

Activating Public Space: Rethinking of Public Open Spaces in Kuleshwor Site and Services Area

Praveen Maharjan ^a, Jiba Raj Pokharel ^b

^{a, b} Department of Architecture and Urban Planning, Pulchowk Campus, IOE, TU, Nepal

Corresponding Email: ^a praveenmhrzn@gmail.com, ^b jibaraj@gmail.com@gmail.com

Abstract

Public open spaces are platform in which people can be part of public sphere. It is the place where people can physically join the wider community, contradictory to the setting of home or work place. The characteristic of a new emerging town has been disappearance of neighbor relations, and isolation of residents due to lack of well maintained public open spaces. Many public open spaces around the globe have suffered from under appreciation and serious neglect. A properly designed public open space would encourage people to leave their houses and engage in different form of activities. This can improve the quality of space in terms of its use and occupancy. This research aims to identify and evaluate dysfunctional public open spaces and weak connections in those spaces, and come up with a suggestions to improve these spaces and activate public life by identifying the architectural and urban features of the public open spaces.

Keywords

Public Open space, Access and Linkage, Use and Activities, Sociability, Comfort and Image

1. Introduction

Public space is a place that is generally open and accessible to people. It is a space in which people can choose to be, regardless of their ethnicity, age, ideologies and gender. A public space doesn't necessarily indicates a typical square or garden but can also be a space of everyday use such as streets, sidewalks and public library [1]. It must be well connected with the surrounding environment which is important to attract people and activities in that space.

The quality in public space design was achieved in the past in the form of great city squares in both eastern and western parts of the world these historic squares that developed over the time span more than two millennium, still exists in European and Asian towns [2]. This case is validated in case of traditional towns of Kathmandu Valley as well. Whereas the modern cities developed in periphery of the core area of Kathmandu valley seems to ignore traditional planning and features. Resulting in unmanaged and poorly designed public spaces and are not properly utilized. Various plans and programs have been formulated to meet housing needs for growing populations, such as site and services, grouping of land, development of land for housing private

developers, etc., whereas need of public spaces are not kept in consideration due to which the public open spaces are degrading.

2. Objectives of Study

- To identify initial objective to design open spaces in Kuleshwor site and services area and current use of those spaces.
- To find out passive open spaces in study area, and reasons for its minimal use.

3. Literature study

3.1 Public Open Space

Public Open Space can be defined as [3]:

- Public: open to the people
- Open: allowing entrance or access to public
- Space: interval between points or objects, area.

Public space can be defined as a common areas that is not closed or blocked up and provides access for people to share. It is a common space shared by strangers for a place of enjoyment, gathering, politics,

religion, commerce, sport etc. Public open space is an important part of the city; with quality spaces having a huge impact on city ranging overall areas including social, economic and environmental benefits. Open space can enhance the character of residential areas, civic buildings, conservation areas and archaeological sites [3].

3.2 What makes Successful Public Space?

Within the framework of Project for Public Spaces; In a study conducted worldwide, more than 1000 public spaces were studied which concluded that success of the public spaces majorly depends on four key attributes [4]:

- Access and Linkage
- Use and activities
- Sociability
- Comfort and Image

Access and Linkage is concerned with how space is connected to its surroundings both visually and physically [5]. Accessibility is an important component of making a successful public space. Successful squares aren't just well walked around and usable but leading roads should also be safe and inviting to the pedestrians [4]. "Access and Linkage" aims at describing the accessibility relationship between the public open space and the surrounding environment to define its approach. Public space should be accessible to and used by all.

Sociability involves the feeling of willingness to interact comfortably with people (i.e: local people, neighborhood, including particularly strangers also)[5]. Social life is a basic element for every successful public space. The important starting point in developing a concept for any public space is to identify the talents and assets within the community [6]. Besides from finding of Project for Public Spaces, many other researches have proved that people participation and sense of belonging are the important factors [4]. It is also concerned with users participation in maintaining space in a good condition.

Uses and activities are considered as the main reason why people often visit and use a space. Activities can convert any space into a different new spot, that is distinguishable among the city's other public spaces based on their diversity, and the opportunities provided to the users to partake in them [5]. Activities in public space must achieve a good balance between

the genders and users of all ages to ensure the continuity of utilizing them throughout the day.

