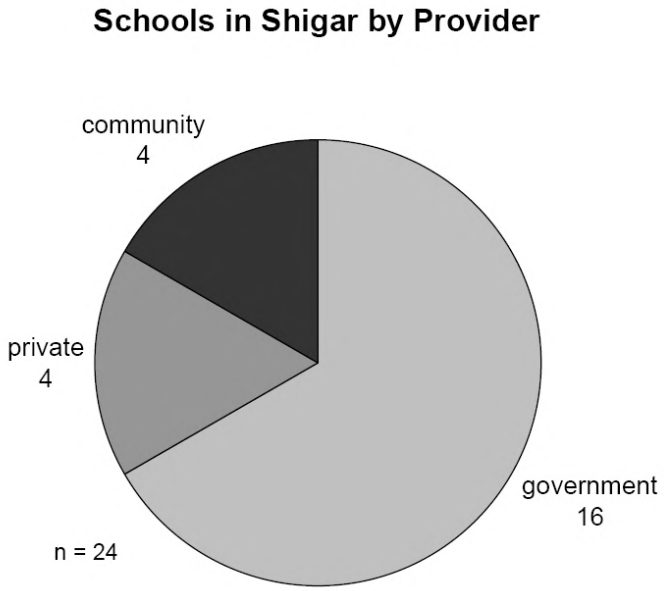


Figure 9.2 Schools by provider
Data: Survey by Benz, Mahrwald & Neutz 2008

All schools in Shigar were established between 1930 and 2008 as shown in Figure 9.3. The first school in Shigar was a boys' primary school, established in 1930. But it was not until 1957 that the first girls' primary school was established. Until the 1990s the number of schools in Shigar increased continuously. During the 1990s, however, Shigar experienced a huge increase in the total number of schools, particularly of government primary schools. This development had several reasons: In 1990 Pakistan,

[56] Schools listed in Figure 9.1 as „high schools" offer high, middle and primary classes (with the exception of the F.G. Boys High School Shigar, which provides only high and middle classes); schools listed as "middle schools" provide middle and primary classes.

among other states, agreed on the World Declaration on Education for All, recognizing that education “must be made more relevant and qualitatively improved, and made universally available” and also that “sound basic education is fundamental to the strengthening of higher levels of education and of scientific and technological literacy and capacity and thus to self-reliant development” (UNESCO1990:2-3).

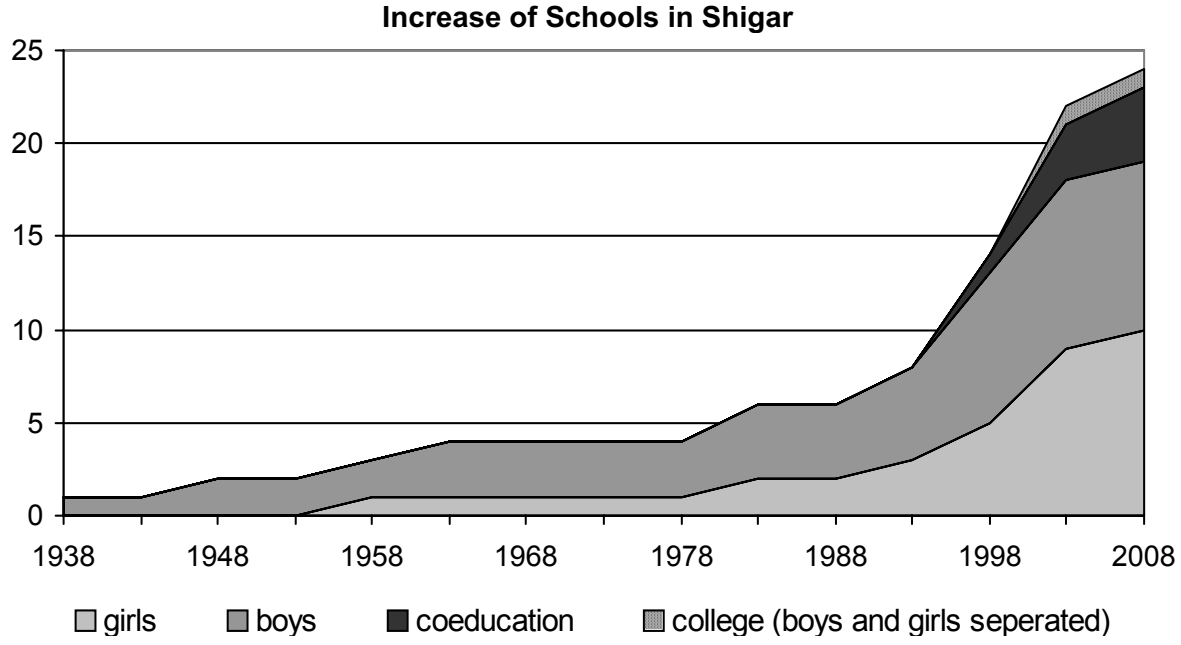


Figure 9.3 Increase of school numbers from 1938 to 2008
Survey by Benz, Mahrwald & Neutz 2008

Thus, increased commitment by the signatory states was demanded. In this respect Pakistan initiated several policy strategies such as the National Education Policy (1992 and 1998-2010), the Education Sector Reform: Action Plan 2001-2005 and the National Plan of Action for Education for All (2003), focussing on the general improvement of educational facilities.
Analysing the distribution of schools in Shigar on the following map (Figure 9.4) it becomes clear, that the establishment of schools since 1930 was mainly focused on the centre of Shigar. In 1980 only five schools existed there, comprising two primary schools, two secondary schools and one high school. It was not until the 1990s when the first primary schools were established also in the periphery of Shigar. Two decades later, in the year 2000, the number of schools, particularly primary schools, has increased significantly, whereas still very few schools are located in the periphery. Furthermore, the number of schools was less gender-balanced before 1990, which means that the number of boys’ schools was higher than the number of girls’ schools. Since then, however, the number of boys’ and girls’ schools got almost balanced indicating equal access to schools for boys and girls.

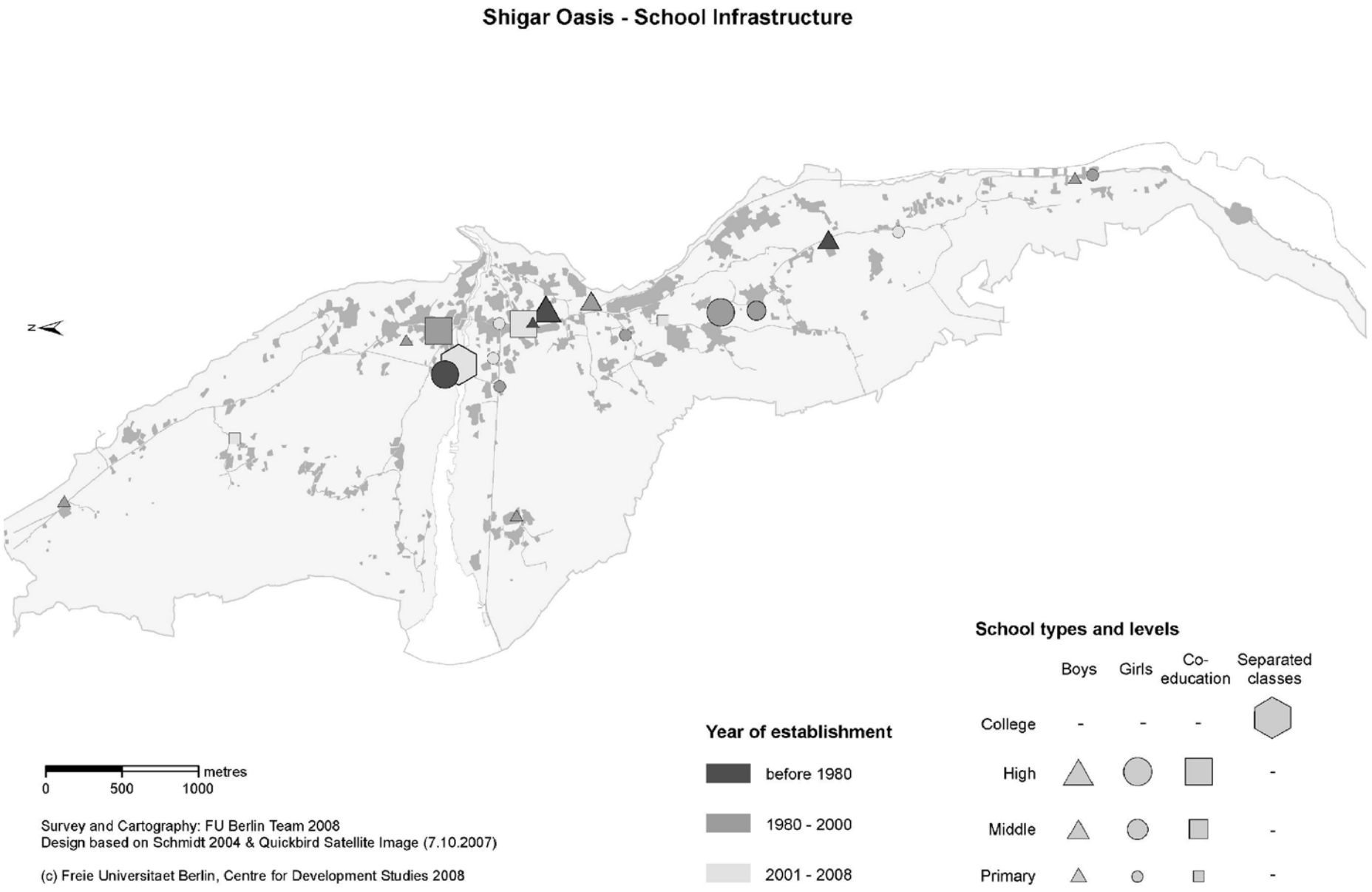


Figure 9.4 School infrastructure in Shigar 2008

According to the present situation the majority of schools is located in the centre of the Shigar oasis. Still, only a few schools are situated in the northern and southern part and to a certain extent in the western part of the oasis. Only primary schools are well distributed throughout Shigar, whereas middle schools, high schools and the college are altogether located in the centre. In consequence, those students who want to continue their education after primary level need to accept long walking distances if they come from the periphery. For example, if a girl student from Thugmo, northern Shigar, intends to go to a middle school for girls, she will have to walk a distance of about four kilometres one way.

