DEVELOPING ENTREPRENEURIAL AND EMPLOYABILITY COMPETENCES FOR EFFECTIVE TRANSITION FROM UNIVERSITY TO EMPLOYMENT MARKET
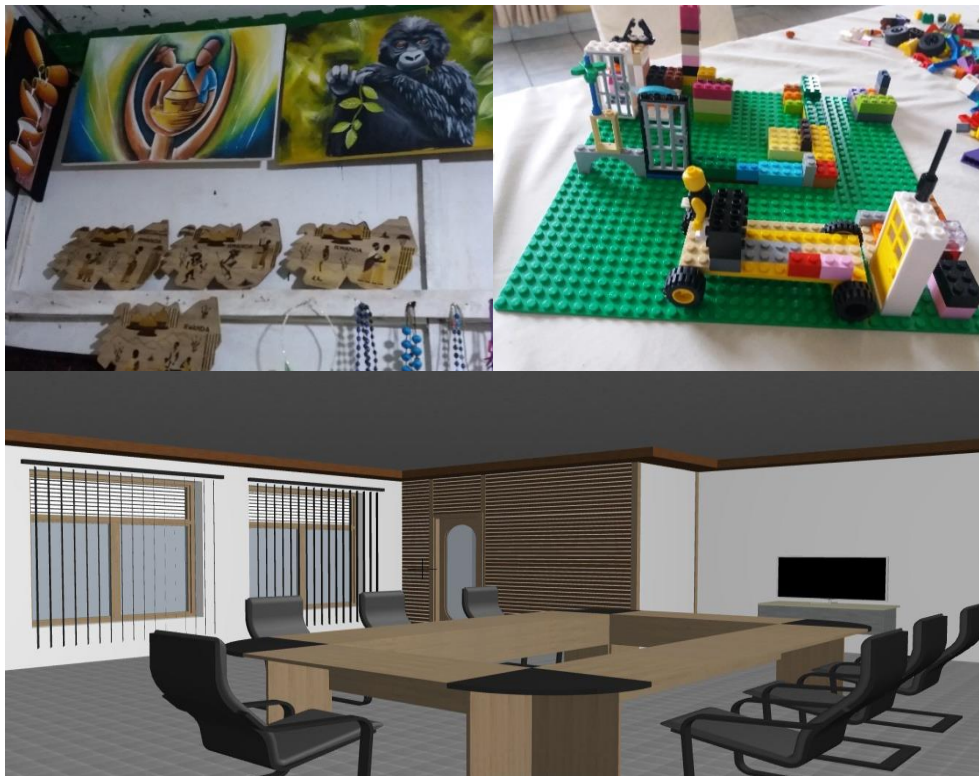

Case study

AFRICAN GERMAN ENTREPRENEURSHIP ACADEMY (AGEA)-RWANDA, 2017-2020

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Biography of the Author

Dr Gonzalves Nshimiyimana is a graduate of the University of Leipzig, Germany, in Small and Medium Enterprises Development with specialization in Entrepreneurship Education. His research and training works are mostly oriented to Entrepreneurship and employability skills development in Higher Education Institutions in Africa. He has been coordinating initiatives and networks that promote entrepreneurship at HEIs in Rwanda. These initiatives include the African German Entrepreneurship Academy (AGEA) and the African Centre for Career Enhancement and Skills Support (ACCESS).

Acknowledgment

This work has been possible thanks to the efforts and support from various individuals and organizations.

First, thanks to Professor Dr Utz Dornberger, Director of AGEA as well as the International Small Enterprise Promotion and Training (SEPT), University of Leipzig, for his invaluable support in implementing this project. Not only did he supervise the project activities but also transferred knowledge and skills. That fed into the assessment of how AGEA contributed to graduates' effective transition from university to the job market in Rwanda.

Second, acknowledgements go to the Institut d'Enseignement Superieur (INES) de Ruhengeri which, serving as a hub for AGEA's activities in Rwanda, allowed me to conduct entrepreneurship promotion activities from 2017 to 2020. This permitted to organize and coordinate entrepreneurship trainings and events which facilitated my access to more than ten public and private Higher Education Institutions (HEIs) in Rwanda; and conduct a longitudinal observation of how entrepreneurship can be imparted to university stakeholders. That gave me the opportunity to access and network with trainers, mentors and students from local partner institutions and other partner universities across Africa and Germany. Their participation was more than just a partnership; it was a life-learning experience. They deserve to be acknowledged for their greater contribution.

Finally, a big THANKS is extended to the Federal Ministry for Economic Cooperation and Development (BMZ) through the German Academic Exchange Service (DAAD) for their financial sponsorship. All that have been done could not have happened without their financial support.

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Summary

It is becoming increasingly visible that relying on disciplinary knowledge and skills for earning a living in today's world is not sufficient. As many graduates become unemployed because public and private institutions are overwhelmed by the number of graduates looking for employment, various options have been and are being proposed to curb the growth of future uncertainties. One of the options includes teaching students how to become self-reliant through entrepreneurship behavioral changes. In this direction students start reflecting on their life while still studying by developing ideas that can be turned into businesses, mastering job skills that are required in the market place for effective performance in self-employment or employment by others. As entrepreneurship is all about needs and solutions, demand and supply, interactions and feedbacks, entrepreneurship rests on learning, applying and sharing competences and experiences. Therefore, developing and sharing knowledge and experiences do not only create bonds between and amongst people of different academic and cultural backgrounds, but also constitutes the driving force for collaboration, partnership and exploitation of opportunities for mutual benefits.

Learning from one another and especially learning from peers makes knowledge transfer smooth and faster. That is why the African German Entrepreneurship Academy (AGEA) was created. It is an initiative between the International SEPT Program of Leipzig University and its partners in Africa and Germany for promoting entrepreneurship at Higher Education Institutions (HEIs) in Rwanda and Ghana. Through its two hubs in Africa- KNUST in Ghana and INES-Ruhengeri in Rwanda, partners in AGEA believe that empowering students who have brilliant business ideas and skills does not only shape their perception about the world of employment but also helps them to align their academic competences with (employment) market needs.

In Rwanda, since its inception in 2017 till December 2020, out of 30 students who went through the program for 2 years at least, 33,3% started their own businesses while 20% are employed, 13,3% are still students, 23.3% are unemployed fresh graduates (less than 1 year) and 10% no whereabouts. As a platform encouraging the creation of entrepreneurship support centers at HEIs and knowledge sharing among African HEIs and the private sector, 10 HEIs developed strategic plans for their centers. From them, 3 new entrepreneurship centers were created and 3 existing ones enhanced their capacities. This has been achieved thanks to the ToTs for 20 staffs from partner institutions.

Despite good achievements, developing entrepreneurship skills for students and in a campus environment is not without challenges. Given the conflict of interest between academic and market priorities, this AGEA case study looks at and offers what can be done in order to improve skills development and transfer in a more conducive environment. Experiences of graduates (self-employed or employed) who went through the entrepreneurship program are informative. They found they lacked skills and competences in many areas (functional, personality) that enterprises needed the most. Such skills require the attention of HEIs if markets are to get ready-to-work graduates.

Based on its multidimensional aspect- universities, polytechnics, institutes, private and public, rural and urban based institutions-, this allows to argue that this case study is representative in nature. Therefore, in the following literature I elaborate on the development of entrepreneurship competences for university students in Rwanda in two sections. Section I discusses AGEA, its rationale, implementation approaches and processes. Section II discusses entrepreneurship/employability skills gaps and challenges that need to be addressed for effective transition of students from university to employment markets.

1. SECTION ONE: UNDERSTANDING THE AFRICAN-GERMAN ENTREPRENEURSHIP ACADEMY (AGEA): RATIONALE AND PROCESSES

1.1. What is AGEA and why?

AGEA is a joint project between the Leipzig University and Universities in Rwanda and Ghana. The principal members include the Leipzig University, INES-Ruhengeri in Rwanda and Kwame Nkrumah University of Science and Technology (KNUST) in Ghana. It started in 2017 and ended in 2020. It was created for empowering Higher Education Institutions (HEIs) in entrepreneurship promotion activities through enhancing synergies between German HEIs and business partners and academic institutions and business partners in Ghana and Rwanda. For reaching out to many players in both countries, two hubs (INES Ruhengeri and KNUST) were created to channel the North-South and South-South partnerships.

1.2. Objectives

The general objective of the project was "To promote entrepreneurship at HEIs in Africa". Its specific objectives included:

1. To implement practice-oriented entrepreneurship education programs for selected HEIs
2. To establish five entrepreneurship/incubation concepts for HEIs in Ghana and Rwanda
3. To strengthen collaboration/cooperation between HEIs, businesses and business associations.

1.3. Expected outcomes

The expected outcomes for Rwanda included the following:

1. Practice-oriented entrepreneurship education programme is completed. Twenty staff members from HEIs are trained in entrepreneurship education tools
2. A tailor-made vision and strategy for five entrepreneurship/incubation centre in HEIs are developed and, staffs are trained to coach and mentor students
3. Collaboration between German business partners and institutions and counterparts in developing countries has strengthened. Three students from Ghana have visited Rwanda for an internship at the Private Sector Federation. Three students from Rwanda have visited Ghana for an internship at the Association of Ghana Industries or the Chamber of

Commerce. In all, 30 students have participated in summer schools in the entire project (all these expected outcomes were achieved).

1.4. Implementation and achievements

Based on the above objectives, various activities have taken place at the hub premises or at respective partner institutions. From May 2017, main activities focused on putting operational structure in place, motivating potential partner institutions to join the project and selecting students who participated in the first AGEA activities (trainings, summer school). In this process, the first team of AGEA mentors was constituted. Each institution was requested to recommend at least two staff with background in entrepreneurship. The recommended staff included teachers of entrepreneurship or coordinators of centers of entrepreneurship/ innovation at respective HEIs. As time and activities went on, 2017 and 2018 recorded the first new partner institutions. Many of them were private institutions as the following table 1 shows. In the meantime, others left mainly because they failed to replace their staff who left the institution or due to internal challenges that made some institutions stop their participation in academic activities. In December 2020, the number of remaining active members was 9 HEIs.

Table 1: AGEA membership status

Year 2017	Year 2018
1. Institut d'Enseignement Supérieur (INES) de Ruhengeri, private and rural institution, www.ines.ac.rw	1. University of Technology and Arts of Byumba*, private and rural institution, www.utb.ac.rw
2. University of Lay Adventists of Kigali (UNILAK), private and urban institution, www.unilak.ac.rw	2. University of Gitwe (UG)* private and rural institution,
3. Integrated Polytechnic Regional College-Ngoma (IPRC), public and rural institution, www.iprcngoma.rp.ac.rw	3. Protestant Institute of Arts and Social Sciences (PIASS), private and rural institution, www.piass.ac.rw
4. Integrated Polytechnic Regional College (IPRC) Musanze, public and rural institution, www.iprcmusanze.rp.ac.rw	4. University of Kibungo (UNIK)** private and rural institution,
5. Muhabura Integrated Polytechnic College (MIPC), private and rural institution, www.mipc.ac.rw	5. Mount Kenya University (MKU), Kigali campus*, private and urban institution, www.mku.ac.ke
6. Institut Catholique de Kabgayi (ICK), private and rural institution. www.ick.ac.rw	6. Christian University of Rwanda (CHUR)**, private and urban institution,
7. University of Tourism, Technology and Business Studies (UTB), private and Urban institution, www.utb.ac.rw	**Notice:** **In 2019,** Universite Libre des Pays des Grands Lacs (ULPGL) from DRC joined the network as observer. It is a private urban institution
8. Integrated Polytechnic Regional College (IPRC) KIGALI***, public and urban institution, www.iprckigali.rp.ac.rw	

Source: AGEA database, 2020

Notice:
Denominations "urban" means an institution located in the capital city and "rural" in towns across the country.
*Institutions which failed to develop Strategic Plans of their incubation/ entrepreneurship centers and failed to produce students who could participate in AGEA competitions in 2019 and 2020 (ref. 1.4.4.2)
** Universities which stopped academic activities since 2020 due to internal challenges

Given the objective and expected outcomes, following is the implementation process of entrepreneurship promotion activities and achieved results.