Comfort and image is related to the success of a space because when a space is comfortable, it can represent itself well and leave good image in peoples mind [5]. Comfort and image includes how individuals feel towards the public space, in terms of safety, cleanliness and maintenance. In addition to this individual's perception towards adjacent building and surrounding's character are also equally important. Furthermore, comfort in public spaces should have the space for people to sit. Many public spaces don't provide place to sit, so just to be comfortable, people are often forced to adapt to the situation in their own way [6].

4. Methodology

The research was carried out using both quantitative and qualitative methodology within the interpretative paradigm. 3 methodological steps were included in the research:

- Mapping of existing open spaces
- Observing user behavior and the use of open spaces
- Residents' opinion survey - help assess the quality of open space in the study area.

Quantitative research was carried out for the physical dimensions, distance, area and number of available space, calculating the available resources and capacity. Primary and secondary data were collected to facilitate the distribution of knowledge about quality indicators of open spaces, the needs and benefits of open spaces, as well as the concepts and theories of planning of open spaces in the neighborhood.

A systematic random sampling was carried out depending upon morphology of the settlement. The main purpose of survey was to get the perception of people towards public open spaces therefore samples from different areas were tried to incorporate.

5. Site and data

The selected area for the study is 'Kuleshwor Site and Services'; which was one of the first planned residential settlements representing the contemporary urban settlement of Kathmandu Valley. Kuleshwor site and services is located in Kuleshwor Height ward

no -14. Due to community participation, continuous efforts and dedication of “Kuleshwor awas pariwar kalyan sanstha” this area has been making a remarkable progress in present scenario [7]. Even though community is progressing, public spaces of settlement doesn't seem to be properly utilized in present scenario. So, Kuleshwor Site and services area was selected for my research.

5.1 Planning concept and public spaces in Kuleshwor site and services in past

During an interview conducted on 14 February 2020, Planner Kriti Krishna Nuchee Pradhan stated that initially the land of kuleshwor site and services was used for agricultural purpose. Since the area consists of high contour land, the topography of site area seems to be key factor in determining the planning of Kuleshwor area. Site consists of high contour land and plain land which was separated through a 7m wide road and inner areas were connected through 5 m and 2m road. The concept of design was based on minimizing the road area and providing maximum residential plot area. Market area was defined at the highest point of the contour. Open space were provided at the center of the Market area which were surrounded by building plots containing the shutter area for shops facing towards open space. Also community school area 4578.63 sq.m. were provided on the high contour land.



Figure 1: Conceptual Map of Kuleshwor Site and Service Area

Plot of 127.18sq.m., 190.78sq.m., 254.37sq.m., 413.35sq.m. and 476.94sq.m. was defined for residential plots. The plot configuration, public space distribution, street network layout and provision of infrastructure were project specific because planning standards and guidelines didn't exist at that time. In

fact, the plot size was first defined, which determines the complete layout plan.

Parks and open spaces shows less hierarchy but all the open spaces were matched to plot sizes except Tinkuney area which was formed at the cross section of 3 roads. Open spaces were provided for the 127.18sq.m. (4 aana) and 190.78sq.m. (6 aana) land. Altogether 26 open spaces were provided in kuleshwor Area. The general layout of open space provided was illustrated in the figure below. The total allocation of land to open space was 4 % in Kuleshwor Awas.

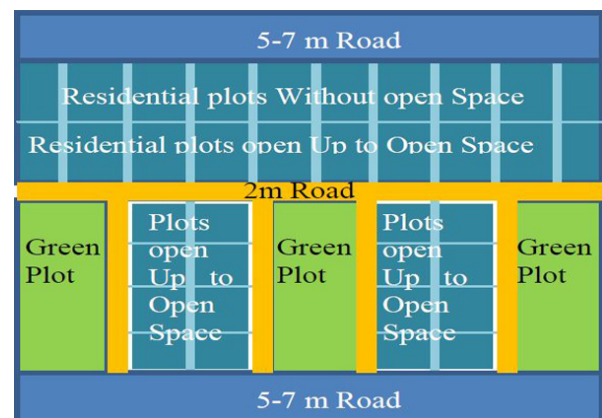


Figure 2: Typical Open Space Layouts of Kuleshwor Site and Services Area

Open Space was designed in such a way that it was surrounded by houses in three sides and separated by 5 -7 m road. During an interview conducted on 1 Febuary 2020, Treasurer of Kuleshwor Awas Pariwar Kalyan Sastha, Madan Shrestha and an interview conducted on 14 February 2020, Planner Kriti Krishna Nuchee Pradhan stated that open space was initially designed for following purpose:

- Creating a suitable place for children to play
- It is also designed for the community gathering to improve social relation

5.2 Existing Scenario

The total site area of the Kuleshwor Awas is 26.56 ha, with a total of 911 existing residential plots. Other than residential plots, a total of 27 plots of different sizes represent the public open spaces. Total area of open space 1.29 ha, which is 4.85 percent of total planned area. Open space density is 3678.84 ppha. Street length is 8401 m, with the area of 3.47 ha.



