Pre-Vocational Education in Government Schools

Action Research Report

World Education

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Preface

Child labor in Nepal is a serious concern. Around 40% or 3,140,000 of the 7,700,000 children aged between 5 to 17 years are engaged in work. Of this 3,140,000, about half or 1,600,000 child laborers are in exploitive working conditions; and about 621,000 are in hazardous work. Children are found working in carpet and entertainment industries, mining, beedi making, portering, brick production, embroidery (zari), car/motorcycle repair workshops, domestic work, cross border smuggling and roadside hawking. Each sector has its own array of push/pull factors influencing entry and exit of children and which determine the nature and extent of exploitive work children are exposed to.

The action research on integrating Pre-vocational education is linked to one of the program's aims of working closely with the Government of Nepal to improve the relevance of curriculum in government schools. Pre-vocational education is expected to better equip the students with knowledge and life skills with which to enter the labor force. By making education more relevent it will also encourage students to continue their education thereby reducing child labor.

On behalf of World Education, I would like to acknowledge the Curriculum Development Centre as well as District Education Offices, Resource Persons and teachers in Sindhuli, Nuwakot, Dolakha, Sindhupalchok, Kavrepalanchok and Ramechhap Districts for thier valuable and essential contribuition in implementing the Pre-vocational Action Research Pilots. activities.

Findings from this action research will be of use to policy makers in designing and implementing future actions to integrate Pre-vocational education in schools and to eliminate child labor. The research undertaken will I believe, also add to the literature and enhance strategies to prevent child labor in the country.

Chij K. Shrestha
Project Director, Naya Bato Naya Paila &
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School Dropouts, Child Labor and Vocational Education

For more than a decade, World Education and its NGO partners have been working with children in the worst forms of child labor. Increasingly many of the children in exploitative labor have dropped out of school to join the workforce. Because of their young age and lacking skills they are at greatest risk of being exploited. Many of these children and their parents say that they do not see the relevance of the subjects taught in school to their lives or increasing their chances of good employment. Even when the subjects taught such as science or mathematics have immediate relevance to future employment, these subjects are often taught in a theoretical way and are not linked to practical applications in the daily life of their community. Typically many families and teachers have regarded vocational education as being more practical skill related training which is accessed after leaving formal school or through higher education.

In response to the growing need for a more educated and sophisticated workforce, the Government of Nepal has committed to introducing more vocational education at the secondary school levels under the School Sector Reform Plan. The Environment, Population and Health subject will be phased out with some of its important content to be added to the science and social studies subjects as well as a new vocational subject that is being introduced. A separate vocational stream is also being introduced in some of the larger high schools.

The Naya Bato Naya Paila Project

On September 30, 2009, World Education, in association with Terre des hommes Foundation launched the US Department of Labor funded Naya Bato Naya Paila Program to combat exploitative child labor in Nepal. During the three year program, World Education and its partners provided educational services to 8,000 children for withdrawal from the Worst Risk were provided with educational services to prevent them entering child labor.

The Program aimed to help eliminate child labor in six sectors including: the Brick Industry, Domestic Servitude, Mining, Portering, Commercial Sexual Exploitation of Children (CSEC) in the entertainment industry, and the Zari (embroidery) industry. The education activities included nonformal education, formal schooling, coaching classes, pre-vocational education in schools, vocational training and youth entrepreneurship (Self-Employment and Economic Education Program-SEEP).

Forms of Child Labor and 7,000 Children At Nepal is rapidly changing and new factors are influencing children and parents decisions in relation to child labor. To better inform future programs and identify patterns, the Naya Bato Naya Paila Program included a research
component that aims to help identify emerging trends and can assess the value of different strategies to address child labor. Helping schools to make formal education more attractive and relevant to students at risk of dropping out is considered a priority action to reduce child labor. As a result piloting approaches to integrate pre-vocational education in schools was planned with the Ministry of Education’s Curriculum Development Centre (CDC).

