CHARACTERISTICS AND CONVERSION OF SCHOOL PLANNING
IN RELATION TO DIVERSITY OF SCHOOL DISTRICTS

— A study on rural community schools of Nepal: Part II —

学校区の多様性に適応した学校施設計画の特徴と改修

— ネパール農村地域におけるコミュニティスクールの研究：その2 —

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New educational concepts such as multi-grade, active-learning classrooms, and school-community functions, continued from the practices of traditional schooling can be seen in many countries. In Nepal, despite the significance of these concepts, schools have less implemented them. Our previous studies focused on the importance of school-community collaboration in funding, administration, and space function. These planning factors are more important in small school districts. This paper reviews existing school facilities at different scales of school districts. At present, they are limited to classrooms, less integration, and socio-cultural spaces; however, conversion into new school functions should comply with diversity of school districts.

Keywords: *Integrated School-Community Function, School District, Rural Area, Nepal, Community School*

学校複合化, 学校区, 農村地域, ネパール, コミュニティスクール,

1 Introduction

Education in small rural communities of many countries started in single-roomed schools. They used to have a local teacher with students of diverse age groups³⁾. These traditional schools were practising multi-grade and collaborative learning in single-roomed schools. Rural schools were also functioning as both educational institutions and centres of community life⁴⁾. Today, modern schools brought refinements to buildings, classrooms, facilities, and teaching. But they also overshadowed rural schools, questioning their effectiveness and efficiency. The existing literature agrees on two different scenarios: the effectiveness and efficiency of urban schools because of their facilities, regardless of the inequality in funding between rural-urban dichotomy⁵⁾ and the effectiveness of rural schools in relation to their social inclusion and rural lifestyle^{6) 7)}. Moreover, rural schools are a centre for education as well as a centre for social life⁸⁾. Similarly, schools of Nepal are transformed into community schools that broaden the range of stakeholders but schools still have to rely on limited resources. There is a lack of multi-grade classrooms in small schools. They also need integration of community functions like clinics, offices for development of women, and learning centres for practical learning

and community services. Therefore, this study highlights the characteristics and conversion of school planning based on the size of the school district.

In 2002, education reform in Nepal transformed public schools into community schools^{9) 10)} to elevate the role of local communities in education as School Management Committees (SMC)¹¹⁾. In our previous studies^{1) 2)}, the support in rural community schools was discussed, and we found prominent financial support from communities and identified some integration of community functions in schools²⁾. Similarly, a study on the integration of functions and community participation in administration clarified that some schools, with community support and essential integrated spaces, supplemented to improve educational standards and rural services¹⁾. However, the scale and diversity of school districts are further influencing factors that play an essential role in connecting resources and learning, which are discussed in this paper.

1.1 Research status

Many issues such as declining enrolments, transforming educational standards, and inequality in funding between rural and urban schools, have placed the scale of school districts at the

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heart of discussion on effectiveness and efficiency¹¹⁾. The geographical isolation, small size, and socio-economic composition of rural schools may have led to inadequate infrastructure, lack of quality teachers, and limited educational offerings, among other challenges. However, various opportunities can be created within a low student-teacher ratio through integrated community functions and multi-grade teachings, to develop competencies like creativity, collaboration and critical thinking¹²⁾. In addition, the school-community relationship is beneficial to create a non-formal school environment¹³⁾. Although this has been frequently pointed out, it is often overlooked.

In community schools of Nepal, there is limited community participation in decision-making. It is not possible for rural schools to flourish until their scope within the community is identified. Current educational research often discusses education reform and management capacities^{14) 15)}; however, it is essential to plan rural school facilities as an integrated function within their communities.

1.2 Purpose of the study

The purpose of this research is to study the characteristics and conversion of school facilities in relation to their school districts in Nepal. The biggest challenges in setting school planning priorities are the size of school districts, geographical isolation, and knowledge gap. In addition, schools rely on 'one teaching style fits all, teacher-centred learning'¹⁶⁾ within limited rooms. Therefore, this study focuses on rural schools of Nepal to combine community functions inside schools, while using such integrations as practical rooms for learning. The unique legacy of rural schools is characterised by individual attention, parental involvement and community participation. Therefore, it is important to understand that new educational concepts are modern ways of describing traditional one-room schools or school-community functions.

