

# KILIMANJARO VET



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## Teaching of entrepreneurship skills in Moshi (Tanzania) area VET colleges

Field study report

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## Abstract

This study, undertaken by Kuressaare Ametikool's team from December 10th to 16th, 2023, explores Vocational Education and Training (VET) in Moshi, Tanzania, focusing on integrating entrepreneurship into the curriculum.

Through qualitative surveys, including focus group interviews with teachers and students across three VET colleges (Moshi RVTSC, Mawella VTC, Hai VTC), and in-depth interviews, the research aimed to tailor entrepreneurship materials and a trainer's course to the Tanzanian educational context.

The findings reveal entrepreneurship as a vital, though recently integrated, subject within the VET curriculum, emphasizing its importance for bridging the gap between vocational skills and market demands.

Despite the well-structured curriculum and practical attachments to industries, challenges such as large class sizes, language barriers, and insufficient ICT resources persist.

Teachers, while eager and knowledgeable, struggle with these constraints, impacting the delivery of entrepreneurial education. The study underscores the necessity of practical learning enhancements, improved ICT infrastructure, and pedagogical support to foster entrepreneurial skills effectively.

These insights contribute to designing relevant training programs, addressing educational and infrastructural barriers, and enhancing the entrepreneurial capacity of Tanzanian VET students.

The suggestions derived from the field study offer strategies to bridge the gap between current educational practices and the evolving demands of the workforce in Tanzania.

These proposals emphasize curricular flexibility, practical application of skills, effective classroom management, resourcefulness, interdisciplinary integration, and digital literacy.

This report, recognized by European and Tanzanian partners of the Kilimanjaro VET project, sets a foundational framework for forthcoming project activities, demonstrating a shared commitment to enhancing VET in Moshi area through targeted initiatives in entrepreneurship studies.

## Overview and Methodology

The team of Kuressaare Ametikool conducted field study in three Moshi area VET colleges as part of the Kilimanjaro VET capacity building project kick-off meeting from 10th to 16th of December 2023.

### 1.1 Goal

The goal of the field study was to improve understanding of VET education at Moshi area to design entrepreneurship materials and train the trainers course (*Work Package 4 - Entrepreneurial Skills*) that meet the needs of Tanzanian partners and are realistic, achievable and consider the local school culture and habits.

### 1.2. Method

Field study was conducted by using qualitative survey methods:

1. 3 focus group interviews with teachers.
2. 2 focus group with interviews students.
3. 2 In-depth interviews with teachers.
4. 1 In-depth interview with an alumnus.

Teachers and students were from three VET colleges:

- Moshi RVTSC
- Mawella VTC
- Hai VTC

In addition to interviews some extra insights were gathered during informal discussions with teachers, managers, principals and other locals in Moshi area.

The interviews were recorded (only audio), transcribed automatically using AI.

Summaries were created from the transcripts using AI (ChatGPT). Based on this preparatory work the transcripts and summaries were analysed to prepare the findings and create field study report.

The first draft of the report was shared to the project partners in Finland and Tanzania to gather feedback. The comments were implemented to the final report.

## Findings: Entrepreneurship studies at Moshi area

### 2.1 Entrepreneurship is a subject in curricula

#### Separate subject

Entrepreneurship was not originally part of the vocational education curricula. It was introduced after recognizing the graduates' difficulty in connecting their skills with market demands. Now, it is a compulsory subject. It was said that the curricula is satisfying for the needs:

*“Actually, the syllabus which we are using in entrepreneurship is to present almost everything which students need in entrepreneurship. The arrangement of topics is very good actually. But the issue probably is how these students may apply those entrepreneurial concepts. For example, we teach them how to employ themselves after their graduation. So the issue is they have entrepreneurial skills, but the issue of capital then. To get some capital which will help them to have maybe their own equipment to start their own enterprises, workshops maybe. But for the matter of skills, I think the syllabus has been stipulated very well.”*

Students might have one class of entrepreneurship subject per week that last 1,5-2 hours.

Teachers follow curriculum strictly.