CHILD LABOR SOURCE DISTRICTS

Working children are often from districts close to labor markets. For the Kathmandu Valley children are drawn from across the country but the majority come from the districts closest to Kathmandu. Two factors combine to both push and pull them into exploitative labor: school education is seen as expensive and irrelevant; and the city and the opportunity to earn an income is regarded as an attraction that is within easy reach. The focus then was given to working with schools in child labor prone communities in six prevention districts;

<table>
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<tr>
<th>Child labor source district</th>
<th>Main child labor sectors children from district engaged in</th>
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<td>Kavrepalanchok</td>
<td>Brick industry, Domestic Servitude, Transport, Commercial Sexual Exploitation in adult entertainment</td>
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<td>Sindupalchok</td>
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<td>Ramechhap</td>
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<td>Dolakha</td>
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<td>Sindhuli</td>
<td>Domestic Servitude, Brick industry, Portering</td>
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Poverty combined with large numbers of children out of school are the major push factors for parents to send their children to work.

Out of School Children in Source Districts 2011

The high numbers of child laborers who originate from these districts is closely linked to the total number of out-of-school children in these districts. District surveys undertaken for the project and the latest 2011 census reveal that Ramechhap, Sindhuli, Kavrepalanchok, Sindupalchok, Dolakha and Nuwakot still have 55,862 out-of-school children aged 5-15. Many of these children have dropped from school and are working in the Kathmandu Valley.

INTRODUCING PRE-VOCATIONAL EDUCATION IN SCHOOLS

In 2010, World Education and its partner NGOs started work with the Curriculum Development Centre and the District Education Offices (DEO) to pilot the introduction of integrating Pre-Vocational Education into selected government schools. World Education and NGO staff, Resource Persons and schools were all engaged in documentation of the process and outcomes for the Action Research.

In each target district, VDCs prone to child labor and interested schools were identified. Schools were selected with a priority being given to those in more child labor prone VDCs which are usually in the more remote areas of the districts. However some DEOs were also interested in linking this effort with the government’s new vocational education initiative. NGOs advocated on behalf of schools in the more neglected and child prone communities.
While the DEOs were interested in including schools that were able and willing to participate NGOs were already doing work with the School Management Committees (SMCs) and Parent Teacher Associations (PTAs) so knew of schools with need, interest and capacity. The final selection was endorsed by the DEO in each district.

A total of 36 schools were selected in Dolakha, Kavrepalanchok, Nuwakot, Ramechhap, Sindhuli, and Sindhupalchok districts. The piloting of pre-vocational activities has started in November 2010. Over the next two years, 6,531 students in Grades 6-10 participated in the pre-vocational education.

Pre-vocational education is a new government initiative. The activities being supported through the Naya Bato Naya Paila Project provided an opportunity to strengthen and enrich these efforts by adding a practical experiential learning component. This encouraged DEOs and schools to invest time, resources and efforts that were essential for the success of the pilot. Once the DEOs were involved, other government offices and stakeholders were on board and willing to support this initiative. Efforts were made to involve the Resource Person in each key activity and process.

**FORMING SCHOOL LEVEL COMMITTEES**

Once schools were selected DEO and NGO staff worked with the SMC and PTA in each school to form a pre-vocational education Committee that was responsible for the implementation of the pre-vocational pilot in each of the identified target schools. These working committees were responsible for planning, implementation, and monitoring the work of mainstreaming pre-vocational activities into the different school course curricula and to gather lessons learned.
UNDERSTANDING PRE-VOCATIONAL CONCEPTS

Pre-vocational education Committee members participated in different interaction sessions to improve their understanding of the goals of pre-vocational education, occupational topic selection, skills required and use of instructional materials for classes, as well as planning and designing practical classes. These orientations and interactions helped the concerned stakeholders develop a common understanding of what integrating pre-vocational activities would entail. Brainstorming sessions helped improve occupational topic selection, ensuring availability of trainers or local experts for each skill, and clarity about stakeholder roles.

Throughout the conceptualization process, the project team and government officials emphasized the need to link the pre-vocational practical learning to the existing theoretical subject content and made efforts to identify possible concepts to make the teaching/learning more relevant. A major issue identified was how to ensure the effective use of time and materials to make the lessons more relevant and the learning more hands-on.

