

## EFFECT OF SKILLS TRAINING PROJECTS ON ENHANCING THE LIVELIHOOD OF EX-COMBATANTS WITH DISABILITIES

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### A CASE STUDY OF ECOPD PROJECT AT RWANDA EX- COMBATANTS AND OTHER PERSONS WITH DISABILITIES ORGANIZATION (RECOPD)

#### ABSTRACT

**T**he purpose of the study was to assess the effect of skills training projects on enhancing the livelihood of Ex-Combatants with disabilities. Previous research has identified that their disabilities have limited their opportunities in life, since Rwanda's public infrastructures and social protection programmes in the past did not give particular provisions for Persons with Disabilities (PWDs). This Research has stopped short of investigating the effect of skills training projects on enhancing the livelihood of Ex-combatants with disabilities. The regular income, access to Education and Access to Health Services for Ex-Combatants with disabilities were examined in order to measure the effect of Carpentry skills training acquired in vocational training centers (VTCs) or Skills Training Centers (STCs). The Carpentry skills training projects was the independent variable, while livelihoods of Ex-Combatants was the dependent variable. Descriptive statistics and Pearson Correlation was used to analyze the data and draw conclusions. The target population of the study was 49 members of 5 Cooperatives of Ex-Combatants with disabilities. Data from the questionnaires was coded and entered into a computer for analysis using SPSS. The data was described, explained and presented through the use of tables, from which conclusions and recommendations were made. The study could benefit community based project practitioners such as National Council of Persons with Disabilities (NCPD), Rwanda Demobilization and Reintegration Commission (RDRC) by providing specific constructs that can be applied towards improving the current approaches to project planning and management. To the academics, the study formed the basis for research into other areas of livelihood of the community members.

**Keywords:** Ex-Combatants, Skills Training and Livelihood

### ***1.1. Background of the study***

There are persons with disabilities in all parts of the world and all levels of society, and the number of persons with disabilities in the world is growing. However, the evidence base on disability prevalence remains thin and global estimates vary depending on the data source (e.g. Census, survey, etc.) and the definition of disability used. According to estimates based on the World Health Surveys, around 720 million Persons aged 15 and older in the world have difficulties in functioning (WHO, 2011). The WHO survey results also suggest that prevalence rates attain approximately 15% in most countries, with higher rates among vulnerable groups such as the elderly and the poor. Population Censuses, in contrast, tend to provide much lower estimates of disability prevalence (Mbogoni, 2002; Mont, 2007).

Overall, 446,453 persons with disabilities aged 5 and above are living in Rwanda according to the 2012 Census, out of which 221,150 are male and 225,303 are female. The count of persons with disabilities by province reflects the geographical distribution of the population in general, with the largest number being found in the Southern Province (122,319) and the lowest in Kigali City (32,170). For the same reason, the number of persons with disabilities is higher in rural areas than in urban areas.

Access to health care is particularly important for persons with disabilities. 85% of persons with a disability have health insurance, with only a small difference between males (84%) and females (86%). The coverage is slightly lower than among the population without a disability (87%).

The urban areas, Kigali City and the Southern Province present the lowest percentages of Persons with disability who are covered by health insurance. The large majority of insured persons with disabilities are members of the Mutuelle de santé", the public health insurance scheme (95%).

The labour force participation rate (LFPR) of persons with disabilities is, at 56%, lower than that of the population without a disability (75%). Persons facing difficulties learning/concentrating and difficulties speaking have the lowest LFPRs of 43% and 48% respectively. Self-employment is more common among the population with a disability (77% of the currently employed) than among currently employed persons without a disability (68%). Also, 13% are employees compared to 18% among the population without a disability.

The main occupation and the main industry among employed persons with disabilities is agriculture, forestry or fishing. It should be noted that discrepancies between persons with and without disabilities are partly due to the age structure, as a larger proportion of the elderly work in self-employment and agriculture.

Improving vocational training and employment opportunities for Persons with disability is a critical element for enhancing the quality of life for individual with disability, their families, but there are also substantial gains for the broader economy. There are substantial costs to individuals and to society associated with these poor employment outcomes for Persons with disability. The World Bank considers that leaving Persons with disability, outside the economy, translates into a foregone Glowf Development Plan (GDP) of about 5% to 7%. In addition to the individual and family benefits, there is also a strong economic imperative to increased labour force participation which will help to address country's shortage of skilled labour force, while at the same time reducing fiscal pressures associated with welfare dependency.

### *1.2. Problem Statement*

The 1994 Genocide has left Rwanda with many PWDs, including ex-combatants and civilians. Their disabilities have limited their opportunities in life, since Rwanda's public infrastructures and social protection programmes in the past did not give particular provisions for PWDs.

Mainstream training of Persons with Disabilities (PWDs) becomes pertinent to empower them with the relevant skills needed to enter into the open labor market and participate in the wider society as well as to challenge society in dealing with stereo-types that lead to the exclusion of Persons with impairments.

Japan International Cooperation Agency (JICA) helped the Government of Rwanda through Rwanda Demobilization and Reintegration Commission (RDRC) and Rwanda Ex-Combatant and other Persons with Disabilities Organization (RECOPD) in contributing to the reintegration of Ex-Combatants with Disabilities through skills training Projects and construction of barrier free in some Skills Training Centers (STCs) from December 2005 to December 2008, where 1023 Ex-Combatants with disabilities benefited in the program.

