**Smart Village: Rural Development with Wireless Internet Services**

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**Proposal for Field Immersion**

**Submitted to**

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**Introduction**

Nepal, home to the Mount Everest, is dominated by the world's most imposing mountains. This small, hospitable country has become an exceptionally popular destination for travelers, whether they are in search of climbing challenges or spiritual enlightenment. Nepal’s natural beauty is seamlessly interwoven with its cultural heritage. Traditional villages, ancient temples, and monasteries are harmoniously nestled within the landscape, providing an opportunity to explore the cultural richness of the country.

Nangi village is in western Nepal on the Southern flank of the Annapurna and Dhaulagiri ranges of the Himalayas. It is a small village located in the beautiful landscape. While members of the village are working to develop Nangi’s resources and build needed facilities for the community. People also have tried to maintain their way of life, constructing homes, preparing food and preserving traditions that have been practiced by the community for countless generations. In the Dhaulagiri Zone of western Nepal, Nangi is situated in the Ramche Village Development committee (VDC)-2 which is included in Annapurna rural municipality of Myagdi district. The region is well-known for its rich cultural heritage, stunning natural surroundings, and trekking routes. Wireless internet connection in Nangi village aims to enhance the region's infrastructure, healthcare system, and educational opportunities.

Travelling to rural and isolated locations and removing oneself from urban centers to experience the genuineness of rural life is known as rural tourism. It's all about the unadulterated, raw beauty of hills, lakes, mountains, forests, and communities found in nature. To explore the community’s culture and tradition, not only the scenery of the village. A fundamental tenet of sustainability is the promotion of conscientious travel habits that save the environment and conserve the region's cultural legacy. By giving these communities income and job possibilities and giving tourists a chance to get away from the bustle of the city and re-connect with nature, rural tourism helps these communities become economically more empowered.

The development of developing nations in general and remote communities particularly can benefit greatly from information and communication technology (ICT). The reduced expenses associated with deploying ICT infrastructure have led to a greater probability of technology dispersion in these places.

**Objectives of the study**

The primary objective is to identify the impact of the Internet on users of Nangi village. Specifically, the objectives are:

* To understand how information, communication and technology has transformed the lives of people in the village.
* To understand and identify the Internet usage in Nangi Village.
* To identify the possibilities of promotion of community-based tourism and sustainable development.
* To collaborate with the local bodies to connect handicraft and paper products to the market.

**Research Methodology**

**Site Description: -**

From Kathmandu, it is a 7-hours bus drive or 35-minute plane trip to Pokhara, the second largest city in Nepal. From Pokhara, one must travel by bus or taxi for 3 to 5 hours to reach Beni, the nearest bus–accessible town to Nangi. One can directly go to Beni from Kathmandu which requires 10 to 12 hours bus drive. Ater that jeeps are available in Beni to reach Ramche vdc -2 Nangi, Myagdi. The elevation of Nangi village is about 2,260 m (about 7,345 ft).

**Research Design: -**

A research design is the set of methods and procedures used in collecting and analyzing measures of variables specified in research problems. It refers to the plan and program for the collection, measurement, and analysis of data. To carry out this research, descriptive research design will be used. Descriptive research design is developed with the aim of studying the subject of research in detail and it explains the facts and characteristics related to research problems. It classifies the variables related to the research problem and analyses and establishes their relationship.

**Source of Data: -**

In this study three different instruments will be used for data collection: structured & semi-structured interview, focus group discussions and observations of event or phenomenon. The secondary data will be collected from government websites and publications of local level government and different research articles.

**Population and Sample:**

The residents of Nangi Village will be considered as the population for this study. For the study, the people who have been engaged in the production of different local handcraft and paper products will be taken. The sample size will comprise the residents of Nangi Village. Purposive sampling will be used since data will be collected directly from those who have been engaged in the production of different local handmade products and paper products. For generating collection of data of Internet users the residents using information, communication and technology will be considered.

**Data Analysis Tools and Method:**

To examine the data, different descriptive statistical tools will be used. Among the various descriptive statistical tools, frequency and percentage will be used to explain the characteristics of the sample population. Moreover, Microsoft Excel will be used as a data analysis tool. An in-depth analysis will be conducted on the data collected through interviews and observation.