Sonam's Story

Sonam, 15 years old, lives in Ramechhap District with his family of five. In 2006, the parents decided to migrate to Kathmandu for labor work. At that time Sonam was studying in Grade Two. In Kathmandu, Sonam’s father started a thanka painting business and his mother started brewing alcohol but after only one year, the parents could not keep up with the accommodation costs and school fees and decided to return to their home village in Ramechhap. Sonam and his siblings were then re enrolled in a new school. Following the family’s return to the village, the father decided to start a thanka business. At the same time, World Education and Suryodaya Samaj Sewa had launched a pre-vocational activity in Sonam’s Secondary School. Joining the thanka training gave Sonam an opportunity to gain the necessary skills for supporting his father in his business. The pre-vocational activity was an incentive for Sonam to continue his studies and in 2013, he took his School Leaving Certificate (SLC) Exams. He is now continuing his thanka training at a more advanced level and is earning Rs.400-500 ($5-7) per day. He is using this money for paying his school fees and assisting his family with their daily expenses. After completing his studies, Sonam is planning to move to Kathmandu and start his own thanka workshop. “But first, I need to complete my education”, says Sonam.
School Level Orientations

Interactions with teachers, local experts, parents, PTA/SMC members, school principals, and Resource Persons were conducted in November and December 2010 to identify occupations for pre-vocational study. Orientations were then provided to students of classes six through nine on how the Pre-Vocational Education Program would work and what to expect. Parents were advised about the introduction of pre-vocational education and the nature of their children’s involvement.

Role of Parents

Pre-vocational education is strongly linked to building parental awareness around the importance of education and strengthening retention in public schools as it combines practical and theoretical knowledge that benefits the economic situation in the household. As many families do not recognize the value of education as an investment in their children’s future livelihood opportunities, the Pre-Vocational Education Action Research Pilot focused on strengthening retention through providing experiential practical learning. Parents can see how this learning benefits their household livelihood as this program allows youth to explore employment opportunities in their locality through their school curriculum.

Choosing Occupations for Practical Skills

Schools are not able to offer a wide range of vocational options due to a number of constraints. Pre-vocational education is not intended to prepare students for direct entry to specific occupations. Instead students learn about one or two occupations as examples and gain skills and knowledge that can be used later in these or other occupations. For this learning activity it has to be feasible to study in the local community and again related basic skills. As society is rapidly changing in Nepal schools were encouraged to ensure both boys and girls learn about many different occupations so they can envision or access various options.

In each target district, the partner NGOs identified the specific occupations that parents, teachers and students believe can provide and assure steady employment and income opportunities within their home district as well as in other parts of Nepal or abroad.

The occupational topics identified were as varied as Thanka art, bamboo crafts, candle and snack making, commercial vegetable farming, plant nursery, earthworm farming, bamboo products and other hand crafts, tailoring and knitting.

Earthworm farming in Sindhuli
In all six districts, commercial vegetable farming came out strongly as a popular occupational topic with different districts choosing the seasonal vegetables with the highest commercial value. Topics like weaving and knitting came a close second. One school in Ramechhap opted for a topic catering to a highly specialized niche market – *Thanka* painting. A few schools in Sindhupalchok selected horticulture and floriculture as each year flowers worth thousands of rupees are sold to nearby Kathmandu. Nuwakot, after mapping several alternatives opted for a totally different topic, candle making, due to the availability of a trainer and a high, perceived demand locally and in Kathmandu. One school in Kavrepalanchok selected embroidered *zari* products.

Occupational topics were chosen according to the specific needs and resources available in each target district. For many preferred options, there were often no trainers available or the costs were too high to be viable for a pre-vocational activity. Overall, agriculture based activities were seen as the most essential and relevant skill across all districts.

### Developing a Curriculum

Once schools had selected the occupation to study for Pre-Vocational Education, students, teachers and Committee members identified the content (related competencies/knowledge/skills/attitudes) needed. The occupational assessment included:

- Observation of the occupation being performed by a practitioner
- Interview of the practitioner(s)
- Collection of relevant documents based on the assessment that teachers carried out with students and parents to identify and list; the competencies (ability to perform practical tasks); knowledge; soft skills; and personal attitudes

Following the occupational assessment, teachers worked out detailed curriculum and competencies with the practical skills trainers and subject teachers.
Each district adapted its own approach in designing and delivering the curriculum. In Sindhuli for example, the team aimed at designing the most effective curriculum by combining practical modules to complement the existing curriculum. (e.g. “Growing Tomatoes” module included subjects related to Physics, Botany and Mathematics). In Kavrepalanchok, the schools adapted a cluster approach. This allowed the schools to share information and practices with each other (e.g. using the same trainers, holding joint learning sessions) and was useful for monitoring purposes.