Though there exist various programmes initiated by government and corporate organisation for improving the skills levels of the general work force, little attention has been given to the benefit of empowerment of Ex-Combatants with disability. Some who have acquired vocational training are equipped with more skills and others are not equipped with the right entrepreneurship skills required to enhance competitiveness for decent employment, job creation, social inclusion and poverty reduction.

After acquiring those skills, they formed cooperatives themselves and JICA provided the Start up kits and started applying those skills through Carpentry project. They are earning some income, but others disappeared with the given start up kits and they are surviving only waiting assistance from the government (Executive Director/RECOPD and Report).

This study has showed that there is effect of skills acquired in the VTC because now they can pay schools fees for their children, health expenses and well as improving the way of living. So based on our results, we can encourage the ones who disappeared to join others cooperative instead of waiting the assistance from the government.

### *1.3. Objectives of the study*

The main objective of the study was to establish the effect of skills training Projects on enhancing the livelihood of Ex-Combatant with Disabilities.

#### **The specific objectives were:**

- I. Determine the effect of Mechanical skills in Carpentry to the livelihood of Ex-Combatant with Disabilities in the Community.
- II. Assess the effect of Math skills in Carpentry to the livelihood of Ex-Combatant with Disabilities in the Community.
- III. Establish effect of Critical Thinking skills in Carpentry to the livelihood of Ex-Combatant with Disabilities in the Community.

### *1.4. Research questions*

The following research questions guided the study:

- I. How do Mechanical skills contribute to the livelihood of Ex-Combatant with Disabilities in the Community?
- II. Do Math skills contribute to access to the livelihood of Ex-Combatant with Disabilities in the Community?
- III. Is there any contribution of Critical Thinking skills to the livelihood of Ex-Combatant with Disabilities in the Community?

### *1.5. Significance of the study*

The study sought to determine the effect of skills training project on enhancing the livelihood of Ex-Combatant with Disabilities.

Persons with disabilities (PWDs) are often excluded from equitable access to education, health, job opportunities. Vocational trainings for PWDs support their economic independence but also integration to the society and a recovery of self-worth of PWDs.

“Disability and Development” has gained an international attention, however there remains an evidence gap in the effectiveness of vocational trainings for PWDs.

The results from the study could benefit community based project practitioners such as NCPD, RDRC by providing specific constructs that can be applied towards improving the current approaches to project planning and management.

To the academics, the study formed the basis for research into other areas of disability for future researchers by providing practical evidence and experiences in management of project on the rights of Persons with disabilities and Community development projects.

## **2. LITERATURE REVIEW**

### *2.1. Introduction*

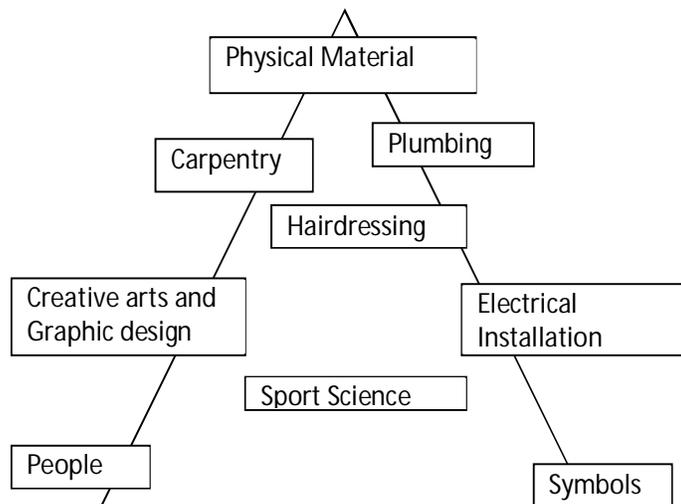
The following literature review provided a foundation for the study on effect of Skills Training Projects on enhancing the livelihood of Ex-Combatant with Disabilities. It focuses in detail on Social Participation, income status, Access to Health Care and Access to education of their children as factors that will show us that there is a big effect of Skills Training Projects to the livelihood of Ex-Combatant with Disabilities. In the empirical and theoretical review an insight into previous studies on Livelihood of Ex-Combatants with Disabilities and contribution or importance of Carpentry skills training Projects to Persons with Disabilities. Finally, a summary of the research gaps and conceptual framework of the dependent and independent variable closed this review. Earlier studies have added some knowledge to this field, but this study aimed to extend the knowledge by investigating the stated questions.

### *2.2. Theoretical Framework*

Several theories and models have been created to help understand disability as well as their participation in society. This thesis brings out three major theories of skills training and their relevant concepts which are Theory of Vocational Pedagogy, Skill Theory and Cognitive Theory.

#### **2.2.1. Theory of Vocational Pedagogy**

The Theory sets out the different types of vocational education, the outcomes of vocational education, and effective ways of teaching vocational education. The report highlights the need for a theory of vocational pedagogy, to provide a clear framework for understanding and appreciating vocational education.



The evidence is clear that vocational education needs to be taught in the context of practical problem-solving. The best vocational learning is broadly hands-on, practical, experiential, real-world as well as, and often at the same time as, something which involves feedback, questioning, application and reflection and, when required, theoretical models and explanations.