1.3 Methodology

This study was conducted in Baglung District which lies in the hilly regionⁱⁱⁱ⁾ of Nepal, 272 km from the capital city, Kathmandu. The three areas selected in the district were: Baglung Bazar, which is the district headquarters of a municipality and has 21

Table 1 Survey methods and interview contents

Survey dates	Survey methods	Descriptions
Survey I 2017.02	School visit/ survey/initial data collection	School selection in 3 rural areas. Survey of 45 public schools. Measurement of school physical facilities. Initial data collection of school district. Preparation for further studies.
Survey II 2018.02	Interviewee	School Management Committee, SMC which includes principal, teachers, and parents (residents)
	Contents	Discussion on the following topics with SMC of 45 schools: History of the school, school's existing facilities, integrated school-community functions, school planning approach by SMC, and involvement of residents in schools. Interview was conducted with all interviewee together in their respective schools.
Survey III 2019.03	Documents collection	Reports on School Improvement Plan, SIP of all 45 Schools, and architectural plans of each schools (Survey I).
	Extracted contents of SIP	History of schools, school districts' data, and planning priorities of physical facilities of 45 schools.

Table 2 List of case studies of 45 community schools

S. No.	School Codes	Areas	Name of schools	Grades	School Types	No. of Students	No. of Classrooms	No. of Households		
1	A1	Baglung	Amar	1-3	□ Primary School	29	7	201		
2	A2		Deurali			23	6	91		
3	A3		Aadharbhat			21	7	95		
4	A4		Bhagwati	1-4		9	9	108		
5	A5		Basundhara			41	10	87		
6	A6		Saraswoti	1-5		43	9	63		
7	A7		Ganesh			36	5	88		
8	A8		Sadashiva			46	10	121		
9	A9		Jyotikunja			31	7	103		
10	A10		Gaurisankar	1-8	△ Basic School	64	7	149		
11	A11		Upalachaur			82	10	273		
12	A12		Balmandir			115	15	450		
13	A13		Ramrekha			118	18	465		
14	A14		Laharepipal	1-10		229	14	487		
15	A15		Rudrepipal			347	19	1442		
16	A16		Kalika Kanya Mandir			418	23	3355		
17	A17		Bidhyamandir			1101	69	4755		
18	A18		Kudule	1-12		225	21	1600		
19	A19		Mulpani			326	26	794		
20	A20		Bishwokarma			337	16	275		
21	A21		Dhaulagiri Birendra			218	20	2204		
22	B1	Burtibang	Nava Jyoti	1-5	□ Primary School	61	8	130		
23	B2		Jaldi			46	6	53		
24	B3		Simalchaur			97	6	95		
25	B4		Saraswoti			96	8	76		
26	B5		Ganga	1-8		50	6	72		
27	B6		Janachetana			35	8	60		
28	B7		Deurali			94	7	149		
29	B8		Janakalyan			164	12	165		
30	B9		Arnakot	1-8		176	12	212		
31	B10		Jana Jagriti			288	12	259		
32	B11		Ghosakhani			260	13	231		
33	B12		Uttar Ganga			639	28	900		
34	C1	Hatiya	Barahasthan	1-3	□ Primary School	11	4	64		
35	C2		Dhustung			30	4	105		
36	C3		Kotmaidan			25	5	89		
37	C4		Baal Prem			30	4	58		
38	C5		Bhume	1-5		75	10	175		
39	C6		Jaya santoshi Ma			13	7	122		
40	C7		Kalika			72	8	95		
41	C8		Dhaulagiri			55	8	156		
42	C9		Chamuwa	1-8	△ Basic School	141	12	207		
43	C10		Jiwanjyoti			107	13	200		
44	C11		Kharuwa			1-10		226	17	554
45	C12		Galkot					1-12		609

Table 3 Classification of education types by grades and ages

Table 1. School composition by type, grade and age												
Education Types	Primary Education								Secondary Education			
	Basic Education											
School Years	1	2	3	4	5	6	7	8	9	10	11	12
Age Groups	5-16 years old										above 16	
Net Enrollment	93.9%								89.4%		37.7%	
School Composition												
Primary school	□	primary education (Grade 1 to 5)										
Basic school	△	basic education (Grade 1 to 8)										
Comprehensive school	○	basic and secondary education (Grade 1 to 12)

Fig.1 Map of 3 areas and position of 45 community schools

community schools, Burtibang and Hatiya, rural municipalities which have 12 community schools each (Fig.1).

The survey was conducted in February 2017, 2018 and March 2019. In total, 45 school facilities were surveyed (Table 1 and 2), and drafted in plans based on the assignment of their functions. During the school visit, principals, teachers and SMC were called for discussion to collect detailed information about the history and planning priorities of the school. Data were also obtained from the documentation named School Improvement Plan (SIP) 2017/18 ^{iv}17).

In this paper, the size of school districts and transformation patterns of schools are classified in chapter 2. In chapter 3, the status of existing school facilities is analysed based on the above classifications. In chapter 4, school functions are detailed and analysed in relation to the diversity of school districts. Chapter 5 concludes that planning of the school should focus on physical spaces for learning and community services in every school district despite their rurality and size of the school districts.