Instructional elements included building up an English vocabulary and usage around the names of tools being used, the colors and the final product; using concepts of measurement – length, breadth, height - to calculate area and volume, multiplication and division, knowledge of different geometric shapes, investment and profit/loss in math; and understanding the cultural aspects around the products and raw materials used, vegetables and their usage in ceremonies; and conservation of the natural resource.

Initially, concerns were raised by the subject teachers as they perceived pre-vocational education as an extra workload. After becoming involved in planning class sessions, the teachers realized it was an opportunity to improve the subject knowledge and understanding of students around some of the more difficult technical concepts. This was particularly relevant for mathematics and science subjects.
LINKING PRACTICAL LEARNING

The schools identified “local experts” or trainers willing to work with the students either at the school or close by. Some of these “local experts” were retired craftsmen or lead farmers which made them highly motivated as they felt rewarded by receiving social recognition and appreciation among the students and their families.

The theoretical sessions took place within the regular class schedule while most schools held the practical classes twice a week; one hour for each session.

The younger students (under 14) were only included in the theory sessions as this is the minimum working age in Nepal. Children in Grades Eight and Nine participated in both the theory and practical sessions. As school classes end early on Fridays, many schools chose to hold the practical activities on Friday and Saturday. The students welcomed the pre-vocational practical sessions with much enthusiasm as they were thrilled to have a school activity as a group outside the classroom.

Pre-vocational Chilli farmer in Sindhuli
Measuring Learning Outcomes and Practical Skills

Schools in Sindhuli, Ramechhap and Dolakha districts undertook a more consistent assessment of “competencies” in comparison to other districts. Schools in Nuwakot and Sindhupalchok carry out thorough assessments but did not come together as a team of teachers with the “local expert” to seriously measure “competencies” as anticipated.

Students, teachers and parents were satisfied with students simply learning, mastering and demonstrating these new skills. Schools had varying success integrating and measuring the more academic aspects such as mathematical calculations, chemistry or biology concepts and skills for working in the English language. Less emphasis was initially given to fully engaging students in all stages from planning, purchasing supplies, record keeping and marketing. Too often teachers and “local experts” took responsibility for aspects students would have benefited from doing themselves. This meant that when it came to measuring competencies, some that were initially identified had not adequately practiced. In the second round, many schools were able to do this better.

Providing a certificate for successful completion and attainment of core competencies was considered but not included. In the initial year staff were hesitant to provide any certificates as students' participation was uneven. Overall, having a more systemic evaluation of competency achievement followed by a certificate of basic competency was recommended as a way to strengthen pre-vocational education.

Niroj's Story

Niroj Lama is the oldest son in a poor family. His father owns a small plot of land but it is not sufficient for providing for his family of five. A few years ago, Niroj's father mortgaged his land and house to pay for labor migration to a Gulf country. This experience was not successful and he was forced to return home empty handed after a few months. In order to supplement the family's income and repay the mortgage, Niroj, along with his younger sister and brother had to skip school for work in a Brick factory in Bhaktapur.

Niroj was a student at Grade Nine when his school was selected for the Pre-Vocational Education Pilot in Kavrepalanchok District. Like his other friends in the school, he was curious about this new curriculum and wondered how practical and theoretical vocational content can be taught along with the formal school curriculum. He later learned from his teachers that this initiative is a good opportunity to learn a practical skill for students like himself who are not able to continue to higher education. Niroj had planned to drop out of school and become a conductor in public transportation but the program seemed appealing and he decided to give school one more chance.

This was the turning point in Niroj's education as from then onwards he became more engaged and serious about his studies. As the school selected tomato and onion farming for the pre-vocational program, Niroj gained both practical and theoretical skills in commercial vegetable farming. Niroj and his friend Dinesh soon decided that they would like to continue practicing commercial vegetable farming outside the school as well. In consultation with their families, the boys planted tomatoes in their small kitchen gardens. Their profits were used to supplement their family's income, as well as to pay for their Secondary School education. Three months later, Niroj had been able to earn Rs.1,200 ($14) profit from selling his tomatoes. Both Niroj and Dinesh just took their SLC exams and are now waiting for their results.
A talented learner and a skilled craftsman

“The Prevocational class has given me enormous knowledge and confidence. It has become a sort of refreshment when I feel bored with my studies. Even if I will not be able to get a good job in my life, I will manage with my tailoring skills” Says Babita Parajuli, 15 years old, Bansanghu High School, Kavrepalanchok District, where World Education and Shanti Jana Adarsha Sewa Kendra launched the Pre-Vocational Education program. Before starting the program, Sabita had never touched a sewing machine but her fast learning amazed her Vocational Teacher and Headmaster. Sabita says: “I never believed I could learn so much in such a short period.”

