



EMPOWERING MOUNTAIN COMMUNITIES THROUGH SKILLS TRAINING IN CIVIL WORKS: A PATHWAY TO SUSTAINABLE DEVELOPMENT

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Abstract

This study explores the impact of civil works skills training on sustainable development in mountain communities, focusing on practical, hands-on training in construction, infrastructure maintenance, and environmental management. The goal is to enhance self-sufficiency, economic resilience, and quality of life for community members. Through interviews and focus group discussions with 27 trainees and 3 vocational trainers, the study identifies challenges that hinder the effectiveness of these programs. Key issues include low participant motivation, financial constraints, and a gap between theoretical knowledge and practical skills. Trainees often struggle to stay engaged due to unclear connections between the training content and its real-world applications. Additionally, financial barriers and heavy workloads limit participation, preventing trainees from fully benefiting from the programs. A mismatch between academic qualifications and practical industrial experience can also lead to frustration among trainees. Despite these challenges, the study concludes that targeted skills training, when supported by motivation, financial aid, and practical learning opportunities, can significantly benefit mountain communities. These programs not only improve local infrastructure but also empower residents to actively contribute to sustainable development. The research suggests a model for similar initiatives in other marginalized regions, demonstrating how well-designed skills training can drive long-term community empowerment and sustainable development.

Keywords: Mountain Communities, Skills Training, Civil Works, Sustainable Development, Community Empowerment

1. Introduction

Leadership Mountain communities often face unique challenges due to their geographical isolation, limited infrastructure, and restricted access to resources. These challenges can lead to economic instability, lack of essential services, and social inequities. Addressing these issues requires a multi-faceted approach, with a focus on sustainable development that empowers local communities. In pursuit of fostering sustainable development and empowering local communities, vocational skills training programs have emerged as vital pathways for socio-economic advancement (Marope et al., 2015).

One effective strategy to foster sustainable development in mountain regions is through skills training in civil works (Broman & Robèrt, 2017). Civil works encompass a wide range of construction activities, including building roads, bridges, water supply systems, and housing. By equipping the community members with the necessary skills and knowledge in civil works, eventually, the community as a whole, creates a foundation for self-sufficiency, economic growth, and improved quality of life among the community



members within the community arena. But the important question is how to acquire these necessary skills and knowledge in civil works? It is very important to consider the aspect of practical and hands-on training because by focusing on practical and hands-on training, it ensures that the benefits of development are accessible and sustainable (Heiskanen, Thidell & Rodhe, 2016).

The significance of this research lies in its potential to provide a model for other marginalized and remote communities facing similar challenges. By documenting the successes and challenges of implementing skills training programs in mountain regions, this study will contribute valuable insights into effective strategies for community empowerment and sustainable development.

While it may be true to say that mountain regions, often characterized by their isolation and limited economic opportunities, face unique challenges that necessitate targeted interventions, this research delves into the specific case of mountain communities where civil works skills training programs are implemented to catalyze community development and resilience (Schneiderbauer et al., 2023).

This research aims to explore the impact of skills training in civil works on the sustainable development of mountain communities. It will examine how such training programs can empower local populations, enhance infrastructure, and promote long-term economic stability. Thus, this study focuses more on the implementation of a civil works skills training program aimed at equipping residents with practical skills, thereby enabling them to contribute meaningfully to infrastructure projects and fostering sustainable development.

2. Importance of the Study

The study is significant as it addresses the critical need for skill enhancement and employment opportunities in mountain communities, aligning with Sustainable Development Goals (SDGs) and relevant legislation. By empowering beneficiaries with civil works skills, the program promotes inclusivity and diversity in the workforce while demonstrating the organizational capability of academic and industry partners (Kim, Kalev, & Dobbin, 2012). The emphasis on sustainability ensures long-term benefits, fostering continuous learning and economic resilience. This study underscores the importance of targeted skills development initiatives in advancing socio-economic development and enhancing community livelihoods.