1.4.1. Practice-oriented entrepreneurship programs for selected HEIs

When developing entrepreneurship programs for undergraduate students, there are core definitions that should be stressed to guide their development and execution. They are grounded in the definitions of Scott Shane (2003) who defines entrepreneurship as activities of discovery, evaluation and exploitation of opportunities to introduce new goods and services, ways of organizing, markets, processes, and raw material through organizing efforts that previously had not existed. Students have the opportunity to learn the start-up process in theory and in practice while still at the campus. This prepares them for the future career and increases their employability potential to fit career positions. In other words, it increases and improves students' employability skills and, to a large extent, reduces skills gaps since they know that entrepreneurship is a process with different stages.

The second definition is grounded in Peter Drucker (1985) who says that entrepreneurship is neither a science nor an art. It is a practice. It has a knowledge base. But as in all practices... knowledge in entrepreneurship is a means to an end. What constitutes knowledge in a practice is largely defined by the ends, that is, by the practice. This definition implies that when students go through different stages of entrepreneurship effectively, they have the advantage of being able to associate their academic programs and market needs. When at each stage of learning they practice entrepreneurship, they grow in both academic skills and entrepreneurship skills. At the end, students can graduate with a clear project of what to do and how to do it; or they graduate with a start-up. In this particular learning-by-doing, knowledge and skills transfer stresses or should stress evidence-based learning which not only delves learners into prototypes development but also pushes academic institutions to invest in extracurricular support schemes. The latter can be explained in terms of entrepreneurship or innovation centres which address students' needs based on their particularities. HEIs in AGEA benefited theory as well as practice-oriented trainings and support initiatives.

Various trainings and workshops have taken place in a theoretical and practical manners. Six training of trainer have taken place and were attended by 20 staff in charge of entrepreneurship promotion at partner institutions. They were mostly interactive and exploratory and explanatory sessions covering incubation management, entrepreneurship (Business idea and

business model development), Entrepreneurship tools (Business model canvas, Business plan), product/ service development (prototyping) as well as innovation management. Trainers were trained in such concepts and tools so that they can transfer the knowledge/skills to their students. The capacity building for staff in theories, skills and product/service development meant to facilitate them to conduct trainings or workshops, mentorship, monitoring and evaluation. It was also intended to provide the basics for the establishment of own entrepreneurship or incubation centers. As individuals already in the field of entrepreneurship, the ToTs were a means to supplement the skills and knowledge they already applied in teaching.

For the benefit of students, the ToTs were done to leverage the ground so that those who come from various partner institutions for competing at the national level have at least a common understanding of the basic skills regarding entrepreneurship concepts and processes. Two main concepts and tools that were largely used to develop and transfer entrepreneurship skills were the "Business model canvas" and the "Business Plan".

1.4.1.1.Business model canvas

A business model describes the rationale of how an organization creates, delivers and captures value. The business model canvas created by Osterwalder et al. (2010) is made of 9 pillars: Customer segment, value proposition, channels, customer relationship, revenue streams, key resources, key activities, key partners and cost structure.

The initial development of a business model starts with identifying and describing customers plus value proposition. While **Customer Segmentation** deals with answering the questions of " For whom are we creating value?" and "Who are our most important customers?"; **Value Proposition deals with "**What value do we deliver to the customer? Which one of our customer's problems are we helping to solve? What bundles of products and services are we offering to each Customer Segment? and Which customer needs are we satisfying?".

Figure 1: Business model canvas

Key partners	Key activities	Value proposition	Customer relationship	Customer segment
	Key resources		Channels	
Cost structure			Revenue streams	

Once value proposition is done, it has to reach the consumers. It is therefore necessary to highlight **Channels** that will be used by answering the following questions "Through which Channels do our Customer Segments want to be reached? How are we reaching them now? How are our Channels integrated? Which ones work best? Which ones are most cost-efficient? How are we integrating them with customer routines?".

For **Customer Relationships** answers are needed with regard to what type of relationship does each of the customer segments expect the company to establish and maintain with them, which ones have been established already, how they are integrated with the rest of company's business model and how costly they are. While **Revenue Streams** describe types of value customers are really willing to pay for, what they currently pay for and how they are currently paying, how they would prefer to pay, and how much does each Revenue Stream contribute to overall revenues; **Key Resources** reflect on tangible and intangible key resources that the value propositions require, the company's distribution channels, resources for building and maintaining customer relationships or for revenue streams etc. It is also necessary to discuss **Key Activities** by listing and describing key activities that the value propositions require for being realized, types of activities to be performed regarding distribution channels, customer relationships, or revenue streams.

Key Partners in the business are described too. These include key partners for the company, key suppliers, kinds of key resources the company is/will be acquiring from partners, and key activities each of the partners perform. Finally, **Cost Structure** is described as well. It

considers most important costs inherent in the business model (investments, human resources, technologies, etc.), identifies key resources and activities that are most expensive.

1.4.1.2.Business plan

As a planning tool very common in many HEIs when it comes to teaching entrepreneurship, the business plan can be seen as a document that commercializes your business idea as a whole towards potential investors and stakeholders. It is a document that conveys to the reader the most significant opportunities and growth capacities of your company realistically; A good business plan should justify and describe the business idea and further business development in a clear and adequate manner without merely emphasizing the strengths of the company, but rather presenting a realistic portrait of its problems, risks and obstacles. On top of that, appropriate solutions should be proposed and discussed in detail (Schwetje & Vaseghi, 2007).

Explained differently, the business plan is not only defined as a formal, written document which describes the nature of the business, operations and strategies for the firm but also is a tool underlying the opportunities of the venture and helping to recognize the strengths and weaknesses while adding structure to the proposal of the entrepreneur. Business plans are tools that serve different purposes including amongst others, obtaining finance, forming alliances, setting the direction of a company or measuring the performance of the firm.

Thus, the business plan checklist underscore key information that need to be covered when developing it.

Table 2: Business Plan content checklist

Topic	Content
Introduction to Entrepreneurship and Intrapreneurship	• Module overview • Definition of entrepreneurship and Intrapreneurship • Personal Entrepreneurship Characteristics (PECs) • Wheel of PECs • Entrepreneurship environment
Business Idea generation and selection	• Techniques for business idea generation (Brainstorming and Mind mapping) • Screening and Selection of best viable business ideas (Macro and Micro screening) • SWOT analysis of best idea • Final decision
Business plan writing structure	• Introduction to why and how to write a business plan • Benefits of business planning • Motivational factors for writing a business plan • Business plan structure

	• Executive summary
Company description	• Vision and Mission statements • Company name and Legal issues • Business goals and strategies (SMART)
Industry analysis and target market	• Description of industry • Description of industry trends • Identification of opportunities and threats existing in the industry • Defining the target market (demographic, geographic, lifestyle, psychographic, purchasing patterns and buying sensitivities)
Competition analysis	• List of Competitors • Years in business • Product/service description (what they sell) • Competitors' customer profile • Pricing strategy • Advertising strategy • Why customers buy from them

Strategic position and risk assessment	• Distinguishing yourself from competitors in the following
	  o Customer perception factors, Market segment, Market shares
	  o Operational and/or technological advantage
	• Risk assessment
	  o Market, competitive, technology, product,
	  o execution risks, capitalization risks
	  o SWOT analysis
	  o What measures can be taken to avoid these risks

Marketing plan and sales strategy	• What message does the company convey to customers? • What message do customers want to hear? • What are the marketing vehicles? • Sales strategies • Budgeting for marketing
Operations	• How to keep track of inventory? • What equipment is needed and when? • Production plan and quality control etc. • Research and development
Management of the business	• What are human expertises required for the business? • How many people are planned to employ? • What is the structure of the organization? • Who is responsible for what? • What will be the cost of the labour force?
Budgeting and financial plan	• Income statement • Cash flow projections • Balance Sheet

Source: Nshimiyimana, 2020

1.4.2. Trainings of students and competitions at institutional and national levels

As the role of the trainers was to transfer entrepreneurship skills to students, sessions of trainings in business skills took place at local institutions. Announcements interesting students to apply for such extra curricula courses were made. Before competing at national level,

internal competitions had to be organized. Only 5 project ideas were allowed to compete at national level. Individual participation as well as groups of three persons each were allowed.

Table 3 Participation of students in entrepreneurship competition

Year	Number of institutions	Number of prototypes
2017	5	15
2018	10	86
2019	8	40
2020*	1	10

Source: AGEA, 2020

* Students went through a three-month mentorship program for product prototyping. They did not participate in any summer school.

About 151 projects/prototypes competed at national level. From these 151 projects/ prototypes, the best 30 were selected (10 every year) for participating in summer schools that took place in Germany (2017), Ghana (2018) and Rwanda (2019).

1.4.2.1. Why the competitions?

Photos courtesy: INES-BIC 2018

Business or innovation competitions are useful in generating ideas that result into new products for the business or social wellbeing. Young students at universities were sensitized to come up with business ideas that are creative and innovative. This pushed respective universities especially business incubation and innovation centers to nurture, mentor, build necessary confidence and entrepreneurial attitudes amongst students. For some, that transformed their ideas into tangible profitable businesses, and for others, it turned them into better skilled workforce.

Entrepreneurship or innovation competitions permitted to assess how students progressed from business ideas to prototypes and to market. This also served as a platform or space for

expressing themselves and technically improving their prototypes. All with an ultimate aim of starting businesses.

Tech adopter Ltd is a start-up created by three young students in 2018. It operates in the sector of agriculture with special focus on manufacturing affordable and easy to use agriculture machines. We are a company manufacturing agricultural manual seeding machines and other processing tools. Our vision is to lead the national market and increase international presence with special emphasis on quality and permanent innovations and customer satisfaction. Our mission is to produce and continually develop quality products at a competitive price.

Growing up in farmers' houses, we observed and experienced the agricultural labor hardships that farmers go through on daily basis. Knowing that almost 80% of Rwandans live by traditional farming, seeing that there is a need to change this way of doing things, the idea of making agriculture machines and tools was born. We kept nurturing the idea until we started an engineering company called: "Tech Adopter".