1.4 Brief overview of the education system of Nepal

The education system of Nepal is classified into primary education (grade 1-5), basic education (grade 1-8) and secondary education (grade 9-12) ¹⁸⁾ as shown in Table 3. Similarly, primary schools consist of grades 1-5, basic schools grades 1-8, and comprehensive schools grades 1-12. Primary schools are established and later, in order to meet the educational demand, they are upgraded into basic or comprehensive schools. Students of age group 5-16 are enrolled in grades 1-10 and the age group of 16 years old and above are enrolled in grades 11-12. However, enrolment rates into secondary level are lower compared to primary and basic levels.

2 Classification of school districts and states of transformation of community schools

From centralized to decentralized educational reform ^{v)}, community schools are taking their momentum of development by adding grades and classrooms. Classifications were made to review the development; (i) school districts based on the number of households and (ii) states of transformation based on the schools' physical facilities and level of education (grades).

2.1 Classification of school districts

In Nepal, school districts refer to communities represented by the number of households from where students are expected to enrol in that school. Various factors such as demography, geography, and rural-urban context control the size of school districts, which ultimately affect the development, effectiveness

Table 4 Classification of school districts by size

Classification by scale of school districts	Small school districts	Medium school districts	Large school districts
No. of households	less than 100	100-500	above 500
School types	No. of schools	No. of schools	No. of schools
Primary schools	14	11	0
Basic schools	0	9	0
Comprehensive schools	0	2	9

and efficiency of the school. Therefore, in this paper, households with less than 100, 100-500 and above 500 are classified as small, medium and large school districts, respectively (Table 4). This classification was applied to compare and analyse the effects of size of school districts in planning of school facilities.

2.2 States of transformation of community schools

Rural community schools started informally. Learning took place in an outdoor public space or in one-room spaces. Planning of school facilities during their development was affected by educational reform, student enrolment, and the communities' participation. By reviewing 45 community schools since their establishment (Table 5), we found four states of transformation indicating conversion either by increment of grades or by addition of new buildings and community functions. All schools showed transformation by increment of grades, except one primary school (A5) in state 2 and two basic schools (A12 and A13) in state 3. They showed the transformation through addition of new buildings and community functions.

2.2.1 Informal schools at establishment

In Nepal, before the establishment of democracy in 1951, schooling was reserved for elite people only. Formal education for all citizens started only after democratization and progressed along with the first education act introduced in 1971. However, due to the limited number of schools in rural areas, public spaces were used for learning. It was identified in 22 out of 45 schools through the review of their history (Table 5). Most of the schools operated in a single room within the village or handed over by the community (10 schools). Six of the schools used open fields as a learning space. In four schools, *chautara* ^{vi)}, a flexible space where people meet, rest, communicate and organize local events, was used. Similarly, a temple, which usually has its auxiliary room for praying, was used by two schools. Furthermore, the community

Table 5 States of transformation of rural schools in three areas

	Informal schools at establishment	State 1	State 2	State 3
Explanation	Learning space Public spaces used as learning space to teach children.	Primary school Designated rooms for primary education	Basic school Primary + Basic education (or) integrated facility.	Comprehensive school Basic + secondary education (or) integrated facility
No.	4 6 2 10	14 original	8 transformed	13 transformed
Schools in Baglung		A9 A1 A2 A3 A4 A6 A8	A5	A15 A18 A19* English School A21* Night School A12* Kindergarten A13 A16* Girls school A17* English School A14 A20
			A11	
Schools in Burtibang		B3 B6 B4 B7	B5	
		B1 B2	B8 B11 B9 B10	
				B12
Schools in Hatiya		C8	C10	C12
		C1 C2 C3 C4 C5 C6 C7	C9	C11
Total no. of schools (N=45)		24-Primary schools	1-Primary; 7 Basic schools	2 Basic schools; 11 Comprehensive S.

□ Refer Table 1. for school names

resident was selected as a teacher at a reasonable price that villagers could afford.

2.2.2 State 1- Primary schools

When education in Nepal was centralized ^v, learning spaces at establishment were accredited as government schools. In 2002, these later became community schools along with the decentralization process ¹⁰. Educational reforms benefited the informal schools at establishment to transform them into formal schools and to receive a regular budget from the government for school buildings and teachers' salaries. From informal schools, 10 learning spaces were transformed into primary schools, and 14 new primary schools were built (Table 5). These 24 schools provided a primary level of education until grade 3, 4 or 5 with basic facilities such as classrooms, offices, and playgrounds. Recently, ECD (Early Childhood Development) facilities were also added in most of the schools for children under 5 years old.