In considering the outcomes of vocational education, the research identifies six clear outcomes that fulfill the overall goal of developing working competence. According to Bill Lucas, Ellen Spencer and Guy Claxton (2012), how to teach vocational education: A theory of vocational

### 2.2.2. Skill Theory

KURT FISCHER'S skill theory provides a lifespan view of cognitive development. Fischer and his colleagues have described a progression of cognitive complexity in the ways people think and reason. The theory includes seven developmental levels that emerge between ages two and thirty and are clustered into two overlapping tiers. The representational tier focuses on individuals' ability to manipulate concrete representations, objects, people, or events; the abstract tier focuses on individuals' ability to integrate, manipulate, and reason using abstract concepts.

In skill theory, two levels of performance, the functional level and the optimal level, define each individual's range of development and skill ability. The functional level represents a student's typical or everyday performance, while the optimal level represents his or her best performance under ideal conditions. Kurt Fischer note, "When people find themselves in a new situation, they can maintain the higher levels of thinking complexity that they can use in familiar domains. They efficiently adjust the complexity of their thinking to the point where what they do in the new situation matches the complexity of the way they can think about the new situation". Using Skill Theory to Recognize How Students Build and Rebuild Understanding,( Kurt F, 2006).

### 2.2.3. Cognitive theory

The essence of our theory is that critical thinking skill is exemplified by asking questions about alternative possibilities in order to achieve some objective. Asking and answering questions is a skill of dialogue. Alternative possibilities are represented by mental models. A process of questioning mental models is adopted because of its reliability for achieving the purposes of the participants within the available time.

Thus, the theory of critical thinking draws on and synthesizes research on three separate topics: cognitive theories of reasoning according to which alternative possible situations are represented by mental models;

Johnson-Laird (1983; Johnson-Laird & Byrne, 1991) cites evidence that humans reason not (or not only) in terms of syntactic formal patterns but in terms of *meaning*. Comprehending an assertion includes understanding what possible states of affairs are compatible with the assertion and which are excluded (Johnson-Laird & Byrne, 1991). *Inference* is in large part a process for comprehending multiple assertions, that is, for determining what states of affairs are consistent with several different assertions.

Reasoning may be circular if carried on long enough, but coherentists deny that justification is circular because they reject the foundationalist equation of justification with reasoning. Justification is not directly transferred from one belief to another by a linear series of arguments (Day, 1989).

### *2.3. Empirical Review*

#### *2.3.1. Regularity Income*

The basis for the measurement of income from self-employment is almost always the SNA's concept of mixed income from the unincorporated enterprise. Mixed income consists of the value of gross output less operating costs and after adjustment for depreciation of assets used in production (ILO, 1998b; Canberra Group, 2001; ABS,1995). Gross output is total production for market, for use as benefits in kind and for own consumption. It includes any subsidies received. Operating costs are the sum of employee compensation, cost of raw materials, maintenance of equipment, vehicles, etc., cost of utilities, indirect taxes, interest paid and rent paid.

Depreciation is the reduction in the value of the capital (e.g. machinery, facilities) used in the production. Sometimes also referred to as profit/loss from the unincorporated enterprise, the concept of mixed income includes income from goods and services produced for barter as well as the estimated value of goods produced for own consumption less expenses.

The two-way link between poverty and disability creates a vicious circle. Poor Persons are more at risk of acquiring a disability because of lack of access to good nutrition, health care, sanitation, as well as safe living and working conditions. Once this occurs, Persons face barriers to the education, employment, and public services that can help them escape poverty.

#### *2.3.2. Access to Healthcare*

A recent Henry J. Kaiser Family Foundation survey (2004) found that a majority (82%) of those surveyed thought that persons with disabilities overall have "better lives today than they had 50 years ago"; however, almost two thirds believed that at least some discrimination continues against persons with disabilities. Around 40 percent believed that the health care system treats persons with physical disabilities unfairly. The survey also found that over half (58%) of all Persons surveyed had read, seen, or heard about the Americans with Disabilities Act of 1990 (ADA). When told the specific content, an overwhelming majority said they supported its key provisions. Large majorities indicated support for health reforms to benefit persons with disabilities.

Frequently, health care providers do not recognize individuals with disabilities as either knowledgeable partners in discussing care options or as "experts" with respect to their own medical conditions.

In some cases, persons with disabilities believe they do not receive sufficient information from their health care providers most often primary care providers to play an informed role in their own health care decisions (Masuda 1999). In other cases, effective communication is frustrated due to the limited availability of assistive supports, such as the use of interpreters for persons who are deaf or hard of hearing. In still other cases, persons with disabilities are excluded from discussions about their health issues altogether, by being treated in much the same way as children are excluded from the conversation between pediatrician and concerned parent (Iezzoni 2003; Welner and Haseltine 2004).

Significance data suggest that persons with disabilities do not participate in wellness programs or health screening activities at the same level as do persons without disabilities. For example, Healthy Persons 2010 has indicated that, while 68 percent of women who are older than 40 years of age and who do not have disabilities have had a mammogram, the percentage drops to 54 percent among women with disabilities (U.S. Department of Health and Human Services 2000).

### 2.3.3. Access to Education

In the UK the simple correlation between worse education attainment and low income has been long established.

More recently evidence has emerged that low income does have an independent effect on children's outcomes after controlling for key aspects of family background and child ability (see Gregg and Machin, 2000, and Hobcraft, 1998).