Figure 3: Existing Distribution of Open Spaces in KA

Among the 28 green plots in Kuleshwor Awas. 15 of the green plots are fenced with no access to public. During an interview conducted on 1 February 2020, Treasurer of Kuleshwor Awas Pariwar Kalyan Sanstha, Madan Shrestha states that the fenced open space will be opened for public after the newly planted plants were fully grown. The fenced open space was managed by the neighborhood committee with the help of Kuleshwor Awas Pariwar Kalyan Sanstha. Among them 2 open spaces were converted into park by Ban Karyalaya with the initiative of Kuleshwor Awas Pariwar Kalyan Sanstha. 13 open spaces in Kuleshwor Awas are not properly maintained and are not properly used. Most of them are used for Private parking purpose. Among them 1 plot was converted into parking lot with paved surface of interlocking blocks.



Figure 4: Open space Converted to parking

In kuleshwor site and services area there are two playgrounds. One is Tinkune volleyball ground in block A and badminton court in Block C. Badminton court in Block C was made by local community for exercise and recreation purpose but was not properly used and now used as private parking area whereas, Tinkuney volleyball ground in block A has been intensively used as playground and other educational, social and cultural events. It is only managed public space which is easy to access by public and is intensively used. This playground is managed by Kuleshwor Awas Pariwar Kalyan Sanstha.

Market area of Kuleshwor Awas is not used in the present context and part of this market area was converted into fenced open space and have access to local people. Also rest of the spaces were converted into parking space. Ganesh Temple is present in market area where people can have access in any time. There are altogether 14 temples in Kuleshwor Awas among them 3 Kumari temples were pre-existing temples before the design of Kuleshwor site and services whereas other 11 temples were built by local community. Sarveshwar Temple of Block A, Kuleshwor Bhagwati, Radha Krishna temple of Block B, Ganesh Temple, Raj Devi, Gaurishankar Temple of Block C and Ganesh Mandir 3 of Block D were fenced and open for public in morning and evening. These temples were built by encroaching the open spaces. Whereas, Kuleshwor Binayak Temple, Panchali Bahairb, CharDham temple of Block C and Ganesh temple 1 and 2 of Block D is open for public in any time. It remains as a part of Public open Space.

5.3 Changes seen from planning to existing site

The major changes seen in public open space is its transformation of usage. In the interview planner Kirti Kishan Nuchee Pradhan stated that, Tinkuney open space is provided for community activities. In present context, Tinkuney community space is converted for three different uses by dividing space into three parts. 1st one is the playground itself and it is one of the most used spaces in present scenario. 2nd part is the park made by Department of Forests and Soil Conservation with the initiative of Kuleshwor Awas Pariwar Kalyan Sanstha. This park is currently fenced. Before it was designed into park, it was used for parking space. 3rd part is the community boring area.

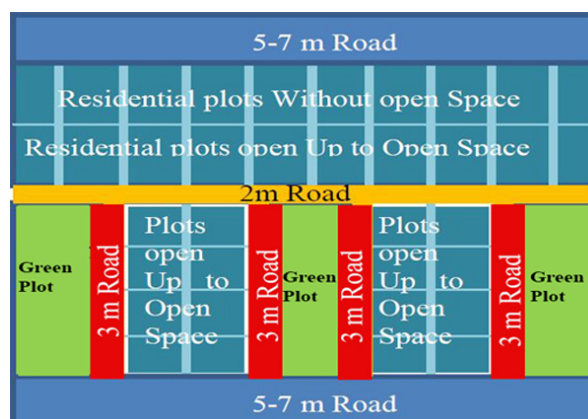


Figure 5: Typical Encroached Open Space Layouts of Kuleshwor Area by road

Comparing figure 2 and 5, the major change seen in Kuleshwor Area is encroachment of public open space by road expansion. The main reason for extending 2m road to 3m was for the ambulance and emergency vehicle entry as stated by Mr. Madan Shrestha and Mr. Kul Prasad Bhattari during the interview whereas they were not satisfied due to local people behaviour of parking vehicles in the road. The expanded road is now used by some local people for parking of car.

