



Assessing the Efficacy of the Integrated School Program in Taplejung, Koshi Province, Nepal: A Comprehensive Analysis of Educational Impact and Community Engagement

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

This study aims to assess the changes throughout school education activities in the Taplejung, district of Koshi province in Nepal. The semi-structured interview like Focus Group Discussion, Key Informant Interviews, sample surveys, and direct Observation methods was designed and used to capture the field information during 2022.

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The data divulged 92.80 percent respondents are feeling happy after infrastructure development, WASH and digital set up in the schools. The drop-out rate significantly down by 35 percent compared to the previous years. The school activities, now a days accelerating toward a progressive direction. The schools have high Graduation rate enrollment from 88 up to 120 percent from the past 2018 to 2020 of class 12. The dropout rate stable and down by 3 to 4 percent, and the distance learning initiatives in 2020 highly prioritized focus on the achievement, and results of 12 students. The community livelihood mode strengthened, as a result of 667 households have been adopted and earning from the coffee farming. The study concluded as the education program support is innovative and useful benefited by the communities and students; However, the long-term sustainability is challenging in coming days.

Keywords: School education; drop-out rate; distance learning; livelihoods.

1. INTRODUCTION

The program aims to improve the quality of education, health and livelihood of the rural people in Nepal. To change the circumstances, the implementing agency is working with the government and local authorities as a registered international non-governmental organization. The implementing agency (Human Practice Foundation) has chosen this joint effort as it leads to a bigger and more sustainable impact in the district [1,2]. The implementing agency focuses work on given districts mirroring the approach to government partners in Nepal. The resources have been focused towards higher impact in the life and livelihoods of rural community [3,4]. The implementing agency is working with the schools in the district holistically as well as creating local socio-economic impact to generate household income and create local employment. (<https://www.humanpractice.org> accessed on 07/10/2021).

2. LITERATURE REVIEW

Taplegung district of the Koshi Province is one of the potential districts from the education perspectives, the district has a big majority of ethnics mainly Limbus are high followed by Chhetri, Sherpa, Gurung etc are the majority of people live. Education is one of the challenging in the remote areas. The major livelihood of the people recorded agriculture practice-preferably cash crop from the sale of local vegetables and cardamom.

“In Nepal Human Practice works in Taplegung District in the Himalayas and Dhankuta District. Both districts are highly secluded and impoverished areas in Nepal”. (Human practice foundation, December 6, 2021).

Despite Nepal's transition to democracy in the 1990s, according to the 2018 report produced by

the Central Bureau of Statistics of Nepal and OPHI, 28.6 % of Nepal's population is still multidimensionally poor. Affected by many years of civil war and the fatal earthquakes in 2015, the Nepalese government is not capable of improving the quality of the school system alone.

According to the UNDP Human Development Report (2016) and the World Economic Outlook Database (2017) “in Nepal only seven out of ten children enrolled in grade 1, reach grade 5 and more than half drop out of school before reaching secondary level. Only 43% of all adults have passed primary education and only 12% have passed secondary education; the average number of years in school is 4. The poor performing educational sector in Nepal restricts the social development of the country”.

“The poverty level and lack of local job opportunities in the poorest regions of Nepal results in many young men migrating to the Emirates to work 10-15 hours a day under inhumane conditions to support their families and girls being trafficked to India by their desperate families to survive” (Human practice foundation, December 6, 2021).

The numerous literatures showing that the education system in Taplegung district is not satisfactory and detail assessment is required to analyze the impact of development projects in the education system. Hence, based on the various discussion with the major stake holders, education experts and literature review show that the in-depth analysis is required in the field of education sector that must also cover the socioeconomic and other livelihood aspects of the study area.

Basic Objective is drawn as-

- To assess the performance against plan towards school teaching and learning environment in the survey areas;

- To assess the unintended changes observed due to school education improvement program to make a difference in the life of local communities in the study areas.