First we look at the relationship between education and family income in repeated cross-section data from the Family Expenditure Survey between 1979 and 2000, a period of rising income inequality, and also one where various government tax changes altered family income levels.

### 2.3.4. Mechanical Skills

Carpenters work with several varieties of tools and machines, they need effective mechanical skills. Equipment for carpenters includes extension ladders, electronic and laser levels and handheld rotary tools such as power sanders. Power saws and framing squares are also part of the tool lineup. Carpenters must know how to use their gear to shape or cut materials to specified dimensions.

### 2.3.5. Math Skills

Carpenters often use formulas and math when carrying out carpentry jobs such as roofing, to check a building is square and to calculate the length of rafters etc. When designing/building and fitting staircases formulas are used to ensure the treads and risers are the right size and comply with local building codes. Other carpentry math is used when checking if things like stud walls are perfectly 'square' for example, along with many other day to day carpentry tasks.

### 2.3.6. Critical Thinking Skills

Scheffer and Rubinfeld discuss critical thinking habits and critical thinking skills. For each of the critical thinking skills shown below, they give a number of activity statements.

### 2.5. Conceptual Framework

The conceptual framework of the study is as shown in figure 1.1. The model shows the three dimensions of regular income, Access to Healthcare, Access to Education as the dependent variables. These dimensions of livelihood have been selected because they have been identified as those likely to show us that household headed by Ex-Combatant with disabilities has developed socio-economically. Carpentry Skills training Projects (Mechanical Skills, Math Skills and Critical Thinking Skills) are independent variable.

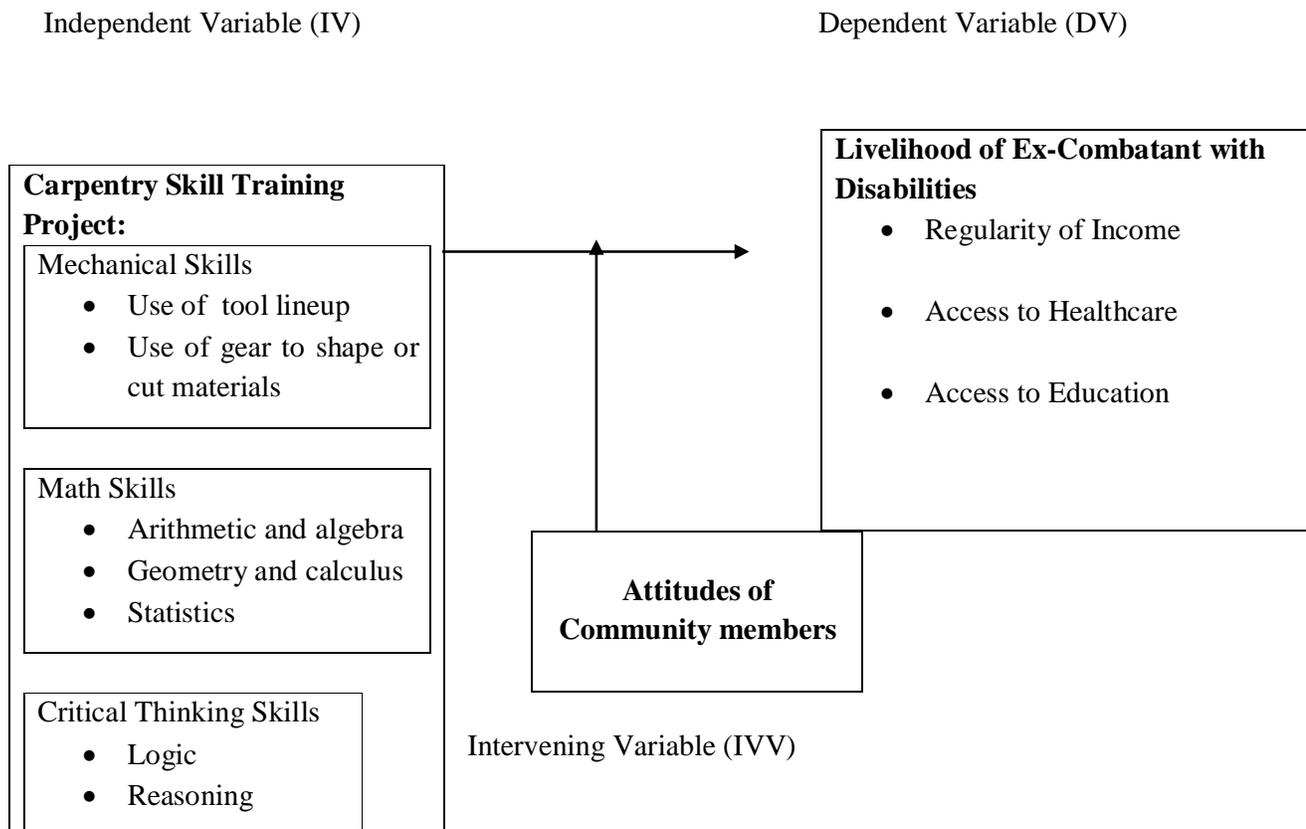


Figure5: Conceptual Framework

Source: Researchers Conceptualization.

### 3. RESEARCH METHODOLOGY

#### 3.1. Introduction

Chapters I and II reviewed importance of skills training Projects and how it improve the livelihood of Persons with disabilities especially Ex-Combatant with disabilities. A person’s disability can have a large influence on the vocational options open to them. In many cases person with disability may be capable of particular vocational training if adequate support facilities are available.