**Literature review**

According to individual or collective level of analysis, studies have independently examined the influence of ICT on social capital or the impact of social capital on ICT (Ellison et al., 2007; Frank et al., 2004; Shah et al., 2001; Simpson, 2005). Unfortunately, most of this research rely on quantitative methods that are useful for pinpointing causal linkages but lacking in the complex analysis needed to develop theories that account for intricate phenomena like the interplay between ICT and social capital. To fully comprehend the impact of the sociotechnical interaction process and the local context, a qualitative approach is more appropriate. Studies on ICT in development should pay special attention to this. The social capital perspective, focusing on resources embedded in social networks for mutual benefit of parties within the networks (Putnam, 2000) has occasionally been used to explore the effects of ICT intervention in communities (Urquhart, et al., 2008).

Located in the western mid-hill of Nepal, Nangi is in six to nine hours walking distance form Beni, headquarter of Myagdi district. With a total population of 800 (CBS, 2011), the primary source of livelihood of people was agriculture and still it is in practice. The main source of income for this village comes from military service. With cool temperatures, the temperature varies from 10 degrees Celsius to 26 degrees Celsius. At the very remote area, lack of trained teacher was always the obstacle. Access to the internet has maximized the benefits of the rural population and made their life easier and more enjoyable.

Being the flourishing appropriate communication media, the Internet has significant effect on user. Fast, easy, and cost-effective exchange of information has saved a lot of time for the villagers and changed their lives. With the development of technology, new job opportunities have been created in communication centers and e-business. With access to computer education, the young generation are more competent and confident enough to tackle the environment. In general, positive impacts are found on the users. The Internet has played a huge role in the livelihood of the rural people.

**Need for Study**

Nepal Wireless Networking Project has been very ambitious project. Nangi, being the pioneer village to wireless network experience, has made it a regional success and it has been the model for the implementation for other projects too. To make people of village close to world through use of technology, social activist Mahabir pun started Nepal Wireless Networking Project (NWNP) in year 1997. NWNP has established its functional office in Himanchal school of Nangi village of Ramche VDC (Village Development Committee) at Myagdi district. Without the long experience of information technology, where email and internet don’t have history of more than a decade or a couple of decades, such remote information technology was established and been successful. Those who study at schools in villages and go for further studies in the cities will not have to face difficulty in navigating the internet, which has become a must for learning. With the successful Nepal Wireless networking project, it was able to bring some changes to the villagers. The project encompasses telemedicine, distance-learning, e-commerce and communications. In this project they trained the villagers on the use of the internet for marketing produce and livestock. After all these trainings and facilities what kind of progress, changes the Nangi villagers have experienced is our need for study in more than decade of internet connection.

Moreover, handicrafts and paper products remain limited to local use. To promote these locally made products, commercial stores and marketing are needed to facilitate sales to a wider area. Empowering the locals with entrepreneurial skills is crucial to maximize their marketing abilities and generate additional income by selling local products and handcrafted items. From the communication with the resident of Nangi village, the paper industry has not been in function after COVID-19; our study also focuses on finding the reason behind it. Similarly, as per the article published by UNDP entitled, “Women driving economic transformation of Nepali villages” in 2021 shows how some catalytic support from the government and UNDP is helping women create jobs for themselves and other people affected by COVID-19. Creative women of Nangi village are making beautiful handicrafts products and helping each other to grow. Our study also focuses on how to promote and market these products to an international level as well.

Our study focuses on the community-based tourism in the village. To get the data and analyze the number of local and international tourists who arrive every year and how tourism has impacted on the lives of villagers.

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**Terms of Reference**

**Objectives of the study**

The primary objective is to identify the impact of the Internet on users of Nangi village. Specifically, the objectives are:

* To understand how information, communication and technology has transformed the lives of people in the village
* To understand and identify the Internet usage in Nangi Village.
* To promote community-based tourism and sustainable development.
* To collaborate with the local bodies to connect handicraft and paper products to the market.

**Outputs of field immersion will be**

1.Nepal Wireless Networking Project Overview:-

* Pioneer village: Nangi set an example for wireless networking in remote regions.
* Regional success: Model for other projects, despite limited IT history.