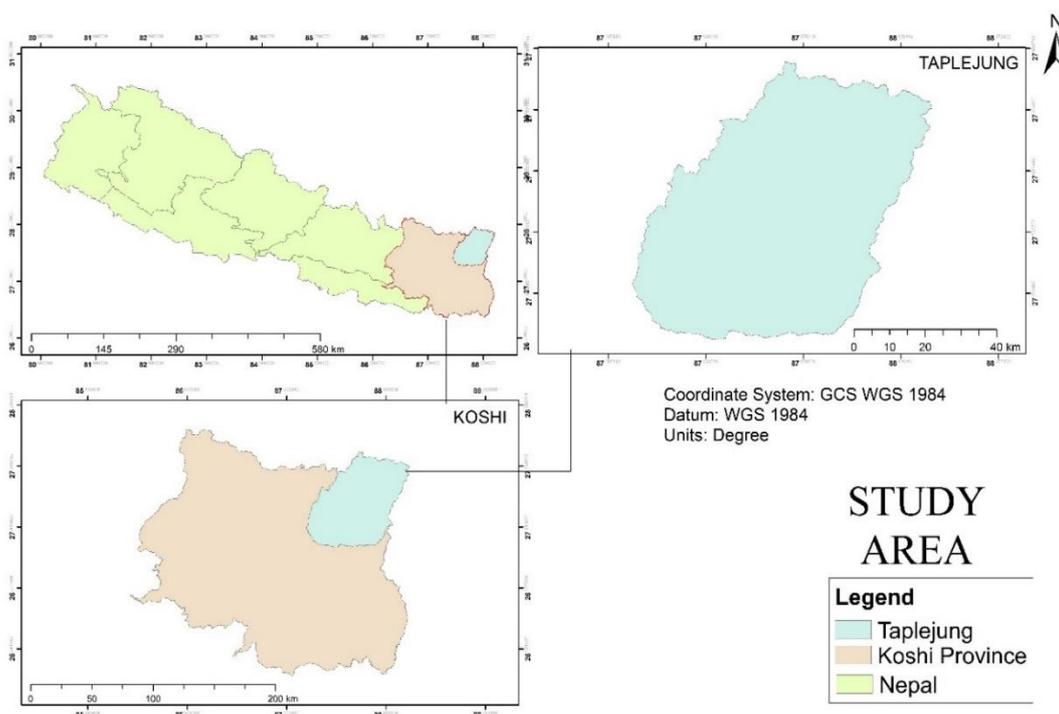
3. METHODS

3.1 Design of the Study

This is a longitudinal study to the sampled population. A longitudinal study captures data over a period of 3 years' time (2018-2020) to understand the long-term effects of changes in products, processes, and environment. The study was carried out in the areas by selecting municipalities through random sampling and followed by purposive sample of respondents from a survey area and administered a semi-structured questionnaire to them. In addition to review of existing documents, direct observation, focus group discussion, key informant interview, case study method was used to capture the quantitative and qualitative information from the respondents. For the parents/household head, considering the unknown population the proposed sample size is a total of 442 respondents. A total of 12 schools out of HPF supported 44 schools have been selected as

sample. During the survey 30 participants from each school including students, teachers, parents SMC members, and local level governments' representatives were interviewed as respondents. A Similarly, an appropriate number of stakeholders and Focus Group Discussion (FGD) was taken for collection of qualitative data and explored the relevant data on the indicators. Around 35 % women participated in the study.

The study team followed a participatory approach by involving the direct rightsholders in general using a combination of qualitative and quantitative tools for data collection. A greater focus however was put on the qualitative methods regarding primary data collection. The gender equality and social inclusion had taken into account while carrying out the study. Appreciative inquiry was adopted while discussing with poor and vulnerable people to dig out the positive and areas for improvement aspects of the project's outputs, outcome, impact and social status and position of poor and marginalized group of the students and parents in the community. The triangulation methods have also used to verify the information. The information has analyzed based on trend over time and pattern over space.



Map 1. Study area map, Taplejung in Koshi Province of Nepal

3.2 Analysis of Data

The quantitative data collected from the field was grouped into different categories and tabulated. The descriptive statistics like frequency distribution, per cent; mean was adopted for analysis point of view. The qualitative data collected, using field information through focus group discussion, key informant interview and observations was made ready in word processor. All the information related to each heading reviewed critically and findings have presented in the report systematically. The maps, tables, graphs, etc. have used as evidence.

3.3 Study Area

Taplejung district was purposively selected for this study as the education program was ongoing on the area and it was decided to evaluate and analyze the project outcomes and share among the various stakeholders for the future program design. The study was conducted between July to September 2021 and various questionnaires and checklist was prepared pre tested and after the satisfactory result it further executed for the final data collections.

3. RESULTS AND DISCUSSION

3.1 Effectiveness and Impact

Thapa [5] has stated that “the purpose of the effectiveness is to measure to make a difference in the life and livelihoods of the local targeted people through planned programs. The changes occurring may be positive or negative, intended or unintended”. “The impact may differ for women and men, people of different ages, different ethnic groups and other social groupings, so the analysis should consider

different groups separately. Consideration should also be given to whether costs can be assessed in relation to importance” [5].

3.1.1 Happiness mapping of Rightsholders’ towards the education activities

When asked about the perception towards the performance of the program, the respondents have scored 1,600 [61.79 %], 803 [31.01 %] and 82 [3.16 %], 77 [2.97 %] and for very happy, happy, unhappy, and don't know parameter respectively. The large majority of the respondents [92.80 %] have rated very happy and happy with the project because the construction of new school building, education training to teachers, water, sanitation and hygiene support, computer lab, science lab, library and playground construction support to the schools. Some respondents [3.16 %] rated the unhappy for not completion of project on time; and don't know the all-program activities of the implementing agency. The happiness mapping tool was used to map out the perceptions of the targeted communities towards the program [Fig. 1].

A total of 50 corn seeds assumed as 100 per cent were given to each respondent. A total of 52 participants were participated in the exercise in order to score the performance of the education activities. The community perception was mapped out based on their direct observation, experience and best judgment of the respondents. This was measured in relative terms. The frequency represents the scoring of the respondents as simple, easily understood and adaptable parameters at community level.

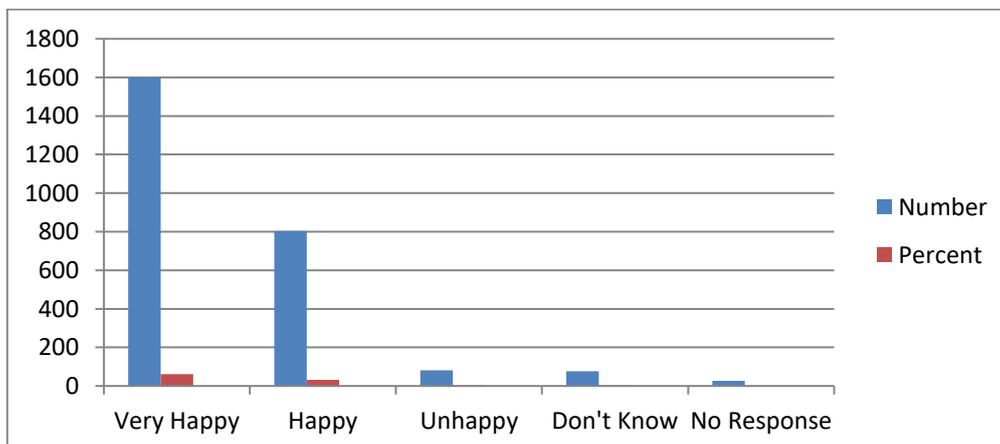


Fig. 1. Happiness mapping among the respondents
(Source: Field Study, July, 2021)