In total there are 2933 students enrolled in the schools of Shigar, of which 55% are boys and 45% are girls. The overall ratio of girls and boys enrolled is very balanced, and even slightly more equalized than at the national level (56.5% boys, 43.5% girls, GOP MINISTRY OF EDUCATION 2006:1).

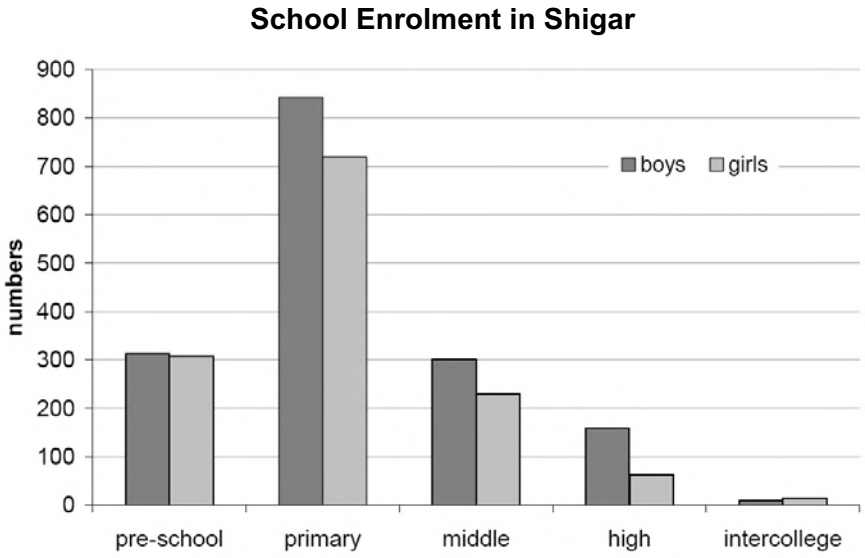


Figure 9.5 Enrolment by gender and school level
Data: Survey by Benz, Mahrwald & Neutz 2008

However, in regard to the data (Figure 9.5), about 74% of the students are enrolled in preschools and primary schools. About 18% of the students are enrolled in middle schools. In consequence, only less than 8% of the students are enrolled in higher education, e.g. high school or college. Due to the longer duration of the primary level (five years) compared to middle (three years) and high school (two years), the absolute enrolment figures in the lower level would be higher even if the enrolment ratio remained constant from primary to high school level. But under consideration of this relation, the figures for Shigar still show that the enrolment rate in the higher levels of education decreases.

In total, 124 teachers work in the schools of Shigar. Unlike the student ratio, the teacher's gender ratio is not balanced. According to the data of the field survey male teachers dominate with 76% while only 24% are female teachers. Despite the fact that the education of boy and girl students in separate schools prevails, the employment of male teachers in girls' schools is quite common. This indicates an acceptance of male teachers in girls' schools throughout society.

9.4.2 Teacher-student ratio

Considering the data on the numbers of students and teachers, the average teacher-student ratio in elementary schools is 1:30, which means that in average one teacher is responsible for 30 students. At first glance, this figure seems to be an adequate ratio, indicating that there are sufficient teachers in the schools.

Evaluating the teacher-student ratio in regard to quality education requires the analysis of the relation between number of teachers and students on the one hand and the number of teachers and classes on the other. Taking this into account, it can be stated that in 15 out of 18 elementary schools at least one teacher is responsible for more than one class at the same time - in other words, teachers face the challenge of multi-grade teaching. Only in two schools one teacher is available for each class. Al-though the quality of learning outcomes of students in affected classes has not been assessed, it might be stated that multi-grade teaching has a negative impact on the learning outcomes as well as on the quality of teaching.

Examining the data in detail, two crucial outcomes attract attention: There is a tendency towards primary schools being more affected by multi-grade teaching than middle schools. Two out of three middle schools and only one primary school have at least one teacher per class. The remaining middle school is also affected, whereas only one teacher, regarding the total number of classes, was lacking. In contrast, in almost all primary schools (14 out of 15) multi-grade teaching is practiced. The second tendency is that the condition in girls' or co-education schools is slightly worse than in boys' schools. The only affected middle school is a girl's school and the only non-affected primary school is a boys' school. At the primary level there are girls' and coeducation schools where teachers are responsible for three to five classes at the same time. This situation cannot be found in boys' schools at all.

This result leads to the conclusion that in almost all elementary schools more teachers are urgently needed, particularly in girls' and coeducation schools. This perception was also shared by teachers or head teachers interviewed in the affected schools. However, not only the number of teachers available in each school is crucial but also their professional qualification.

9.4.3 Qualification of teachers

Within the educational process the importance of teachers as key figures is very high. The most recent National Plan of Action: Education for All recognises that the teacher is considered the most crucial factor in implementing all educational reforms at the grass-root level (GoP 2001:6). The World Declaration on Education for All emphasizes the role of teachers as follows: *"The pre-eminent role of teachers as well as of other educational personnel in providing quality education needs to be recognized and developed to optimize their contribution. This requires to improve their working conditions and status notably in respect to the recruitment, initial and in-service training, remuneration and career development possibilities."* (GoP & UNESCO 2003:14).

According to the data most of the teachers in Shigar Proper have an Intercollege[57] or Bachelor degree as shown in Figure 9.6. More interesting is the fact, that in aver-age male teachers are higher qualified than their female counterparts. These figures show also very clearly the inequality between the two genders. Furthermore, almost all teachers in primary schools hold Intercollege degrees or lower. Only in higher secondary schools, high schools and colleges teachers are higher qualified. Although the government puts high emphasis on primary education, teachers in primary schools are less qualified.

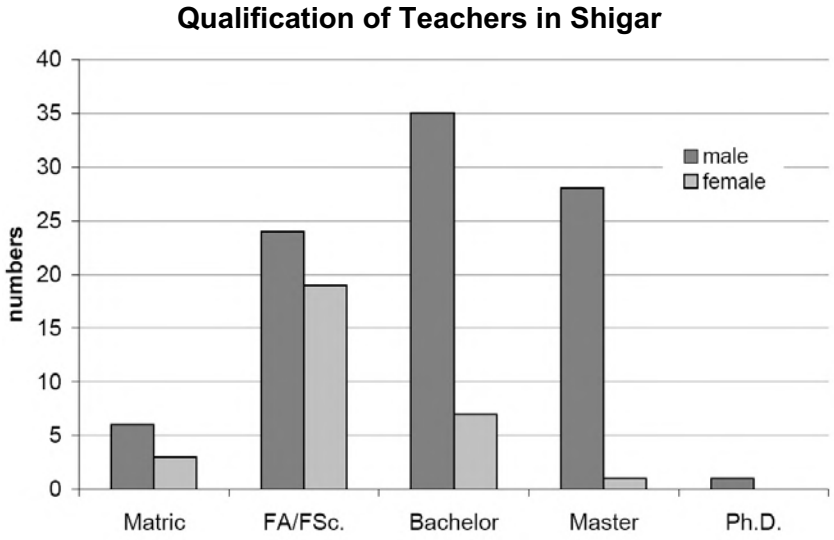


Figure 9.6 Academic qualification of teachers by gender
Data: Survey by Benz, Mahrwald & Neutz 2008

9.4.4 Availability of teacher training and refresher courses

Almost every interviewee got his or her teaching degree several years ago. In the National Plan of Action on Education For All however it is stated that the *"teachers` competence shall be improved and the relevance of training programmes for teachers shall be ensured"* (GOP MINISTRY OF EDUCATION 2003b:6).

According to the data of the field survey, more than 50% of the teachers inter-viewed in Shigar did not have the chance to participate in teacher trainings. They have been teaching for many years without any refresher courses. Those who took part in refresher courses only did this once. Just one teacher got a refresher course organised by the government, all other refresher courses were organised by the Aga Khan Education Service. This is an interesting outcome of the research project. It seems that the government does not provide enough teacher training measures.

Another question was about the necessity of refresher courses on the way of teaching. The outcome of this question was that almost every interviewed teacher would need a refresher course about the techniques of teaching.

Consciousness in the teaching subject is important, but it is equally important to know how to teach. Beside the way of teaching, most of the teachers mentioned a need for courses in almost every subject, especially in science, English and maths. There was even one teacher who mentioned not to have proper knowledge about the new curriculum.

[57] Intercollege (intermediate college) graduation requires two additional years of education after matriculation (class 10); graduation can be obtained either in the arts, commerce and general group (FA, First Examination in Arts) or in the science group (FSc, First Examination in Science)

9.4.5 Availability of teaching material

Ways of teaching are very limited in most schools, since teaching is dependent on the teaching material available in the school. In addition, in those schools, where teaching material is available, it is seldom used. Teachers often do not know how to handle the existing material. The equipment of the schools with different teaching materials, particularly the class rooms, is very diverse. In some schools the walls of the class rooms are painted or draped with maps, posters and charts. In other schools, however, there is either very little or no material available. Often the scarce available material is in a bad shape (in one case even damage by mice has been witnessed (Figure 9.7), or is not applicable to local conditions, because the topics covered have nothing to do with situations of every-day life in a remote high mountain oasis (Figure 9.8).

Most of the teachers themselves noted that they lack teacher manuals, additional reading material, charts, a library, a lab, computer lab models, maps, a globe, blocks for maths or toys and books in their schools. Only two out of 23 schools have a library and only three schools have a laboratory. Therefore in most cases it is up to the teacher how a lesson looks like and to figure out how to teach with new teaching material, since there are no teacher trainings on this issue.