2.2.3 State 2- Basic schools

Basic schools at state 2 were further developed from informal schools and state 1, offering education until grades 8. Primary schools with enough students and potential for growth were gradually accredited as basic schools. This also helped to minimize the dropout rates of primary schools by decreasing commuting distances to schools. State 2 consists of seven basic schools from all three areas and one primary school (A5) from Baglung Bazar (Table 5). The transformation into the basic school involved only an addition of extra classrooms and teachers. In the case of school B10, the chautara was destroyed to build new classrooms. However, with an exception, primary school (A5) had sufficient classrooms including a clinic shared with the community in its spare room.

2.2.4 State 3- Comprehensive schools

At state 3, schools were upgraded up to grade 12. There are 11 comprehensive schools in this group and two basic schools. Some of them (A12, A16, A17, A19 and A21) are the oldest schools established as special schools in the district headquarters, Baglung (Table 5). Later, they were institutionalized to the mainstream school system. In Burtibang (B12) and Hatiya (C11 and C12), there were significantly few numbers of comprehensive schools for the entire rural area. Students commuted longer distances on foot to reach the nearest school in town because no school bus services were offered. State 3 schools had a new grade, labs and a library. Although these schools showed transformation, the further performance depended on the community involvement, SMC and administration of the school. However, with an exception, two basic schools (A12, A13) had sufficient classrooms including additional facilities for the community in its spare rooms.

3 Status of planning and conversion of rural school facilities

The prominent physical infrastructures in rural schools are buildings, socio-cultural spaces (chautara and temple), and a playground (Fig. 2, site plans of schools A2, C5, A5, C10, A13 and

A19). The buildings have a linear-single corridor plan with equally divided classrooms, academic functions and sometimes community functions. Such planning presents the socio-cultural spaces as a facility originated by social behaviour and religious beliefs. The playgrounds are at minimum the size of a volleyball court as a rule, but, in reality, this is rare due to topography of land in rural schools.

Fig. 2 Influence of scale of school districts on transformation states

3.1 Relationship between states of transformation and the size of school districts

The size of school districts affected the transformation states of the school. Based on this relationship, we discussed the planning status of schools in the later chapters (Fig. 2). There were 24 primary schools in state 1, among which more than 50 per cent of schools (13/24) were located in small school districts. In state 2, seven basic schools were located in medium and one primary school in the small school district. Similarly, at state 3, out of 13 schools, nine comprehensive schools were located in large school districts while none of those were in the small school district. However, medium school districts had 22 schools comprising primary, basic and secondary education. This showed that medium school districts were most flexible towards transformation. In contrast, the small school districts, due to fewer students, had limited access to basic as well as secondary education.

3.2 Preservation status of tangible socio-cultural spaces

Tangible socio-cultural spaces, such as chautara and temples, which were learning spaces during state 0, represent the unique aspects of community schools in Nepal.

Among four schools that started education from chautara (Table 5), only two schools (A9 and A11) continued along with the structure; B10 had already destroyed it, and school C8 was relocated. In addition, chautara was found in the other 12 schools (Table 6). Although they did not start the education in chautara, it is a part of the school property. Chautara are located at the entrance or within the school premises. The potential of the space is to convert them into informal learning spaces where locals and students can meet, greet and communicate. However, the new construction of classrooms replaced such learning spaces. In six schools, trees remained but there were no platforms. Nevertheless, the other six schools managed to use them appropriately for occasional outdoor classes as well as for students to rest, play and communicate with local people. (Image in Note viii)

Similarly, two schools (A7 and A10 (Table 5)), started education using the auxiliary room of the temple. School A10 was relocated but A7 managed to construct its classroom near the temple. Compared to chautara, temples were prioritised, and preserved in all 12 schools (Table 6). Schools consider a *Saraswoti* temple ^{vii)} as a part of the school space and cultural symbol. Due to the sacred nature of the space, it was always retained.

Hence, socio-cultural spaces are still unidentified as the learning space in public schools of Nepal despite their significance and existence. Unless they are recognised as a place which contributes to learning as well as community functions, they might become extinct in the future. Therefore, identifying such spaces through research and mandating them in the school planning could inform school management committees about the prospect of socio-cultural spaces within schools. Preservation of such spaces binds social behaviour in education. Hence, frequent use of the space as

Table 6 Preservation status of tangible socio-cultural spaces (Chautara / Temple)