3.1.2 Achievements of education improvement activities

The implementing agency has remained committed to one thing during the lockdown – securing the students access to quality education. In Nepal, implemented agency has conducted lessons through a radio program and distributed self-learning materials in collaboration with UNICEF & Save the Children. In Nepal, many of the students have been able to return to a completely new school after the lockdown. In the study areas currently has 8 ongoing school constructions and 3 more will be initiated in future. The implementing agency was asked several children how their learning experience has been during the lockdown. "It was on March 24th the government declared lockdown throughout the country and cancelled my examination. As the SEE examination¹ is considered a major gateway for one's own future career, I was taking this seriously and preparing well. My ambition was to pass the SEE with good scores and become a doctor thereafter. The announcement of postponing the exam less than 12 hours before start made all of this seem wasted. At times where everything was all closed and we were completely isolated from our teachers and friends, the implementing agency started to broadcast an English Radio Program. I tuned in daily for radio classes. It helped me to prepare well for the examination. As a result, I secured a 3.6 GPA which is above 90 in percentage" says Pawan a graduating student at Birendra Secondary School in Taplejung, Nepal.

Most of educational indicators have found increasing trend over time as compared to baseline 2018 to study period in 2020. The drop-out rate decreased by 35 % from baseline 2018 to study period 2020. Likewise, student absence has also been decreased by 16.3 % from baseline 2018 to study period 2020 [Table 1]. The data shows that the quality education program contributed significantly difference towards positive direction in Taplejung district, Nepal.

Learning has not been halted in the schools during COVID -19 as well. In fact, the impact measurements conducted at the schools in Taplejung in Nepal show significant progress

¹ SEE Examination: - SEE stands for School Education Examination which is a preliminary board examination of grade ten examination to pass and step further in the higher secondary examination as per the Government of Nepal which is circulated through a board of Nepal.

compared to a benchmark of the other public schools in Taplejung. After only two years of operation (2018-2020), the average English learning achievement has increased by three times as much in the study area's schools for grade 10-12 compared to the benchmark public schools in Taplejung. Likewise, the average learning achievement at schools has increased by more than double as much for grade 10-12 as benchmark schools in Taplejung [HPF, 2021].

In the study areas, schools have further seen an increased in the grade 12 graduation rate of 120.5 % since 2018 and a total of 88% of the students are now graduated grade 12. The study shows that the greater results on the dropout rates, 3-4 out of 10 students, which would have dropped out of school in 2018, are now staying. Unfortunately, approximately one more student is dropping out at the benchmark schools currently compared to 2018. The distance learning initiatives in 2020 have been focused on graduating students, which is aligned with the particularly high results has observed on grade 10-12 as learning outcomes [HPF, 2021].

3.1.3 Status of secondary school coverage in Taplejung district

The implementing agency has covered 44 school building construction [70 %] out of 63 schools in the Taplejung district where a total of 16,365 [68 %] students out of 24,104 students actively participated in the school education quality improvement program. The school building construction is highly demanding program by communities, local government and students as well to improve the infrastructure facility that create conducive educational environment towards good teaching and learning. The community contribution is reported as 80:20 ratios during school building construction. The size of classroom is 15' x 18' ft. across the study areas as per the building code of Department of Urban Development, Government of Nepal. The cost of building construction has reported as cost-effective as compared to Government of Nepal's norms without compromising the quality. The following outcome and impact level changes among the students have been map out [Table 2] over the past two years [2018-2020].

Note: concept of child-level cognitive outcomes:

- **Verbal Comprehension:** the ability to use a range of vocabulary to understand and

Table 1. Status of educational indicators

#	Educational Indicators	Baseline	Yearly Results		Overall Progress
		2018	2019	2020	
1	Grade 12 Completion Ratio	39.9	49.3	88.1	120.8
2	Average Learning Achievements				
2.1	Average Learning Achievement –Grade 1-9 (%)	49.9	55.6	57.9	16.0
2.2	Average Learning Achievement –Grade 10-12 in GPA	1,836	1,924	2,627	43.2 %
3	Average Learning Achievement English				
3.1	Average English Learning Achievement - Grade 1-9 (%)	-	51.4	55.7	8.2
3.2	Average English Learning Achievement - Grade 10-12	-	1,763	2,577	46.2
3	Enrollment	7,559	7,931		4.9
5	Drop-out Rate	13.2	10.8	8.6	-35.0
6	Grade Promotion Rate	86.7	94.1	100.0	15.4
7	Absence (%)	28.4	27.5	23.8	-16.3

(Source: HPF, 2020)