Entrepreneurship subject is supported by practice periods in companies, as explained by one of the teachers:

*“They do have a field attachment, we call. When they are level 2, they go for field 2 months. They use to go there, make it practical and we go there as teachers to assist them, talk with their supervisors, how they do things. It helps us a lot because most of the industries have changed their technology apart of what we are teaching them here. So also they come with new, very new things from there.”*

*“And others when they finish, for example, they are trying to do their own works, like starting their own business, their workshops in the street there.”*

#### Entrepreneurship exams

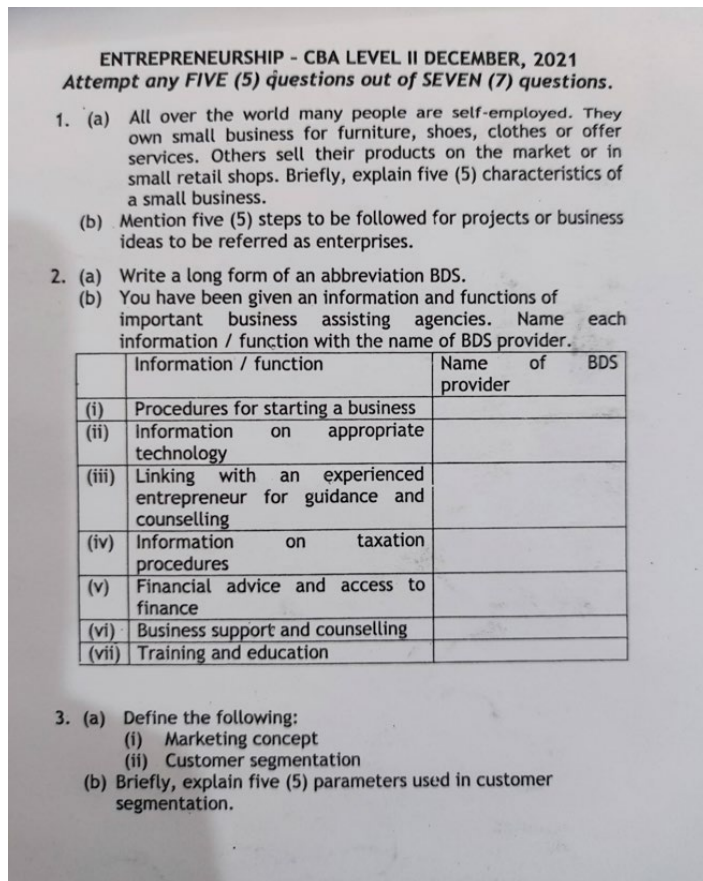
Entrepreneurship is one of the exams that the graduates must take in December when they have two weeks long of period of national exams.

Other exams support also entrepreneurial mindset and skills eg life skills, English etc.

Students must pass a national exam that consists of theoretical closed and open-ended questions.

The questions can be both theoretical and story based.

Here's an example of test that was pictured on Hai Vocational Training College that belongs to the Evangelical Lutheran Church of Tanzania:



## Entrepreneurship teachers

Entrepreneurship teaching is conducted by specific entrepreneurship teachers. Entrepreneurship studies are not very often connected or integrated to other subjects. On several occasions other teachers mentioned that entrepreneurship teaching is the responsibility of entrepreneurship teacher and did they not feel it as their responsibility.

## 2.2. Teachers are eager but have challenges

### Teachers are eager and educated

The teachers who took part of the interviews were motivated in their work and eager to educate their students. Teachers showed knowledge of modern paradigms of teaching like competence-based learning, active learning methods etc. There is a desire to improve current situation:

*“On the side of entrepreneurship, I think what is supposed to be changed is maybe to make it more practical. That what we are teaching, and I say always, they are supposed to practice while they are here at the college. So when they leave the college, they already have enough experience of what they are supposed to do.”*

### Big number of students in a class

One of the most significant challenges teachers face is managing large class sizes. In some cases, classrooms are filled with 60 to 80 students, making it difficult for teachers to provide individual

attention, assess students' understanding effectively and manage classroom dynamics. The sheer number of students limits the feasibility of applying engaging teaching methods and providing personalized support.

Teachers face the challenge of handling large numbers of students, with one teacher responsible for about 800 students.

### Language poses challenges

The language of instruction for VET colleges is English. This is not the first language for most of the students. Teachers reported difficulties in conveying complex concepts in English. The need to translate instruction into the local language, Swahili, and then back to English adds to the complexity, potentially leading to misunderstandings and decreased comprehension among students.

### ICT capabilities are insufficient

The availability of computers and related hardware is limited for the teachers.

Technological and material resources are limited, impacting the quality of education that can be provided. Older computers, insufficient number of projectors, and a lack of other teaching aids hinder the delivery of comprehensive lessons. The scarcity of resources forces teachers to rely on traditional teaching methods, which may not be as engaging or effective for modern vocational education.