Table 1. General Information on Demographic Profile of the Participants

Indicators	Frequency	Percentage
Job Description		
Working	15	50%
No Work	15	50%
Competency		
Skillful	12	40%
Unskillful	18	60%
Status		



Single Married	10	33%
Gender	20	66%
Male Female	25	83%
Age	5	16%
18-25	11	36%
26-40	18	60%
41-60	1	4%

3. Research Methodology

3.1 Data Collection

Using a qualitative research approach, semi-structured interviews and focus group discussions were conducted with 30 purposively selected participants from the mountain community. The participants, aged between 18 to 60 years, included 15 individuals currently employed and 15 unemployed, representing diverse backgrounds in terms of marital status and gender. The interviews, averaging 60 minutes each, were conducted in participants' homes, focusing on their perspectives on the challenges and opportunities related to skill development and employment. The data was transcribed and analyzed using thematic analysis (Braun & Clarke, 2006), identifying recurring themes and patterns (Terry et al., 2017).

3.2 Data Analysis

The data analysis involved coding and categorizing the interview transcripts to extract meaningful insights. Thematic analysis was used to identify key themes related to skill acquisition, employment opportunities, economic impact, and community development. The analysis aimed to understand how the training program influences participants' skills, employment status, and overall socio-economic well-being.

The questionnaire, comprising five inquiries, was meticulously crafted in this study. The questions incorporated in the questionnaire were as follows:

1. How does a lack of interest and motivation among community members affect the success of civil works skills training programs in mountain areas?
2. What difficulties do people without experience in civil works face when participating in the training programs?
3. How do money issues, limited budgets, and heavy workloads make it hard for people to attend civil works training courses in mountain communities?
4. What problems do vocational trainers face in finding time for civil works training sessions, and how do these problems affect their own development and the program's success?
5. How does a lack of skills, techniques, and adherence to industry standards among workers in mountain communities affect their job performance and career growth after the training program?



4. Results

Based on the interview sessions held with the thirty participants, five main challenges faced by the trainees in the pursuit before the advent of developing community livelihoods through skills training in civil works initiated by Cebu Technological University (CTU) in collaboration with the department of community extension of research were identified. These challenges will be discussed in the following sub-sections.

4.1 Disinterest and Lack of Motivation among Peers

Despite possessing extensive knowledge and skills in their respective fields, particularly in civil works, the interest of students significantly impacts their participation and motivation. Many individuals may not fully understand the importance or potential benefits of community livelihood initiatives (Gutierrez-Montes et al., 2009). Without a clear understanding of the goals and potential outcomes, they may lack the motivation to participate actively. Peer support is crucial, necessitating an approach that includes raising awareness about the benefits of community livelihood initiatives (Krantz, 2001).

One participant (Participant 9) shared:

“As I walked through our neighbourhood, I noticed something troubling: my friends and neighbours seemed uninterested and lacking motivation. It felt like everyone was just going through the motions, with no real excitement or drive to make things better. Conversations felt dull, and it seemed like nobody cared much about improving our community. This lack of interest made it hard to work together on community projects. How could we build a better place to live when nobody seemed to care? It felt like we were stuck in a rut, unable to move forward because everyone was too apathetic to get involved.”

Another participant (Participant 10) revealed:

“I need help with skills training sessions. This isn't something I'm exceptionally skilled at or interested in. It feels like I'm being pushed into something beyond my expertise. I need more motivation to fully engage and see how this training relates to my role or career progression. Many friends have lost their motivation to learn this skill because of their lack of interest in this skills training.”

Participant 5 added:

“I need help staying motivated during skills training. While I understand the importance of learning new skills, I need help seeing how this training directly relates to my day-to-day tasks. It's easier to stay engaged with a clear connection between the training and my job responsibilities. Additionally, I need more guidance and support to develop these skills effectively. It's disheartening to struggle through training sessions without the proper resources or assistance.”