Table 2. Trend of teaching and learning Improvement

Indicators	Achievement (2018) (% coverage)	Achievement (2020) (% coverage)	Overall Progress (%)
1. Grade 12 Completion Ratio	39.9	81.1	120.8
2. Better educational outcomes			
2.3 Mathematics learning achievements (SLC grade in year 12)	39	52.5	35
2.4 Literacy Rate	69.9	80.5	15
3.Continued Higher level Education			
3.1 Enrollment in post SLC	48.5	61.125	26
4.Increased Child level cognitive outcomes			
4.1 Verbal comprehension	43.6	61.5	41
4.2 Visual spatial	48	66.1	38
4.3 Fluid reasoning	42.5	60.5	42
4.5 Working memory	49.5	69	39
4.6 Processing speed	50.5	68.5	36
5.Increased socio-emotional level (SEL) outcomes			
5.1 Enhanced SEL skills	51	6.5	-87
5.2 Improved attitudes about self, school and social issues	49	69	41
5.3 Social behaviors	55	70.5	28
5.4 Conduct Disorders/problems	50	42	-16
5.5 Emotional distress	54	40.5	-25

Source: Field Survey, 2021

Table 3. Outcome and impact of education program in community livelihoods

Impacts	Achievement (2018) (% coverage)	Achievement (2020) (% coverage)	Overall Achievement (%)
1.Financial Capital			
1.1 Saving per Year in NPR (Yes/No)	61	79	30
1.2 Bank Account (Yes/No)	53	82	55
1.3 Income per year	17,321,120.88	20,297,454.71	17
2.Human Capital			
2.1 start-up new business (Yes/No)	20	41	102
2.2 Having special Skills (Yes/No)	22	48	123
3. Physical Capital			
3.1 Land Ownership	95	96	1
3.2 Shelter	93	94	1
3.3 Formal Job (Yes/no)	35	36	4
3.3 TV (Yes/No)	47	68	45
3.4 Mobile (Yes/No)	77	97	26
4.Social Capital			
4.1 Membership in groups/Cooperatives (Yes/ No)	78	90	15
4.2 Literacy Rate (Yes/No)	96	98	3
4.3 Use of Health Institutions (Yes/No)	91	98	8
5. Vulnerability Coping Capacity			
5.1 Level of Coping capacity (Yes/No)			
High	9	11	26
Medium	70	78	12
Low	21	6	-74
5.2 Recovery Level			
High	6	12	100
Medium	48	74	53
Low	29	6	-80
6. Migration in Last year			
6.1 India	1	1	0.0
6. 2 Gulf countries	17	9	-46
6.3 Employment Creation at Local level	22	38	69
7. Household Level Happiness			

Impacts	Achievement (2018) (% coverage)	Achievement (2020) (% coverage)	Overall Achievement (%)
7.1 Very happy	5	32	60
7.2 Happy	83	63	-23.32
7.3 Unhappy	13	4	-73.17
7.4 No response	NA	NA	NA
7.5 Don't Know	NA	NA	NA

(Source: Field Survey, July, 2021)

- express general knowledge and explain concepts.
- **Visual Spatial:** the ability to evaluate visual details and understand visual spatial relationships.
- **Fluid Reasoning:** the ability to use conceptual information from visual details and apply that knowledge.
- **Working Memory:** the ability to learn, manipulate and retain information to complete new tasks.
- **Processing Speed:** the ability to quickly process and make judgments about visual information.

The trend of teaching and learning on grade 12 completion ration, better educational outcome, continued higher level education, increased child level cognitive outcomes has been significantly contributed towards the positive trend over time during the period 2018 to 2020. In case of misconduct and emotional distress among the sampled population has also been decreased from 2018 to 2020 whereas enhanced SEL skills have been decreased from 51-6.6 which is -87 % due to negative impact of COVID-19 pandemic [Table 2]. The score ranking tool was used to capture the information from the respondents. The school teachers and head teachers were used as informants to collect the information regarding child cognitive outcomes. The respondents have scored using recall method particularly to baseline and current data because they are the primary actors who were involved in day-to-day interactions with students as teachers. So, they are the best respondents to answer these questions.

A total of 10 seeds of corn [Assumed to be 100 per cent] were provided to the school teachers and head teachers as key informant to judge the changes over time among the students. In depth interview with knowledgeable person like concerned teachers only invited in the scoring exercise. It was noted that higher the score greater the performance during the score ranking by the respondents. The school teachers' perception was map out based on their judgment. It has been measured in relative terms.

3.1.4 Impact of education activities in the community livelihoods

This livelihood interlinks the definitions of resilience, sustainability, and livelihood, as each affects the others and highlights how DRR or

mitigation strategies directly affect sustainable livelihood. This means that there needs to be a heavy focus on reducing vulnerabilities of the community, including reducing poverty levels, building capacities and coping mechanisms, and focusing on community resilience (UN-ESCAP, 2008, 2015).

There are five primary capitals in the sustainable livelihoods framework that can influence sustainability and community resilience, as they can all be affected during disasters. These assets are human, social, natural, physical, and financial capital. Collectively, this is referred to as the *Pentagon model*. *Human capital* includes the skills, knowledge, labor ability, and good health that collectively allow people to pursue livelihood. *Social capital* consists of the specific social resources that are necessary to pursue one's own unique livelihood. These can be fostered via establishment of networks, trusting relationships, and membership of formalized groups. *Natural capital* consists of the natural resource stocks from which resource flows and sources are derived; these natural resource stocks include such elements as nutrient cycling and erosion protection, both which are useful for maintaining livelihood. *Physical capital* represents the resources available to support viable livelihood. It may include clean water, adequate sanitation, and effective shelter; these items are often encompassed by basic infrastructure. *Financial capital* consists of the financial resources that are required if people want to fulfill their livelihood objectives (UN-ESCAP, 2008).