Sabita’s family has five members; her parents, herself, brother and a sister. Her family is very supportive of her pre-vocational work and recognizes her talent and enthusiasm. Her father has even used some savings to purchase her a sewing machine. Sabita says that her sewing does not disturb her studies. On the contrary, it is an encouragement and incentive to go to school each day.

Sabita’s Headmaster says she is one of the most talented students in the school as she scored the highest grade in Grade Eight final exams. Now Sabita can sew various types of clothes and linens such as daura suruwal, kurta suruwal, dresses, and mattress covers.

CHALLENGES AND LESSONS LEARNED

Selection of Occupations to Study – Schools were constrained by available resources, timing and local expertise for the practical skills component. Many students were interested in studying challenging sectors (such as dairy farming) but could not realistically do this. Some schools initially chose occupations like candle making or computer center operator but later realized these provided less scope for learning than other occupations. Candle making, while an initial success, had little to offer by way of long-term prospects for either the school or the student. Communities depending upon the land and human resources are now opting for a more agro-based curriculum focusing on commercial vegetable farming such as radish, cauliflower, and other off season vegetables, or herb and spice crops such as cardamom targeting the Kathmandu consumer market.

Seasonal Constraints and the School Year - For schools interested in commercial agriculture have encountered special challenges. It was difficult to match the agricultural season of some commercial crops with the school calendar. The months with a lower academic workload were not suitable for agricultural practical work. In contrast, February and March, the months of the school exams, were also the busiest months for the practical work. Thus, students were torn between their studies in the classroom and their practical work efforts. Participants recommended starting the practical field sessions during the first six months of the academic year. In order to upscale the activity and be able to fully utilize the agricultural low-season months, there is a need for more investment in advanced equipment (e.g. greenhouses for off-season agriculture). This will also allow the students and their families to learn to produce commercial vegetables during the off-season for a better market price.
Uneven Student Participation - Not all children could participate equally due to distance from the schools. For many occupations students needed to participate before or after school in practical sessions or during holidays. Participation was especially difficult for the children who live in remote villages far from the school. In many cases, these children are from the poorest and most vulnerable families are at highest risk of child labor and trafficking. These children and their families are, therefore, the ones who need this program the most and any future pre-vocational programmatic efforts should incorporate their needs.

Changing Teaching Learning Methodology - A key challenge was getting teachers to have a conceptual grasp of how to use pre-vocational education as a way to develop “experiential learning” and encouraging students to take an active part in it. Historically the teaching system has emphasized “rote learning” and “text and test” approaches that do little to develop students’ analytical and problem solving skills. Pre-vocational education needs a totally different set of attitudes, perceptions and approaches, empowering the children to try out new learning pathways, develop their own conceptual clarity on subjects and linking it to the practical experimentation. These new approaches to learning are important, but are yet to be internalized by many teachers.

Integrating Local Content - Teachers are instructed in teacher training to integrate local content in to their lessons. Government policy is to have at least 20% local content in each subject. Unfortunately most teachers’ focus and priority lies in completing their academic year’s lesson plan and textbooks and feel that little room is left for innovation. The pre-vocational activity provided many opportunities for exploring links between academic subjects and local applications. The more creative teachers were better able to make linkages and accommodate this extra pre-vocational curriculum component into their existing teaching modules. This effort emphasized the need to better mainstream local content and pre-vocational curriculum development in to the teachers’ formal teaching. A formal orientation for teachers and Resource Persons at the beginning of each school year will help motivate teachers to prioritize integration of local content.

Integrating Pre-Vocational With the English Subject – A high percentage of young people from the districts will migrate for work in foreign countries or work with international tourists. Teachers and students wanted to gain an understanding of the English names and terms used in their chosen occupation; be able to follow simple instructions in English or hold simple conversations about the work in English. Mainstreaming pre-vocational curriculum in English was seen as the most challenging of the various subjects mainly because teachers’ own English skills and limited technical vocabulary proved a barrier.