Figure 9.7 Teaching material nibbled by rodents
Photo: Benz 2008

Figure 9.8 Teaching material not suitable for local perceptions
Photo: Benz 2008

Regarding the teaching conditions, teachers were asked why they became a teacher. The answers are quite diverse, as shown in Box 9.1.

Box 9.1 Motivations for becoming a teacher

Mohammad Ali:	"It is my profession. In Islam it is good to be a teacher"
Hussein Ju:	"My father was also an Islamic teacher, so it is my duty to follow him"
Ms. Halda:	"I had no other opportunity but I have also interest in teaching"
Rashid Abbas:	"In those days no teachers were available, so I decided to be-come a teacher"
Ms. Habiba:	"I need to earn money"

9.4.6 Teaching and learning environment

Since students and teachers of all types and level of schools spend a considerable amount of time in the school, the learning environment – i.e. the school building, class rooms, sanitation, as well as the furniture and equipment – should be in a proper condition. In this regard the learning environment is an important factor sup-porting the motivation of students and teachers alike, thus contributing to quality education.

The condition and equipment of schools in Shigar is very heterogeneous. It varies from a proper school building and class rooms equipped with furniture and various types of teaching material to schools in poor condition which possess neither sufficient class rooms, any furniture nor proper teaching material (Figure 9.9 and Figure 9.10).

Figure 9.9 Government Boys' Primary School Senkhor
Photo: Neutz 2008

Figure 9.10 SAP Community Girls' Primary School Rupa
Photo: Neutz 2008

In some schools the buildings and the class rooms are in a poor condition, which means that the walls are damaged and the rooms are dark. In contrast, there are also schools consisting of a proper building and nice class rooms. Only five out of 24 schools have sufficient class rooms for every class. In the remaining 19 schools different classes share one class room or have to sit outside, which is uncomfortable at rainy or cold days with low temperatures.

In almost all schools electricity is not available. Sanitation in general is poor. In some schools sanitation facilities are either in a bad condition, out of order or do not exist at all. Also the quality of furniture and equipment in the schools of Shigar vary significantly. Some schools are provided with sufficient tables and chairs for every student, in others students have to sit on the floor, which is often, particularly in the seasons with low temperatures, cold and uncomfortable.

The learning environment of three elementary schools will be exemplified below in order to point out the different conditions of these schools:

F.G. Boys Primary School Shigar Khas

This government school is located in the centre of Shigar. It is the oldest school, established in 1930, although the present building is of recent times. The overall learning environment is in a proper condition: The school building consists of attractive class rooms (Figure 9.11), although the number of class rooms is not sufficient for all classes. Electricity and also sanitation facilities are available. Furthermore the class rooms are equipped with several teaching materials such as books, maps, models and charts.

A School with Attractive Class Rooms

Figure 9.11 F.G. Boys' Primary School Shigar Khas
Photo: Benz 2008

F.G. Girls Middle School Marapi

This girls' middle school, established in 1980, has a proper school building, whereas the four class rooms available are not sufficient for nine classes and are too dark. However, a new building with more class rooms is under construction (Figure 9.12). Unlike electricity and sanitation facilities, furniture, e.g. chairs and tables for the students, is not available. Beside this, the school has various teaching materials, whereas models are broken, and a library as well as a laboratory for science classes is needed.

A New School Building

Figure 9.12 F.G. Girls' Middle School Marapi
Photo: Benz 2008

SAP Community Girls Primary School Kothang Pain

This school is a former Social Action Programme (SAP) school established in the mid 1990s. It has no proper building. Therefore the students are taught within the schoolyard of the governmental Boys Primary School Lamsa, sitting on the ground (Figure 9.13). Only in winter the students move to their own building, which is actually in an insufficient condition. The class rooms are very dark, the roof is partly broken and there is also no furniture, particularly no chairs. Furthermore the school does not possess any teaching material.

Two Schools Sharing one Schoolyard

Figure 9.13 Government Boys' Primary School Lamsa
Photo: Neutz 2008

9.4.7 The school's contribution to students' nutrition and enhanced motivation

As already mentioned in the introduction it has been assumed that schools are not responsible but also not in a position to cater for their students and in this regard con-tribute to the students' nutrition. This assumption is confirmed through the data of the field survey. Virtually no school visited provides any food or beverages for their students.

Beside the condition of the learning environment, various out-of-school activities on special occasions contribute to the student's motivation. These can be the celebration of national days, teacher's or parent's day, but also different competitions. Out of twelve schools interviewed seven organise various activities on national days such as Pakistan Day or Independence Day. In addition, five schools celebrate a Parent's Day. Activities on such days include reciting the Holy Qur'an, singing songs, reading or presenting poems as well as giving speeches or performing dramas. Some schools also arrange sports days. Only three schools organise competitions in fields like speeches, poems or debates.

9.4.8 Support from government, community and parents

Continuous support of schools by different stakeholders is a necessary task in order to ensure, but also to contribute to quality education. Thereby, support can be pro-vided at different levels as well as by different means.

At the governmental level the support of schools may be characterized through a proper yearly budget, implementation of regular teacher trainings or refresher courses, provision of adequate students' textbooks as well as supplementary reading material and evaluation or monitoring measures. Regarding the budget, the data shows that each government school is provided with a certain fund from the government, depending on the level of the school as well as the number of students. The average annual government school budget is about 20,000 Rs. Two schools even had no budget at all. Almost all Government schools (n=9) interviewed replied that budgets are too low and usually have to be used for repair or maintenance work. In some schools hardly any money is left for furniture, particularly chairs and tables, or teaching materials. Students' textbooks are not available in the schools, and parents have to purchase the books for their children on their own. Supplementary readings for teachers and students such as teacher manuals are only available in some schools. They are lacking either because they are not provided by government institutions or because the budget of the school is too low to buy these items. As already discussed, about 58% of the interviewed teachers do not have the possibility to participate in trainings or refresher courses on a regular basis. This outcome indicates that the support or engagement of the government in this field is very weak, although this measure should be on the agenda of the government education policy.

The community and parents respectively cannot be excluded from daily school activities, since the community and the parents cannot rely on proper support by the Government, yet. Furthermore, if the community or parents are involved or have the chance to take over some responsibilities, they can actively support the school in weak areas through raising additional funds for maintenance or teaching materials but also for organising extracurricular activities. This is particularly necessary for community schools since they do not receive any yearly budget from the Government or other institutions. Two out of three community schools interviewed do not receive any budget. The third community school receives every seventh or eighth month 6,000 to 7,000 Rs which are completely spent for the teacher's salary. Consequently, all community schools do not have any financial means for maintenance, sanitation or additional teaching material.

Most common means of community or parental participation are regular meetings or school management committees, where parents, teachers and head teachers have the possibility to discuss their problems and difficulties and also to find solutions if possible. Particularly in regard to financial shortcomings the community can play an active role in collecting money if needed. According to the data of the survey almost half of the schools are not supported through meetings by the community (Figure 9.14). Four schools conduct at least one meeting per year and two schools conduct at least one meeting per month. In conclusion it can be stated that the support and engagement of the community could be enhanced, in order to compensate weaknesses of the schools.

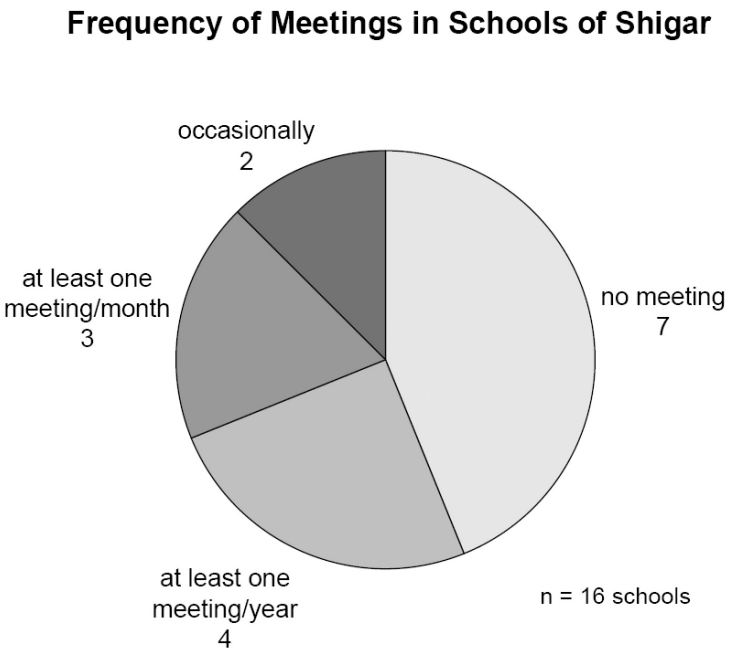


Figure 9.14 Frequency of parent-teacher meetings
Data: Survey by Benz, Mahrwald, Neutz 2008

9.4.9 Drop-out rate and school persistence rate

In the Millennium Development Goals of the United Nations, goal two is not only aiming at increasing the enrolment rates for boys and girls up to comprehensive enrolment at primary level, but also to secure full completion of the course of primary education, in order to prevent early drop-outs. This goal is set as to *"[a]chieve universal primary education [and to] ensure that all boys and girls complete a full course of primary schooling"* (UNITED NATIONS 2007:77).

Pakistan, however, is one of those countries in the world having the highest numbers of out-of-school children, i.e. children in school going age not enrolled. In 2004 about 6.462 million children in school going age in Pakistan were not in school (UNESCO 2007:30). The reasons for children being not enrolled are various. Some are likely to be enrolled late, some never ever enter school at all, and some have initially been enrolled but dropped out before they completed school. The drop-out rate for Pakistan is 30% (28% for females and 32% for males) (UNESCO 2007:35).