The following outcome and impact level changes among the community people have been map out Table 3 over the past two years [2018-2020].

There has been observed the positive outcomes and impacts of quality education program in the community livelihoods as well. The indicators of livelihood's capitals [financial, human, physical, and social] have found positive trend overtime and pattern over space in the project areas. Around 17 % household level income has found increased over a period of 2018 to 2020 among the sampled population in the project areas. The vulnerability coping capacity during disaster [9% to 11% at high level 70-78 % at medium level and low level 21 -06 % in 2018 to 2020] at high level and recovery level as well has been increasing trend over time [6% to 12% in 2018 to 2020] at high level among the sampled population. The seasonal migration to Gulf countries [17% - 09%] has found decreasing

trend over time whereas migration rate to India remained constant. An employment creation at local level has also found increasing trend over time [22 % to 38% in 2018 to 2020] respectively among the sampled population.

The recovery level is a state of being normal condition due to individual and humanitarian support by external agencies after disaster impacts whereas coping capacity is a state of response by disaster survivors to fight against the negative impacts of disaster in the life and livelihoods of the people living with disaster. The capacity developed among the individual disaster survivors to live in the critical situations. The special skill is a new technical knowhow among the respondents to generate income for sustainable livelihoods as compared to previous one. It could be on farm or off-farm economic activities that contribute to generate household income. The respondents who are involved in primary users' group or cooperatives defined as membership of groups. It could be saving and credit groups, productions groups like vegetable farming, goat rearing, piggery farming, chicken rearing etc.

The household level happiness among the sampled population has found increasing trend over time [5 % to 32 % in 2018 to 2020] in the project areas [Table 3]. In case of social capital, group membership [78-90 %], literacy rate [96-98 %] and use of health institutions [91-98 %] among the respondents has been increasing trend over time from 2018 to 2020. The funding agency contribution seems to be instrumental to make a difference in the life of vulnerable population in the areas. However, the social entrepreneurship initiative is not enough to generate income in sustainable livelihoods within a limited period. It needs to be scaled-up in the days to come.

Happiness mapping is the measurement of satisfaction level of direct stakeholders or community towards the project performance. The happiness is the abstract terms it employs to explain or make sense of experience. It has learnt at a relatively early age that happiness means the state of being happy. It also learns to use this term in evaluating experiences and phenomena, which perceived as making happy to unhappy response towards the project performance. Thus, the term happiness represents a concept, or abstract idea, which has been apply to particular situation. However, it could map out the happiness level using certain

parameters. The score ranking tool was adopted to measure the happiness among the respondents that has already mentioned the process earlier interpretation. The score ranking tool is regarded as doable and simple at community level. The household level happiness is determined by multiple factors that include social, economic, cultural, access to health and education, food and nutritional security, secured livelihoods, and power relationship with others etc.

A total of 10 corn seeds assumed as 100 per cent were given to each respondent. A total of 150 participants were participated in the exercise in order to score the happiness at household level. The community perception was mapped out based on their direct observation, experience and best judgment of the respondents. This was measured in relative terms. The frequency represents the scoring of the respondents as simple, easily understood and adaptable parameters at community level [Fig. 2]. This is a powerful self-monitoring participatory result-based monitoring and evaluation tool to capture information from the community people. The school teachers, parents, school management committee members, students, local leaders were the respondents during the score ranking exercise. The participatory learning and action [PLA] methodology is a powerful tool that empowered the people towards development process and articulates the human rights as well. However, it is doable and handle by community workers as well.

3.3 Social Entrepreneurship Development

3.3.1 Coffee farming

Coffee is one of the highest traded commodities in the international market. There are two important species of coffee in the world- *Coffea Arabica* (Arabica coffee) and *Coffea Canephora* (Robusta coffee). Among these, the self-pollinating Arabica coffee is perhaps the most highly acclaimed species. All Nepalese coffee is Arabica coffee.

The high value cash crop is becoming extremely popular among Nepalese farmers. Coffee plantations have now spread to over 40 districts in the Nepal's hill country, and more than 30,000 households are now involved, either individually or through cooperatives. Coffee is among the few commodities in which Nepal has a consistent trade surplus. Global price of coffee has been on an increasing trend therefore an investment in

the processing, packaging and branding of coffee is recognized as an investment opportunity (Nepal Investment Board, P.11).

It is estimated that Nepal consists of around 1 million hectares of land ideal for coffee farming in Nepal, but somehow, only a small percentage of it is in use. Only around 1753 tons of coffee cherries are grown in Nepal currently, in 973

hectares of land area. This clearly suggests that we are way below our capacity when it comes to coffee production and the use of available land area. The reason could be the lack of personnel involved in the coffee industry in Nepal, including the ones who have technical knowledge, or the inability of the numerous governmental and non-governmental organizations to properly convert this huge resource into coffee farm.