Preservation status		Chautara			Temple
Symbols		Preserved	Unpreserved	Destroyed	Preserved
No. of schools		6	6	4	12
School districts	Small	A2	B4	C3	A5, A7, C8
	Medium	A9, B7, A13	A1, A11, C5	B10, C8, C9	A4, A12, B7, C9, C10
	Large	A19, C12	A21, B12		A13, A15, A19, C12
Remarks (For images Note viii)		Preserved state: - With platform - In use by school and community	Unpreserved state: - Without platform - Not in use - Abandoned	Destroyed state: - Formally existed as facility - Destroyed	Preserved state - Temples are preserved because of religious beliefs

Table 7 Status and types of school buildings

Building types		Load bearing masonry (*)	Metal truss (☆)	Reinforced concrete (★)
Shapes (Image: Note ix)
	Elevations	Slope roof	Slope roof	Flat roof
	Floors	1-2 Max	1	Any
	Walls	Cut stone + Mud mortar	Cut stone+cement mortar	Brick +cement mortar
	Roofs	Wooden Truss	Metal Truss	Concrete
	Windows	Wood	Wood	Wood
	Design types	Self-built	Prototype	Prototype
	Classroom sizes	Avg.3.5*4.5(Mostly vary)	5.4*4.8	6.95*4.75
	Teaching styles	Teacher-centered	Teacher-centered	Teacher-centered
	Building forms	Linear	Linear	Linear
No. of rooms	as per school needs	1 or 2 room prototype	2,4 or 6 room prototypes	
No. of buildings	61	11	24	
No. of schools	All 45 schools	10 schools	19 schools	
School districts	Small	All 14	A7, C7, A5	A2,A6,A5
	Medium	All 22	A1, B11, C5, B9, B10, C10	A10, A11, B11, A12, A13, A14, A20
	Large	All 9	A14	A15, A16,A17, A18, A19, A21, B12, C11, C12

Table 8 Access for communities in school playground

Access for community		Restricted Access		Open Access	
Boundary walls		With wall		Without wall	
Topography of Lands		Flat	Contour	Flat	Contour
School District	Small	A3		A2*A5*B5*	A6,A7, B2, B3, B4, B6*, C1*
	Medium	A12, A13, C4, C6, C9	A10	C3,C7*	A1,A8,B1,A11,A4*, A9*, B7*, B11*, B8*, B9*, B10*, C2, C5*, C8, C10*, A14*, A20*
	Large	A15, A16, A18		C12*	A21, A17*, A19*, B12*, C11*
Total No. of Schools		9	1	6	29

* 22 schools have open access playground for communities at least the size of a volleyball court.

outdoor classrooms and children's informal activities is essential to maximise the use of chautara and temples in schools.

3.3 Status of school buildings

The school building, where formal education takes place, is an essential physical facility. In 45 community schools, there were three types of buildings: i) load-bearing masonry buildings ¹⁹⁾, ii) metal truss, and iii) reinforced concrete (Table 7 and Note ix). Each school has at least one load-bearing masonry building in use (61 buildings). They have sloped roofs, and stone in mud mortar load-bearing masonry walls constructed using indigenous knowledge. However, because of the mud floors, small windows, small classroom size and lack of earthquake resistance, the school preferred the other types of building over the load-bearing masonry buildings. Therefore, metal truss buildings with light roofs and cement mortars were introduced. These prototype buildings are constructed within 10 schools mostly in the medium school districts. Similarly, reinforced concrete buildings were constructed in three small school districts, seven medium school districts and nine large school districts. The high number of new reinforced concrete buildings mostly within large school districts showed the partiality in funding. Classrooms in new buildings still followed the teacher-centred learning approach without any active learning classroom layouts.

3.4 Playgrounds and open spaces for activities

The prevalent hilly region's topography consists of contoured land and terrace farming. In table 8, 30 schools had contoured land, and only 15 schools were situated on flat land. Due to topography, the construction of school boundary walls was costly. Therefore, schools on flat lands (9 out of 15 schools), mostly in medium and large school districts, had a closed boundary. In contrast to this, most of the schools (29 out of 30) on contoured land had open access to the playground for community sports and events. Due to topographical hindrance, villages lacked a proper space for events and sports. In 22 schools, this was supplemented by the playground at the school, but the construction of boundary walls in some schools restricted community residents from using that space.

4 Relationship between school and community influenced by diversity of school districts

The diversity of the school districts has an influence in planning and priority of school functions. Therefore, analysis from the perspective of communities is crucial. In this chapter, the existing functions of the school are analysed with respect to the diversity of school districts.