It is estimated that 79 per cent of Persons with disability are unemployed. According to Dr. Arthur O’Reilly, Chief Executive of Africa Rehabilitation Institute (ARI), “300000 Persons with disability have become this country’s most isolated, unemployed and welfare dependent minority”.

For ex-combatants with disabilities, effective vocational training presents a second chance at a string of missed opportunities; a window to be self-sufficient and provide for their families; it is a chance to begin to shed the negative aspects of the combatant identity for good.

This chapter gives a detailed outline of how the study was carried out. It describes the research design, the target population, the sample and sampling procedure, data collection and data analysis procedure.

#### 3.2. Research Design

Descriptive research design was used. Kothari (2003) recommends descriptive design as it allows the researcher to describe, record, analyse and report conditions that exist or existed.

The existing conditions were answered through the three research questions of the study by identifying if a relationship existed between the independent and dependent variables.

#### 3.3. Target Population

The target population of the study was Ex-Combatant with Disabilities in the following cooperatives: Tuzamurane, CPM Mitobo, Twitezimbere, Kundumurimo, Twikuremubukene in Musanze district, five sectors (Kinigi, Cyuve, Gataraga, Nkotsi and Nyange). The targeted population was 49 Information will also be gathered from RECOPD as the implementing partner of the project.

Research was carried out in 1 district where Ex-Combatants with disabilities have been formed cooperatives after skills training project.

Target Population		Total Population	Sample Size universal sampling
Ex-Combatant with Disabilities in 1 District:	Musanze	Tuzamurane	8
		CPM Mitobo	12
		Kundumurimo	10
		Twikuremubukene	9
		Twitezimbere	10
<b>Total</b>		49	49

#### 3.4. Sample procedure and sample size

Sekeran, (1999) defines a sample as a portion of the population that has attributes as the entire population. This definition relates to the fact of starting from a limited number of elements to draw the conclusions applicable to the unit in which were drawn.

In this study, the universal sampling technique was used for selecting 49 members of cooperatives from RECOPT. Therefore, sample size of this study was 49 members of cooperatives from RECOPT.

### 3.5. Research Instruments

The Instruments consisted of three sections:

**Questionnaire:** The Questionnaire distributed to member of the cooperatives (Ex-Combatants with Disabilities).

### 3.6. Data Collection Method

Data collection was done through questionnaires personally distributed to respondents.

A cover letter was attached explaining the purpose of the study, assuring the Persons confidentiality and provided instructions on how to complete the questionnaire.

The questionnaire contained open-ended questions on the livelihood of Ex-Combatants disabilities through skills training project.

## 4. RESULTS AND DISCUSSION

### 4.0. Introduction

This chapter described the presentation and analysis of data and information collected within the questionnaire administered to the members of 5 cooperatives of Ex-Combatants with disabilities as recorded in its statistics. The information from field survey was critically analyzed in this chapter.

### 4.2. The effect of Mechanical skills in Carpentry to the livelihood of Ex-Combatants with Disabilities in the Community

This section describes the level of mechanical skills in Carpentry effect the Livelihood of Ex-Combatants with Disabilities in the Community.

**Table 232: Level mechanical skills in Carpentry affect the Livelihood of Ex-Combatants with Disabilities in the Community**

	Frequency	Percent	Cumulative Percent
High	12	24.5	24.5
Moderate	33	67.3	91.8
Low	4	8.2	100
<b>Total</b>	<b>49</b>	<b>100</b>	

According to the information from table 2, mechanical skills in Carpentry affect the Livelihood of Ex-Combatants with Disabilities in the Community at moderate level according to 67.3% of all respondents. Mechanical skills in Carpentry affect the Livelihood of Ex-Combatants with Disabilities in the Community at high level according to 24.5% of all respondents while 8.2% of all respondents reported that mechanical skills in Carpentry affect the Livelihood of Ex-Combatants with Disabilities in the Community at low level. Hence, mechanical skills in Carpentry affect the Livelihood of Ex-Combatants with Disabilities in the Community especially the members of 5 cooperatives of Ex-Combatants with disabilities at moderate level.

**Table 333: Respondents’ view on whether members of 5 cooperatives of Ex-Combatants with disabilities are using the Mechanical skills received during reintegration**

	Frequency	Percent	Cumulative Percent
Yes	41	83.7	83.7
No	8	16.3	100.0
<b>Total</b>	<b>49</b>	<b>100</b>	

According to the information from table 3, the members of 5 cooperatives of Ex-Combatants with disabilities are using the Mechanical skills received during reintegration as it was agreed by 83.7 % of respondents while 16.3% were not agree with the statements.

Hence, the members of 5 cooperatives of Ex-Combatants with disabilities are using the Mechanical skills received during reintegration in their daily activities. For furthermore understanding the use of mechanical skills received during reintegration, the respondents who reported negatively the above statement were asked to highlight whether the members of 5 cooperatives of Ex-Combatants with disabilities have ever used it. Their views are presented in table below.