Figure 9.15 reflects the situation in the Northern Areas. This is a more alarming situation, because in the Northern Areas the drop-out rate on primary level for boys is 65% and 47% for girls (AKF 2007:4).

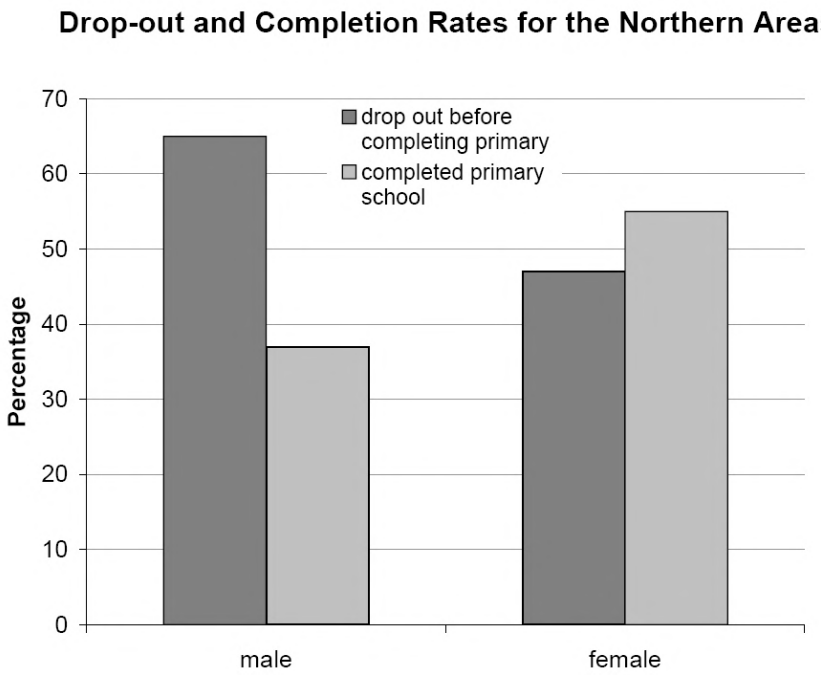


Figure 9.15 Drop-out and completion rates at primary level in the Northern Areas
Data: AKF 2007:4

The enrolment rate of the students in Shigar at the age of 7 to 10 however is very high compared to the national or regional level. Only 7.6% male students and 11.1% female students at the age of 7 to 10 are not in school in Shigar.

The answers we received from the teachers asking for the school survival and drop-out rate for schools in Shigar are quite surprising and contradictory at the same time. For example, the school survival rate mentioned for the F.G. Primary School in Thugmo was 50% but at the same time, the drop-out rate was declared as only 2%, whereas the survival rate for the SAP Community Girls' Primary School Kothang Pain was stated to be 80% but the drop-out rate to be only 10.5%. Therefore, the data should be used carefully, because it is not well pinpointed if these answers given reflect the actual situation.

Over all, out of 22 schools, 14 schools in Shigar have a survival rate which is either over the average or just the same as the average for the Northern Areas. If the survival rate is de facto high, it must be assumed, that there are on the other side very low drop-outs. In Shigar the highest drop-out rate was stated to be 50% (F.G. Intercollege Shigar), which is doubtlessly quite high, but still under the average.

Over all, almost every student who enters primary school does not drop-out before completing primary level. In this respect Shigar is quite outstanding compared to the general situation in the Northern Areas.

Nevertheless, the transition between primary and middle school is a big challenge, especially for female students. However, it is to mention that compared to a couple of years ago, female

students are catching up in education. At least in preschools, primary and middle schools the number of male and female students is quite balanced (Figure 9.5).

9.5 The state of education in Shigar

During the last decades, the state of education in the Northern Areas of Pakistan, as well as in Pakistan in general, underwent a tremendous change and improvement. Starting in 1981 from a literacy rate of 26.2% for Pakistan (FAROOQ 1993:8) and 14.7 % for the Northern Areas (WORLD BANK 1997:2), the rates improved remarkably to present levels of 54.2% for Pakistan (UNESCO UIS 2008) and 39% for the Northern Areas respectively (GOP MINISTRY OF KASHMIR AFFAIRS AND NORTHERN AREAS 2006:69). This is mostly due to a great joint effort of governmental and non-governmental actors to increase the number and improve the quality of educational facilities during this period of time. Better accessibility to formal education made the enrolment rates rising at all educational levels, and the number of graduates increased correspondingly. Alone during the last decade the female primary gross enrolment rate more than doubled in the Northern Areas from 29% in 1994 to 67% in 2005 (AGA KHAN FOUNDATION 2007:3). The former huge gender gap in educational attendance, especially at the higher levels of formal education, is steadily narrowing. Nowadays in the Northern Areas the gross enrolment on High School level is equal between boys and girls, at a rate of about 33% each (AKF 2007:3). Although the gender gap still persists in most regions of the Northern Areas, the overall trends of the three indicators mentioned above – increasing literacy, increasing enrolment at all levels and the narrowing of the gender gap – indicate a fundamental progress in the educational status of the people of the Northern Areas of Pakistan.
This development is accompanied by a tendency to broaden the economic basis of the rural households from combined mountain agriculture to off-farm income generation. Access to off-farm income opportunities, mostly formal employment, is highly dependent on formal education. With the increasing relevance of off-farm incomes for the rural livelihood systems, the awareness of the importance of education for both, male and female, has grown substantially.

9.5.1 Current status of education in Shigar

In the scientific literature and in official statistical reports, there is no consistent definition of the term literacy. In reports of the Government of Pakistan, a person is considered to be literate, if he or she “can read a newspaper and write a simple letter, in any language” (GOP POPULATION CENSUS ORGANIZATION 2001:Annex D) and the ratio is based on all persons aged ten years and older. On the international level, UNESCO is treating as literate all persons who can “read and write, with understanding, a simple statement of their everyday life” (UNESCO 2007:62), with the ratio based on all persons aged 15 and older. IUCN is using a somewhat different and quite restrictive definition of literacy in their report on the Socio-Economic Baseline of Shigar (IUCN 2007). According to this specification a person is considered as literate when he or she at least has graduated middle school, i.e. grade eight, and the ratio is being calculated on the basis of the whole population without age restriction (IUCN 2007:14). This leads to figures which are considerably lower than those of common literacy definitions and makes it difficult to compare them. In this report I will follow a modified version of the definition of literacy used by AKRSP in their reports on Socio-Economic

Trends in the Northern Areas, in which a person is considered literate when he or she has graduated primary school (i.e. grade five), and the ratio is calculated on the basis of all persons aged ten or older (AKRSP 2007:58). My modification will be to consider only persons aged 15 or older and calculate the ratio on this basis, with respect to the fact, that some children older than ten years – due to frequent late enrolment in Shigar – still are attending primary level classes.

The recent adult literacy rate for Shigar is close to 51%, which is only slightly lower than the average for Pakistan (54%, cf. Table 9.1). The same is true when these figures are considered differentiated by gender. The male adult literacy rates are almost on the same level for Shigar and for Pakistan, while the female rate is with 33% somewhat lower in Shigar than the average in Pakistan, which is nearly 40%. Keeping in mind that the average adult literacy rate for the Northern Areas is clearly lower than the Pakistan average, we can conclude, that Shigar – which almost reaches the level of the Pakistan average – represents one of the more advanced regions in terms of formal education, although it does by far not reach the outstanding educational levels of the most advanced regions in the Northern Areas.

Table 9.1 Literacy rates in Shigar and Pakistan

Literacy	Shigar (2008)	Pakistan (2005/06)
Adult Literacy Rate		
Total	50.7%	54.2%
Male	66.0%	67.7%
Female	33.2%	39.6%
Youth Literacy Rate (15-24 years)		
Total	74.4%	65.5%
Male	86.2%	76.7%
Female	62.2%	53.1%

Data: Survey by FU Berlin Team 2008; UNESCO UIS 2008; UNDP 2006

The facts are quite different when considered the youth literacy rate for Shigar and Pakistan. Was it Shigar slightly lacking behind the Pakistan average in adult literacy figures, Shigar shows a nearly 10% lead in youth literacy rates against the average of Pakistan (Table 6.1). Together with the fact, that the youth literacy rates for Shigar are substantially higher than the adult literacy rates in this community, this indicates a fundamental change and dynamics in the field of formal education attendance.

The analysis of the literate and illiterate population by gender and age groups as shown in Figure 9.16 gives a first hint on the character of this dynamics. It becomes obvious, that in the age-group of 35 years and older, nearly any literate woman can be found. Male literates can be found in every post school age group, and in the group of men less than 40 years old the literate section makes up the majority. For women under 35 the situation gives a different impression: a considerable share of women in this age-group is literate, and in the age-group under 25 years for the first time only a minority of women remains illiterate.