Lack of Local Vocational Expertise - Selecting an occupational study area requires a “local expert” being available and willing to teach. In many communities there were few people available in the preferred occupations. Some schools opted for a practical solution – for the first piloting year they identified a subject teacher who was an expert. For example Petku Middle School in Sindupalchok identified a local school teacher who was also a knitting
instructor. An alternative would be to bring a trainer or expert from outside the community but this greatly increases the costs of Pre-Vocational Education and therefore is not a sustainable solution.

**Giving Pre-Vocational Education a Priority** - Pre-vocational Education still requires prioritization at the DEO level. The School Sector Reform Plan makes this a policy priority and a new vocational subject curriculum is being developed. Currently, the Resource Persons have many priorities and it is often hard to get their engagement for this one aspect of secondary education.

**Career Planning** - Students often lack information about different career options and have few ideas about how to find information or make decisions about vocational training or to select areas for higher education. A career planning book for use by young people of high school age developed by the Council for Technical Education and Vocational Training (CTEVT) and World Education would be of great benefit in these schools and the content could be integrated into pre-vocational education. Career fairs or career days to expose students to different occupations have also been effective in Makawanpur and Dadhing districts and could be introduced in these schools. As part of the effort, People from different occupations visited schools and interacted with the senior students to answer questions about different careers in their sector of the economy and pathways into those occupations.

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**Janaki's Story**

Janaki Thapa Magar lives with parents and three siblings in Sindhuli District. Both parents are working as farm laborers and the family is very poor. When Janaki completed Grade Six, her parents could not continue to support her formal education. The school fees were too high and the family did not have enough income for keeping all their children in school. At the same time, World Education and Sindhuli Integrated Development Service had launched the coaching and pre-vocational activities in Janaki's school.

Janaki was quick to enroll herself as she was curious about this activity and hoped it would allow her to stay in school. The pre-vocational education in Janaki's school was focused on commercial vegetable farming. Since her enrollment, Janaki has been attending the school regularly and is able to grow vegetables in her family's kitchen garden. She also has her own personal plot in which she grows vegetables and then sells them in the local market. She is using the earned income for paying her school fees and saving for her upcoming school years.

Before starting the pre-vocational training, Janaki would have never guessed that she would be so interested in vegetable farming. Her parents are even considering leasing an additional plot of land so that the family can grow vegetables at a larger scale for expanding their future income. "I am working in the vegetable plot before and after my school hours. "My dream is to start my own vegetable farming at a large scale and use modern scientific methods." says Janaki.
MAJOR IMPACTS AND LESSONS LEARNED

Impacts on Academic Learning
The pre-vocational program has stimulated and enhanced classroom participation and knowledge about the related subjects. Teachers and students report that they have improved their ability to connect aspects of Physics, Biology, Mathematics, English and Nepali to their chosen pre-vocational practical work. This has enabled the students to combine theory and practice and apply their learning to everyday life.

The teachers were able to make cross connections and address the learning materials in an interdisciplinary approach. As teachers gained more experience, they have improved their interdisciplinary sharing of information and involvement in each other’s teaching subjects. Their enhanced competence was in turn reflected by the students’ academic achievements and confidence. Identifying and creating linkages was emphasized and mainstreamed during the planning stage at the beginning of each academic year which teachers found helpful.

Student Attendance and Effort
Children who were not attending the school on a regular basis or were expected to become school dropouts found the pre-vocational activity to be an incentive for continuing their formal education. In several schools, school attendance significantly improved, reducing the children’s risk of becoming child laborers.

Students who fail the SLC exams often gravitate towards exploitative labor options. Having the pre-vocational education initiative in local schools has resulted in these recent school leavers learning of other employment alternatives through younger students who participate in the pre-vocational activity. They too have started taking interest in learning and engaging in these activity.

Students that participated in the pre-vocational classes were very interested and eager to learn. They recognized the importance of acquiring certain technical and soft skills for their future livelihood and income generation opportunities. Many of the school principles and SMC members believe this has energized the schools and helped improve the whole teaching-learning environment and outcomes.