In schools of Nepal, the number of classrooms represents the size of a school, i.e. four-room schools (C1, C4 and C2) or a 69-room school (A17) (Table 9). Academic and integrated functions were

allocated in those rooms. In all 45 schools, individual rooms were allocated for each grade. Classrooms of 15 schools were divided into two with plywood partitions due to fewer students and insufficient rooms for individual grades. Similarly, the teachers' offices (45 schools), ECD (34), storage rooms and libraries (21 schools each), computer rooms (19), and meeting rooms (8) occupied the majority of rooms. However, academic facilities such as science and agricultural laboratories were rare even in the large school districts. In addition, special art, craft, and music classes were completely absent. It showed a very low proportion of special rooms for students' development.

Therefore, the planning of rural schools was analysed based on school planning priority adopted by SMC, the importance of integrated function in school, the scale of school districts (including location, and classroom density), ethnicity and the role of local organisations.

4.1 School's planning priorities adopted by SMC

(Table 9: School's planning priorities): Every community school is required to record its problems and needs through consultation with school principal, teachers and SMC. This documented report is called School Improvement Plan (SIP) ^{iv} 17). Through the review of school infrastructures and their planning priorities, we could assume the potential track of the development of community schools in rural areas.

Table 9 Influence of the school districts on school facilities' planning priority in relation to states of transformation

[illegible]

The school planning by SMC, as indicated in the SIP, has prioritized the construction of boundary walls in 33 schools for safety. Similarly, 21 schools prioritized renovation of traditional load-bearing masonry buildings that were vulnerable to earthquakes and consisted of mud walls and floors, with low lighting and ventilation. 19 schools indicated the need for new buildings, whereas, 13 schools for new furniture, laboratories and libraries. Some comprehensive schools also requested dormitories.

In rural villages, the main purpose of boundary walls is to prevent livestock from entering the school, so temporary barbed wire fences are erected. However, in general, safety measures are designed to protect school property from damage by people trespassing onto school grounds outside school hours. Yet, due to the contoured land, people have access from the highest elevation of the property. Otherwise, the construction of boundary walls is expensive to overcome this problem. Despite the necessities, highly appreciated boundary walls contradict with the concept of integration. In rural villages, people live in a close relationship, and they are less concerned about security and privacy. In addition, students in public schools are allowed to exit the school during lunch breaks but not in private schools. Therefore, public schools with higher priorities of boundary walls want to keep students inside the school premises throughout school hours, influenced by private schools. Hence, in rural schools, such development priorities contradict with the tradition of freedom between school hours where students live in a close proximity.

On the contrary, schools did not mention community services and school-community functions despite being a community school. Although schools had spare classrooms, an alternative use of such spaces was not mentioned in the SIP. In addition, schools have not aimed to preserve the socio-cultural spaces. Less priority was accorded to old buildings' renovation, preservation of social and cultural spaces, increasing special rooms, and integrating school-community functions. Hence, school planning needed a clear intervention of learning spaces and community facilities in the future.

4.2 Realization of integration approach

(Table 9: Integrated facilities): According to the priorities set by each school, the broad spectrum that rural schools could serve students and communities were trivialized by the school management committee. Similarly, integration of school-community functions was considerably less in small school districts (shaded areas in table 9). Such areas needed more public services compared to town areas. Integrating functions beyond the academic purposes entirely depended on extra rooms available in the school. In table 9, schools of small school districts in state 1 and 2 have only three types of school-community functions (community halls, clinics and offices of mothers' groups). The schools with large school districts have included community facilities in their new buildings. Within few schools, the integration was limited to the

offices of mothers' groups, clinics, shops, gymnasiums, community halls, dormitories, community learning centres (CLC), chautara and temples. However, it was likely that these facilities might be replaced, since schools have less priority on community services and school-community relationships.

4.3 Low socio-economic status, and ethnicity

(Table 9: Diversity): Globally, people in rural areas are economically weak compared to those of towns, especially in developing countries ²⁰⁾. Rural areas are mostly peaceful with friendly environments where communities share close and stable relationships ²¹⁾. In the case of Nepal, school districts consisted of a majority of four different ethnic groups ³⁾ (Table 9). In the traditional hierarchy, *dalit* communities were considered the most economically disadvantaged groups. But, ethnicity did not have a significant influence on the status of schools. Despite this, when people started becoming economically strong, they sent their children to private schools. This affected the enrolment rate as well as community participation in public schools. In addition, the majority of people relied on agriculture as their major source of income. The small schools faced additional challenges in decision making, setting priorities and lack of diverse fields of expertise, to cope with changing technology and educational transformation.

4.4 Local community groups and organizational support

(Table 9: Local organizations): There was support from governmental and national as well as international non-governmental organizations to the schools. Additionally, the support of local community groups was praiseworthy (Table 9). Mothers' groups, as well as forest users' groups, were active in social works. Though all the communities had their own mothers' groups, the direct influences were seen in five community schools, especially in small school districts. Collaboration with forest user groups depended on the availability of forest resources within the school area. The forest user groups paid some amount to the school for using forest products such as wood and fodder, within its boundaries. It helped in sustaining schools financially to some extent.