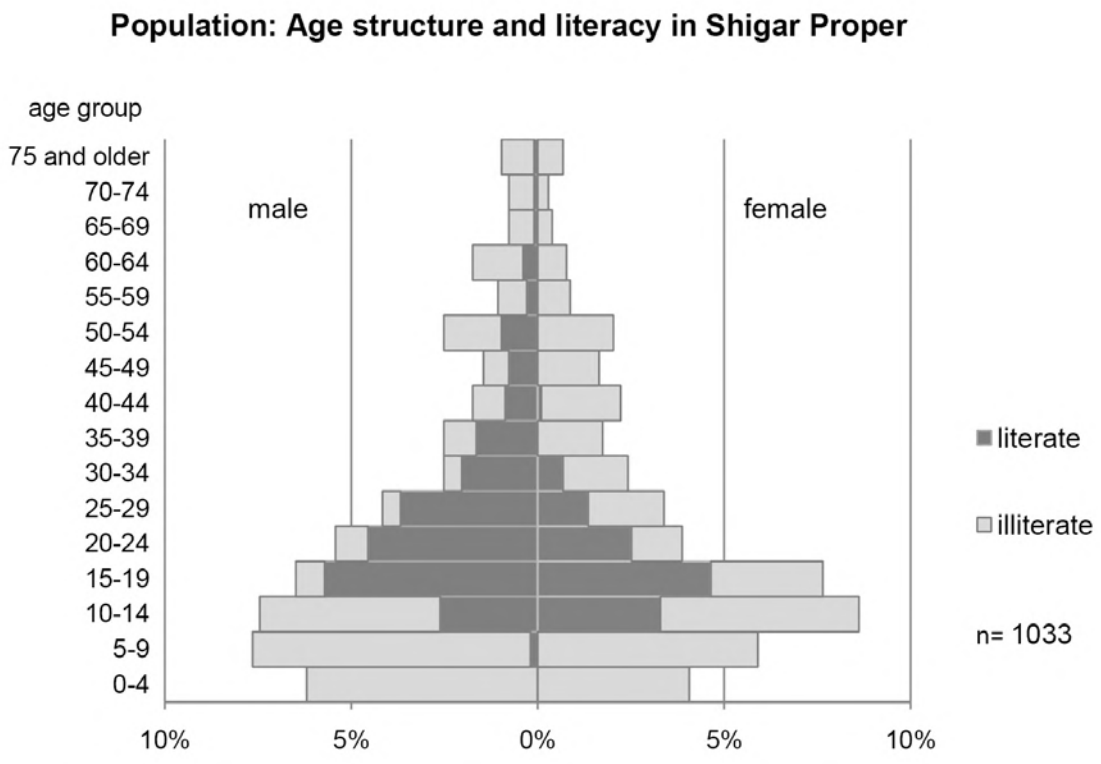


Figure 9.16 Age structure and literacy in Shigar Proper

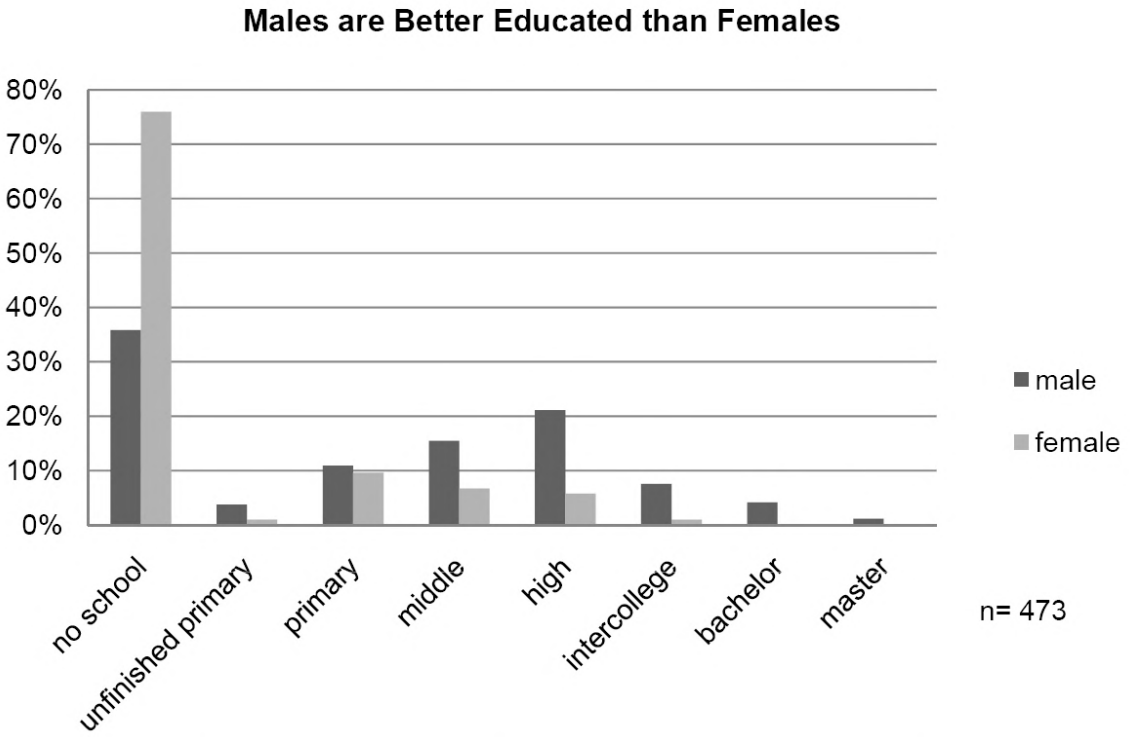


Figure 9.17 Educational status by gender in Shigar Proper

Taking a closer look at the graduation levels of these literate sections in the adult population, the before hinted gender gap becomes obvious (Figure 9.17). Males, in average, are much better educated than females. Not only do illiterate women account for a share of 76%, compared to 36% only for males. But also under those, who are literate, the majority of women has low educational graduations (Primary and Middle) only, whereas within the literate male population the majority has high school graduation or higher.
A hint for a shifting pattern is given in Figure 9.18. Here the same figures as discussed above are given for the young section of society, which will predetermine the future pattern of educational status and its gender balance in Shigar. Both, the share of illiterate women and men, have decreased remarkably to 10% illiterates in the male and 38% in the female section. As well, the share of educated women with high graduations has risen. Anyway, the gender gap still persists even among the young generation, as is clearly indicated in Figure 9.18.

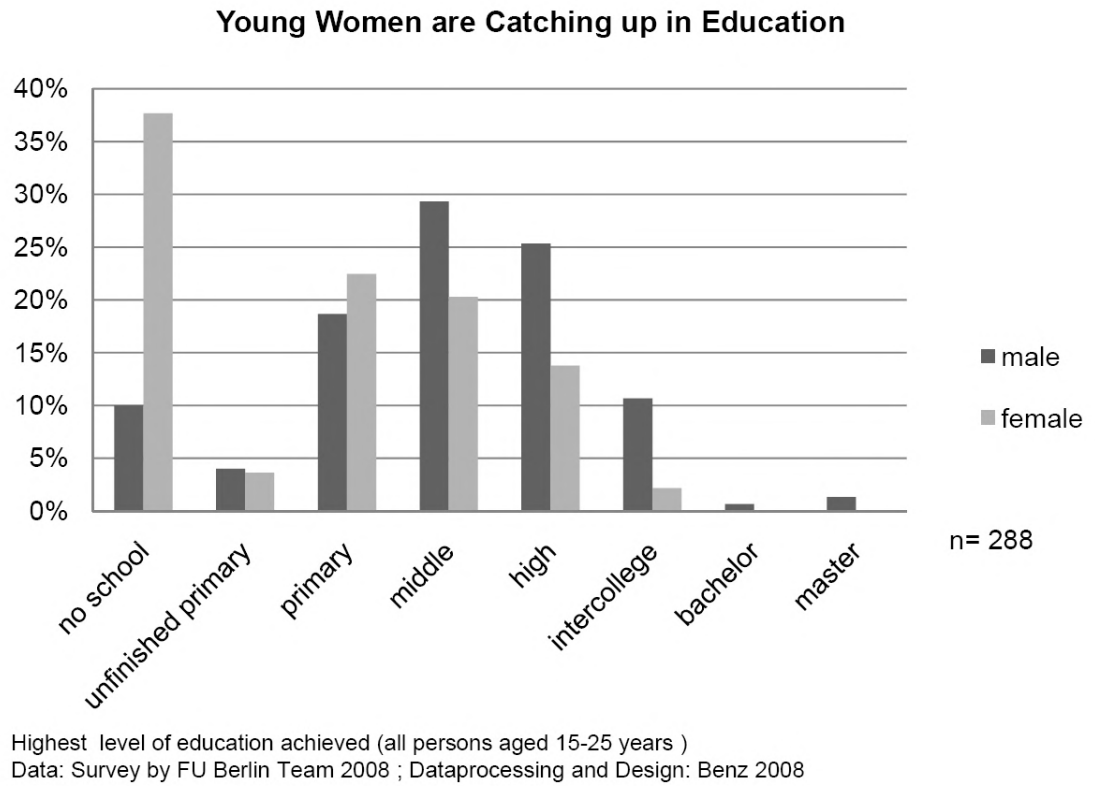


Figure 9.18 Educational status of the young generation

9.5.2 Trends of education in Shigar

The past trends and patterns of development which led to the present educational structure and status in Shigar can be derived from an age-group based analysis of the average educational attendance, as shown in Figure 9.19

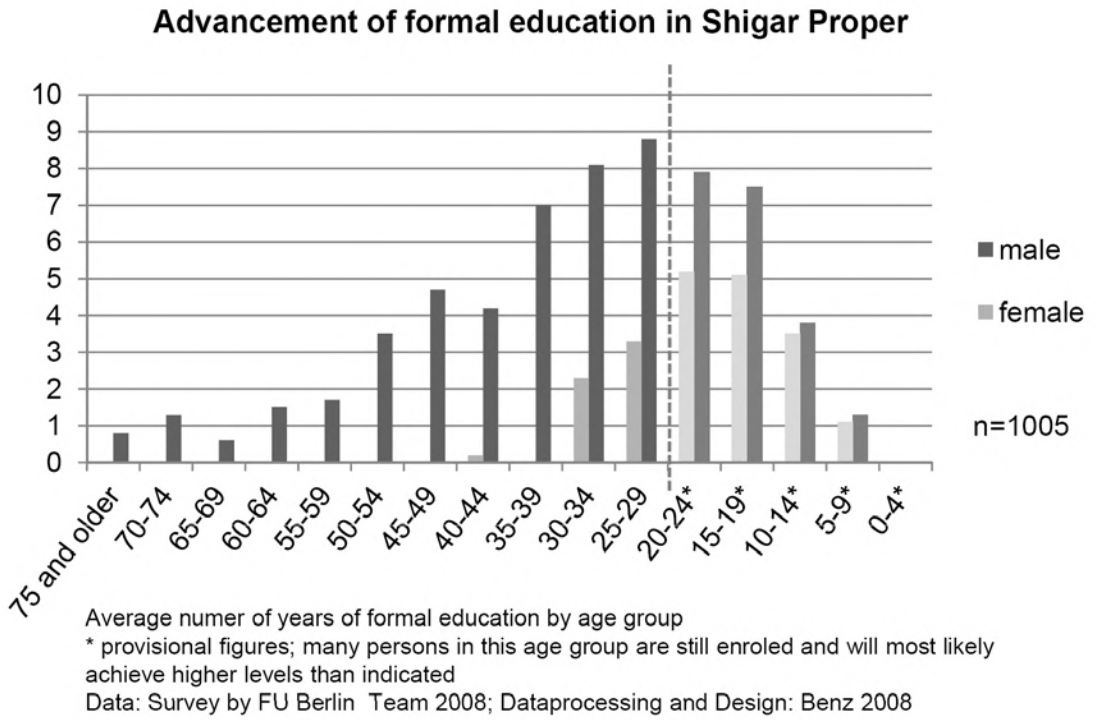


Figure 9.19 Status of education by age-groups and gender in Shigar Proper

The average educational attendance, measured in years of formal education, represents an indicator for the overall educational level achieved in the respective gender and age-group. For the male section of society, a long and steady increase in educational attendance is indicated in Figure 9.19. For the male section, this process started more than 70 years in the past and is still culminating with a preliminary peak at 8.3 years average educational attendance in the male age-group 25-29 years.