Participant 16 echoed:

“I'm really struggling with the civil works skills training. Honestly, it's just not my forte, and I feel completely out of my depth. The training materials seem to assume a certain level of prior knowledge that I simply don't have. Instead of feeling motivated to improve, I feel overwhelmed and discouraged. It's hard to see



the value in pushing through when it feels like I'm constantly playing catch-up. Without the proper foundation and support, it's difficult to find the motivation to continue investing time and effort into this training.”

The experiences shared by the participants underscore the critical importance of motivation in training programs, particularly evident in civil works skills training sessions. Disinterest and lack of motivation among peers can severely hinder the effectiveness of such programs, leading to low engagement, limited skill development, negative impacts on morale, and decreased performance. To address these challenges, there is an imperative need to actively support and motivate every trainee. Trainees should have the chance to enhance their knowledge and skills through courses or training in their field of expertise. Additionally, by prioritizing motivation and creating a supportive learning environment, organizations can maximize the effectiveness of training programs and ensure that participants develop the skills they need to succeed in their roles.

4.2 Academic Graduates without Industrial Experience

In the Philippine context, the discrepancy between academic qualifications and industrial experience among graduates presents a significant challenge to their employability and professional development. To address this issue, there's a pressing need to reimagine education by integrating practical, industry-relevant experiences into academic curricula. This entails fostering stronger collaboration between educational institutions and industries to co-create programs that meet industry needs and provide students with hands-on experience. Expanding internship and apprenticeship opportunities is crucial, allowing students to gain real-world exposure and build professional networks.

Mentorship and career guidance programs are also essential in helping graduates navigate their transition into the workforce. Government support through incentives and policies is imperative to encourage industry-academia collaboration and recognize the value of industry experience in academic qualifications. Collaboration among stakeholders can help close the knowledge gap between academic programs and business needs, preparing graduates for success in the Philippine labor market and fostering economic development in the nation.

Participant 11 shared:

“As an academic graduate without industrial experience, the civil works skills training is quite challenging. While I have theoretical knowledge from my studies, I lack practical experience in the field. The training materials assume a level of familiarity with industrial processes that I don't have. This knowledge gap makes it difficult for me to grasp the concepts being taught and apply them effectively. Without hands-on experience, I struggle to see how these skills translate to real-world scenarios, which diminishes my motivation to engage in the training fully.”

Participant 18 added:

“In my opinion, the civil works skills training sessions are proving to be overwhelming for me as an academic graduate without industrial experience. The technical terminology used in the training materials is unfamiliar to me, and I constantly have to look up definitions and explanations. This slows down my learning process and makes it challenging to keep up with the pace of the sessions. I'm falling behind without a



solid understanding of the terminology and concepts being discussed, which demotivates me from fully participating in the training.”

Participant 23 echoed:

“Coming from an academic background without any industrial experience, I need help to bridge the gap between theory and practice in the civil works skills training. While I have a strong theoretical understanding of the concepts being taught, I lack the practical skills to apply them effectively. This disconnect between theory and practice makes it difficult for me to grasp the relevance of the training to real-world scenarios. Without hands-on experience, I'm finding it hard to stay motivated and engaged in the training sessions.”

Participant 4 expressed:

“I feel inadequate compared to my peers who have prior industrial experience in the civil works skills training. As an academic graduate without any practical background, I often find myself needing to catch up during group activities and discussions. Seeing my peers effortlessly apply their knowledge and skills makes me doubt my own abilities and diminishes my motivation to participate actively. It's challenging to stay motivated when I constantly feel like I'm playing catch-up to those with more experience.”

Participant 22 highlighted:

“Industrial work experience is one of the best tools to facilitate the vocational students' learning process. A potential learner or trainee with industrial work experience will share their hands-on experiences, practical steps, and industry needs. The trainees will demonstrate that the actual events outside differ from the lessons learned at the institute. However, I lack confidence in my ability to apply the civil works skills training in practical scenarios. Coming from an academic background, I'm used to theoretical learning rather than hands-on application. This lack of practical experience makes me hesitant to actively participate in training activities that require real-world problem-solving. Without the confidence to apply what I've learned, I struggle to see the value in the training and find it difficult to stay motivated throughout the sessions.”