Similarly, local people established a fixed deposit account in a bank or through local cooperatives, to offer scholarships to students. Since most of the community and organizational support for schools was limited in providing funds for school facilities, individual donations focused on scholarships and educational material for students. It was found mostly in the basic and comprehensive schools in medium and large districts.

4.5 District size, classroom density and distance from town

Since lower priority was given to small school districts, they lacked special functions to advance their education. As a result, the rural villages with fewer facilities and services compared to towns had low enrolment of students. This led to excess management costs of schools making it less affordable for rural people, ultimately leading to their closure.

Fig. 3 Average students per classroom with respect to size of school districts

Fig. 4 Schools' distance from city centres with respect to size of school districts

In Nepal, the average number of students per classroom is 35¹⁸⁾. In figure 3, most of the primary schools in small school districts had lower density (17 students/class) because people were more drawn to private schools as well as their migration to towns. However, the proportion of students as a whole were below the average in small school districts. Therefore, transformation of schools does not necessarily mean adding classrooms only, but also the planning and management of existing learning spaces. If a multi-grade classrooms approach is practised in the current spaces, it creates an extra room for a special classroom. Furthermore, community services can be built near the school premises to create broader possibilities of integration and expansion of school facilities.

Similarly, the school district size should be considered during the transformation of schools. In figure 4, primary schools in the small district have low potential for development, if we calculate by size. Nevertheless, schools in small and large districts are equally important. Therefore, the planning of facilities must be prioritised based on the needs of schools as well as communities.

5 Conclusions

This paper has discussed the likely effects of school districts on school facility planning, integration and potential development in the future. Schools in small districts have limited facilities compared to large districts. Similar to many new educational concepts, community school is the contemporary name for integrating education and services that evolved from early schools. However, public schools of Nepal still lack the essential concept of multi-grade, active learning classrooms, and integration of community functions. It is important to understand that new educational concepts are modern ways of describing early schools. The unique legacy of rural schools is the individual attention,

parental involvement and community participation. Hence, small school districts could promote education by integrating community functions and community participation to supplement the need of special classrooms.

From this research, it was found that:

1. Priority in transforming rural schools is addition of grades and new infrastructures. The development for schools means addition of higher-grades, technologies, learning spaces into dedicated classrooms, and loss of traditional learning spaces. This transformation reflects a town-centric approach and focus on district sizes, endangering the small rural schools. Thus, transformation must complement the need of schools as well as communities.

2. The current school facilities have few socio-cultural spaces, a large portion of old buildings, newly constructed buildings in larger school districts, and a high demand for boundary walls. The traditional load-bearing masonry buildings are vulnerable to earthquakes. Similarly, due to topography, the size of the playground is limited and school boundaries are open. Therefore, the resources of rural schools are limited to basic classroom functions, a playground, and community spaces. Thus, they require an additional school-community function for learning as well as community service at large.

3. In small school districts, contemporary rooms, with respect to the diversity of communities, are not functioning as special rooms or integrating communities. Adoption of integration is based on the availability of infrastructure in the school. However, the priority of many schools is to add new buildings and build boundary walls. Thus, small school districts could not afford such integration, even though they are required by communities. Nevertheless, forest user groups support schools to sustain them financially to some extent. Also, mothers' groups collaborate with schools, especially in the small districts, demonstrating a strong bond between school and the community. In addition, individual donations to support and encourage students, are yet another influencing factor to help minimize the declining enrolment rates in community schools.

Notes

- i) "Community Schools" are those schools that have been approved by the government and receive regular grants from the Government of Nepal. Previously, they were known as "government schools". (Education Act of 1971, seventh amendment)
- ii) School Management Committee (SMC) is a management body of the community school composed of parents, teachers and local members. The duration of the executives is two years. They have the right to make decisions for the school management.
- iii) Geographically, Nepal consists of three distinct ecological zones: 1) the Himalayas, the high mountain range with snow-covered peaks 2) the hill areas with lush high hills and valleys, and 3) the Terai, a strip of fertile plains.
- iv) School Improvement Plan (SIP) was introduced under the Basic and Primary Education Program II (BPEP II) for promoting decentralised reform process in primary education and enhancing the effectiveness of the school system. Later, SIP was included in secondary schools as well under the Secondary Education Support Program (SESP). It was implemented to increase the level of the

participation of people and organisations in education development and to enhance the pace of quality improvement of schools. As a result, each school develops an education plan, SIP, by involving the school management committee, SMC.