Also the construction of temples in open spaces is another change seen there. The construction of temples with compound wall in place of green open space also seems to be problem because during the time of planning of kuleshwor area those spaces were left for green open spaces and no other construction were allowed to build there [8]. During the time of site visit also most of the public open spaces in each block were used for private parking purposes which are degrading the open spaces.

Initially open spaces are designed for children to play and for improving social relation among neighbors but in present context 37 % of open space is fenced and not accessible to public. Also the market area initially designed for commercial purpose but now it is used for parking and also contains fenced open space which is not accessible to public.

Open plots are increased in present context than the initially planned settlement, it is one of the positive changes seen in Kuleshwor site and services area. The open space is created by Department of Forestry and Soil Conservation with the initiative of Kuleshwor Awasiya Pariwar Kalyan Sanstha.



Figure 6: New Open Spaces by Department of Forestry and Soil Conservation

6. Results and Discussions

A total of 40 respondents were surveyed through random sampling technique during the research. The data were coded into SPSS software for descriptive

statistical analysis. The main focus of this analysis is to understand the user perception towards public open spaces area. The result is categorized into 4 attributes.

6.1 Access and Linkage

6.1.1 Proximity

Open Spaces at Kuleshwor Awasiya area are neighborhood open spaces, therefore most of the residence have open space within 1-5 minutes. 67.5 % of the household have open space within 1-5 minute. 32.5 % of the household have open space within 5-15 minutes distance. Larger open space near to this area is Kuleshwor Mahadev Temple and Bhuwaneshwari Temple.

6.1.2 Settlement Layout

Kuleshwor Awasiya area is site and services scheme therefore houses are built individually, most of the houses are detached houses, with compounds. Approximately 78.97 % of settlement is detached house and 21.03 % is row housing but have uneven facade and floor height. Even though row housing is present the design, style and vertical height of the buildings differ from one another. Even though separate bylaws is prepared for kuleshwor Awasiya area it is not been properly implemented.

6.1.3 Road access to Residence

The road access to the houses at Kuleshwor Awasiya area is mostly 2m-4m, 43.45 % have road access of 2 to 4 m, 36.30 % have road access 4m-6m and 20.25 % have road access greater than 6m.

Use and Activity

6.1.4 Public Space people use in KA

In Kuleshwor Awasiya, 20.5 % people uses Park. Due to fenced green space most of the respondent doesn't have access to those spaces and unfenced open spaces are poorly maintained so most of the respondent doesn't visit park in Kuleshwor Awasiya. 43.6 % people uses public playground. 28.2 % of respondent uses religious place. 15.4 % respondent uses library, 15.4 % use community building and 10.3 % of respondent visits other public spaces.

6.1.5 Activities and Use of Open Space

People use open spaces usually for social interaction, sports, exercise and yoga, religious activities and

parking. 22.5 % of people use open space for Yoga and exercise, 35.0 % of people uses open space for social interaction, 12.5 % of respondent use open space for Religious activities, 30 % respondent use open space for sports. Since tinkuney volleyball ground is most used open space in Kuleshwor Awas so, most of the respondent uses tinkuney volleyball ground. In this ground not only sports activities but other social, cultural and educational activities also takes place. 35 % respondent uses open space for parking purpose.

6.1.6 Time of Use

48.9 % of people use the open spaces in the morning, 11.1 % people use open space in afternoon and 40 % of people use open spaces in the evening.

6.1.7 Duration of Use

As the open spaces are not managed properly, 55 % of the respondent visits the open space for 1 to 15 minutes. 27.5 % of respondent visits the open space for 15- 30 minutes and 17.5 % of respondent visits the open space for more than 30 minutes.

6.1.8 Public Spaces people prefer

Most of the respondent prefers accessible park among the other public spaces. 65 % of respondent prefer to have parks, 5 % respondent prefer playgrounds, 17.5 % prefer to have Religious buildings and 12.5 % prefer to have library and community buildings.

6.2 Sociability

6.2.1 Relation with Neighbors

Respondents claim their relation with their neighbours is good, 10 % said they have very good relation with their neighbours, 75 % said they have good relation and 15 % said they have moderate relation.

