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Article

Effectiveness of Vocational Training on Light Vehicle Mechanics in Underprivileged Children's Educational Programs, Nepal

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Abstract

Training effectiveness is important for the employment of technical and vocational education and training (TVET) school graduates, such as light vehicle mechanics in the automobile industry. This study explored the training effectiveness of light vehicle mechanics in Nepal, with focus on students' satisfaction with TVET school's physical facilities and physical environment. The training effectiveness is explored among the sampled TVET graduates of a CTEVT affiliated school, using quantitative method of research. The overall impression of the training was effective because the graduates responded positively about training. The school did not fully achieve the objectives due to inadequate provision of modern technology. Thus, they pointed out the need for regular up-to-date tools and equipment as per need of the industry. Utilization of library facility and technology in the teaching- learning methods was equally needed. The skill mismatch could be solved by linking industry to the TVET training. This study may draw an interest of the TVET school leaders for taking effective measures to maintain quality of graduates, keeping in mind the industry needs. Similarly, future researchers may take reference when they want to explore the underlying causes of students' satisfaction with physical facility and school environment, as well as training and skill mismatch in the labor market among the TVET school graduates.

Keywords: effectiveness, satisfaction, physical facility, physical environment

Introduction

The technical and vocational education and training (TVET) focuses on labor market consumable output of the graduates from TVET institutes. The UNESCO (2001) defines TVET as:

> *all forms and levels of educational process involving, in addition to general knowledge, the study of technologies and related sciences and the acquisition of practical skills, know-how, attitudes and understanding relating to occupations in the various sectors of economic and social life. (p.7)*

The TVET focuses on employability skills. The TVET plays a major role in skilling young persons for the world of work (Kintu et al., 2019). The human resources working in the industry are crucial. They are end product graduates from TVET institutes for the labor market. In this regard, skill of

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TVET schools' graduates is significant for industry as well as economic development of the country. As labor market prioritizes increased productivity of the industry, it always seeks employability skills rather than medium of the skills acquisition of the individual- either formal, informal or non-formal.

The TVET system in Nepal had aimed to grow fast and make a significant contribution to the Nepali labor market by supplying skilled human resources. The Council for Technical Education and Vocational Training (CTEVT) is the apex body for production and quality control of basic and middle level skilled technical and vocational human resources in Nepal (CTEVT Act, 1989). There are 1,370 short term skill/ vocational training provider institutes affiliated to CTEVT for the conduct of short courses (CTEVT, 2022).

According to Karemera et al. (2013), the environmental difference and the difference in the quality of instruction from one school to another can as well create differences in the level of knowledge acquisition of the student. This implied that the learning facilities in the school will expose the student to learning environment which can affect their academic performance. Therefore, there is no doubt that the school environment contributes to student's academic performance which is usually measured in terms of cognitive, psychomotor and affective achievement (Akaninwor, 2016). If the physical resources are good then quality output as a trained graduate are available in the job market.

All the discussion above relates to the effect of physical resources on the vocational training. The adequate provision of relevant tools, workshop equipment and facilities helps to a large extent to improve students' practical skills and their academic performance. The workshop equipment, physical facilities, physical environment, library facilities and administrative delivery have influence on psychomotor skills of the graduates. This is the link with the effectiveness of the physical resources on the vocational education and future performance in job as well as economic life.

The research is based on the evaluation of CTEVT affiliated training institute. How people are benefited with reference to physical resources of the institutes? It is to verify progress towards achieving objectives of short courses as a help of school physical facility and school physical environment to gain competency improvement conditions of underprivileged adults, and determine the effectiveness of short course programs intern of skill and employment as well as earning with reference to physical resources available in the training institute.

School Physical Facilities

According to the CTEVT Program Evaluation Form (2075), physical facilities refer the class room size (minimum 0.75 sq.m. per student), provision for natural or artificial lighting/ ventilation in the class room, appropriate condition and numbers of furniture and white/black board, neatness and cleanness of class room, and at least two class room with multimedia. It further mentions library space of minimum 40 meter square program and additional 15 meter square for each additional program, book and student ratio of 1:2 per subject, availability of reference book 1:10, and the library remains open during off hour too.

School Environment

According to Ndirangu and Udoto (2011), the quality of the library, online resources and lecture facilities provided by Kenyan public universities did not meet quality measures of adequacy. Those universities were unable to support the desired educational programs effectively and facilitate the development of learning environments that support students and teachers in achieving their goals; and the facilities were the antithesis of healthy and secure facilities that can provide a stimulating/inspirational setting for the users.