The contents extracted from the SIP of 45 public schools are: History of the school, school districts' data, students' and teachers' data, and schools' planning priorities for physical facilities.

- v) In 1960, King Mahendra implemented the Panchayat system seizing the power of political parties. He centralized the education system as government schools. He included informally opened schools into the mainstream education system and prepared a centralized curriculum to manage the unplanned expansion of schools. In 2001, the Education Act devolved school management responsibilities to the community and renamed government schools to community schools. It was the first step for the decentralization in education initiated in accordance with the Local Self-Governance Act, 1999.
- vi) Chautara is a raised platform with a pipal tree (*Ficus Religiosa*) (note viii image 1,2) located in schools, public spaces, and unpaved paths. It serves as a meeting point for local people to communicate, rest and perform recreational activities. It also has religious values: in the past, it was used as an open classroom.
- vii) Saraswati temple: According to the Hindu religion, Saraswati is the goddess of knowledge. Once a year, schools organize a cultural program on the special day of worshipping Saraswati. Students also frequently worship in the temple. Schools consider the temple as a part of their school infrastructure. However, such temples are often constructed through individual donations. They may also exist as a historical space preserved from the past (note viii Image 3).
- viii) Image: 1. Preserved chautara with platform (school A19), 2. without platform (school A1), 3. Preserved temple where cultural events take place (school A12).

- ix) Image: 4. Load-bearing masonry building (school C1), 5. Metal truss building (school A5), 6. Reinforced concrete building (during construction of school A12).

- x) Ethnic groups are the cultural identity of Nepalese society. They also created the hierarchy in society through a caste system and their economic status. Four major ethnic groups identified within the research area were *Brahmins*, *Chhetri*, *Dalit* and *Janajati*. Brahmins were the priests, Chhetri the warriors, whereas Dalit and Janajati were categorized based on occupations. In recent years, due to increasing awareness, caste/ethnicity are regarded more as a cultural identity of people rather than fixed social orders.

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Summary in Japanese

本研究は、ネパールの農村地域における公立学校施設の実態と課題を探究する研究の第2報である。対象とする公立学校施設は、先進国の学校と異なり、都市部との格差も大きく、最低限の設備の普通教室のみという校も少なくない状況にある。前報1)では主に、地域との複合化と地域拠点性の実態を把握してきたが、農村地域の学校が保持してきた地域住民のための機能は重要であり、各学区（農村地域のコミュニティ圏）で画一的ではなく、地域特性に適応した学習空間整備が課題である。本稿ではさらに、学校空間が地域拠点性を保持しながら、子ども達の質の高い学習空間として整備していくための計画要件を明らかにすることを目的としている。

対象は、ネパール農村地域における3地区45校であり、各校の現地調査と学校運営協議会が策定している学校改善計画資料の分析を基に、学区ごとの多様な地域特性を配慮した学校空間の特徴と改修の実態と課題を分析している。

研究構成は、2章では学区の分類と学校施設整備状況の変容段階を設定し、次に3章は、2章の分類に基づき、学習環境に直接関わる校舎とグラウンド、学校に設置される伝統的なコミュニティスペースと寺院等の関係性について分析している。さらに、4章では、学校の持つべき機能を学区の多様性に関連して詳細に分析し、5章において結論を述べている。

Summary in English

This is the second part of our study on the existing situations and issues of community school facilities in rural areas of Nepal. The rural school facilities are limited, compared to the urban areas. New educational concepts such as multi-grade, active-learning classrooms, and school-community functions, continued from the practice of traditional schooling can be seen in many countries. In Nepal, despite the significance of these concepts, schools have implemented them less. These planning factors were found to be more important in small school districts. In our previous studies, the support in rural community schools was discussed, and we found prominent financial support from communities and identified some integration possibilities of community functions in schools. Similarly, a study on the integration of functions and community participation in administration clarified that some schools with community support and essential integrated spaces, supplemented to improve educational standards and rural services. However, the scale and diversity of school districts are further influencing factors that play an essential role in connecting resources and learning, which are discussed in this paper.

This paper is based on the field survey of 45 community schools in three rural areas of Nepal. In addition, the document called School Improvement Plan (SIP) prepared by School Management Committee (SMC), was used for the analysis of existing school facilities in each school district. The size of school districts and states of transformation of schools are classified in chapter 2. In chapter 3, the status of existing school facilities such as buildings, playgrounds and tangible socio-cultural spaces are analysed based on the above classifications. In chapter 4, school functions are described and analysed in relation to the diversity of school districts. Chapter 5 concludes that planning of the school should focus on the physical spaces for learning and community services in every school district regardless of their rurality and size of the school districts.

(2020年2月7日原稿受理, 2020年9月29日採用決定)