Manual grain seeding machine and Hilling hoe (Photos courtesy: Tech Adopter Ltd)

Not only can we manufacture manual machines but also can we integrate modern technologies, produce electronic and remote controlled machines which are appropriate to big land. We highly value our customers' wishes and we do our best to satisfy them.

1.4.2.2. Competition process and guiding principles

Experts from private organizations worked in collaboration with partner university team of trainers to evaluate the prototypes. Each team involved between 3 to 5 expert judges and their sizes depended on the number of projects to evaluate. Judges were selected based on their professional backgrounds, mostly their proximity to business skills development, and historical participation in business ideas/projects evaluation. After getting the topics of projects to be

evaluated, projects were grouped in accordance to the business sectors. Teams of judges were also formed in accordance to the fields of the projects. The judges were guided by the following principles: Independence, fairness, equity and objective judgment.

1.4.2.3. Criteria for assessment

These criteria were followed during national competitions:

- Before the commencement of the competition, team leaders (trainers/mentors) had to submit to the judges a list of students approved by participating institutions. These students must be registered in the running academic year and must show their student identification documents to the judges. This is however not applicable to the competition assessing the progress made by projects that participated in the previous competition because owners might have graduated. In addition to that, their identity was already known to organizers

- The competition was entirely in English. This was done to push students get familiar with business terminologies in English, and also prepare them for other opportunities that would request pitching skills or self-presentation in that language

- Each presenter was given 10minutes (5 for presentation + 5 for Questions and Answers)

- The competition was not open to the public due to business idea's security. However, university team leaders had the right to follow any pitching session of their choice

- For competitions assessing prototypes, judges were recommended not to allow people to present business ideas or projects without showing the prototype (even if it was not very advanced or complete). Judges should do everything possible to identify if competitors were real owners of prototypes. This is because some students could bring products developed by others and impersonate them. Judges had to check, test or taste prototypes wherever applicable

- A panel of specialists could be created if the judgment required sector specific skills

- Priority should be given to prototypes showing a combination of the following elements: creativity, innovation, implementable and greater impact to the society

- To avoid bias especially based on prototypes coming from one or two fields, judges had to make sure the final list of winning prototypes was diversified. This helped to minimize the dominance of one sector as none was allowed to have more than 3 projects in the best 10 to enter summer school

- The final list of 10 winners had include at 3 women with best ideas. This was done to encourage women participation in entrepreneurship competitions.

1.4.3. Creation of start-ups

By 31st December 2020, some projects had graduated into start-up businesses while others experienced different destinies. In the next table 4, it is observable that IPRCs produced many businesses compared to other types of HEIs. This can be linked to the fact that graduates in IPRCs are more practice-oriented with education approaches mostly dominated by hands-on skills. This gives them an advantage of learning-by-doing where maneuvering tools becomes a routine activity. For the other HEIs, there is almost an equal distribution of data, especially with regard to the status of AGEA's alumni. Although more than a half has an occupation that brings them an earning, ¼ is not employed.

The following is the status of all participants in the summer schools from 2017-2019.

Table 4: AGEA Alumni employment status by 2020

	Self employed	Employed	Students	Unemployed	No news	Total
IPRCs	6	1	0	2	1	10
Other HEIs	4	5	4	5	2	20
Total	10	6	4	7	3	30

Source: Author, 2021

From this table, ten alumni (33,3%) created their own companies, six (20%) are employed in private sector, seven (23.3%) are unemployed, four (13.3%) are still students and three (10%) could not be accessed.

When checking their fields of operation and legal status, the start-ups are categorized as follows:

- Three are in agribusiness, two in construction, two in ICT, two in design and one in handcraft.
- Of the ten businesses created, six (60%) are sole proprietorships, three (30%) are companies with shareholders and one (10%) is a youth cooperative.

Table 5: Categories of AGEA alumni start-ups

Nr	Student's Institution	Employment status	Field	Type of business (Shareholders)
1	IPRC Ngoma	Self-Employed	Agribusiness	Youth cooperative
2	IPRC Musanze	Self-Employed	Agribusiness (Horticulture)	Sole proprietorship
3	IPRC Kigali	Self-employed	Agribusiness (manufacturing)	Company (3)
4	IPRC Ngoma	Self employed	Construction	Sole proprietorship

5	IPRC Musanze	Self employed	Construction (manufacturing)	Company (3)
6	UNILAK	Self employed	Design	Sole proprietorship
7	IPRC Musanze	Self-employed	Design - Electronic material	Sole proprietorship
8	INES	Self employed	Handcraft	Sole proprietorship
9	UNILAK	Self employed	ICT	Company (3)
10	UNILAK	Self-employed	ICT	Sole proprietorship

<p align="center">Source: Author, 2021</p>

In summary, students from six out of ten HEIs that participated in the entrepreneurship program created a business.

RCGF Rwanda Ltd

Photos courtesy to RCGF Ltd

RCGF Rwanda Ltd (Reinforced Concrete Garden Furniture) is a limited company created in 2017. We are a multi-award winning company which manufactures precast light in weight reinforced concrete garden furniture made of 75% of volcanic stones, concrete art and concrete special structure.

Resources are features of environment that are important. They have value to humankind in one form or the other. However, the advancement of modern civilization has had a great impact on our planet's natural resources. Everything that we purchase, use or consume is manufactured from raw materials that have been derived from natural resources. The use of these raw materials to produce manufactured goods will have an impact on the environment. Many people around the world are now beginning to quantify the impact of producing manufactured goods from certain raw materials and resources.

Whilst studying at IPRC Musanze, in 2016, after realizing how much human needs are having significant negative impact on the natural resources, and how there is increasing unemployment rates, after looking around to find out the local natural resources and ways to process them for finished products; the volcanic stones available in Rwanda in large quantities since 700 years ago came first in our mind. Now you can add more comfort to your place by using well-selected pieces such as seats, benches, lounge, tables and flowerpot and precast concrete special structures which are 75% made of volcanic stones, cement, reinforcement bars and water.

We don't just talk. We do add some classy appeal to your garden! Your home's garden, hotel, hospital, recreation park, schools and colleges can be one the most attractive areas. With the right additions of course. You own that go-to place to hang out and relax? Yes, we owe you this friendly advice: Give that place a little bit of simplicity plus sophistication. We believed in precast concrete. And the result? Its natural beauty, and elegance plus a sense of a tropical feeling it gives to a place. We are bringing our quality products to the outdoors market. Concrete is really fascinating! It fits everywhere. Be it at your home garden, your workplace, a hotel outdoor, a leisure place... everywhere. We create beautiful, usable, and modern furniture.

RCGF Rwanda Ltd aims at being a long term, dynamic and sustainable business continuously adjusting to meet new market conditions and changing customer needs. RCGF Rwanda Ltd will continuously undertake research and development activities aimed at identifying new opportunities, improving existing systems, models and processes.

1.4.4. Supporting HEIs to establish Entrepreneurship centers

Photo courtesy: INES-BIC

1.4.4.1.Why entrepreneurship support centers?

This is in line with the fact that job opportunities for graduates from the Higher Education Institutions in Rwanda and in Africa in general have been reducing thereby resulting in high unemployment rates across the country/continent. However, there are many business opportunities that can be exploited by students and staff at campus, as well as by other persons outside the campus, if proper guidance is offered. It is also known that, the unemployed, idle youth in the community are a time - bomb as was witnessed through the Northern African Arab springs, the Xenophobia wave in South Africa, and radicalization of youth in East and West Africa. Therefore, HEIs need to work together as a network to offer solutions to the youth unemployment and challenges especially through creation of support units within HEIs. Such units can either be incubation, innovation or entrepreneurship centers. It is believed that if business and innovation opportunities are promoted, they would offer job opportunities to the youth, and create wealth for the society. Business innovation and/or incubation centers can be developed to spur students' and community-driven business and innovation developments (for the aforesaid gains). Such support centers could also be a rich third stream of income generating opportunities for the HEIs if well planned, developed and strategically operationalized. In brief, promoting innovations shall lead to patenting and commercialization of patents by HEIs.

On this note, first, there was strong commitment by various stakeholders to AGEA to support entrepreneurship development. Second, there was also an encouragement to exploit such commitment in every aspect of employment, before, during and after getting employed. Third,

such support should drive to producing individuals who add value to all sorts of blue and white-color jobs. Fourth, at the fore front should be HEIs which have strong and qualified workforce able to professionally start and run entrepreneurship centers.

1.4.4.2.Establishing entrepreneurship support centers at HEIs in Rwanda

AGEA had planned to have at least five entrepreneurship/ incubation concepts for HEIs in Ghana and Rwanda established. In this process, trainings in management of incubation centers were delivered (in the first quarter of 2018) to recommended HEIs staff as a means to help them to understand how incubations operate and how they work in the university context. Participants agreed that by the end of year 2018 they would have developed strategic plans for guiding their future operations. In total 13 institutions participated in the training in 2018. They included INES-Ruhengeri, University of Tourism Technology and Business Studies (UTB), University of Lay Adventist of Kigali (UNILAK), Kabgayi Catholic Institute (ICK), IPRC-Ngoma, IPRC Musanze, and Musanze Integrated Polytechnic College (MIPC), Protestant Institute of Arts and Social Science (PIASS), University of Kibungo (UNIK). Although the University of GITWE, Mount Kenya University (MKU) and the University of Technology and Arts of Byumba (UTAB) participated in the trainings, they did not develop strategic plans of their incubation centers.

The development of incubators' strategic plans whose endorsement by mother institutions took place in December 2018 helped institutions members of AGEA to have the basis for planning their future activities. Amongst the key activities included, among others, putting in place operational structures for starting the entrepreneurship support centers, trainings and fund raising. From December 2018 to December 2020, three incubation centers had created operational structures (IPRC Musanze, MIPC and ICK) while others enhanced their capacities in various forms (INES Ruhengeri, UTB, IPRC Ngoma).

For matters of raising more commitment and support towards the centers' activities, and as a matter of connecting leaders of institutions, mentors, students and the private sector, AGEA organized every year an event whereby the presentation of students' achievements took place. The leaders of the institutions could be Vice-Chancellors, Deputy Vice-Chancellors, Directors at ministries or local governments, and other stakeholders who intervene (as policy makers or implementers) in business skills development at different levels. This platform served as an opportunity for all participants to reflect on how best students can be supported in their endeavors, or how best HEIs can become more entrepreneurially oriented with the support from private and public institutions.

1.4.5. Collaboration between HEIs, private and public sectors

"Summer schools are good platforms for exchanging on academic and market opportunities"

As one of the objectives of AGEA was to establish and strengthen university - business collaboration, the private sector was invited in all events (trainings, conference, summer school) that were organized by AGEA. Its participation was meant to serve three purposes: first, enhancing collaboration between it and AGEA's local partner members; second, enlightening students from partner institutions about the business environment in their region and country; third, elaborating on profitable business opportunities available to them and financially accessible to students.

As a result of the established collaboration, graduates from AGEA were invited to exhibit their products in local and national trade fairs. They were also used as motivators to other youth for inspiring them to engage in learning-by-doing where business and disciplinary skills are coupled to provide solution to the needs of the market and society. The partnership served as an opportunity as well as a channel to visit some big industries that became, later on, sources of students' inspirations or internships. Participants in the trainings or in the summer schools visited various institutions. These showed what they can offer and do to support students in entrepreneurship mindset change.