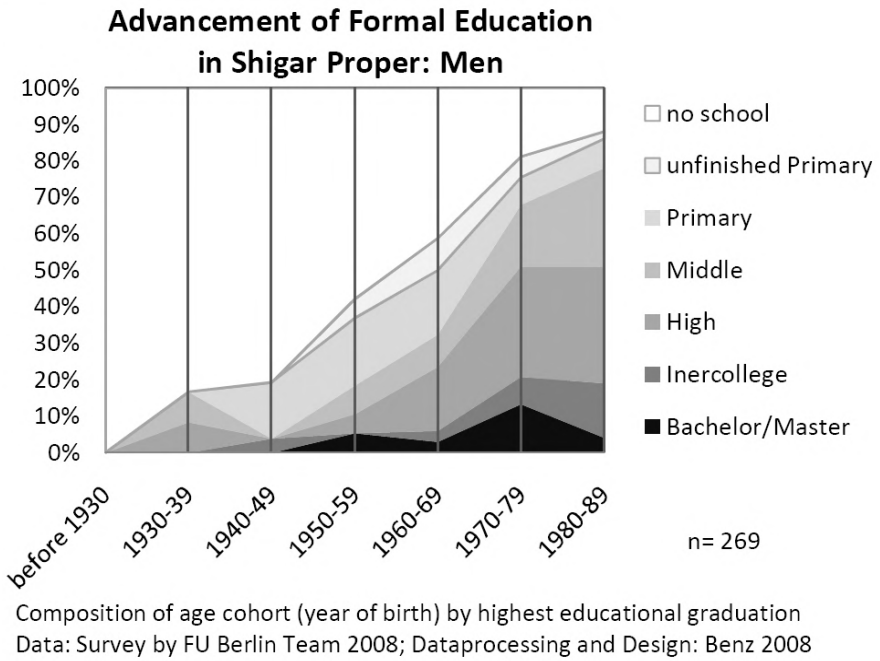
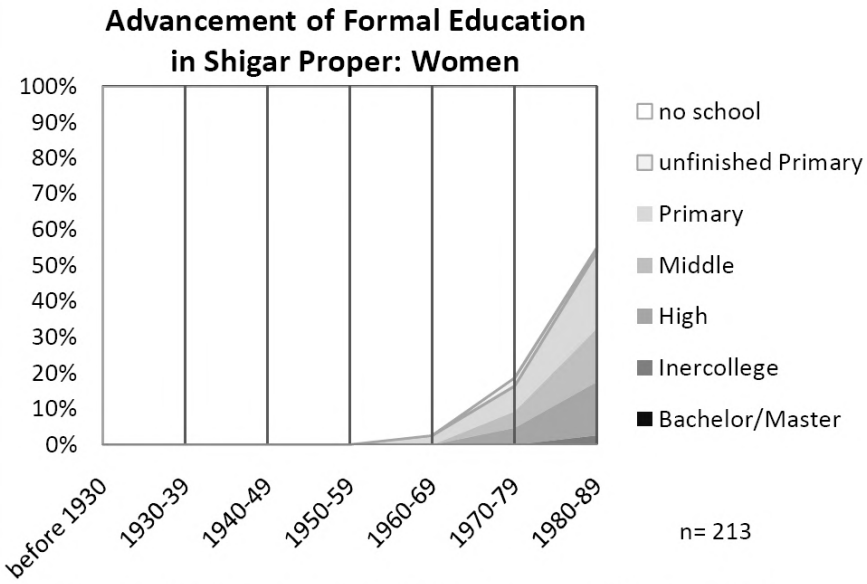


Figure 9.20 Trends of male education

For the female section the picture differs significantly. A similar process of steady increase did not start before the age cohort of women who are today 30-34 years old, which means a delay of about half a century compared to the men. Women started late, but with higher pace than their male counterparts. For the men it



Composition of age cohort (year of birth) by highest educational graduation
Data: Survey by FU Berlin Team 2008; Dataprocessing and Design: Benz 2008

Figure 9.21 Trends of female education

took almost four decades to let the illiteracy rate drop under 50% for the first time in an age cohort (Figure 9.20) whereas the same achievement for the women only took about two decades (Figure 9.21).

9.5.3 Student population of Shigar

Enrolled students account for 36.1% of the total population in Shigar. With a share of nearly 58% the majority of students is male (Table 9.2). The bigger part of the students is enrolled in pre-school and primary levels, comprising nearly 52% (Table 9.3). Slightly below 10% of all students are enrolled in higher education (intercollege level and higher). The gender parity is at all levels in favour of male students, except in middle school education. The male biased parity becomes more articulated at the levels of higher education, where 86% of all students enrolled are male.

Table 9.2 Students in Shigar by gender

	Shigar (2008)
Student share	
Share in total population	36.1%
Gender composition of enrolled students	
Male	57.7%
Female	42.3%

Data: Survey by FU Berlin Team 2008

Table 9.3 Students in Shigar by level

Level	**Share of all students**	**Ratio female/ male**
Pre-school	8.6%	0.68
Primary	44.1%	0.79
Middle	25.1%	1.16
High	12.7%	0.52
Intercollege	5.7%	0.17
Bachelor	2.4%	0.29
Master and higher	1.3%	0.00

Data: Survey by FU Berlin Team 2008

The primary net enrolment ratio for Shigar is slightly over 90% (Table 9.4). The gender gap in primary enrolment is reduced to a marginal difference of about 3% between male and female enrolment. This means, that about 8% of boys and 11% of girls in primary school going age are not enrolled in any school. But anyway, with these figures, Shigar has already achieved Goal 2 of the UN Millennium Development Goals, which is to achieve “universal primary education” (UN 2007:10) on a gender balanced basis.

Table 9.4 Primary net enrolment rate in Shigar

	Shigar (2008)
Primary net enrolment rate (age group 7-10)	
Total	91.1%
Male	92.4%
Female	88.9%

Data: Survey by FU Berlin Team 2008

9.5.4 Education and occupation

When asked about their motivation for the decision to send their sons and daughters to school, almost all parents expressed their wish to enable better off-farm income and job opportunities for their children. Education is seen as the very precondition for access to high status and high income occupation opportunities in- and outside the region. In a social system, where retirement age livelihoods nearly exclusively depend on support from the own sons, there is not only the parents’ wish to make a better life for the next generation possible a driving force, but also considerations about the own retirement benefits. Many parents consider their often huge investments of money, time and their renunciation of children’s contribution to domestic and agricultural workings as part of their retirement arrangements. Also, today the agricultural basis alone is no longer sufficient for sustaining the livelihoods in the region, and consequently off-farm income has become more and more important during the last decades. In Baltistan, the contribution of off-farm incomes to total incomes (including the assumed market value of agricultural products and by-products, which are not sold but consumed by the households themselves) has risen from 41% in 1991 to 53% in 2005 (AKESP 2007:16). Thus, off-farm incomes today constitute the main pillar on which rural livelihoods rest.

Decisions about educational attendance may be considered as a component of the broader livelihood strategies followed by the rural households with multifaceted interests and objectives. Regarding the fact that most of the education related livelihood strategies are aiming at expected improvement of job and income opportunities, it is worth to take a closer look at the de-facto correlation between educational and occupational status (Figure 9.22).

There is great evidence that the job opportunities are rising with better educational graduations. The share of those who are not in remunerated occupations is inverse proportional to the level of education. In the group of illiterate men, for example, the majority of 57% is not in remunerated occupation, whereas in the group of men with high school graduation (grade ten) or better the share of unemployed persons is only 8%. So, at least concerning the male

side, the expected enhancement of employment opportunities by formal education seems to proof true. Different from that is the picture in the female section of society, where employment still is a rather exceptional phenomenon even for high educated women. The great progress realized in female education in Shigar over the last decades did not (yet) transpose in rising female employment. In the group of women with less than high school graduation, the share of employed women is below 1%. Even in the group of women with high school education and better, employed women make up for only 23%. The majority of these women work in the education and health sector, which both are considered as two of the few socially and morally accepted female occupations in Shigar. The remaining vast majority of women not in remunerated occupation is doing domestic and agricultural work in their households.