2.Impact of Internet Connectivity:-

* Education: Access to learning resources for students in remote areas.
* Telemedicine: Improved healthcare accessibility.
* E-commerce: Facilitated marketing of local produce and livestock.
* General communications: Enhanced connectivity for villagers.

3.Progress and Changes in Nangi Village:-

* Entrepreneurship: Training on internet usage for marketing local products.
* Limited expansion: Handicrafts and paper products remain locally used.
* COVID impact: Decline in paper industry post-COVID.

4.Local product in Nangi village:-

* Women empowerment: Creation of jobs through handicrafts production.
* Need for marketing: Promoting local products to international markets.

5.Geographical Context of Nangi Village:-

* Location: Western Nepal, nestled amidst the Annapurna and Dhaulagiri ranges.
* Landscape: Scenic beauty enhancing the village's appeal.

6. Community-Based Tourism Analysis:-

* Tourism data: Assessing the influx of local and international tourists annually.
* Impact on villagers: How tourism has influenced livelihoods and community dynamics.

7.Preservation of Traditions:-

* Balancing development with cultural preservation.
* Maintenance of traditional practices in daily life.

8.Future Directions and Recommendations:-

* Strengthening local entrepreneurship.
* Fostering sustainable tourism practices.
* Leveraging technology for marketing and communication.
* Addressing challenges such as post-COVID economic recovery and preserving cultural heritage.

**Information source**

The social workers, members of the mother groups, school teachers, local clubs and students and local residents, local government body

**Time frame and deliverables:**

The project will require seven days from the day of travel from Kathmandu to returning. Four days will be used for site staying, study, and data collection.

After the field visit, a report will be submitted about the findings. Where the major concern of visiting remains to be gathering information about the impact of the Internet on the village, its impact on education, health, communication and tourism, study on the local products, local business, agricultural scope along with other issues will be studied.

**Stakeholders**:

-Local people

-School teachers/students

-Farmers Group

-Community Leaders

-Local government

-Health Institutions

-Local Business owners

-Mother’s group

**Travel Plan**

**Tentative Technical field immersion schedule**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Day** | **Place** | **Duration** | **Time** | **Work** |
| 1 | **Kathmandu-Beni** | **12 hours** | **6 am – 6 pm** | **Travel to Beni** |
| 2 | **Beni – Nangi** | **4 hours** | **8 am – 12 pm** | **Travel to Nangi** |
| **Nangi Ward no. 2** | **5 hours** | **1 pm – 5 pm** | **Self-tour for identifying possible research topics and location** |
| 3 | **Nangi Ward no. 2** | **9 hours** | **8 am - 5 pm** | **Community visit** |
| 4 | **Nangi Ward no. 2** | **3 hours** | **9 am – 12 pm** | **Meeting with representative** |
| **Nangi Ward no. 2** | **1 pm onwards** | **6-7 hours** | **Work In Progress note** |
| 5 | **Nangi Ward no. 3** | **9 am – 5 pm** | **8 hours** | **Visting community and interacting with them along various topics** |
| 6 | **Nangi Ward no. 2** | **8 am – 12:30 pm** | **4 hours** | **Completing WIP and finalizing the findings along with verification** |
| **Nangi - Beni** | **1 pm – 5 pm** | **4 hours** | **Travel to Beni** |
| 7 | **Beni – Kathmandu** | **7 am – 5 pm** | **10 hours** | **Back to Kathmandu** |