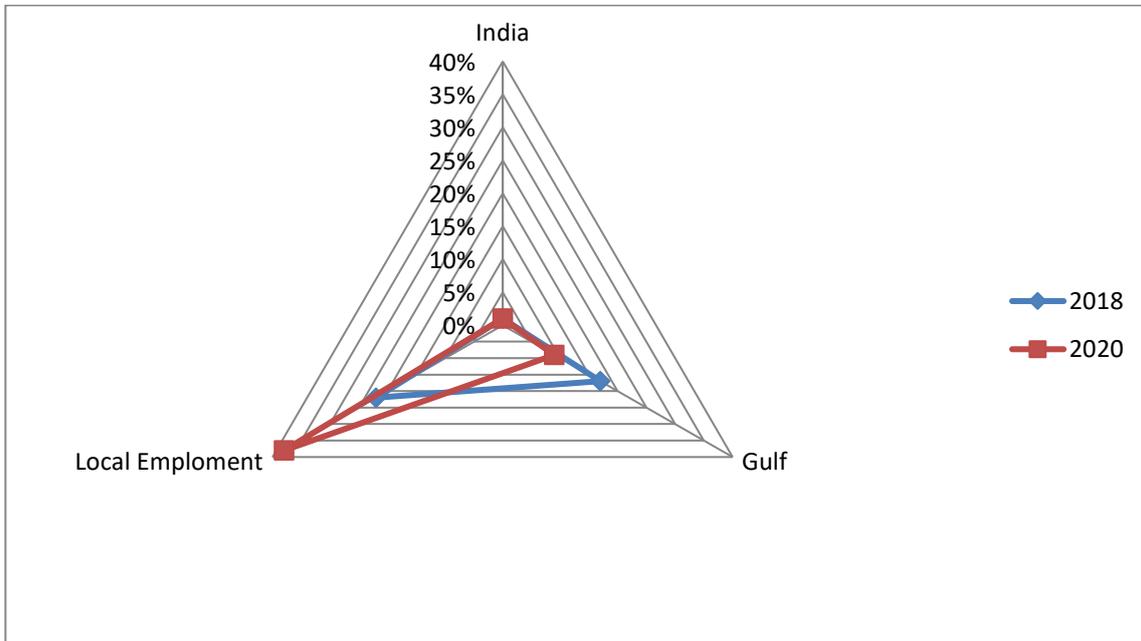


Fig. 2. Distribution of out migration rate

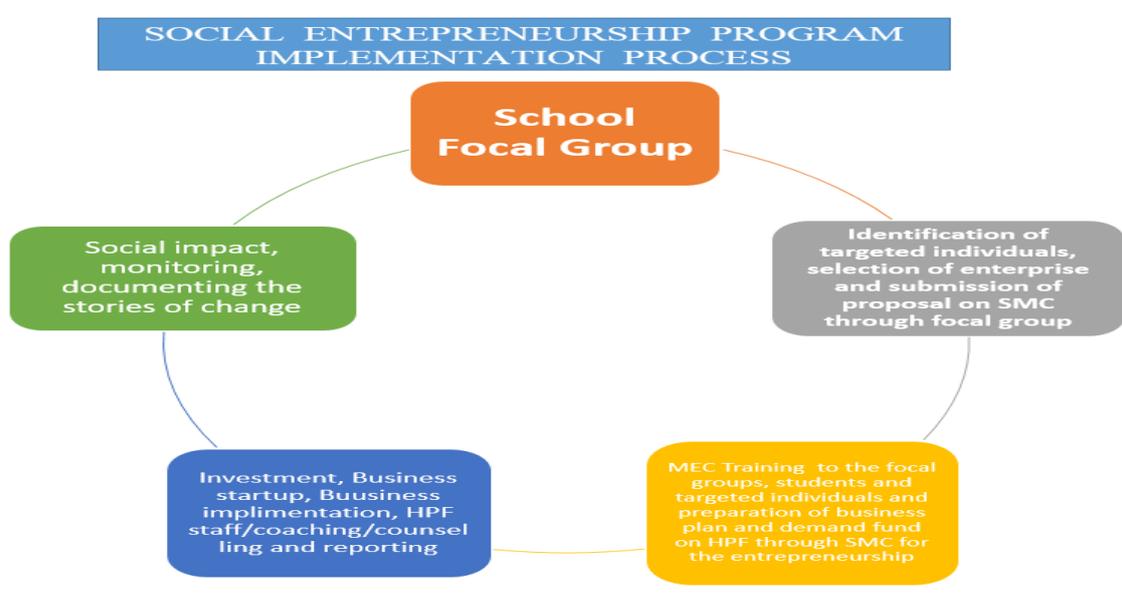


Fig. 3. Social entrepreneurship initiative cycle, 2020

The productivity of coffee in Nepal has increased tremendously over the last few decades. While in 2005 coffee was produced in only 19 districts, the current statistics suggest that coffee is grown in around 42 districts. The amount of coffee beans produced every year has gone to around 400 to 500 tons. It would not be a mistake to say that coffee industry in Nepal is worth over \$1 million. There are so many factors responsible for the increase of productivity of coffee in Nepal. These factors haven't just increased the size of coffee industry in Nepal, but also changed the life of so many people, especially the local farmers, who suffered from poverty. Now, despite the fact that Nepal produces such a huge amount of coffee every year, it is not able to meet the demands of the local consumers by leaps and bounds. Altogether, 513 tons of coffee was produced between 2017 and 2018, however, just the local demand is around 7000 tons. And, not all the coffee that is produced here is consumed here. A large percentage of it is also exported to different parts of the world, mainly countries like Japan, Korea, United States, United kingdom, and so on (<https://himalayancoffeetrading.com/coffee-farming-in-nepal/> accessed in 07/10/2021).

Farming is the main occupation in the Taplejung district, Nepal. Few farmers, however, managed to make a living from their crops. To help the local business community and entrepreneurs, Human Practice Foundation launched the Coffee Impact Program, making sure that farmers can make their business profitable and gain access to foreign markets. Thus far, the program has directly impacted the livelihoods of 3,500 people in Taplejung, who now have turned their crops into a sustainable income source. A total of 667 households have been adopted the coffee production in the project areas. The coffee plantation program is an increasing trend due to good market price and highly demand of highland coffee in the local, national and international market as well due to good quality in terms of taste and high-grade product. Around 1,156 kg ripe cherry have been produced that worth NPR 92,480 [net income] until the end of 2020 in Taplejung district. The economic development enterprise could be replicated in collaboration with local government.