6.2.2 Interaction with Neighbor

Among the respondent, 17.5 % of respondent claim that they interact with their neighbour daily, 52.5 % of respondent claim that they interact with their neighbour weekly and 30 % of respondent claim that they interact with their neighbour occasionally.

6.2.3 Streets

Streets in Kuleshwor Awas was less crowded therefore most of the people feel comfortable walking

in the roads even though there is no footpath. Out of total respondent 57.5 % of total respondent feel comfortable walking on the streets and 3 % felt it was moderately comfortable and only 12.5 % of total respondent feel discomfort while walking on the streets. Discomfort while walking in the streets was felt more by the elderly people. During the direct observation, streets were also used by children for playing.



Figure 7: Children playing on street

6.3 Comfort and Image

6.3.1 Safety of Public Open Space

Among respondent, 25 % feels very safe during public space use, 52.5 % feels safe to use public space. 12.5 % respondent feels less safe while using public space and 10 % of respondent doesn't feel safe using public space.

6.3.2 Solid waste

12.5 % respondents said solid waste management is very good, 60 % of the respondents said solid waste management in their locality is good and 27.5 % said solid waste management is moderate.

6.3.3 Rainwater Drainage

17.5 % said it is very good, 52.5 % said its good and 30 % said moderate.

6.3.4 Air Quality

The 25 % of the respondents consider air quality in their locality very good, 50 % of the respondents consider air quality in their locality is good, 15 % consider it to be moderate and 10 % said it is bad.

6.3.5 Sunlight

Among the respondents 50 % said they receive very good sunlight, 40 % said good and 10 % said it is moderate.

6.3.6 Noise

Among the respondents 25 % said their locality is quiet, 62.5 % said it is low, 12.5 % said moderate.

7. Findings and discussions

7.1 Access and Linkage

Comparing the open space in Kuleshwor Awas with the guidelines, there is sufficient open space in Kuleshwor Awas Area but most of the open spaces are not properly utilized. A large portion resident used to go for a walk around the neighborhood streets mostly in the morning and evening. Such walking used to work as a facilitator to generate other public activities such as meeting and communication among neighbors. Whereas, due to Melamchi drinking water project streets of Kuleshwor Awas area are less suitable for walk nowadays due to poor road condition. So, during the direct observation only few people are seen on the streets. Other street activities include children playing in inner streets. This is due to poor access and maintenance of the open space.

Heavy vehicles were rarely seen on the streets. Motorcycles and cars were seen on the streets of Kuleshwor Awas but the streets are not busy so, even though the absence of footpath peoples feel comfortable to use streets.

7.2 Use and Activity

The use of public open space is changing with the changing provision. Initially the open spaces of Kuleshwor Awas were designed for the children to play but due to rapid progress in technology children are more engaged in electronics devices than the real environment.

The use of public spaces is also affected by what is on a particular place and also varies according to the time of day and day of the week. During morning adults and old age people mostly uses open spaces whereas during evening time it is mostly used by children and teenagers. Also the day of the week can also determine the use of public space. During Saturday and other holidays children are mostly seen using public spaces.

7.3 Sociability

The open spaces are also poor in terms of management and landscape design as they lack elements of interest and show no or less sign of

physical design or development. Direct observation reveals that not all the open space is really open to public. As revealed from the focus group discussion conducted on 1 February 2020, the fenced open space will be opened to the public when the newly planted plants will be fully grown. Also the management of open space is not satisfactory. Contrary to the findings from questionnaire survey, in the interview conducted in 1 February 2020, Treasurer of KAPKS ^aMadan Shrestha and Local resident of Kuleshwor Awas ^bKul Prasad Bhattari state that the major problem in the management of open space is the absence of community feelings in the neighbours. Even though there is management committee for open space in each neighbourhood, the open space cannot be managed until and unless all the people residing there have the feeling of conserving the open space. ^b He also state that most of the open space in KA degraded during the time of earthquake as most of the people uses opens spaces that time and then most of the household doesn't show interest in maintaining the open space after that. The only open spaces that open daily for the residents are the temple area and the tinkune volleyball court. Unfenced open spaces are open to public but are poorly used and most often they are the places for the private parking spaces.