Also the number of computers at VET colleges is limited, the students learn how use basic office applications:

*“..is teaching students how to make CV, they are going to you and using computer for making CV.”*

*“Excel, Web, Publisher, Access, PowerPoint and also teaching Internet and email.”*

The availability of internet connection is issue also for teachers:

*“If we have permanent internet, it will help us much to have also upgrade ourselves through internet as well. It is also expensive for our country. So we switch it when we want to learn something, just a little bit of time. So not every time we want to learn something. Just for sometimes”*

The same applies to both personal internet connection via smartphones and internet at workplace. If there is internet connection installed at the teachers' offices, the connection is not always available:

*“Sometimes if there is no budget, we don't access it.”*

### Smartphone usage (BYOD)

As the availability of computers is limited for the students, there is an option to use the principle of using student's own smartphones (Bring Your Own Device, BYOD). This is limited because of the affordability of internet connection bundles:

*“Nowadays they are using their mobile phones. But still we have problems. The bundles. It means students can have a mobile phone but they don't have a bundle for connecting to the internet. For buying a device megabytes.”*

In some VET colleges students are allowed to use smartphones, in others not:

*“In our school they are free. But in other schools they are not allowed. It is strictly prohibited because sometimes they misuse it. But in our school, it is allowed.”*

It was also reported that it is just not school managements who want to restrict smartphone usage in schools because of it might lead to problems, also petty crimes, but the parents who are afraid of porn or other harmful content.

Teachers also said that they allow students to search information on the internet but are not well aware of the possibilities that smartphones offer for teaching and learning:

*“But you see, we as teachers, we also lack this knowledge and awareness that these devices can be very useful for teaching.”*

## Teaching methodology

In Moshi area VET centres, the balance between theoretical and practical learning seems to be more to the theoretical side. The equipment on the workshops varies significantly. Students have 1-2 days per week when they are in workshops. Other days they have theoretical classes.

The same goes for entrepreneurship subject. The field study team could not visit any entrepreneurship classes because of the period of national exams. Still the interviews revealed that there can be many traditional lectures where teacher writes information on the blackboard and students copy it.

Teachers reported also using flip charts:

*“But we are using flip charts. I can prepare the material one day before. Then the day when I am teaching, I put my flip chart aside. Then I give them the flip chart and questions. They try to answer it.”*

Still the teachers are aware of active teaching methods like case studies, role plays, dramas, showing videos, engaging students in discussions:

*“In the facilitation, we divide the class into groups. Then we prepare the questions, after answering them we make a presentation in front of the class. Each group makes a presentation, then at last the teacher gives the correct answers.”*

*“After that I provide the question for them to do in a group and one of them maybe will come forward and present it or I'll just give them the assignment and go to do at their own time. Next time you come with a certain group, I'll pick around on a certain group to come up and present with the deadlines. Because we have libraries, they have smartphones. Sometimes I'm asking them to go into the smartphone like that. And we have computers. So there are people, there are students who are interested in doing those kind of things.”*



*“This business game: sometimes you issue a maybe money and then you make groups. You have groups, maybe group A, B, C and D [...] Then you issue these samples of money and then after that they become maybe traders or maybe they become customers. So, during the game, they will be learning.”*

## 2.3. Students’ interest and motivation varies

### Pedagogical challenges

Teachers face pedagogical challenges, such as engaging students in critical thinking and problem-solving activities. Students often show resistance to active learning strategies like brainstorming, preferring traditional lecture-based approaches.

Here’s a quote to illustrate that:

*“Because most of the time, one of our challenges, our students don't like to brainstorm, to think out much.”*

This resistance limits teachers' ability to foster a more interactive and participatory learning environment, essential for developing practical and entrepreneurial skills.

Teachers mentioned that students enjoy participatory methods, particularly when technology like projectors is used, allowing for more interactive and engaging lessons. Traditional methods like chalk and blackboard are less favoured as they limit student participation and understanding.

### Aspirations are varied

The opinions gathered during the interviews and discussions about the entrepreneurial mentality varied significantly. Students who were interviewed showed keen interest in becoming self-employed, being owners of their own small businesses and providing value to their communities. They understood the role of entrepreneurship for the prosperity of their community and nation.

Here’s an excerpt from one of the students:

*“So when you get education in practice, it means that you can do something with yourself and deliver to other peoples, which will help you to be creative and also to create something that will be beneficial to other persons in the community.”*

On the other hand, the members of field study team had discussions where locals in Moshi area said that many people aren’t entrepreneurial: they tend to wait for others to tell them what to do. Especially at the workplace where employee does not work when the supervisor is not present.