On top of business relationships, AGEA helped students to access and interact with public institutions intervening in entrepreneurship or employment creation. Interactions have taken place between the Ministries of education, Ministry of Trade and Industry as well as Ministry of information, communication and technology, to mention a few. Discussions reflected mainly on how the promotion of entrepreneurship could be enhanced in HEIs; challenges and solutions related to innovation and entrepreneurship development. Participants could be updated on the status of unemployment in general and among graduates in particular, positive effects of

promoting entrepreneurship by using higher education as a tool for solving labor market problems. They could also be shown the opportunity and benefits arising from working together or partnering with government institutions and private organizations. In general, such partnerships build a strong synergy that transforms and boosts micro-businesses and small businesses. These graduate into medium and large businesses can play a bigger role in supporting student's efforts either technically, financially or both.

Having discussed activities and achievements of AGEA between 2018-2020, looking at the linkages between entrepreneurship and employment creation, considering that AGEA alumni have increase their potential to create business and work for themselves, or work for existing organizations, the AGEA context can be captured and summarized in the following matrix.

Table 6: Log frame matrix AGEA

	Description	Indicators	IOVs	Assumptions/Risks
Overall objective	Promoting entrepreneurship at HEIs	Increased number of institutions interested in Entrepreneurship support at HEIs	Number of partners	Support of the mother institutions
Outcome	• Practice oriented entrepreneurship education is institutionalized • Effective Business Incubation Concepts developed at HEIs in Rwanda • Networks between HEIs, Businesses and Associations are strengthened	• Concepts accepted by University Leadership • Involvement of relevant ministries	• Statements of University Leadership • Participant list of trainings and conference • Reports	• Willingness of the Government to support practice driven entrepreneurial learning • Availability of funds to implement the concepts
Outputs/ Results	• Well Trained and Experienced Trainers are available • Entrepreneurship promotion schemes are in place • Existing relationships among HEI are strengthened	• Number of Participants • Existence of Concept manuals	• Participant lists • Reports	• Willingness of students to participate • Availability of innovative ideas • Availability and willingness of staff to participate
Activities	• ToTs on national level • Development of Business incubation concepts • Summer Schools	• ToTs & summer schools organized • Work on concepts in progress	Reports	• Willingness of HEI to send staff for trainings • Intrinsic motivation of HEI to develop concepts

Source: Author, 2021

1.4.6. National and international cultural exchanges

It was very interesting that the whole process of entrepreneurship promotion in Rwanda impacted the understanding of cultural differences either by regions or by countries. Students and staff of AGEA were introduced to different cultural behaviors. Each and every one had to exploit the differences in a manner that renders the partner entertained, joyful, cooperative etc., in a cordial and fun atmosphere. Through visiting museums and other cultural centres where the locals had to explain their culture, it attracted the attention of participants who understood the commonalities and differences. It was also possible to see new relationships unfolded between students, a situation that can be exploited for future collaborations.

1.5. Challenges, lessons learnt and recommendations

It is important to recognize the role AGEA played in improving the understanding of entrepreneurship at HEIs in Rwanda through the following points:

- Even if all academic programs have a module of entrepreneurship, students can now access extra-curricular support through trained mentors
- There has been creation and capacity building of incubators that train, coach in business skills and, organize competitions between and amongst institutions
- Entrepreneurship support centers have encouraged students and staff to identify business opportunities through field visits, career day, research, etc.
- Students' exchanges between INES and Local HEIs; INES and International HEIs (Germany, Ghana, Kenya) through trainings and summer schools increased individual as well as institutional collaborations
- Students appreciated the work and commitment of Managers/ Coordinators of entrepreneurship centers who help(ed) them to participate in AGEA's activities. Most importantly they appreciated the opportunity to explore, experience other countries and/or exchange with new nationalities. Such interactions and cultural encounters paved the way to establish and build friendship amongst participants, institutions.

Having discussed the above points, there are some improvements that need to be done given the challenges that the implementation process went through.

1.5.1. Challenges and lessons learnt

It has been realised that young students have good ideas that can compete at national as well as international level. Such students' ideas have the potential to be developed further for satisfying the needs and problems that the communities have. However, such ideas need to be exploited in proper ways and in real markets not just for academic experiential learning. If

students are well mentored, their creative and innovative thinking can yield better results. Unfortunately, lack of experts, technical and financial support hinders their learning process. On top of that, students and trainers/mentors demonstrate other challenges as discussed here below:

1. *Lack of common understanding, among university leaders and other staff, on the role of entrepreneurship/incubation center.* Given the existing departments or faculties which in most of the cases have insufficient number of staff and equipment, leaders find it a bit complex to institute another structure that will need some extra attention without an immediate return on investment. This understanding delays the endorsement of the center and its activities not because they are unimportant to the institution but because they might not be a priority of the moment

2. *Based on the above challenge, an immediate consequence becomes insufficient support (logistics) in the preparation of students.* This entails lack of or insufficient training materials, insufficient time for coaching and mentoring students in their journey of business idea development etc.

3. *Inappropriate career guidance which results in poor coaching and follow-up.* For some institutions, they pick same students/graduates to represent them in different competitions the institution is invited to. This can only enhance the capacities of the selected competitors but on the negative side, new talents and skills can be prevented from emerging. As the institutions may try to save their image using a bit advanced individuals, the space seems closed onto students with good new ideas but cannot find opportunities to exhibit their potential. In the end, it shuts down the possibility to effectively orient students in their educational and entrepreneurship careers.

4. *Lack of platform connecting students/mentors or their institutions after graduation.* One of the major challenges is to keep in touch with graduates after graduation. They get scattered across the country and it becomes difficult to keep track of their progress. While tracking systems can be put in place to know their whereabouts, it is insufficient as it might limit the flow and credibility of information. Regular platforms for allowing AGEA alumni should be put in place, various challenges encountered and successes registered after graduation can be shared with former and new members. This facilitates in evaluating the gaps between skills acquired and required as well as linkages needed between the actors for closing the gaps

5. *Language barriers.* Language is and has been one of the major hindrances to effective communication. While academic as well as project/donor-oriented communication

uses English, the local business community entirely uses the local language. In trainings or workshop, it is always recommendable to provide examples that reflect the reality on the ground. However, theories and concepts used in knowledge transfer are documented in English, but the environment they have to apply to uses a different language- mother tongue. Many trainees are trained in other academic fields not connected to business or management. However, they have to meet local people in order to get data or train them, but sometimes technical terms have no correspondences in the local language. It is therefore not easy to communicate since one, under normal circumstances, has to use the language that listeners relate with easily without losing the substance of the message conveyed in a foreign language. Thus, the status of training and product/ service development may be characterized by inadequate delivery of knowledge and skills due to lack of appropriate terminologies corresponding to words used in other languages.

1.5.2. Recommendations

Given social, economic and market potential students' projects demonstrate, it is of great importance to identify supportive measures that can enhance their skills in product and service development. Efforts from different actors (private and government institutions) that are involved in entrepreneurship promotion are needed and mother institutions need to occupy the central role in this process. This is relevant in terms of technical as well as financial support to the entrepreneurship centers. Mother institutions have the privilege to closely assess the process of monitoring, coaching and mentoring students when they are developing ideas.

Projects like AGEA help students in terms of national or international exposure. However, the primary responsibilities of mother institutions lie in facilitating the nurturing of individual competences in every aspect of skills development. This has to be done before students graduate to superior levels. In this line:

1. Institutions should continually invest in detecting and supporting (new) students with best business ideas and try to link them with mentors/experts for effective development. Teams of lecturers and students can work together to develop an idea thereby improving their research and practical skills

2. Institutions should avail some funds to support the research and development process, and most importantly, support prototyping till the final product is obtained

3. Project selection process should be fair and inclusive to allow many students to expose their ideas. Practices of picking one or two student(s) who participate(s) in every competition whenever the institution is invited, though good for institutional

appearance and individual experience, should be considered as a sign of weakness in fairness and development of new ideas. It can also temper with the career guidance principles as avenues for new ideas are shrank or not well exploited

4. Students who participated in summer schools wish to establish an international platform for future interactions and exploration of new opportunities. As participants believe in their ability to serve as role models, they also wish to keep learning from each other and keep the spirit of togetherness

5. As most AGEA alumni in Rwanda and Ghana were in undergraduate studies, they would like to integrate and remain connected with Germany and its education system. They therefore look for, on the basis of participating in AGEA, opportunities to get short term trainings or scholarships for Master's studies at German schools

6. Participants in summer schools (2017-2020) would like meet physically once again in the future to discuss and exchange on their achievements.

2. SECTION TWO: ADDRESSING GRADUATES' SKILLS GAPS FOR A BETTER TRANSITION FROM UNIVERSITY TO EMPLOYMENT MARKET

Undertaking the journey of entrepreneurship promotion at HEIs in Rwanda, as described in the first section, has been a good experience to both the learners and mentors/trainers. Not only have the mentors motivated students to discover the best and weaknesses in them but also it helped the institutions to once again reflect on their relations with market. Some of the students went beyond academic theories to product/service prototyping and selling while others looked for employment. Four years down the road, the program helped beneficiaries to identify gaps that need to be closed in business, but have also identified skills gaps that need to be addressed for a better transition from studentship to employment. It is therefore in that context that a survey was conducted to assess how direct beneficiaries perceived what they learned (from academia and AGEA skills) and what the market is seeking from them as new employees (entrepreneurship and/or employability skills).

Therefore, the discussions in the following pages are about what needs to be done for effective promotion of entrepreneurship in Rwanda. This involves identifying missing skills that are needed in graduates for effective transition from university to employment. Ideas were collected in November –December 2020 from 55 AGEA trainers/mentors, alumni and new participants. Have been considered only those students who participated in the summer schools between 2017-2019 and new students who participated in a three months training and coaching program (in product development) in 2020.

Since 2017 there was a competition for new participants every year. From 2018, participants were allowed to participate once again in the competition organized for competitors in the previous year. This was as a strategy to follow-up on the progress of previous projects. It was also done to create a networking platform for AGEA alumni and new players. All competitions were taking place in the same event. That said, each project that went through the summer school had, at least, a minimum follow-up period of two years until 2020. In this exploratory qualitative case study, respondents were asked to give their opinion on the following four open questions:

1. Identify at least 5 key skills/competences that students need to learn from universities and are needed the most in the market
2. What experiences/competences did you find you lacked most on the employment market after your graduation?

3. What has been the contribution of AGEA to who you are today?

4. What would you recommend AGEA to focus on most in developing entrepreneurial and employable graduates?

2.1. Profile of respondents

2.1.1. Number of respondents per institution

In this table 7, 9 HEIs were represented in the survey. Institutions with the highest number of respondents include INES Ruhengeri (17/55 many of whom (10persons) were new students attending workshops in product development and prototyping), IPRC Ngoma and UNILAK with 7 respondents each. The least represented is IPRC Kigali with one respondent.