Participant 17 added:

“As an academic graduate without industrial experience, I feel like I need additional support and guidance in the civil works skills training. While the training materials provide a basic overview of the concepts, I would greatly benefit from more hands-on instruction and mentorship. Having someone experienced guide me through the practical aspects of the training would boost my confidence and motivation to fully engage. Without adequate support, I fear that I'll continue to struggle to grasp the material and apply it effectively in real-world situations.”

Industrial work experience emerges as a pivotal tool for vocational learners, enabling them to share first-hand experiences and practical insights not covered in academic settings. Novice or fresh graduate students who are diploma holders in a university, especially those without industrial experiences or who have not even undergone on-the-job training, have difficulty performing quality job execution.

However, for academic graduates like the narrator, the absence of industrial experience creates self-doubt and a lack of confidence in applying civil works skills training practically. Additional support and guidance are deemed essential for academic



graduates to navigate these challenges effectively, including more hands-on instruction and mentorship to bolster confidence and motivation. Without such support, the risk of continued struggle to grasp and apply training material persists, potentially hindering success in the workforce.

4.3 Difficulty in Attending Training Courses Due to Financial Constraints and Heavy Workload

Facing financial constraints, limited budget allocations, and heavy workloads from their current employment, Filipino individuals encounter significant obstacles in attending training courses. These challenges often stem from the rotation system within their companies, exacerbating their difficulties in accessing essential skill-building opportunities. In the Philippine context, Technical-Vocational Education and Training (TVET) faces unique perceptions and challenges. Unlike in some other countries, where TVET is seen as a pathway primarily for those with lower academic performance, in the Philippines, there is a dual perception.

On one hand, TVET is recognized as a valuable avenue for acquiring practical skills, particularly among individuals with a predisposition towards hands-on learning. However, there exists a prevailing notion that individuals with higher academic achievements tend to pursue further education in traditional academic institutions, overlooking TVET opportunities. Teachers in TVET institutions encounter distinct challenges in cultivating the skills of students with varying backgrounds and aptitudes. Beyond imparting technical knowledge, they must possess strong emotional intelligence and discipline to effectively engage students who may lack foundational knowledge in their chosen field. This necessitates a transformative approach to teaching, wherein educators nurture students' practical skills while addressing their diverse learning needs.

Participant 2 described:

“I understand the challenges you're facing with financial support for skills training. It's frustrating when you're passionate about learning and improving yourself but are held back by financial constraints. I can imagine how discouraging it must be, especially when you see others pursuing their goals while you struggle to find the means to do the same. It's not easy to admit, but I too have.”

4.4 Problems Faced by Vocational Trainers

One of the efforts to develop the quality of learning is by improving trainers' professionalism. It is very important because trainers have a crucial factor to determine the quality of education system. Trainers should have the competencies affecting the trainees' achievements and performances. To meet the demand, trainers should also be able to answer the trainees' need in their learning. According to the Minister of National Education Regulation No.16 of 2007, there are four competencies of trainers' academic qualifications through trainer education; pedagogical, personal, professional, and social competencies. Those competencies are aimed to actualize the need in improving the quality of education in widely scope.

However, trainers themselves face challenges in balancing their responsibilities, finding time for training sessions, and maintaining their own professional development. These issues can impact the quality and success of the training programs.



T3 shared in one of his experiences as he explains:

“As a vocational trainer, one of the biggest challenges I face is engaging trainees who lack interest and motivation. Despite the importance of the skills we are teaching, many participants do not see the immediate benefits and thus struggle to stay motivated. This disinterest makes it difficult to maintain a productive and energetic learning environment. Additionally, without strong peer support, it becomes even harder to keep the trainees engaged and committed to the program.”