Starting a business involves risks and it was mentioned by teachers:

*“I think most of them lack confidence of doing something. Even if they have knowledge, everyone asks themselves how. They like someone to push, just start. They fear to lose money, they fear to whatever.”*

Looking on the streets of Moshi and neighboring towns and villages there are many people who make living by selling goods on the streets, women with sewing machines etc. Tourists are encountered by local men who try to sell something.

Therefore, the field study team made a conclusion that entrepreneurial spirit is well alive in Moshi area, it just varies significantly like in European partner countries.

### Are the entrepreneurial classes enough?

Although the teachers had positive opinion about the entrepreneurship curricula and syllabus, the discussions on attitudes and socio-emotional skills revealed that there might be gaps that hinder graduates in their future careers, like risk-aversity:

*“So the issue of taking risk is another problem that they fear to take risk. Because you cannot go into establishing an enterprise without taking risk. Although they are taught to take a moderate risk, which is not too high, not too low, a calculated risk I mean. So it's another issue to be addressed, taking risk.”*

Another issue mentioned was creativity for idea-creation and willingness to push forward with it:

*“Maybe also they need to have the conceptual skill. They must have the concept about what they are going to do exactly. It's like creating the business idea. Because maybe if we don't know exactly from the beginning to the end what he is going to do, that's what makes them fail.*

*Because sometimes he or she wants to do maybe a business, because she needs money or he or she needs money. But he or she is not engaged, he or she has self in such a thing. He's just partially there, he's just partially thinking about money. He's not creative, that's the problem. If you think about money, getting money and you are not creative, you will lose.”*

## Suggestions

Based on the findings the field study team proposes these avenues for improvement of the entrepreneurship studies in Moshi area:

**Curricula development.** During the interviews it was mentioned that the curricula is somewhat rigid but on the other hand strictly followed by the teachers. In the rapidly moving world where automation and AI bring on constant change, this poses risk for a gap between education and workplace needs. The need to prepare students for testing on national exams hinders any experimentations at VET colleges to find local and autonomous solutions to bridge this gap.

The solution could be creating more competence-based exams that do not test students specific knowledge but allow them to demonstrate their skills in a more practical setting. The topics could be business idea creation, market research, budgeting and accounting, marketing etc.

**Large classroom management.** The large class sizes pose some problems to teachers, including management of large groups, maintaining discipline, and ensuring that each student receives attention, despite the size of the class. The teachers have strategies and experience on how to manage large classrooms. Additional method could be flipped classroom. Implementing AI and automation could also be effective.

**Utilization of limited resources.** Since equipment like projectors are scarce, the teachers need to be skilled in maximizing the impact of limited resources. Training in creative and innovative teaching methods that do not rely heavily on technological aids would be important.

**Integration.** Assisting teachers in the integration of entrepreneurship into other subjects could alleviate some of the pressure that teachers face with large numbers of students. Content and Language Integrated Learning (CLIL) could be used to integrate entrepreneurship subject with English classes. There are possibilities to solve tasks related to budgeting in Mathematics classes. Cross-curricular project could offer possibilities for students from different trades to work and learn together.

**Becoming more practical.** Teachers need skills to bridge the gap between theoretical knowledge and practical application. Training in real-world case studies, local business visits, and integrating practical examples from the Tanzanian business environment into the classroom would be of great value.

**Digital literacy and ICT skills.** Improving teachers' digital literacy and ICT skills is very important, especially in an environment with limited digital resources. Training on basic ICT skills, using smartphones effectively for teaching, and leveraging online resources for entrepreneurship education would be very useful.

## Conclusion

Despite curriculum development to provide all the necessary entrepreneurial skills and adequate entrepreneurial training to the students, several challenges remain.

Teachers, though professional and well-versed in the required subjects, grapple with over-sized classes, language barriers, and insufficient ICT resources that are obstacles for delivering quality education.

Introducing entrepreneurship as a compulsory subject is a positive step toward aligning education with the demands of the market but exhibits gaps, particularly in practical application and resource allocation.

There is a requirement for strengthening ICT infrastructure, implementing new teaching methodologies, continuous improvement of curriculum.

Practical application of theoretical knowledge and ICT skills were considered the key fields by the feedback from the Moshi partners.

Excitement among students to explore entrepreneurship seems to vary, mirroring broader attitudes toward self-employment and the creation of business.

There is a strong base to capacitate young Tanzanians with the pragmatic skills and mindsets to be entrepreneurs and contribute meaningfully to the socio-economic aspirations of the nation.

Among other topics the Kilimanjaro VET project will focus on the entrepreneurship studies at Moshi area VET colleges. This report has been validated by the partners in Tanzanian VET colleges and will be one of the bases for the future project activities.

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