Table 7: Respondents' institution

INSTITUTION	NUMBER	INSTITUTION	NUMBER
IPRC Ngoma	7	ICK	6
IPRC Musanze	5	PIASS	4
UNILAK	7	UTB	4
INES RUHENGERI	17	IPRC KIGALI	1
MIPC	4		

Source: Author, 2021

2.1.2. Age and gender of respondents

Respondents have been classified in accordance to their age and gender

Figure 2: Age and Gender
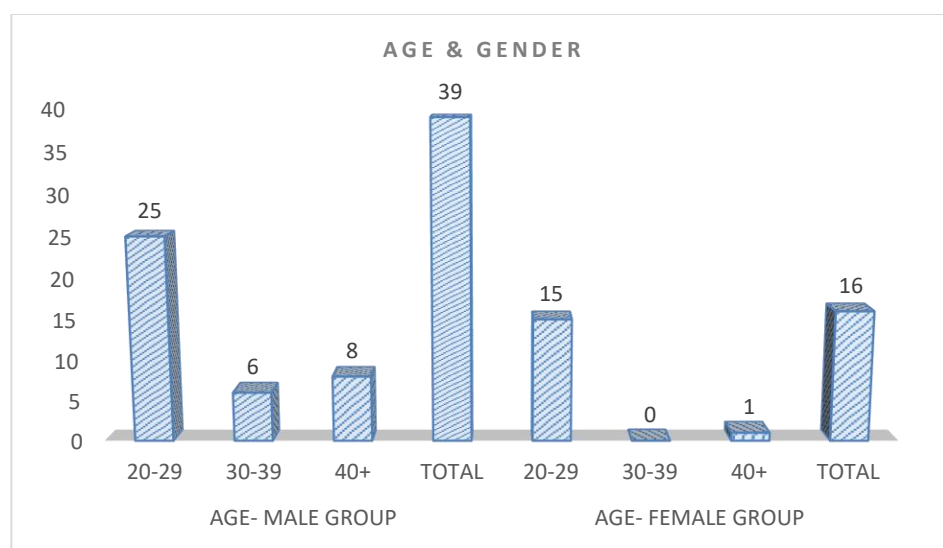
Source: Author, 2021

The majority of respondents are males and females between 20-29 years old. This is a group of students and fresh graduates. The second age group is 40+ years old which is characterized by trainers and mentors mostly.

2.1.3. Status of respondents

When considering the status of the respondents, two statuses were considered: Status1 is related to the current employment status (employer, employee, self- employed, student) while Status 2 is related to the respondent's relationship with AGEA (mentor, alumni, new participant).

Figure 3: Respondents' status
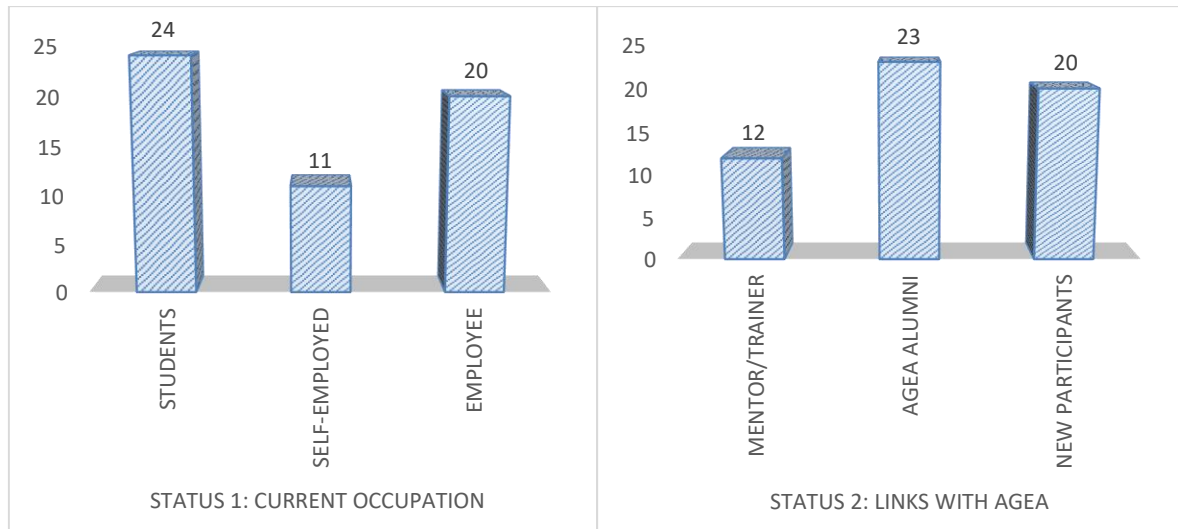
Source: Author, 2021

With regard to status 1, majority are students (24/55) followed by employees (20/55) and self-employed (11/55). Status 2 shows that alumni (23/55) and new students (20/55) have higher numbers compared to trainers and mentors (12/55) from partner HEIs.

2.2. Perceived market skills gaps and mitigation measures

As introduced earlier, the environment in which students live allows them to develop disciplinary competences and skills but it is sometimes difficult to apply such skills in the market. There are many reasons but two can apply to the AGEA group. First, students concentrate on academic skills and performance which are justified by grades and degrees. In some cases, such grades and degrees do not transcend laboratory tests to address real community problems. This becomes an issue when students are requested to transform their knowledge and skills into tangible solutions but they find themselves not aware of community problems or needs. In actual sense, when students lack what we can call "service learning skills" whereby the knowledge created is applied to existing problems in order to address them, they find themselves in a situation of incompetence or unemployment or both. When the opposite situation exists and thereby students demonstrate that they are in touch with community issues, then people can say there is a connection between academia and

community/society. In this case, skills/knowledge created fit well with the needs of the community and that status smoothens communication between the sides of producers and suppliers of graduates and the employment market. When such harmony is strong, there arise additional competitive values to "graduates". Graduates not only act as the main beneficiaries of education but also as the bridge between the market and the academia. In the end, the value of the university increases because more people can identify and relate with it.

Second, the environment in which skills and knowledge apply is characterized by uncertainties brought by its constant transformations. It becomes difficult for both the trainers and trainees to predict what exactly will happen in the future. Yes there are preemptive measures that are always taken by individuals or institutions but the Rwandan context makes it harder to access reliable data that can facilitate someone to make reliable predictions.

Since it is difficult to predict, it is even harder to find the perfect fit between required market skills and suppliers' capacities. As a consequence, any misfit leads to an increase in unemployment as well as unoccupied positions; it can trigger the wastage of resources (time, human, financial, infrastructure) in some cases; higher likelihoods of seeing resources misallocated or reallocated. For example, misallocation can be observed through investment in programs and matters that are properly useful in the past up to present, but not exactly important to the next generation; the reallocation of resource can be visible and constantly in curricula revisions. Though curricula revision is good for catching-up with new contents vis-a-vis the current market trend, HEIs often lag behind due to the fact that education follows programs largely influenced by the external. This makes education institutions become followers in that academic market competition. As many academic institutions in developing countries including Rwanda have little influence in shaping the environment of competition, this turns them into constant market followers. Consequently, it hinders their overall teaching/learning progress and performance, including underperformance or loss of jobs by their graduates.

Given that this situation can transform students into "victims of the time" by turning them into employees of the past and the present (ie trained in programs that mostly address historical and current concerns), students may get confused and trapped in the past. As market conditions keep changing, graduates and their mother institutions become incapable to adapt in accordance to the speed of the changes. It therefore is of utmost importance to introduce what one can call "preemptive learning". This refers to introducing and enhancing learning skills, values and behaviors that take the learners out of the past and present traps to enhance deep connections

with the environment in which future performances will take place. Preemptive learning sparks transformational abilities that facilitate to foresee the future, with enough capabilities to identify and predict market opportunities, assess them, exploit them and prosper with them.

2.2.1. Skills needed the most on the market that students need to learn at universities.

For being able to dispatch transformational preemptive learning, understanding the market needs is very important. From a university perspective, it is important to understand the market needs in order to design appropriate academic programs. Based on the formal academic trainings that AGEA participants went through before, during and after their membership to AGEA; given the workshops in the form of formal trainings or intercultural interactions between employers, peer students with local as well as international backgrounds, given the participants' conscious or unconscious comparison of academic and market environments, the respondents were requested to identify at least 5 key employability skills needed the most on the market that students need to learn from Universities.

Figure 4: Skills needed the most on the employment market
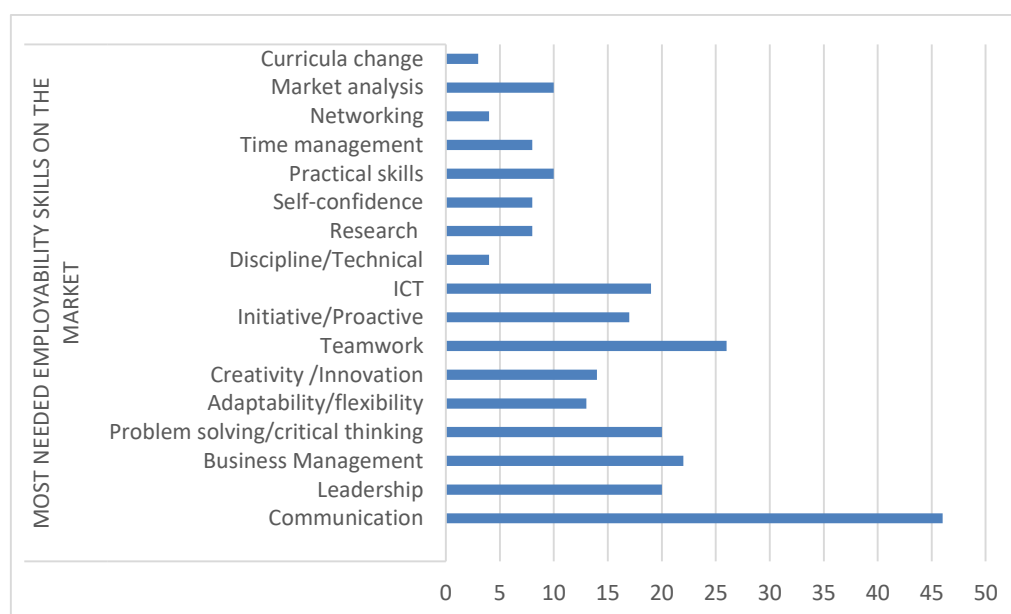
Source: Author, 2021

In accordance to the figure 4, the most needed skills on the (employment) market that students have to learn while still at their universities include, among others and by order of importance: Communication skills, teamwork, business management, leadership, problem solving/critical thinking, ICT, initiative/proactive, creativity and innovation, adaptability and flexibility, practical skills and market analysis.

2.2.1.1.Communication skills

Looking at respondents' feedback in figure 4, there is no doubt that communication skills need to capture the highest attention of academic institutions. When people talk about communication skills especially at work, they refer to the following sets of ideas: *1) communicating with others, 2) speaking and listening, 3) understanding and interpreting communication* (AQF, 2013). Communication becomes effective when the communicators can reason and exchange in the language they understand well and, most importantly, are all familiar with. Locally, the common citizen uses Kinyarwanda (the mother tongue) to communicate wherever they are including administrative offices. However, the English language, which is also the medium of teaching, as well as French (recently replaced by English), are all official foreign languages used to communicate with foreigners and for administration purposes. Since common people don't use the foreign languages often, and that most communications are done in Kinyarwanda, participants in the AGEA find the language barrier as one of the hindrances to effective communication. Many of them cannot reason in and speak well foreign official languages- especially English. The difficulties have been observed during business competitions and summer schools which took place in English. These events which brought together English speaking peers exposed the weaknesses in communication abilities and fluency (speaking, listening and writing).