**Questionnaire**

1. How has the introduction of communication and technology impacted your daily life in Nangi village?
2. Can you share specific instances of how technology has transformed communication within the community?
3. In what ways has the Internet been used in Nangi for educational purposes?
4. What are the common uses of the Internet among the residents of Nangi village?
5. How has the Nangi Project (Internet and Communication) influenced the infrastructure, healthcare system, and educational opportunities in the village?
6. Has the Nangi Project impacted the tourism? In What way?
7. Can you describe any changes you've observed in the village due to sustainable development initiatives?
8. Have you noticed any changes in the availability and quality of healthcare services in Nangi due to the Nangi Project?
9. In what ways has the development of technology influenced the production and marketing of local handmade products in Nangi?
10. How has the wireless Internet project in Nangi affected the accessibility of education for the younger generation?
11. Can you share personal experiences of how the Internet has opened new job opportunities in Nangi?
12. In your opinion, what positive impacts has the Internet had on the livelihood of rural people in Nangi?
13. How has the Nepal Wireless Networking Project affected the overall progress and development of Nangi village?
14. Have you seen a noticeable change in the promotion and marketing of locally made products, especially handicrafts, after the Internet connection?
15. What challenges, if any, have hindered the functioning of the paper industry in Nangi, especially post-COVID?
16. How has the COVID-19 pandemic impacted the local paper industry and handicraft production in Nangi?
17. In what ways can the promotion and marketing of locally made products be improved to reach broader market?
18. Can you share examples of successful entrepreneurial ventures initiated by women in Nangi, particularly in response to the COVID-19 pandemic?
19. Have you observed an increase in the number of local and international tourists visiting Nangi in recent years?
20. How has tourism impacted the local economy and lifestyle of the villagers in Nangi?
21. Can you provide insights into the challenges faced by the community in preserving traditional practices while developing resources such as Internet in Nangi?
22. How has the environment of Nangi village been affected by the influx of tourists and the development projects?
23. In what ways has the Internet facilitated communication between Nangi villagers and the outside world?
24. Can you share examples of how the Internet has been utilized for marketing local products on a broader scale?
25. How do you feel about the integration of technology in traditional practices, such as handicraft production, in Nangi?
26. How has the Nangi Project influenced the education and skill development opportunities for the younger generation?
27. What steps can be taken to further enhance the educational and skill development opportunities in Nangi?
28. How has the perception of Nangi village changed among the locals since the implementation of the Nangi Project?
29. Do you think the Nangi Project has successfully addressed the healthcare needs of the community, and if not, what improvements can be made?
30. Can you share instances where the Internet has played a crucial role in emergencies or disaster management in Nangi?

**Some Question to Rate from 1 to 5, 5 being the most favourable:**

1. To what extent do you Strongly Agree or Strongly Disagree that the Internet has significantly improved communication within the Nangi community?

2. How Positive or Negative is your perception of the impact of community-based tourism on the overall well-being of the villagers in Nangi?

3. Do you believe the Nangi Project has effectively addressed the healthcare needs of the community?

4. In your opinion, is the introduction of technology Very Positive or Very Negative in influencing the production and marketing of local handmade products in Nangi?

5. To what extent do you think the Nepal Wireless Networking Project has contributed to the overall progress and development of Nangi village, with options ranging from Excellent to Very Poor?

6. How Often do you believe the wireless Internet project has significantly improved accessibility to education for the younger generation in Nangi?

7. How Frequently do you believe the number of local and international tourists visiting Nangi has increased?

8. To what extent has the influx of tourism Positively or Negatively impacted the local economy and lifestyle of the villagers in Nangi?

9. How well-received is the integration of technology in traditional practices, such as handicraft production, with options ranging from Very Positive to Very Negative?

10. Considering the challenges faced, how Likely is it that the paper industry in Nangi will recover and thrive post-COVID?

11. How Often do you think the Nangi Project has improved healthcare services in terms of accessibility and quality?

12. To what extent has community-based tourism enhanced the preservation of local traditions and customs in Nangi?

13. How Positive or Negative do you perceive the younger generation's ability to tackle environmental challenges, influenced by technology?

14. In your opinion, is the Internet opening up new job opportunities, especially in communication centres and e-business, Very Effective or Very Ineffective?

15. To what extent has the promotion of locally made products through the Internet reached a wider audience beyond the local market, with options ranging from Very Satisfied to Very Dissatisfied?

16. How Likely is it that women in Nangi are actively contributing to economic transformation through the production of handicrafts and paper products?

17. Considering the success of the Internet project, how Likely is it that other villages could replicate similar initiatives for their development?

18. How well-received do you think the Internet project has positively impacted the entrepreneurial skills of the locals, particularly women?

19. To what extent do you believe the Internet has played a role in preserving and promoting the cultural legacy of Nangi?

20. Considering the development projects and increased connectivity, how Likely is it that the demographic and economic profile of Nangi has changed over the years?