Dewey (1926) writes, 'Education is a continuous process of experiencing and of revising or non-revising experiences. It is the development of all those capacities in the individual, which enables him to control his environment and fulfill his possibilities' (as cited in Singh, 2007, p. 22). A good and sufficient environment is necessary for a learning. The home and the school both should provide necessary stimulus for learning experience. The student, who spend most of time in school and school environment, is exerting influence on performance through curriculum, teaching technology and relationship with colleague and teacher in the school environment.

Students Satisfaction

A student's satisfaction plays a major role on his/her performance. Students' satisfaction as a short term attitude results from an evaluation of a students' educational experiences (Elliott & Healy, 2001). Students' satisfaction is a multiple dimension process which is affected by different factors. Wilkins et al. (2012) identified quality of lecturers, quality of physical facilities and effective use of technology as key determinant factors. Student satisfaction is greatly influenced by quality of class room, quality of feedback, lecturer-student relationship, and interaction with fellow students, course content, available learning equipment, library facilities and learning materials. In addition to that, teaching ability, flexible curriculum, university status and prestige, independence, caring of faculty, student growth and development, student centeredness, campus climate, institutional effectiveness and social conditions have been identified as major determinants of student satisfaction in education.

Skill and Employment

The graduates in TVET education and their employability are the main pillars of economic activities to contribute to the development of any country. They are characterized by a set of achievements, skills, and personal attributes that make graduates more likely to gain employment and be successful in their chosen occupations (Holmes, 2013). In the technological changes or dynamic job market, employment of graduates is directly related with the demand of the labour market or industry. Employer surveys indicate that occupation-specific skills are no longer sufficient for graduates to meet the needs of national labor markets (OECD, 2013). In this regard, skilled employees are highly demanded in the labor market. It could be possible only after the course are designed and conducted in line with the need of job market.

Methodology

Formally, TVET in Nepal is a gateway for education and training through CTEVT routes

and informal skills acknowledged through recognition of prior learning (Skill Testing) in alternative way (CTEVT Act, 1989). According to the CTEVT Skill Mapping (2020), the CTEVT and different ministries in the sector of technical education involve in providing the certification of technical education. The trained human resource efficiency can be evaluated how they are employed and their training is effective in the job market.

To examine the outcome gaps, the study dwelt on the perceptions of a sampling of CTEVT short course trainees who had completed their course under the CTEVT. Additionally, the study observed the effectiveness of short course the technical graduates received with technical training from the institutes providing it. To determine the effectiveness, this study was limited to Kathmandu Valley - only one technical institute with 33 graduates for the survey study research. To study the effectiveness of short course of light vehicle mechanic, the data were taken from currently graduated and those working in the automobile industry. This assist the researcher to examine the effectiveness of the short course provided by the technical training provider.

The researcher conducted quantitative research to determine effectiveness of training along with the effectiveness of physical facility, students' satisfaction and school environments of training institutes by applying structured questionnaire to the respondents. Descriptive research methodology was used to collect primary data. The evaluation research was conducted only in the organization called Underprivileged Children's Education Programs (UCEP), Nepal, Sanothami, Bhaktapur. The automobile occupation is focused, for the institute is a pioneering one for the short courses and currently has working graduates. The research draws the knowledge of physical facility, students' satisfaction and physical environment of the training.

Results

There were many short courses run by the UCEP for social benefit. The physical resources were means for uplifting socially backward people. The light vehicle mechanic was one of the occupations for the socially disadvantaged people, aiming at ensuring their prosporous life.

The Table 1 shows that among 33 respondents of the light vehicle mechanic, 63.6 percent were from Bagmati Province and 36.4 percent were from Sudur Paschim Province. The institute is located in the Kathmandu valley with full physical resources. The majority of students were from the Bagmati province.

Table 1
Province-wise Graduates

Province	Frequency	Percent
Bagmati	21	63.6
Sudurpaschim	12	36.4
Total	33	100

Among the study participants, 90.9% of the graduates were male and 9.1% were female.

The study reveals that 90.90% graduates were satisfied with the class room facility, workshop facility, lighting and ventilation of the premises. Similarly, 81.8% were satisfied

with the physical layout of the institute. The 72.7% of graduates were satisfied with the safety measures.