T1 added, saying:

“Working with academic graduates who have no industrial experience is a significant hurdle. These individuals often have a solid theoretical understanding but lack the practical skills necessary for civil works. I find myself spending extra time bridging the gap between theory and practice. This often involves simplifying complex concepts and providing more hands-on demonstrations. The discrepancy between their academic knowledge and real-world application sometimes leads to frustration and a sense of inadequacy among the trainees, which I have to carefully manage to keep them motivated.”

4.5 Lack of Skills, Techniques, and Adherence to Industry Standards

Participants might not possess the necessary skills, techniques, or knowledge of industry standards, which can affect their job performance and career growth post-training. Trainers need to address these gaps to ensure trainees are adequately prepared for the workforce.

Trainer 1 opined:

“The lack of foundational skills and techniques among workers in mountain communities significantly hampers their job performance post-training. Many trainees struggle with basic tasks that are critical to civil works projects. For instance, improper handling of tools or incorrect measurements can lead to subpar construction work. This not only affects the quality of the projects they undertake but also their confidence in executing tasks independently. Consequently, many trainees find it difficult to secure stable employment or advance in their careers, as employers are reluctant to hire individuals who require extensive retraining.”

Trainer 2 posited:

“Adherence to industry standards is a major issue among workers from these communities. Despite comprehensive training, some trainees fail to fully grasp the importance of following established guidelines and safety protocols. This oversight can result in unsafe work practices, leading to accidents and project delays. Employers, aware of these risks, often hesitate to offer long-term contracts or higher positions to workers from these programs. This lack of career growth opportunities can be discouraging for the trainees, making it harder for them to break the cycle of low-skilled, low-paying jobs.”

Trainer 3 stated:

“After the training program, many workers find it challenging to keep up with evolving industry standards and techniques. The isolated nature of mountain communities means that they have limited access to ongoing professional



development and updates on new practices. As a result, their skills can quickly become outdated, further diminishing their job prospects. Employers in the construction and civil works sectors prioritize workers who demonstrate up-to-date knowledge and skills, and unfortunately, many of our trainees fall behind in this regard. This gap in continuous learning and adaptation affects their long-term career growth and job security.”

5. Discussions and Conclusion

The study highlights significant challenges and benefits associated with the initiative. The research underscores the importance of practical, hands-on training in civil works for the sustainable development of isolated mountain communities.

However, the findings reveal several challenges that impede the success of these training programs. A major issue identified is the disinterest and lack of motivation among participants. Many trainees do not fully understand the importance or potential benefits of the training, leading to low engagement and limited skill development. This lack of motivation is further compounded by the peer group's general apathy, which creates a challenging learning environment. Without a supportive and motivating atmosphere, trainees struggle to see the value in participating actively in the training sessions.

Additionally, the study highlights the gap between academic qualifications and practical industrial experience among trainees. Many participants, particularly those with academic backgrounds, find it difficult to apply theoretical knowledge to real-world scenarios. This discrepancy leads to frustration and a sense of inadequacy, as trainees struggle to bridge the gap between their academic learning and the practical skills required in civil works. The lack of hands-on experience makes it challenging for them to grasp the training concepts effectively, resulting in decreased motivation and engagement.

Financial constraints and heavy workloads also pose significant obstacles to participation in the training programs. Many individuals face difficulties attending training sessions due to limited financial resources and the demands of their current employment. The rotation system within companies and the necessity to prioritize immediate work responsibilities over training further exacerbate these challenges. These financial and logistical barriers prevent many potential trainees from accessing essential skill-building opportunities, limiting the overall impact of the training programs.

Despite these challenges, the study concludes that with proper support, motivation, and practical training, mountain communities can achieve significant benefits from civil works skills training programs. By addressing the issues of motivation, providing hands-on learning experiences, and offering financial support, these programs can empower community members to contribute effectively to local development projects. The initiative has the potential to serve as a model for similar marginalized and remote communities, demonstrating how targeted skills development can lead to long-term community empowerment and sustainable development.



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