Attitudes towards Agriculture and other career options
Parents in rural communities were extremely satisfied that the stigma of illiterate people working as farm laborers is now being slowly eroded. As a result of pre-vocational education students now see commercial agriculture as a challenging and potentially rewarding occupation. Parents said that students who tended to avoid farm work are no longer doing so and instead are now helping their parents with their crops and livestock. Overall, the whole attitude towards agriculture work has changed as children and their families are now seeing farming as an even more valuable option for the family’s income generation and livelihood.
The students report that participating in pre-vocational education has helped them to start thinking about future work options though many remain concerned about their ability to access higher education or more advanced technical vocational training required for pursuing these dreams.

**Income and Independence**

Many secondary school students are forced to drop out due to the costs. School is “free” until Grade Eight but parents must still meet the costs of stationary and uniforms and many school levy fees for exams. These costs rise sharply for Grades Nine -12 resulting in many students that want to study either leaving or working part-time to cover costs. Some of the students that were engaged in the Pre-Vocational Education are now able to fund their future education independently by using the knowledge and skills gained through pre-vocational education.

For older students opting to leave school, in addition to agriculture, immediate employment has been secured through choosing craft related enterprises. The *thankas* and *zaris* manufactured in Dhulikhel and Banepa are sold in Kathmandu for a high price as there is a strong demand in the Valley for these products. Some of the youth who participated in pre-vocational activities focusing on skills for these occupations are now able to continue practicing on their own and access these markets. While *zari* work in particular is of concern for child labor, older youth engaged in this embroidery in their home communities under safer working conditions demonstrate ways in which this industry can offer less exploitative work for young people.

Applying knowledge and skills learned immediately has been greatest in agriculture. Children are now teaching their parents about farm work especially in relation to new commercial crops which families may not have had experience with or using new techniques such as greenhouse cultivation during the off-season. Being able to translate the knowledge provided at school into improved family income is enabling families to invest in their children by paying school fees, purchasing more nutritious food and improved access to proper medical care. This knowledge transfer and increased focus on children’s development also empowers and motivates children which, in turn, becomes a major incentive for them to stay in school.
Life Skills Soft Skills

There is a strong emphasis in pre-vocational education on building “life skills” or “soft skills” that children need when they enter the workforce. These skills include time management, communications, teamwork, leadership, problem solving and creativity and are often more sought after by employers than practical skills that can be quickly taught. Across the districts teachers, students and parents noted the development of these types of “soft skills” which will improve the students' ability to earn a livelihood in the future regardless of the occupation they enter.

Sustainability of Pre-vocational Education at the School Level

Schools that participated in the action research pilot are currently establishing their own funds in order to be able to continue this activity into the future. SMC and PTA members are convinced that this should be a part of their schools curriculum at the high school level. The school principals are also taking a personal interest in this activity and are supporting the fundraising efforts.

Schools seeking build in sustainability to continue with pre-vocational activities beyond the Naya Bato Naya Paila Project are experimenting with cost recovery approaches that could carry forward the momentum of pre-vocational education. Schools in Sindhuli are planting amriso (for making brooms), bamboo and seasonal vegetables on school land that is unused, such as on hillsides areas which is not appropriate for either playgrounds or buildings.

SIDS, the local partner in Sindhuli, points out, “These are being planted for two reasons. To have raw materials ready for practical classes in the upcoming sessions and for the school to earn money from the sales so that the money could be used for purchasing necessary materials for conducting pre-vocational classes in the upcoming school sessions.” In Nuwakot one school is taking a similar approach using community forest for teaching cardamom farming.

Schools, teachers and communities have been giving serious thought as to ways to improve the quality of their pre-vocational education and incorporating lessons learned in the post piloting design. Much thought is being given to product diversification and moving from basic to a slightly more advanced levels of learning for students with an exposure to the topics in the piloting phase. For instance, woolen hat making is now being advanced by making woolen uniform sweaters for the senior students during training. In this community the potential is seen for producing woolen garments locally for sale for the tourist and Kathmandu markets.

LONG TERM PROSPECTS FOR PRE-VOCATIONAL EDUCATION IN NEPAL

Initially teachers and PTA/SMC members were concerned about the challenges in including and mainstreaming the pre-vocational activity in the school curriculum. After two years of implementing pre-vocational education in their schools, however the students, teachers and school committees were all enthusiastic about the curriculum and are acknowledging its benefits. Students in particular are convinced of its value and for many it was the first time learning has become enjoyable relevant by preparing them for the future in a very practical way.