**Table 434: Respondents’ view on whether members of 5 cooperatives of Ex-Combatants with disabilities have ever used the Mechanical skills received during reintegration**

	Frequency	Percent	Cumulative Percent
Yes	49	100.0	100.0
No	0.0	0.0	0.0
<b>Total</b>	<b>49</b>	<b>100</b>	

According to the information from table 4, the members of 5 cooperatives of Ex-Combatants with disabilities have ever used the mechanical skills received in education and training during reintegration as it was agreed by 100.0% of all respondents. Hence, the members of 5 cooperatives of Ex-Combatants with disabilities have used the Mechanical skills received during reintegration in their daily activities.

**Table 535: Respondents’ view on whether mechanical skills acquired helps the members of 5 cooperatives of Ex-Combatants with disabilities to generate income**

	Frequency	Percent	Cumulative Percent
Yes	45	91.8	91.8
No	4	8.2	100.0
<b>Total</b>	<b>49</b>	<b>100</b>	

According to the information from table 5, mechanical skills acquired helps the members of 5 cooperatives of Ex-Combatants with disabilities to generate income as it was agreed by 91.8% of all respondents. While 8.2 % reported negatively about the statement with was mechanical skills acquired helps the members of 5 cooperatives of Ex-Combatants with disabilities to generate income.

Those reported negatively about the statement reported that, they did not have the materials where they can apply their skills like machine. Hence, the members of 5 cooperatives of Ex-Combatants with disabilities are using the mechanical skills to generate their income

**Table 636: Respondents’ view on whether the members of 5 cooperatives of Ex-Combatants with disabilities observe improvement in their livelihood**

	Frequency	Percent	Cumulative Percent
Yes	40	81.6	81.6
No	9	18.4	100.0
<b>Total</b>	<b>49</b>	<b>100</b>	

According to the information from table 6, the members of 5 cooperatives of Ex-Combatants with disabilities observe improvement in their livelihood since completed carpentry training as it was agreed by 81.6% of all respondents. While 18.4 % of all respondents reported negatively about the statement. Those reported negatively about whether the members of 5 cooperatives of Ex-Combatants with disabilities observe improvement in their livelihood, they didn’t get the materials to use related skills got in training. Hence, the members of 5 cooperatives of Ex-Combatants with disabilities observe improvement in their livelihood

**4.2.1. Correlation between mechanical skills in carpentry and livelihood of ex-combatants with disabilities in the community**

This sections describes the correlation between mechanical skills in carpentry and livelihood of ex-combatants with disabilities in the community

**Table 7: Correlation between mechanical skills in carpentry and livelihood of ex-combatants with disabilities in the community**

Mechanical skills in carpentry		Mechanical skills in carpentry	Livelihood of ex-combatants with disabilities in the community
	Pearson Correlation	1	.892**
	Sig. (2-tailed)		.021
	N	49	49
Livelihood of ex-combatants with disabilities in the community	Pearson Correlation	.892**	1
	Sig. (2-tailed)	.021	
	N	49	49

Table 7 reveals that, the correlation between mechanical skills in carpentry and livelihood of ex-combatants with disabilities in the community was at the rate of 0.892 means that mechanical skills in carpentry influence livelihood of ex-combatants with disabilities in the community at the level of 89.2%. There is high correlation between mechanical skills in carpentry and livelihood of ex-combatants with disabilities in the community because all members of 5 cooperatives have acquired math skills in carpentry and livelihood of ex-combatants as also the level of livelihood of ex-combatants with disabilities in the community is at high level. Hence there is the effect of mechanical skills in carpentry on livelihood of ex-combatants with disabilities in the community

#### 4.3. *The effect of Math skills in Carpentry to the livelihood of Ex-Combatants with Disabilities in the Community*

This section describes the level of math skills in Carpentry effect the Livelihood of Ex-Combatants with Disabilities in the Community especially those who are the members of 5 cooperatives of Ex-Combatants with disabilities.

**Table 837: Respondent 'views on whether members of 5 cooperatives of Ex-Combatants with disabilities have acquired Math skills used in Carpentry**

	Frequency	Percent	Cumulative Percent
Yes	49	100.0	100.0
No	0	0	0.0
<b>Total</b>	<b>49</b>	<b>100</b>	

According to the information from table 8, all members of 5 cooperatives of Ex-Combatants with disabilities have acquired math skills used in carpentry as it is indicated by 100.0 % of all respondents. Hence, respondents were asked to highlight the level of math skills in Carpentry affect the Livelihood of Ex-Combatants with Disabilities in the Community, there is presented in table below.

**Table 938: Level of math skills in Carpentry effect the Livelihood of Ex-Combatants with Disabilities in the Community**

	Frequency	Percent	Cumulative Percent
High	31	63.3	63.3
Moderate	16	32.6	96.9
Low	2	4.1	100
<b>Total</b>	<b>49</b>	<b>100</b>	

According to the information from table 9, math skills in Carpentry affects the Livelihood of Ex-Combatants with Disabilities in the Community at high level according to 63.3% of all respondents. Math skills in Carpentry affect the Livelihood of Ex-Combatants with Disabilities in the Community at moderate level according to 32.6% of all respondents while 4.1% of all respondents reported that math skills in Carpentry

affect the Livelihood of Ex-Combatants with Disabilities in the Community at low level.

Hence, math skills in Carpentry affect the Livelihood of Ex-Combatants with Disabilities in the Community especially the members of 5 cooperatives of Ex-Combatants with disabilities at high level. After knowing the level of math skills in Carpentry effect the Livelihood of Ex-Combatants with Disabilities in the Community, respondents were asked to highlight how they value the math skills acquired in your carpentry training. Their views are presented in table below.