3.3.2 Other social entrepreneurship initiatives

There has been introduced the innovative social entrepreneurship small enterprises among the financially challenged students/parents in order

to retention of child in the school education. The small enterprises include goat farming, pig rearing, fisheries, commercial vegetable gardening, poultry farming, small hotels, shop keeping etc. at the community level to make a difference in the life and livelihoods of the poor and vulnerable people. The implementing agency provides NPR 50,000.00 [Fifty thousand] (1 US dollar is 133 NPR) as start-up business fund [revolving seed money] for the poor students/parents to increase HH income and decrease drop-out rate. It is assumed that the fund will be revolving among the parents/students. A total of 25 parents have received this fund from implementing agency until the end of 2020 [Fig.3].

The following social entrepreneurship program execution process has been adopted in the study areas.

3.4 Sustainability

Thapa [6] has pointed out that the purpose of the sustainability is to long lasting of programs for the benefit of people [6]. The environmental sustainability is also taken into account during monitoring and evaluation of the programs. An impact monitoring is a process on how the natural environment and resources have affected due to the project intervention. Thapa [5] has stated that the Sustainability is a major issue of the most of the humanitarian response projects in Nepal due to high incidence of poverty, weak management capacity, seasonal migration of youths, less coordination with local level government and poor governance system [5].

The program is not exception in terms of institutional, technical and financial sustainability after the phase over. There is a need of viability gap funding from the Government of Nepal for the long-term sustainability of the program in the remote areas like Taplejung district, Nepal. However, the program has adopted the existing School Management Committees, maintained linkage and coordination with local level Government that contributed towards sustainability of the project to some extent.

3.5 Linking with International and National Policies and Programs

The program has been implemented in landslide prone area, earthquake affected, geographically remote from the center, and food insecurity to make a difference in the lives of poor and

vulnerable people. This program seems to be relevance in terms of need and priority of the vulnerable people, Government of Nepal's policies, plan and programs. The implementing agency is working towards achieving the UN Sustainable Development Goals [7] as well. The development support program falls under the United Nations sustainable development goals-1 on no poverty, SDG-3 on good health, SDG - 4 on quality educations, SDG-6 on clean water and sanitation and SDG- 8 on good jobs and economic growth. It can be said that the HPF supported program harmonized with national and international policies and strategies in order to micro and macro policy linkages.

3.6 Linkage and Coordination with Local Level Government

The implementing agency has maintained good linkage and coordination with Rural and Urban Municipalities in order to increase synergistic effect at the community level. In Nepal, constitutionally local government has strong enough in terms of executive, legislative and judiciary power enjoyment in decision making process as well. This is considered as unique in nature to take charge of local development process [8-10]. The partnership between HPF and local government regarded as good areas for partnership. At the moment, this is not strong enough to achieve high impact and sustainability of the program, process, outcomes and impacts.

3.7 Unintended Changes observed in the Project Area

In the social sciences, unintended consequences (sometimes unanticipated consequences or unforeseen consequences) are outcomes of a purposeful action that are not intended or foreseen. The term was popularized in the twentieth century by American sociologist Robert K. Merton.

There has been observed unintended social changes in the community due to cumulative effect of the implemented programs and other factors involved that include print and electronic media, government services, influence by political parties, commitment to action by school teachers, community-based organizations [mothers' groups, child clubs, user groups etc.] and change makers. Some school teachers have worked as community change maker in their constituency due to good intention and motivation to make a difference in the life of poor

and vulnerable groups like Dalits, poor and vulnerable population. The leadership development, organized in the groups, environmental protection, participation in decision making process at municipal level, gender equality and social inclusion and happiness mapping among the community people in the areas has found increasing trend over time from 2018 – 2020.

In the project areas, the level of awareness, well-being ranking [high class from 1.94 to 2.75, medium class 4.40 -4.91 out of ten], food and nutritional security level [surplus 2.02 to 2.93, sufficient level 3.24 to 4.15 out of ten] increasing trend over time and not food sufficiency level household decreased from 4.94 to 3.57] among the respondents from 2018 to 2020. There have been overall changes observed in the life and livelihoods of the community from 4.55 - 5.74 out of ten. This is good achievement among the respondents due to unintended changes over time.

The solid overall unintended change has found 1.19 out of ten [11.91 %] due to the indirect impact of quality educational program in the community [Table 4]. This is considered as significant contribution towards the overall socio-economic development of the targeted population. This is only the anecdotal of the intervention focusing on Taplejung. It could not be generalized across the country as a whole. Other factors like electronic and print media, government development interventions, seasonal migration etc. also contributes in this.

A total of 10 seeds of corn [Assumed to be 100 per cent] were provided to the group leaders to judge the changes. The focus group discussion was used that included teachers, students, parents and SMC members in the scoring exercise. Each group members were allowed to participate in the discussion before scoring in the before and now situation. It was noted that higher the score greater the performance during the score ranking by the respondents. The community perception was map out based on the judgment of the respondents. This was measured in relative terms (Table 4).