Parental insights and views on pre-vocational in Dolakha where children are learning skills to paint thankas were very pertinent. A few who also painted thankas, said: "This is a skill that can be practiced at homes as well. In fact, as I too am a thankas painter, my children can give me tips to improve my own paintings using the skills that they have learnt from school. Children can help in future towards family income. This will help reduce the economic pressure on us as providers when the children are grown up because they too can contribute as adults towards family earnings. This is a sentiment shared by schoolteachers and principals, many of whom want to see thankas painting become a subject and part of the school curriculum.
Visits by high-ranking government officials from the CDC of the Ministry of Education to Dolakha and Ramechhap districts lent added credibility to the efforts of mainstreaming pre-vocational into the main curriculum. The Deputy Director of CDC, during a debriefing session at the World Education office shared the recently introduced government provision of vocational curriculum wherein a local subject (and a pre-vocational subject area such as thanka painting) can be included as part of the vocational subject in a local government school at the VDC level. The pre-vocational pilot has shown the potential to incorporate more practical components along with the new vocational subject in an affordable way and at scale. The CDC staff have expressed their interest to mainstream the pre-vocational topics into development of district level local curriculum. This can be later mainstreamed into the Government Occupational Business Training (OBT) Plan.

At the school level, many of the 36 schools that participated in the pilot are poorly resourced and located in remote communities affected by child labor. Despite such constraints, they were able to manage and run a successful pre-vocational program. In the second year many were able to diversify and offer more practical options and strengthen their efforts. Many are committed to sustaining the program but will need to have sufficient school budgets to meet the modest additional costs they will incur. Of greater concern is the need to retain the institutional memory and support from the DEOs and Resource Centres. Thus, those involved in designing the curriculum for the new vocational subject need to visit and learn from these pioneering schools to incorporate the lessons learned in future vocational education programs in schools across Nepal.
CONCLUSIONS

Over the past decade World Education and its partners have worked with schools across Nepal in the Terai, hills, and mountains – in small remote schools and urban schools in the capital to introduce vocational education. Earlier the focus was Student Field Schools for agriculture or entrepreneurship education, both using a practical discovery learning approach. These were very successful and enthusiastically received but were difficult to sustain due to the costs involved and the need for external trainers. Under the Naya Bato Naya Paila initiative the focus has been to learn from these experiences and those of World Education in pre-vocational education in other countries such as in the Tibet Autonomous Region of China and Cambodia to develop a viable model for use in schools in Nepal.

The Pre-vocational Education pilot in 36 schools has shown that teachers in poorly resourced rural schools of Nepal can successfully integrate pre-vocational education into the public curriculum with modest additional financial and technical support. The schools and communities took ownership of the initiative and many are now working to find ways of continuing. These school communities now realize that they can better prepare their students for the workforce even if they are unable to provide sophisticated vocational technical training. Teachers initially feared that pre-vocational practical components would distract students from their academic subjects. Experience, though, has shown them that pre-vocational education in fact helps students better understand concepts being taught in a number of subjects such as science, math, social studies and English. It also provides new motivation for older and weaker students, increasing attendance rates and effort.

With the introduction of the new vocational subject for grades 6 through 10 Nepal faces both an opportunity and a challenge. If this subject is to result in children gaining the soft skills and knowledge they need for improved value in the workforce then special efforts will be needed. For example, if traditional teaching practices are continued it will just become another subject that is memorized to pass a subject at SLC. The pilot effort to integrate practical skills in schools alongside the more academic subjects provides a valuable example of the way that teaching/learning modifications can be made in Nepal. With many schools located in small, remote villages with few resources and insufficient students to justify a full-time trained vocational teacher this pilot has created one model that can contribute to improving the relevance of education. While building students’ skills is essential, emphasis should be given to attracting the most disadvantaged children for whom the barriers of attending school outweigh the benefits.

Improving relevance through pre-vocational education will delay the entry of the most vulnerable children into the workforce and therefore has the potential to play an important role in reducing child labor in Nepal.
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- Kakani Community Development Center, Nuwakot
- Rural Development TUKI Association, Dolakha
- Rural Women Creative Forum, Sindhupalchok
- Shanti Jana Adarsha Sewa Kendra, Kavrepalanchok
- Sindhuli Integrated Development Service, Sindhuli
- Suryodaya Samaj Sewa, Remechhap

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