From what respondents mentioned, it is important that students know how best and effectively they can communicate in a work environment. In the "Business and professional communication: principles and skills for leadership", Steven Beebe & Timothy Mottet (2013) argue that without communication skills, people are less likely to be successful in whatever activities they undertake. Communication is the most valued workplace skill and without effective communication skills, one's career may suffer. The authors categorize the nature of human communication in four areas including: *Making sense, Sharing sense, Creating meaning and Verbal and nonverbal messages*. In this spectrum, learners should be able to identify different components of communication such as the **Source** (the originator of the message) which embodies encoding (Turning thoughts into a code) and decoding (Interpreting the message); the **Message** (the information communicated); the **Receiver (t**he person interpreting the message); the **Channel** (the means by which the message is expressed); the **Noise** (anything interfering with the interpretation of the message); the **Feedback** (the response to the message) and the **Context** (the environment of communication).

While teaching students communication skills, learners should be able to differentiate between conditions and factors that influence their abilities to transfer the message and receive the

feedback. These include: Reading (definition of reading, techniques of reading), Writing (paragraph and essay writing, summarizing, paraphrasing, quoting, synthesizing and referencing), Listening (definition of listening, listening skills), Technical writing (minutes taking, report writing, business letter and CV writing etc.).

2.2.1.2.Teamwork

Teamwork emerged the second cited *most* needed skill on the market that need to be taught at university. In any organization, individuals come together to form a team that helps the organization to achieve its objectives. Although individual efforts in their areas of expertise are key to the success, when such efforts are put together in a harmonious manner, results are likely to be higher than those arrived at individually. That said, "teamwork replies upon individuals working together in a cooperative environment to achieve common team goals through sharing knowledge and skills. The literature consistently highlights that one of the essential elements of a team is its focus toward a common goal and a clear purpose…" (HERDSA, 2002, p.641)

When building and working in teams, certain imperatives need to be looked at. They include, among other things, understanding oneself, building relations with others and cooperating and collaborating with others. Delarue (2003) and Hacker's (1998) cited by the European Foundation for the Improvement of Living and Working Conditions (2007) distinguish between two conflicting terminologies: teams and work groups. Teams refer to 'Groups of employees who have at least some collective tasks and where the team members are authorised to regulate mutually the execution of these collective tasks' (Delarue, 2003); "group work" refers to a common task requiring interdependent work and successive or integrative action' (Hacker, 1998). Though teamwork is encouraged, it does not always apply and benefit every organization. All depend on the objectives and the means.

There are many ways to instill teamwork in students. They include group assignments, role play exercises, interactive sessions in the form of parliamentary debates, etc. Although these approaches may initiate students to teamwork, students need more practical and result oriented techniques. Such experiential practices do not only enhance the capacity of individuals to understand the subject matter but also induce them in learning from their mistakes. In order to correct such mistakes, collective understanding and agreement on the causes and effects improves the capacity to preempt the negative consequences.

Therefore, it is recommendable that students get to know certain key attributes that are required for successful teamwork and, have the opportunity to exercise them in an environment of doing. Such attributes (HERDSA, 2002, p.641) include, among others, the following:

- *Commitment to team success and shared goals*: successful teams are motivated, engaged and aim to achieve at the highest level

- *Interdependence*: team members need to create an environment where together they can contribute far more than as individuals by promoting and encouraging peers to achieve, contribute, and learn

- *Interpersonal Skills:* these includes the ability to discuss issues openly with team members, be honest, trustworthy, supportive and show respect and commitment to the team and to its individuals

- *Open Communication and positive feedback*: team members' willingness to give and receive constructive criticism and provide authentic feedback

- *Appropriate team composition is essential in the creation of a successful team*: accepting the differences in individuals, that people are not created the same, that they have different backgrounds etc., but that should not be the source of conflict, instead, the source of complementarity. Team members need to be fully aware of their specific team role and understand what is expected of them in terms of their contribution to the team and the project

- *Commitment to team processes, leadership & accountability* - team members need to be accountable for whatever action they perform; and be aware of team processes, best practice and new ideas. Effective leadership is essential for team success including shared decision-making and problem solving.

2.2.1.3.Business management skills

The third most cited and needed skill is business management. Many participants have demonstrated that knowing how to start and run a business is very beneficial to graduates, no matter what academic program they follow. This is because wherever students go after graduation, management skills will be required for successful performances. In this respect students wish to have skills in identifying opportunities (including knowing what an opportunity is and how to know it), understanding prerequisites for starting a business, how to strategize so that one overcomes different challenges that arise in the process of starting and running businesses, but most importantly, how to raise money and make profit. In few words, they are interested in understanding the deployment and manipulation of human resources, financial resources, technological resources, and natural resources.

As many graduates aspire to create their own enterprises as an escape to the increasing unemployment, relying on what they studied in their academic disciplines is not sufficient. It

is important that they learn fundamental aspects of management which consist of planning, organizing, staffing, leading and controlling. However, since graduates aim to become successful employees or managers, it is crucial that they see themselves as entrepreneurs and active change agents, not just as mere managers (Carpenter et al. 2010). Thus, they have to learn how to perform such functions as part of a body of practices and theories before they step out of universities.

2.2.1.4. Leadership skills

In addition to management skills, leadership is another key point that should be developed amongst students at universities. Leadership is, in association with problem solving and critical thinking, an essential element for facilitating individuals and organizations to adapt to the changing (market) environments. Graduates must be reminded that in the environment they are prepared to join, there is competition among employers and countries for the best and brightest; increased labor mobility for better positions and pay; and hypercompetition that puts pressure on firms to invest in present and future leadership capabilities. Therefore, when students are aware of the above situation, they must understand the roles and importance of leadership, entrepreneurship, and strategy in principles of management. They must also understand how leadership, entrepreneurship, and strategy are interrelated so that the company's or personal objectives are achieved. As an art of mobilizing others to want to struggle toward a common goal, help build an organization's human capital, then motivate individuals to take concerted action, graduates need to know when, where, and how to use more formal sources of authority and power, such as position or ownership (Carpenter et al. 2010).

2.2.1.5. Critical thinking/problem solving

In their curriculum development, universities should emphasize on training students "how to think critically" and how, based on such ability, to "solve problems". In theory this might look simple as concepts/theories can be found and explained, principles and guidelines can be highlighted (enough literature on that exists) etc. Critical thinking process can be elaborated, case studies as well as individual or group assignments can be applied, and presentations of results can be discussed in class as a form of training or evaluation. However, it is of utmost importance to let students exercise their critical thinking in a real environment. In this context, not only will learners face and feel the heat of the reality of the issue they are dealing with, but also will be able to experience the emotional aspect attached to that issue. This emotional side of the problem is often missed during formal academic trainings yet the ability to capture it in the thinking process influences the quality of the decision that one makes plus the solution to reach.

In entrepreneurship or business management, people learn how to deal with things and factors that keep changing, how actors must act quickly and rightly to stay and lead the competition. This requires a sharp mindset, an informed situation and a practical experience. All these elements put together can help the person in a problem to twist the results in his/her favor and become the market leader. That said, understanding the convergence between leadership, entrepreneurship and problem solving introduces the learners to self-assessment, discovery of own abilities to deal with complex situations and to take appropriate decisions. Having acquired the right competences, students will graduate with entrepreneurship abilities that involve recognition of opportunities (needs, wants, problems, and challenges) and the use or creation of resources to implement innovative ideas for new, thoughtfully planned ventures (Carpenter et al., 2010).

2.2.1.6. Adaptability and flexibility

In management and leadership, despite proper and strategic planning, participants put in place preconditions which, if everything remains constant, must be fulfilled to successfully attain expected results. During the process of implementing the strategy many scenarios can happen including: things happening the way they were planned, or something (an obstacle) interfering in the middle of the process thereby delaying, diverting or stopping the process, or members finding themselves implementing things they have not planned for, just for surviving. This relationship between intended versus realized strategies is based on the analysis of a situation, the environment and possible impacts on the strategizing individual/firm, and it offers a differentiated perspective full of complexities and uncertainties.

In a competitive environment such as the market, strategy relies heavily on the competitive intelligence that involves the systematic collection and analysis of public information about rivals for informing decision making (Dzemyda, 2014: p.24). Such intelligence plays three major roles: to forecast competitors' future strategies and decisions; to predict competitors' likely reactions to firm's strategic initiatives; and to determine how competitors' behavior can be influenced to make it more favorable (Ibid). From this description, it is imperative that conditions allowing adaptability and flexibility are in place for a business entity to sustain its operations.

Learning how to become adaptable and/or flexible as qualities of entrepreneurship, leadership and management, require practical and experiential approaches. Practical experiences require also that the environment for learning is suitable for instilling and helping the learner to endure the pain and/or celebrate benefits of engaging in an action. However, it should be understood that endurance (which is close to resilience) is different from adaptability. While resilience

involves responses to adversity, adaptability concerns responses to change, novelty, and uncertainty that may be positive or negative in nature (Collie and Martin, 2016). Flexibility is required when adapting to a situation and flexibility is shown when information handling for decision-making is done. It provides better readiness for intervening in conflicts and other situations that require a leader to change the course of action; it is an essential part of affecting in a person's motivation, sense of importance and personal development; it helps a leader function more effectively and in an appropriate manner in different situations (Vaari, 2015). Training people in skills of adaptability and flexibility requires that they are taken out of their comfort zones and they are subjected to regular but varying exercises, experiences and tests. Such exercises should involve people or situations that can manipulate the psychology of the learners in hard and soft conditions so as to keep developing their ability to deal with complexed contexts. As a meta-skill or meta-capability, adaptability may be seen as a function of the cognitive and relational skills. Being adaptable to a situation requires a certain level of intuition. This also requires certain practices, many of which are impromptu, to train the brain and body to react accordingly and quickly. Freeman and Burns (2010) give an example of a pilot who is required to fly a specific number of hours per month and periodically demonstrate the ability to respond effectively to emergencies in order to maintain the vigilance, regardless of his seniority…., and must be provided with regular opportunities to maintain the basic skills of his or her profession in a variety of situations and to practice decision-making under conditions of physical and mental stress. Thus, this intuition is the capability that allows individuals to draw upon their experience to recognize what is going on in specific situations (make judgments) and guides them in how they react (make decisions) in those situations (Ibid).

Like intuition, critical thinking is an essential component of adaptability which also requires hard work to develop and constant practice to maintain. Individuals need to be trained in such skills even though it is not easy. It is not easy because it requires agility on the side of the instructor and the side of the learner, it needs time and staff with a good level of psychological assessment (especially when the task and conditions involve pain and frustrations) which many HEIs may not be capable to provide. Though it is challenging, there should be investment in intuitive and critical thinking fields so that students are introduced to them and get ready to confront the uncertainties awaiting them in the market environment. On top of intuition, it is paramount to train people to know and understand who they are (strengths and weaknesses). With self-awareness individuals understand well their capabilities and limits. That contributes

to self-regulation when it comes to taking and implementing decisions. It also contributes to effective leadership which, as highlighted above, is an essential component of adaptability.