**Table 1039: Respondents' view on how members of 5 cooperatives of Ex-Combatants with disabilities value the math skills acquired in carpentry training**

	Frequency	Percent	Cumulative Percent
High	19	38.8	38.8
Moderate	28	57.1	95.9
Low	2	4.1	100.0
<b>Total</b>	<b>49</b>	<b>100</b>	

According to the information from table 10, members of 5 cooperatives of Ex-Combatants with disabilities value the math skills acquired in carpentry training at moderates level according to 57.1% of all respondents, members of 5 cooperatives of Ex-Combatants with disabilities value the math skills acquired in carpentry training at high level according to 38.8% of all respondents while 4.1% of all respondents reported that members of 5 cooperatives of Ex-Combatants with disabilities value the math skills acquired in carpentry training at low level. Thus, members of cooperative from RECODPD value the math skills acquired in carpentry training at high. Moreover, respondents' were asked to highlight whether math skills acquired during the training increases the quality of your work, their view is represented table

**Table 1140: Respondents' view on whether math skills acquired during the training increases the quality of work**

	Frequency	Percent	Cumulative Percent
Yes	42	85.7	85.7
No	7	14.3	100.0
<b>Total</b>	<b>49</b>	<b>100</b>	

According to the information from table 11, a big number members of 5 cooperatives of Ex-Combatants with disabilities reported that math skills acquired during the training increases the quality of their work as it is indicated by 85.7 % of all respondents, while 14.5% of all respondents reported negatively about the statement.

Those reported negatively were agreeing that they don't have all materials necessary to use in their daily activities. Furthermore, the respondents were asked to highlight whether the members of 5 cooperatives of Ex-Combatants with disabilities can cover health care expense for all the member of family. Respondents 'view is described in table below.

**Table 1241: Work of members of 5 cooperatives of Ex-Combatants with disabilities can cover health care expenses for all the member of family**

	Frequency	Percent	Cumulative Percent
Yes	43	87.75	87.75
No	6	12.23	100.0
<b>Total</b>	<b>49</b>	<b>100</b>	

According to the information from table 12, the 87.75% of all respondents agreed that work of the members of 5 cooperatives of Ex-Combatants with disabilities can cover health care expenses for all the member of family while 12.23 % reported negatively about the statement.

Work of members of 5 cooperatives of Ex-Combatants with disabilities can cover health care expenses for all their family members. Hence the researcher asked the respondents their insurance used to ensure access to health care. Their view is described in the table below.

**Table 1342: The method/insurance used by members of 5 cooperatives of Ex-Combatants with disabilities to cover health care expenses for all the member of family**

	Frequency	Percent	Cumulative Percent
Community based insurance scheme	45	91.8	91.8
Private insurance	2	4.1	95.9
None above	2	4.1	100.0
<b>Total</b>	<b>49</b>	<b>100</b>	

According to the information from table 13, the 91.8% of all respondents reported that, members of 5 cooperatives of Ex-Combatants with disabilities used community based insurance scheme to cover health care expenses for all the member of family, 4.1 % of all respondent reported that members of 5 cooperatives used private insurance to cover health care expenses for all the member of family while 4.1% of all respondents reported that members of 5 cooperatives of Ex-Combatants with disabilities have no insurance to cover health care expenses for all the member of family. This means members of 5 cooperatives of Ex-Combatants with disabilities used community based insurance scheme, private insurance to cover health care expenses for all the member of family.

#### **4.3.1. Correlation between math skills in carpentry and livelihood of ex-combatants with disabilities in the community**

This section described the correlation between math skills in carpentry and livelihood of ex-combatants with disabilities in the community.

**Table 14: Correlation between Math skills in Carpentry to the livelihood of Ex-Combatants with Disabilities in the Community**

Math skills in carpentry		Math skills in carpentry	Livelihood of ex-combatants with disabilities in the community
	Pearson Correlation	1	.782**
	Sig. (2-tailed)		.033
	N	49	49
Livelihood of ex-combatants with disabilities in the community	Pearson Correlation	.782**	1
	Sig. (2-tailed)	.033	49
	N	49	

Table 14 reveals that, the correlation between math skills in carpentry and livelihood of ex-combatants with disabilities in the community was at the rate of 0.782 means that math skills in carpentry influence livelihood of ex-combatants with disabilities in the community at the level of 78.2%. There is high correlation between math skills in carpentry and livelihood of ex-combatants with disabilities in the community because all members of cooperatives have acquired math skills in carpentry and livelihood of ex-combatants as also the level of livelihood of ex-combatants with disabilities in the community is at high level. Hence there is the effect of math skills in carpentry on livelihood of ex-combatants with disabilities in the community.

#### 4.4. Effect of critical thinking skills in carpentry to the livelihood of Ex-Combatants with Disabilities in the community

This section describes the level of the effect of critical thinking skills in carpentry to the livelihood of Ex-Combatants with Disabilities in the community.