7.4 Comfort and Image

The existing open spaces do not contain basic amenities or elements of interest for engagement of the users. Therefore the spaces are less inviting. Even though there are separate bylaws for Kuleshwor Awas Area, it has not been followed. Therefore, the open spaces and buildings do not complement each other in physical form.

Temples were built by neighborhood themselves. The existing temple areas generate a very small amount of daily activities as the residents do not visit them on a regular basis. Temples were mostly used by elderly people.

From the questionnaire survey, it is clear that the open spaces are safe and solid waste management and rainwater runoff of the open space are also good enough whereas the use of open space is not satisfactory.

Looking at the environmental data (air quality, noise level and sunlight) is also satisfactory in Kuleshwor Awas.

8. Conclusion

As far as the provision of public space in Kuleshwor Awas is concerned, it is not satisfactory in terms of the quality, although it meets the requirements of the current by-laws in terms of quantity. The finding of the study has revealed that accessibility is one of the major issues with the use of the existing public spaces. The open spaces are not open to the residents on a daily basis. Those public spaces that are accessible are not inviting due to poor management and the lack of elements of interest. The success of neighborhood open space projects depends entirely on the interests of neighborhood participation. Lack of neighborhood interest in management of public spaces is one of the major causes for the degrading of open spaces. Neighborhoods have failed to appreciate the importance of public space and poor development of neighborhood public space is also degrading the quality of social life. Parking in public spaces is also the major problems seen in the public spaces of Kuleshwor Awas which is also degrading the quality of open spaces. The temples spaces which were built by encroaching the open spaces also degrading the open spaces.

The existing drawbacks with the public spaces is in terms of both the design and management (including poor maintenance, the lack of proper access and use for parking) seem to have affected their use, both on a daily basis as well as during social events.

Looking at all the four aspects, it is clear that if the open spaces in KA are maintained properly then open space has high opportunity for the proper use and also helps in the environmental benefit of the Kuleshwor Awas as open spaces seems to be distributed well.

9. Recommendations

- From the questionnaire survey, it seems obvious that people prefer accessible park as an open space, therefore during the restoration of existing open space, park with good accessibility and containing basic amenities should be provided for engaging the users.
- Even though children are inbound of technology advancement and generally focused on electronics appliances, they still need opportunities for outdoor play in neighborhood spaces. Therefore children friendly open spaces should be provided which in turns develops the

sense of belonging with the community.

- The success of a particular public space is not only in the hands of the architect, urban designer or urban planner; it also depends on people using and managing the space. People behavior towards the public open space depends on the success or failure of open space. Therefore self-regulation and respect to the open spaces should be maintained by every individual.
- Parking is one of the major issue of every public space so, dedicate parking space should be provide in or near to the planned area.
- Even though there is bylaws for Kuleshwor Awas, people doesn't seem to follow the regulations so, even elevation in buildings are not seen which is degrading the overall look of planned area. Therefore building bylaws should be properly followed.
- Open spaces are diminished by the construction of temples with compound wall. The construction of temples can be done in a way that it serves as the element of open space itself.

References

- [1] Charita kishore Rupa. Importance of public spaces in cities, 09 2015.
- [2] RM Chitrakar. A study of historic urban squares of kathmandu valley: Defining contemporary public open space design. Master's thesis, Master of Urban Design Dissertation), The University of Hong Kong, Hong Kong, 2006.
- [3] RECPHEC. A study on public spaces of kathmandu metropolitan city for policy revision. Technical report, Resource Centre for Primary Health Care, 2016.
- [4] László Jóna. Inner courtyards as public open spaces. *Real Corp 2018:Expanding Cities – DIminishing Space*, pages 605–612, 04 2018.
- [5] Nehad S Abd El Gawad, Khalid S Al-Hagla, and Dina M Nassar. Place making as an approach to revitalize neglected urban open spaces (nuos): A case study on rod el farag flyover in shoubra, cairo. *Alexandria Engineering Journal*, 58(3):967–976, 2019.
- [6] Why public spaces fail, Dec 2009.
- [7] Bishwa Lal Shrestha. Sansthaगत संस्कृतो नमूना कुलेश्वर आवास चहेतरा. *Kuleshwor Aawas Pariwar Kalyan Sashta, Smarika*, 4:11–13, 2070.
- [8] Laxminath Shrestha. Yethartha, chunauti ra samadhan. *Kuleshwor Aawas Pariwar Kalyan Sashta, Smarika*, 3:28–29, 2067.