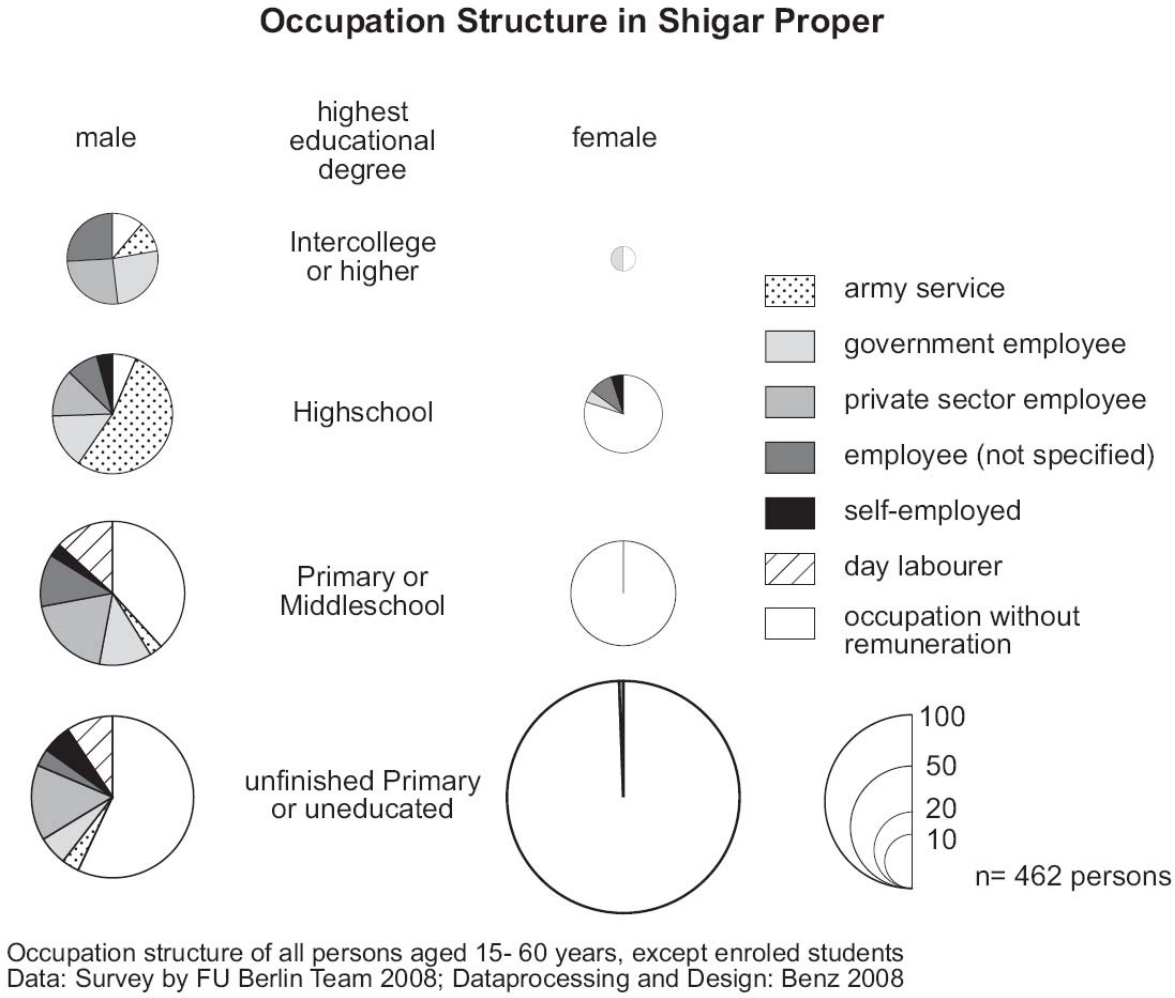


Figure 9.22 Occupation status by education level and gender

A closer look on the male persons with remunerated occupation shows that besides the highly sought-after government or private sector employment, the army service plays an important role (Figure 9.22). This is especially true for those men with high school graduation, which is due to the fact that a high school degree a few years before has been made a prerequisite for army recruitment. Army service enjoys a great popularity with young men, due to a secured long-lasting employment opportunity, relatively high guerdon, a transfer payment at the end of the service period and a lifelong pension payment. These after-service pay-

ments often form the basis for setting up a small business, like shops, workshops or restaurants. Remittances from persons in army service presently contribute to the financial income in about 17% of all households in Shigar. For these households, the received army remittances are of great importance and in average account for 62% of the total financial income in these households. Some households even depend entirely on the army remittances in their financial income sources. About 28% of households in Shigar receive army pension payments.

9.5.5 Migration and absent population of Shigar

Job opportunities for well-educated graduates and possibilities for enrolment in higher education beyond high school and intercollege level are rather limited in Shigar and the region, which leads to a significant phenomenon of temporary migration out of Shigar. Those absent persons, who are temporarily resident in other places than Shigar but who still belong to a household of Shigar, account for about 5% of the total population. This means that in roughly every second household of Shigar one person is absent. Please note that the statements made in the following are only with reference to those persons who still belong to a household in Shigar (although residing outside the village), and thus not include persons who ceased to be part of a Shigar household, e.g. by marriage of women to another village.

The overwhelming majority of these absent persons is constituted by young men between 20 and 29 years with an education level above average. Only about 4% women are found within the group of absent persons. In average, the absent persons show a medium level of 8.4 years formal education attendance, which is slightly higher than the expected medium of 7.7 years for a group with the same age and gender composition in the resident population.

There are two major reasons for temporary migration out of Shigar: employment and income generation on the one hand, and attainment of higher education on the other. One in four absentees left Shigar for getting higher education, mostly to graduate at intercollege, bachelor or master level. Almost all remaining 75% of absentees left Shigar for employment and income generation purposes. In this group, army service plays a particular role, regarding the fact that about 55% of the non-student absentees have joined the army service.

The big cities in “down country” Pakistan are the preferred destination of migration for 80% of the absentees, with an outstanding importance of Karachi, where every second Shigar absentee is staying. Within the Northern Areas, Skardu and Gilgit are the dominant destinations. Skardu is particularly significant for Intercollege students from Shigar. In the field of religious education, the city of Qom in Iran is the preferred destination among Shigar students.

9.6 Conclusion

Education is the key to sustainable development, to democracy and peace in and between nations. It is an important instrument to achieve freedom and social justice. Most important, education is a human right. Every child, boys and girls alike, should have access to at least primary education. One reason for not overcoming illiteracy, insufficient teacher training and high drop-outs has to been seen in insufficient in-vestment in human resources. Pakistan spends at least twice as much money in the military sector as in the education sector (SIDDIQA 2007).

At the World Conference for the “Education for All” in Jomtien 1990, an essential result was the ambition for schooling for every child all over the world:

“We, the participants in the World Conference on Education for All, reaffirm the right of all people to education. This is the foundation of our determination, singly and together, to ensure education for all. We commit ourselves to act cooperatively through our own spheres of responsibility, taking all necessary steps to achieve the goals of education for all. Together we call on governments, concerned organizations and individuals to join in this urgent undertaking. The basic learning needs of all can and must be met.” (UNESCO 2000: 77)

This ambition has been confirmed at all subsequent conferences in the following years.
The question is, however, how does the actual educational situation in Shigar look like? As has been shown in this report, some progress has been achieved over the past years. This may be a result of the different education projects realized in the past in Shigar. It is now important to tie in with these results and to keep on focusing on education.
Nevertheless, it is to make a note on the fact, that there are more students enrolled in preschool classes than in high schools or colleges (Figure 9.5). Obviously students in Shigar often do not go for higher education. Therefore a number of reasons may be mentioned: Although no school fees need to be paid in most schools in Shigar, it is still too expensive for some families to send every child to school or furthermore to high school and college. This relates to the fact, that some parents do not see the importance of education, especially for girls’ education and for higher education. Most of the parents believe, according to the answers of the teachers, their children will not find a job anyway, even if they are educated or not. As shown in the previous chapters of this report, practising agriculture alone is no longer sufficient for sustaining a livelihood in Shigar. People strongly rely on other sources of income, and finding jobs without education today is almost with no reasonable chance.
The figures shown in this chapter also demonstrate the inequality between male and female students. Indeed, till the end of the 1990s the number of girls’ primary schools increased significantly. Nevertheless, the condition of girls’ schools is worse than that of boys’ schools. The inequality between the different genders is part of an overall challenge which includes the gender discrimination and the economic and political disadvantages girls and women have to face.
Most important to deal with is the difficulty for girls to gain access to school. Girls face cultural barriers concerning their roles in home and society (EDUCATION FOR ALL 2007:39). Poverty and long distances to schools are other reasons. The challenge is to deal with this subject and to develop structures in which more and more female students will also have the chance to participate in the educational system.
Moreover, there might be another problem as to name lack of schools for higher education. On the one hand, there are enough primary schools in Shigar, but there would not be enough high schools, especially in the periphery of Shigar if every student went on for higher education.
In addition, there is yet one college under construction, but this will be a college only for male students. Female students who would like to go to a college have to go to Skardu. This might be a reason for parents not to send their girls to college.

But even if there are sufficient primary schools, the number of teachers remains too low to deal with the high number of students.
Despite the fact that the Government of Pakistan puts a high emphasis on primary education, the reality is quite the opposite. Overall primary schools in Shigar are disregarded in many aspects compared to middle schools or high schools. In primary schools there are less qualified teachers, the teaching and learning environment is less equipped, the budget is lower and the teacher student ratio is higher.
During the 1990ies many schools were established in Shigar, but there was no in-crease in the number of teachers. It is not enough only to construct school buildings.
The importance of primary education is noted in so many documents and declarations; now it's up to the Government of Pakistan, in particular to the Ministry of Education, to take action in accordance with all these ambitions.
In the following, selected results of the field research are visualised in an evaluation matrix (Figure 9.23) demonstrating strengths as well as weaknesses of each school in Shigar. The matrix consists of schools listed by their respected names. They are arranged by school level from primary to high school. The schools are evaluated according to selected indicators already discussed in the previous chapters. In this regard the schools can be compared regarding the number of teachers per class, the professional qualification of the teachers, learning environment, availability of teaching material, the budget per student as well as the number of meetings. Furthermore, the results of a self-evaluation by the teachers of the schools visited are included in the final column. Each indicator in the matrix is classified into four categories ranging from high level to low level visualised with different colours. In this regard the matrix shows deficits or shortages of primary, middle and high schools as well as of the college, not only in general but in particular for each school. According to the matrix it becomes clear that the primary schools, and particularly the community schools, have much more deficits in the field of number of teachers, qualification of teachers as well as learning environment and availability of teaching material than middle and high schools. Therefore, the final conclusion is that primary schools urgently need more attention and improvements, respectively.