Similarly, 45.5% students were satisfied with the library facility. They were fully satisfied with the administrative facility, open space, adequate hostel, separate toilet for male and female, and enough parking space.

About 82% were satisfied on the utilization of classroom and workshop facilities. More than 80% of the trainees gave positive responses regarding the workshop equipment, relevant equipment for course, equipment for individual practice.

Discussion

This study showed that 63.6 percent light vehicle mechanic graduates were from Bagmati Province. The CTEVT Skill Mapping (2020) showed that 30.6% of total enrollment capacity in Nepal belongs to Bagmati Province in case of vocational education or skill training. The enrollment capacity as well as the federal capital of Nepal belongs to the Kathmandu Valley, so there was higher number of participants from Bagmati Province. This study also showed that more than 90% of graduate were male. Report on Impact Evaluation-Study of the CTEVT/NSTB graduates in Bagmat Province showed 84% male were in engineering occupation (CTEVT BPO, 2022). This study and the given study report from CTEVT BPO were similar on higher number of participation in engineering sectors. In this regard, whether engineering occupation is a male-friendly can be a matter of further study.

Satisfaction with Physical Facilities

The study showed that majority of graduates were satisfied with the classroom facility, workshop facility, lighting and ventilation of the premises, physical layout of the institute, safety measures in the institute. Similarly, they were happy with the students' services, and building and services provided by institute. Likewise, physical resource plays a significant role for the learning situation of the students. The support facilities and condition for the graduates in the light vehicle mechanic showed less than half students are satisfied with the library facility. The graduates are fully satisfied with the administrative facility, open space, adequate hostel, separate toilet for male and female. The graduates were satisfied with hygienic drinking water, and the hygienic canteen facility.

Choi et al. (2014) suggested that indoor environmental quality of the classrooms, such as thermal conditions, indoor air quality, acoustic conditions, lighting conditions, furnishings, aesthetics, technology, and view conditions, was associated with positive student outcomes. Hence, the research result and international literature were positive on good school environment, which enhances performance of the students. It further substantiates that school physical facility effects the performance of the students.

Satisfaction with School Environment

The research result shows that majority of the students were satisfied with the utilization of classroom for study. More than two-thirds students were satisfied with the utilization of workshop. The utilization of library was in satisfaction of less than half of the students.

The program was based on skill oriented training. Due to this, less utilization of library facility was as per program nature. Similarly, majority of the students were satisfied with provision of enough, related tools and equipment for individual practice. But, just more than half students were satisfied with response on up-to-date equipment; the majority of students were satisfied with the replacement of equipment as needed with reference to new technology; the majority of students did not get satisfaction with the use of modern technology.

Lyons (2001) summarizes the importance of physical environment to educational achievement by detailing the existing links of the research literature with classroom conditions and learning, which deals with significant effect of classroom environment on concentration levels, listening, and writing. It is supported by research results that have found higher test scores and more positive student outlooks in upgraded learning environments.

Skill and Employment

The study showed that just more than half of the graduates were satisfied and gave positive response on up-to-date equipment. This result showed that the graduates were not applying fully update and current marketable equipment and technology in the training. According to Branka (2016), matching of jobs and skills is the most important issue for employers and individuals. A solid partnership among different stakeholders in skills development is necessary, particularly with the business sector and employers' representatives, employers and training providers mostly articulate their short-term needs, which reflects the reality of labor and training markets: most employers and training providers simply do not plan for the long-term; the immediate or short-term benefits of skills recognition are their key interests.

This study shows graduates were not practicing in an up-to-date tools and equipment in the training, which leads to skill mismatch. Training was due to not involving employer in the training process, as the international research have showed: the recognition of skill could be achieved only after the participation of both employer and training provider. In order to produce skilled workforce, there should be good coordination between employer and training provider. Income of the individual is affected by the skills they acquired in the training. Highly skilled people gain good income for their work.

Conclusion

The effectiveness of the training on light vehicle mechanic for under privileged adults saw positive response. The training instils people with competence and confidence required for the work. The evaluation of effectiveness of courses relied on satisfaction of trainees and improved skills of trainees as evidenced for their application in their jobs. The institute did not achieve their objectives due to inadequate up-to-date technology. The overall impression of the training was positively responded. However, the responses pointed out the need for regular and timely update of tools and equipment and as per need of the industry, which could solve the skill mismatch.

To make the light vehicle mechanic training effective, the new technology need to be

introduced in the training institutes. It is also to enhance skill as per industry demand.

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