**Table 1543: level of the effect of critical thinking skills in carpentry to the livelihood of Ex-Combatants with Disabilities in the community**

	Frequency	Percent	Cumulative Percent
High	29	59.2	59.2
Moderate	18	36.7	95.9
Low	2	4.1	100.0
<b>Total</b>	<b>49</b>	<b>100</b>	

According to the information from table 15, critical thinking skills in Carpentry affect the Livelihood of Ex-Combatants with Disabilities in the Community at high level according to 59.2% of all respondents. Critical thinking skills in Carpentry affect the Livelihood of Ex-Combatants with Disabilities in the Community at high level according to 36.7% of all respondents while 4.1% of all respondents reported that critical thinking

skills in Carpentry affect the Livelihood of Ex-Combatants with Disabilities in the Community at low level. Hence, critical thinking skills in Carpentry affect the Livelihood of Ex-Combatants with Disabilities in the Community especially the members of cooperatives from RECOPD at high level.

**Table 1644: Respondents 'view on whether Critical thinking skills increase the quality of their work**

	Frequency	Percentage	Cumulative percentage
Yes	49	100.0	100.0
No	0	0	0.0
<b>Total</b>	<b>49</b>	<b>100</b>	

According to the information from table 16, the 100.0% of all respondents proved that Critical thinking skills increase the quality of their work.

Thus, all members of 5 cooperatives of Ex-Combatants with disabilities were agreeing with that Critical thinking skills increase the quality of their work. Hence, respondents were asked whether critical thinking skills generate their monthly income. The perception of respondents on whether critical thinking skills generate their monthly income is presented in table below.

**Table 1645: Respondents 'view on whether Critical Thinking skills increase the way of generating their monthly income**

	Frequency	Percentage	Cumulative percentage
Yes	49	100.0	100.0
No	0	0	0.0
<b>Total</b>	<b>49</b>	<b>100</b>	

According to the information from table 16, all respondents reported that critical thinking skills increase the way of generating the monthly income. This shows the significance effect of critical thinking skills on livelihood of Ex-combatants with disabilities.

**Table 1746: Respondents 'view on whether Critical thinking skills provide to purchase health insurance of their family members**

	Frequency	Percentage	Cumulative percentage
Yes	45	91.8	91.8
No	4	8.2	100.0
<b>Total</b>	<b>49</b>	<b>100</b>	

According to the information from table 17, critical thinking skills provide to purchase health insurance of their family member according to the 91.8% of all respondents while 8.2 % of all respondents reported that critical thinking skills do not provide to purchase health insurance of their family member, those are the members of 5 cooperatives of Ex-Combatants with disabilities who have no insurance.

#### 4.4.1. Correlation between Critical skills in carpentry and livelihood of ex-combatants with disabilities in the community

This section describes the correlation between Critical skills in carpentry and livelihood of ex-combatants with disabilities in the community.

**Table 18: Correlation between Critical thinking skills in Carpentry to the livelihood of Ex-Combatants with Disabilities in the Community**

Thinking skills in carpentry		Critical Thinking skills in carpentry	Livelihood of ex-combatants with disabilities in the community
	Pearson Correlation	1	.913**
	Sig. (2-tailed)		.003
	N	49	49
Livelihood of ex-combatants with disabilities in the community	Pearson Correlation	.913**	1
	Sig. (2-tailed)	.003	
	N	49	49

Table 18 reveals that, the correlation between thinking skills in carpentry and livelihood of ex-combatants with disabilities in the community was at the rate of 0.913 means that thinking skills in carpentry influence livelihood of ex-combatants with disabilities in the community at the level of 91.3%. There is high correlation between thinking skills in carpentry and livelihood of ex-combatants with disabilities in the community because all members of cooperatives have acquired math skills in carpentry and livelihood of ex-combatants as also the level of livelihood of ex-combatants with disabilities in the community is at high level. Hence there is the effect of thinking skills in carpentry on livelihood of ex-combatants with disabilities in the community.

#### 5.3. Conclusion

By concluding, mechanical skills in Carpentry affect the Livelihood of Ex-Combatants with disabilities in the Community especially the members of 5 cooperatives of Ex-Combatants with disabilities at moderate level. The members of 5 cooperatives of Ex-Combatants with disabilities are using the Mechanical skills received during reintegration in their daily activities. The members of 5 cooperatives of Ex-Combatants with disabilities observe improvement in their livelihood.

Math skills in Carpentry affect the Livelihood of Ex-Combatants with Disabilities in the Community especially the members of 5 cooperatives of Ex-Combatants with disabilities at high level. The members of 5 cooperatives of Ex-Combatants with disabilities used community based insurance scheme, private insurance to cover health care expenses for all the member of family. Critical thinking skills increase the quality of members of 5 cooperatives of Ex-Combatants with disabilities work, critical thinking skills in Carpentry affect the Livelihood of Ex-Combatants with Disabilities in the Community especially the members of 5 cooperatives of Ex-Combatants with disabilities at high level. Furthermore, there is an effect of skills training Project on enhancing the livelihood of ex-combatants with disabilities.

#### 5.4. Recommendations

Following the analysis of the study, the researcher came up with the following recommendations.

- ECOPD project should make sure that all materials needed for members of cooperatives' from RECOPD in their daily activities are available.
- RECOPD must ensure that all cooperatives are function in good manner by using the regulation and policy of cooperative in Rwanda

#### **Recommendation to areas for further research**

Based on the findings of this study, the researcher suggests that future researches should be carried out in the area of:

- The challenges faced by people with disabilities in running small business in Rwanda
- The analysis on the contribution of cooperatives of people with disabilities on development of Rwanda

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