Note: 10 score has been assumed as full marks [100 %]

Scoring Assumptions: Higher the score greater the performance whereas lower the score poorer the performance of the program activities

Table 4: Mapping of Unintended Changes in the Community Level

Unintended Indicators	Before (2018)	End of Dec (2020)	Difference
1.Level of Awareness			
1.1 Highly Awareness Level	0.0	4.05	4.05
1.2 Medium Aware level	3.79	4.03	0.24
1.3 Low Awareness Level	3.71	1.91	-1.80
2.Well-being			
2.1 High class	1.94	2.75	0.81
2.2 Medium Class	4.40	4.91	0.51
2.3 Low Class	3.69	2.40	-1.29
3.Food and Nutritional Security			
3.1 Surplus	2.02	2.93	0.91
3.2 Sufficient	3.24	4.15	0.90
3.3 Not Sufficiency	4.94	3.57	-1.37
4.Leadership Development	3.40	5.26	1.86
5.Organized in the Groups	6.27	8.04	1.77
6.Environmental Protection	5.23	7.02	1.79
7. Participation in Decision Making Process at Municipal level	3.34	4.72	1.38
8. Gender Equality and Social Inclusion	4.07	6.30	2.23
9. Happiness among the People	4.62	6.91	2.29
Total	54.64	68.93	14.29
Mean	4.55	5.74	1.19
Overall Difference	-	-	1.191
Percentage	-	-	11.91%

(Source: Focus Group Discussion, July, 2021)

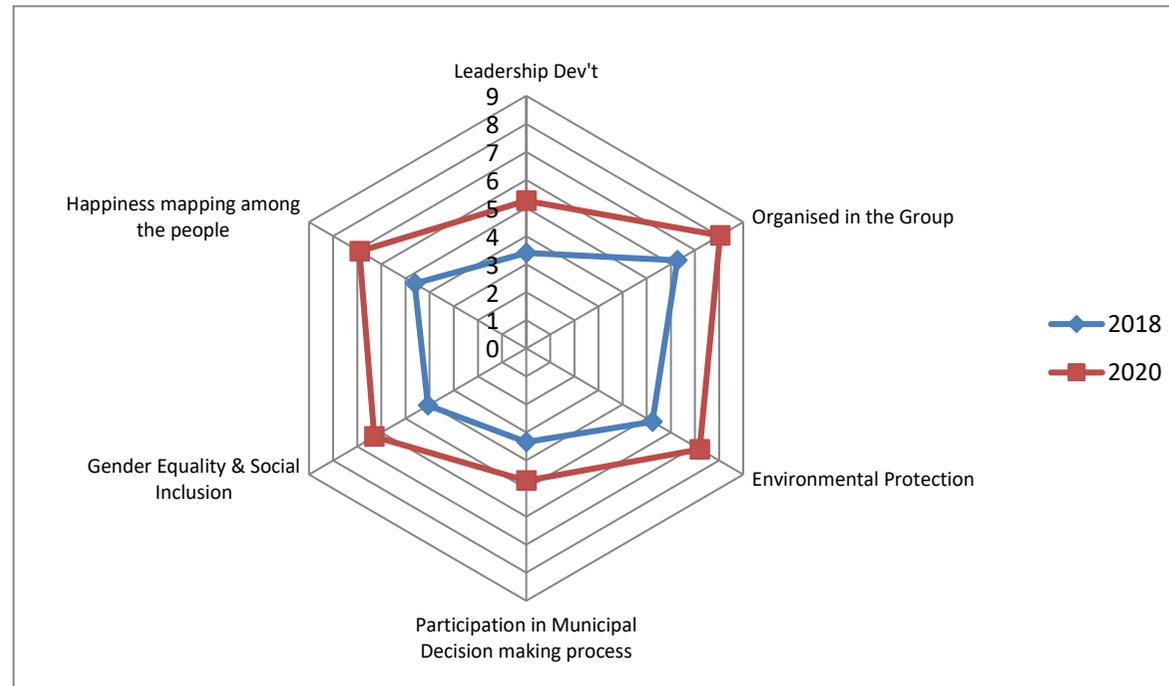


Fig. 4. Unintended changes over time among the respondents
Source: Focus Group Discussion, 2021

It can be said that decreasing of lower class population resulted the upgrading in upper class due to improvement of socio-economic activities among the lower class people.

4. CONCLUSION

The majority of the respondents (93%) have perceived happy towards the education activities because of the community need based quality educational development activities that include construction of school building, water, sanitation and hygiene support in the schools, teachers' training, computer lab, science lab and library establishment in each HPF funded schools and social entrepreneurship initiative to the poor and vulnerable students etc.

The Sustainability is becoming an issue in the development activities due to high incidence of poverty, weak management capacity, lack of viability gap funding from government, weak follow-up and poor governance system. There is a need of viability gap funding from the Government of Nepal for the long-term sustainability of the program in the remote areas of Nepal. However, implementing agency has adopted the existing School Management Committees, maintained linkage and coordination with local level Government that lead to sustainability.

The implementing agency has completed a total of 44 schools out of 63 schools in the district. However, there is room for improvement to increase close contact and coordination with elected local level people's representatives at municipal level. In the areas, the participation of women in the development process has significantly increased particularly in decision making process at households, community and Rural Municipality level. There has been narrowing down the gap in traditional gender roles and division of work in women and men. However, women have still more engaged in domestic chores whereas men have focused more in seasonal migration.

5. LIMITATION

This study is not covering the other development activities achievement and does covering a specific goal of the education system analysis of the surveyed area only. Hence, the other social-cultural and economic aspects of the areas is not covering by this study and limited to the specific objective only. The role and responsibilities of the

stakeholders is also limited not illustrating through this research paper.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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