2.2.1.7.ICT skills

"Training students in ICT skills increases their competitive advantages on the employment markets."

Pixel Inc. Ltd

Photos courtesy: Pixel Inc Ltd

Pixel Inc. Ltd is a private IT service company created by students after attending AGEA-Rwanda program in 2018. Our mission is to increase youth literacy in ICT through trainings and services delivery in IT. Our services include:
Web and application hosting; Software Development (Mobile and desktop applications). Some of the Big Software we developed are Iwacu School System: a system that manages various activities from different schools. We develop also systems for managing thesis and dissertations. We develop websites for schools at affordable prices and provide IT Trainings to students from contracted schools. Similarly, we do Consultancy in IT by managing software and IT Departments of schools, private companies and NGOs.
Our motto: "Innovation you need is our priority."

The place of ICT skills is very crucial in developing and transmitting knowledge. In recent decades, the use of information and communication technologies (ICT) for educational purposes has increased, and the spread of network technologies has caused e-learning practices to evolve significantly. Widespread use of new technologies, such as the internet, social networks and mobile phones, has affected the processes of education at universities. Technology has an important impact on education, making possible both a better communication and the implementation of the newest information systems, useful for learning and tuition (Marko Urha, 2015). There are systems which support individual learning, collaborative learning, learning content management, learning activity management, formal

learning, informal learning, and workplace learning. One of the most common educational systems, which are supported by information technology, is e-learning.

E-learning is the use of telecommunication technology to deliver information for education and training. E-learning is being introduced as a fundamental part of the student learning experience in higher education. Nichols (2003) defines e-learning (electronic learning) as the use of various technological tools that are web-based, web-distributed or web-capable for the purposes of education. Daly et al. (2010) define e-learning as a set of practices which enhance the potential of people to learn with others via technology-aided interaction, in contexts which can be "free" of barriers of time and place. It involves the utilization of a range of digital resources- visual, auditory and text-based- which enable learners to access, create and publish material which serves educational purposes (Global, 2017).

For e-learning to effectively happen, countries and HEIs in particular need digital infrastructures. Such sets of digital technology tools and systems that offer communication, collaboration, and computing capabilities are used to communicate, create, store and manage information. These tools and resources include computers and the internet, telephones, television and radio. Digital infrastructure are foundational services that are necessary to the information technology capabilities of a nation, region, city or organization. By extension, they are necessary for the economy and quality of life of a modern man or nation.

Since education has changed dramatically with the distinctive rise of e-learning whereby teaching is undertaken remotely and on digital platforms, different remote learning strategies have been put in place by both government and private learning institutions in order to facilitate continued learning. Some of the initiatives include airing classes on public radios and televisions. Others include "Electronic learning", or commonly known as "e-learning" which delivers learning using purely internet and digital technology. This type of learning uses a computer and software programs for its learning process, and was first designed for working adult students who were unable to receive formal education as full-time students (Moore, 2016). It is learning facilitated by technology that gives students some elements of control over time, place, path and/or pace.

HEIs must embrace the e-learning trend, those offering and receiving e-learning services must make sure that some issues are addressed. These include:

- *Training technology users (teachers, students and support staff)*: whilst some users may be advanced in using and manipulating e-learning tools, others may not be familiar with one or many of the tools. It is important that users especially teachers start using the technology when they completely understand how it works. This is because they can

play two roles at a time: teacher and trainer. As teachers, they deliver knowledge and skills content; as trainers, they help students to understand the use of the tools. This also implies that the institutions provide the initial structure to a student's work, encourage self-direction and remain sensitive to the various learning styles.

- *Matching technology to infrastructure, teachers, and learning goals*: This goes back to training in such new technologies to both teachers and students to create a balance in the system. This implies manipulation and maintenance of ICT tools, appropriate use of applications and platforms etc. The technology must match the professor's abilities, needs, and learning objectives as well as the infrastructure of the organization offering e-learning. That said, teachers have the room to use various knowledge/skills transmission techniques. They, however, should provide facilities that encourage learners to carry out research for discovering new knowledge/skills. That can be achieved through individualized initiatives and self-designed styles, or through individual or group tasks guided by specific milestones in a particular time.

- *Being quick in decision-making and future-oriented*. It is important that when choosing technology to be used in an academic environment, decisions must be quick and preemptive for the future. This is because technologies change quickly. Organizations should minimize bureaucracy while, at the same time, looking to the future when proposing and accepting any e-learning initiative.

- *Seeking constant feedback*: As an academic activity, it is always important to have feedback so that the teaching/learning process gets adapted to the issues arising from the field. This may relate to various user experiences such as feedback from students on how well certain features are working or not working and, what features they would like added to the course; issues related to the infrastructure (lab, networks, apps etc.), accessibility to e-learning technologies, information about what works best in a particular application, etc.

2.2.1.8.Creativity and innovation

The concept of creativity or creative thinking means a lot in the field of entrepreneurship. Not only does it appeal for unusual ways of thinking and acting but also the extraordinary capacity to bring about changes. Being creative means breaking the assumptions restricting "normal" thinking. As a mental activity, creativity techniques are based on two basic mental processes. These are: creation of unusual or interesting links between ideas; reversing or interrogating certain aspects of the thought that are concerned. There is a close relationship between

creativity and innovation. As creativity is a mental activity that brings innovation, innovation is the physical or external consequence of creativity (SİPAHİ, 2017). When applied to an organization, creativity can be defined as valuable, useful, new product, service, idea or process created by individuals working together in complex social systems. When applied to an individual, individuals with creative ability produce original ideas thereby making creativity a prerequisite for a successful innovation work. It therefore becomes the first step in innovation process (SİPAHİ, 2017).

One can ask him/herself if creativity can be learned. The answer is yes! creativity can be learned and improved over time. There are different techniques for that and individuals can enrich their daily lives by innovating. Teaching and learning creativity skills at HEIs in Rwanda is somehow challenging as the environment does not facilitate thinking out of box. Students need to get exposed to scenarios and realities that push them to get new pictures of things.

While the literature about creativity acknowledges that not everyone is capable to innovate, the literature fails to provide the limits beyond which a person is not capable to think creatively. It can therefore be deducted that teaching creativity skills to groups of learners lays solid grounds for potential innovations. For learners, they should be trained in creative personality which reflects a personality that is open to curiosity, patience, change and innovation, ability to invent, adventure, risk taking, imaginative thinking, imagination, experiment and research. It is also important that learners identify and enhance their personality in terms of flexibility, sensitivity, tolerance, responsibility, autonomy and positive self-criticism as these are among other characteristics of creative personality (Ibid).

Various techniques can be used in developing creativity and innovation. Like Suzanne Stein et al. (2014, p.2) elaborate in the book "Creative Techniques Handbook", "creative technique is a tool that may be used by groups of creative practitioners to move from a broad concept to a defined idea for implementation. Indeed, they may help a group to find or frame a problem to solve and they are intended to give shape and form to the intended solution or offering". In this definition one deducts that creativity is a process, it involves a need and a solution (product/service). In other words, creativity involves opportunity or problem identification, research & development and, solution finding by using unusual or unconventional means/ approaches in the process. It is therefore good to introduce here below some creativity techniques.

2.2.1.9. Creativity techniques

The following techniques have been extensively discussed in the books "Creative techniques handbook" by Stein et al. (2014 & 2015). They include among others:

- **Brainstorming:** It is a group or individual creativity technique by which efforts are made to find a conclusion for a specific problem, by gathering a list of great ideas spontaneously contributed by its members. The purpose of the initial 'think up' process would be to come up with as many ideas as possible;

- **Card Sorting:** It is a simple technique where participants are guided by a facilitator to create some kind of categorization or hierarchy of elements. By analyzing the statistical results of many rounds of sorting, designers can evaluate which elements the average user of their product or service expects to find grouped together. Among the benefits/goals of card sorting include that it is a fast, cheap and flexible technique; it helps to provide organizational information to the design process; it facilitates creating a high level structure for the information contained within the subject

- **Imagination Box:** It is a typical creativity stimulating game through the ideas and performances of other players to inspire players' imagination. It is a simple, playable, practical and entertaining game. It is also a game that can be used as a method to generate creative ideas and innovations. The basic rule of this game is to keep receiving and passing an invisible (imaginary) box, which may contain any object imagined by players. This exercise is played in order to develop imaginations, collect inspirations, understand futures, help analyze users' needs, discover desirable functions, realize players' characters

- **Sound ball**: It is a warm up activity that involves improvisation and thinking on your feet. In the game you pass around an invisible ball while making noises that the person you pass to must repeat. This exercise is played in order to warm up/ wake up, increase spontaneity, increase participation, get people to listen/pay attention to one another

- **Yes, Let's:** This is a group game in learning what kind of offers or ideas inspire your fellow players. In this game, every participant offers a behavior/action by saying "Yes, let's". Then, every participant responds "Yes, let's" and performs improvised behavior spontaneously. The goals of this exercise involve getting your creativity, going and increases your team members' engagement with each other. This activity not only increases energy but also requires each person to, actively engage, listen, think, and do

- **Bodystorming or experience prototyping:** It is one process for coming up with ideas based on actually experiencing a situation to see what users will go through. This can be done through improvisation and play, using a prototype, or actually going out into the environment. Through going through the motions we get a better understanding of

how a process, product, or place works. We get a better understanding of the actual challenges that either are creating barriers, causing confusion, or are just not easy. An example given is like the experience and feeling one has ever got by shopping for a major piece of furniture with someone. They probably both tried it out, sat on it, made sure it was comfortable, and discussed which one was preferred and why. The purposes of this exercise include (1) "creating Empathy" for your users. By going through the process you get a better understanding of the difficulties they are dealing with and what they are going through (Burns et al., 1994). (2) Defining needs or areas for improvement: This requires going out and actually experiencing how users use your product, or by creating a small model in order to simulate that experience.

- **Mobile Diary:** It is a way of gathering specific participants' information. It is a hybrid method that incorporates many of the creative and playful aspects. It is generally used with a group of one to 10 identified individuals. A range of different analog and digital technologies are used that allow participants to post and share on various aspects of their daily life. Researchers capture users' reflections that they could not be able to access, particularly the types of personal and private data collected through interviews or observations.

  The purpose of this technique is to identify stakeholders and their relationships; capturing data and insights from an individual or group to assess actions, activities, timing of events, habits, behaviors and emotions. *On the side of participants*, it enables them to self-report by gathering their own data over a period of time; it allows for self-reflection and possible change; create and share the richness of their lives; capture moments in real-time; document actions, behaviors and emotions. *On the side of researchers*, it enables them to see personal and private aspects they would not be able to access through interviews or observations; identify areas of focus opportunity and unmet needs; gauge reactions; tell a story with qualitative data; deep immersion into the lives of the participants.