Evaluation Matrix Schools in Shigar

Primary Schools	No. of teachers per class	Teacher's qualification	Learning environment	Availability of teaching material	Budget per student enrolled	No. of meetings	Evaluation of schools by (head) teacher
F.G. Boys Primary Markunja							no data
F.G. Boys Primary Shigar Khas			4 class rooms for 8 classes				no data
Boys Primary School Senkhor			4 rooms for 6 classes	No teaching kit, models, books			
Boys Primary School Akbarabad			3 class rooms for 7 classes	No maps, books, models			
F.G. Boys Primary School Lamsa			2 class rooms for 6 classes				
F.G. Boys Primary School Thugmo		no data	3 class rooms for 6 classes	No models, maps	no data		
F.G. Girls Primary Todkhor Khan (Shopa)			2 class rooms for 5 classes				no data
Akbariyya Girls Primary School Shigar			5 class rooms for 7 classes			no data	no data
F.G. Girls Primary School Byasingpa			4 class rooms for 6 classes	No models, library			
F.G. Girls Primary School Rupa			2 class rooms for 6 classes, Sanitation under construction	No books, slide rule			
F.G. Girls Primary School Rompa			No electricity	Charts are destroyed by mice			
SAP Community Primary School Daskhor			2 class rooms for 4 classes	No models, books			
SAP Community Girls School Thugmo			4 class rooms for 6 classes	No books, models, globe			
SAP Community Girls Primary School Kothang Pain			No class rooms at all				
Indicators	No. of teachers per class	Teacher's qualification	Learning environment	Availability of teaching material	Budget per student enrolled	No. of meetings	Evaluation of schools by (head) teacher

Middle Schools	No. of teachers per class	Teacher's qualification	Learning environment	Availability of teaching material	Budget per student enrolled	No. of meetings	Evaluation of schools by (head) teacher
F.G. Boys Middle School Kothang/ Marapi			8 class rooms for 10 classes	No s-l & c-l (only 1 PC), no room for books			
USWA Boys Public Middle School Shigar				no data			no data
F.G. Girls Middle School Marapi			4 class rooms for 9 classes new building under construction	No library, lab, models, posters			
Ladha Girls Middle School Marapi Bul			11 class rooms for 12 classes			no data	no data
Madrasa Jamia Imamia Shigar Khas			no data	no data		no data	no data
Classification	No. of teachers per class	Teacher's qualification	Learning environment	Availability of teaching material*	Budget per student enroled	No. of meetings	Evaluation of schools by (head) teacher
HIGH RANKING	No. of teachers >no. of classes	(PhD), Master degree on average	Sanitation, electricity, no. of class rooms=no. of classes	Various Types	> 400 Rs	1 meeting/ month	Good
MEDIUM-HIGH RANKING	No. of teachers =no. of classes	Master & Bachelor degree on average	Sanitation, no. of class rooms =no. of classes	Various types but no b, c-l, s-l or l	200- 400 Rs	1 meeting per year	Satisfactory
LOW-MEDIUM RANKING	No. of teachers <no. of classes	Bachelor degree & intercollege on average	No sanitation or electricity, no. of class rooms<no. of classes	Only charts, posters or maps	< 200 Rs	Meetings held occasionally	Insufficient
LOW RANKING	1 teacher=2 or more classes	no data	no data	no data	no data	no data	no data
NO DATA	no data	no data	no data	no data	no data	no data	no data

* various types of material include books (b), charts, posters, maps, models, globe, etc. For school above primary level material also comprise library (l), science (s-l) and computer lab

High Schools and College	No. of teachers per class	Teacher's qualification	Learning environment	Availability of teaching material*	Budget per student enroled	No. of meetings	Evaluation of schools by (head) teacher
F.G. Boys High School Shigar			7 class rooms for 9 classes			no data	no data
Tameer-e-Milad Community Model School Shigar Khas				No s-l & l		no data	no data
Sunrise Grammar Public School			3 class rooms for 4 classes	no data		no data	no data
F.G. Girls High School Shigar						no data	no data
F.G. Inter College Shigar				No maps, no s-l		no data	no data
Classification	No. of teachers per class	Teacher's qualification	Learning environment	Availability of teaching material*	Budget per student enroled	No. of meetings	Evaluation of schools by (head) teacher
HIGH RANKING	No. of teachers >no. of classes	(PhD), Master degree on average	Sanitation, electricity, no. of class rooms=no. of classes	Various Types	> 400 Rs	1 meeting/ month	Good
MEDIUM-HIGH RANKING	No. of teachers =no. of classes	Master & Bachelor degree on average	Sanitation, no. of class rooms =no. of classes	Various types but no b, c-l, s-l or l	200- 400 Rs	1 meeting per year	Satisfactory
LOW-MEDIUM RANKING	No. of teachers <no. of classes	Bachelor degree & intercollege on average	No sanitation or electricity, no. of class rooms<no. of classes	Only charts, posters or maps	< 200 Rs	Meetings held occasionally	Insufficient
LOW RANKING	1 teacher=2 or more classes	Intercollege & matricula-tion on average	No sanitation, electricity, no. of class rooms<no. of classes	No material at all	0 Rs	No meetings at all	Very bad
NO DATA	no data	no data	no data	no data	no data	no data	no data

* various types of material include books (b), charts, posters, maps, models, globe, etc. For school above primary level material also comprise library (l), science (s-l) and computer lab

Figure 9.23 School evaluation matrix for Shigar Proper
Data: Survey by Benz, Mahrwald & Neutz, 2008; Design: Mahrwald & Neutz 2008

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11. Glossary, abbreviations and measurement units

A – Arabic
B – Balti
U – Urdu

alim	A	(pl. *ulama*) Muslim religious scholar, clergyman
alu	U	potato (Solanum tuberosum)
bloq	B	high pasture
chudong	B	traditional water storage pit, connected to irrigation canal
hiba	A	gift, literally: "gift from God"
hnang	B	border irrigation
hrkong, hrka	B	canal
hrkong-pa	B	canal watchman
hyaq	B	yak (Bos grunniens)
imambara (or *imambar-gahs*)	A	religious meeting places
jamabandi	U	settlement records
katsa	B	traditional balti winter living quarter
khar khong	B	hole in the floor giving access to the *katsa*
lungma	B	valley, high pasture
madrasa	A	Islamic religious school
mahram	A	kin and in-laws of the opposite sex, whom a Muslim is not allowed to marry
mauza	U	administrative unit (municipality)
nālā	U	side valley stream
nang	B	traditional balti house
nas	B	barley (Hordeum vulgare)
ol	B	irrigated meadow
pata (or *tacal*)	B	stable for sheep, goats and cattle in the *katsa*
patwari	U	land revenue official; village accountant and record keeper, land assessor
purdah	A	literally: "curtain"; deduced: gender-segregation in two forms: 1. physical segregation of the sexes, 2. requirement for women to cover their bodies and conceal their form
qanun	A	governmental law
res	B	rotation system
register inteqalat	U	mutation book (land transactions)
resm-e-revaj	U	indigenous law
revaj-e-abpashi	U	water rights

rzing	B	water reservoir
Shigar Proper		settled area including Marapi and Markunja, also named as: Shigar oasis
tehsildar	U	revenue administrative officer
tehsil office	U	administration department
thab	B	fireplace
thabka	B	main room in the *katsa*
tro	B	wheat (Triticum aestivum)
tshar	B	garden, orchard
tsharma	B	village elder
udar	A	credit in financial terms
wa	B	furrow irrigation
zakat	A	third pillar of Islam, a voluntary tithe on property paid by a wealthy Muslim for the support of the poor
zo / zomo	B	male / female hybrid of yak and cow

List of abbreviations

AC	Assistant Commissioner
AKCSP	Aga Khan Cultural Services Programme
AKF	Aga Khan Foundation
AKRSP	Aga Khan Rural Support Programme
AKTC	Aga Khan Trust for Culture
BA	Bachelor
FA	First examination in Arts
FAO	Food and Agriculture Organization
FE	Formal Education
FFMOG	Federal Foreign Ministry of Germany
FG	Federal Government
GIS	Geographical Information System
GoP	Government of Pakistan
GPS	Global Positioning System
GST	Goods and Services Tax
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation)
HPP	Hydroelectric Power Plant
ICRW	International Centre for Research on Women
IUCN	International Union for the Conservation of Nature
JMT	Joint Monitoring Programme of the WHO
KKH	Karakoram Highway
LPG	Liquefied Petroleum Gas
MA	Master of Arts

MDG	Millennium Development Goal
n/a	not applicable
NAPWD	Northern Areas Public Works Department
NGO	Non-Governmental Organization
NWPD	Northern Water Power Department
PCO	Public Call Offices
PPAF	Pakistan Poverty Alleviation Fund
Rs	Rupees
SAP	Social Action Programme
SDPI	Sustainable Development Policy Institute
SIM	Subscriber Identity Module Card
STMS	Shigar Town Management Society
U.C.	Union Council
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund
WAPDA	Water and Power Development Authority
WASEP	Water and Sanitation Extension Programme
WHO	World Health Organization
WPD	Water and Power Department
WSS	Water Supply System

Measurement units

	Reference unit	**Conversion to metric system**
Units of length	1 yard	0.9144 m
	1 foot	0.3048 m
	1 inch	0.0254 m
Unit of area	1 kanal	505.86 m²
Unit of weight	1 maund	37.32 kg