- **Prototyping:** A prototype is a model on which something is based on or formed. It can be an early sample, model, release of a product built, to test a concept or process, or to act as a technique to be replicated or learnt from. It is a term used in variety of contexts; this includes semantics, design, electronics and software programming and this method is often adopted in user centric design process to meet user needs and expectations. Prototyping is not simply understood as the development of "first forms" or "first

strikes" as beta-versions of products as in industrial design, but as a more general mode of doing culture: a mode that is tentative, based on bricolage, user involvement and ongoing change and improvements of products and practices, as "open innovation", rather than on an expert in a closed lab who turns out a finished product to be used by a unknowing user.

The purpose of prototyping can be summed up by the two basic prototyping categories as for why they are done: *(1) The Proof of Principle Prototype (Model)* - is used to test the intended design without attempting to simulate the exact visual appearance in order to identify which design options will work or whether further development and testing is needed before making the final design. *(2) Form Study Prototype (Model)* - allows designers to explore the feel, look size of the product without simulating the actual functions or exact appearance and saving on the cost and time. Prototypes are considered the blue prints and backbone of the final design and allow users and designers to test their interactions in terms of design and usability with the interface.

- **The Action Method:** This is a technique for implementing ideas. It is a productivity methodology targeting creative professionals, and is often considered to be a task-management system. It was invented by Scott Belsky, founder and CEO of Behance. It is more about an incredible idea which one couldn't find the mojo (good luck) to realize it. It is about dealing with excitement ideas create, transforming vision into a reality onto the laser focus when the excitement fades, it is more about how to handle things when the period of execution comes and where nothing remains but the task of actually doing.

  For implementing the "action method", limit your "reactionary workflow" and start pushing ideas forward; learn how to work with a bias towards action, reconcile urgent versus important to focus on what matters; overcome the stigma of self-marketing to maximize the impact of your ideas; maximize the creative chemistry of your team and, break free of consensus and bureaucracy (Stein et al. (2015).

  By keeping in mind that the action method is project centric rather than context centric, its users should live life focusing less on "reference material"; rather, they should use design to make people more productive. As a matter of fact, the action method is closely linked "Getting Things Done" by David Allen as cited by Stein et al. (2015). He summarizes his method in five steps to get things done: Capture: collect what has your attention, Clarify: process what it means, Organize, Review frequently and, Engage: simply do.

2.2.1.10. Market analysis

It is always recommendable to keep an open eye on the dynamics of the market. This means that creative or innovative ideas are subject to alterations which mostly originate from the market. As discussed earlier, market changes and trends bring opportunities and challenges. To analyze the market is one of the best ways entrepreneurs, managers or employees can deal with the market opportunities and challenges. Market analysis consists of thorough assessment of market conditions and factors in a specific industry; and studying its dynamics such as volume and value, potential customer segments, buying patterns, competition, and other important factors. While planning or doing market analysis, the analyst should answer the following questions[1]:

- Who are the potential customers?
- What are customers' buying habits?
- How large is the target market?
- How much are customers willing to pay for the product/service?
- Who are the main competitors?
- What are the competitors' strengths and weaknesses?

In successfully answering such questions, the market analyst is able to know who will buy the product/service, what they feel about it, whether they think it's a luxury or commodity, the packaging, the branding etc. It also helps to identify and describe the target market in its demographic, geographic, lifestyle (consumer or business-style for businesses), psychographic patterns (consumer/business), purchasing patterns and buying sensitivities. Moreover, when conducting market analysis, one identifies who the major competitors are; on what basis they compete; how they compare (products and product quality, market share, technologies…); potential future competitors, barriers to entry for new competitors, etc. (Rhonda, 2010).

D. Nancy Trust ltd
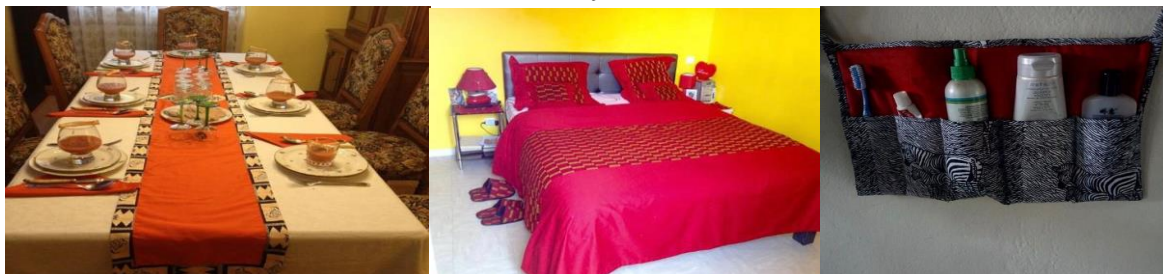
Photos courtesy: D. Nancy Trust Ltd

D. Nancy Trust Ltd is a company created in 2019 operating in the field of textile interior decor. We co-create an environment with friendly atmosphere in homes, offices, hotels, restaurants,

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[1] https://www.businessnewsdaily.com/15751-conduct-market-analysis.html retrieved on 4.02.2021

hospitals, churches etc. We use African fabrics and textiles. All our decoration items are personalized based on clients' needs and wishes.

Our main products are; Tablemats, Table clothes, Napkins, Bedcovers, Pillow cases, Neck pillows, Window curtains, Male and Female clothes. We are mostly focused on branding our country's image by promoting "made in Rwanda" products, promoting the African colorful dressing and culture; facilitating our customers to access and use local materials; producing diversified unique and high quality home-made products.
We always strive to serve our customers beyond their expectation and make them live unforgettable experiences with us.

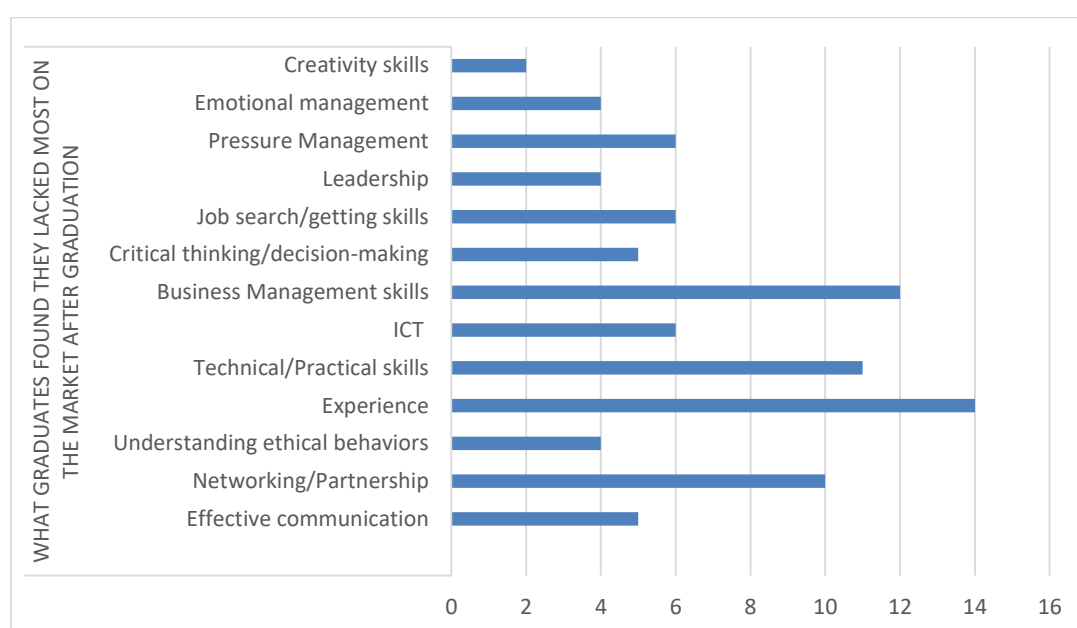### 2.2.1.11. Practical skills

The context of practical skills is related to the ability of students to handle tasks in a practical manner. This refers closely to familiarity with tools and processes for performing tasks effectively in the workplace. In their respective academic disciplines, students are taught various skills many of which are exercised within the academic boundaries. Graduates may claim to have full knowledge and understanding of them but when they come to the market field, reality shows that they lack competences in applying them. When they graduate and compete for employment, some fail to deliver to the satisfaction of their employers. This put otherwise, before they graduate, students need to be attached to industries where they get introduced to some company's practices and accustomed to practical realities. In such initiation process, they become able to relate the market characteristics with their academic backgrounds, they learn new things which happen in the business/work environment but do not happen in class, they establish and build new relationships which are job inclined. This also helps them to differentiate between job and other types of relationships and, how job relationships should be managed, etc. Practical skills develop a set of job skills and increase the value of the basic academic experiences.

2.2.2. Competences graduates found they lacked most in the employment market

This question was asked to the 31 out 55 respondents who identified themselves as employees and employers. It focused on identifying the competences/experiences they lacked most on the market after their graduation.

As the figure 5 shows these can be put into three categories: practical and functional skills (opinions with percentage above 30), functional and personality skills (opinions with percentage between 15 and 30) and, life-learning skills (opinions with percentage below 15).

2.2.2.1.Practical and functional skills

Category one which registered the highest percentages comprises competences such as experience (45.1%), business management skills (38.7%), technical skills/practical skills (35.4%) and networking/partnership skills (32.25%).

2.2.2.1.1. Experience and technical/practical skills

From the results, the employment market was expecting functional competences from the respondents. It has to be remembered that even if someone is entering the job market for the first time and has no field experience, employers set minimum requirements that graduates/applicants should satisfy for potential recruitment. In fact, the experience can be acquired through laboratory manipulations and tests, field experiments or industrial attachments. In the latter, students are brought closer to the reality before they graduate so that, by the graduation time, they easily integrate the job market and, they have at least the minimum competences to perform the tasks.

This experience issue goes along with the technical or practical skills that many respondents identified they were lacking. If close to the half of respondents faced this experience and technical challenges, it reveals a lot in relation to the entire teaching ecosystem. It might be possible that the teaching/learning methodology is not appropriately aligned with the needs of

the market, or teachers are not well equipped with the right tools and methodologies for teaching, or the teaching institutions lack resources (human, infrastructure, pedagogical) that can support effective knowledge development and transfer, or there is lack of synergy between academic and market actors to streamline the knowledge/skills development and transfer policies, etc. Given this situation, academic institutions and stakeholders have the responsibility to revise their policies in order to increase the level of collaboration. Through such collaboration possibilities for students to practice and get the experience will increase.

2.2.2.1.2. Business management skills, and networking/partnership skills

Respondents identified also management skills as missing when they joined the (self) employment market. Here, emphasis was put on the process of planning, organizing and controlling resources of the business. Respondents' arguments were based on the fact that there are many students who graduated in not business fields, who attempted to create their own businesses but struggled to plan and manage the basics for their companies (ex. business idea/project development, market analysis, book keeping, etc). They had to look for colleagues or external consultants who (could) charge(d) them for something simple, that they believe everyone should have known and done for themselves. They consequently advocated for enrolling management courses to all students (irrespective of their academic field) so that when they graduate and they are called for (self) employment, they are able to perform well, at least, the basic functions of management.

People doing business do not work in isolation, reason why they collaborate or network with others. Through the network they can access bigger markets, learn from the partners, develop products or processes together, etc. Through networking, the exchange and flow of information facilitates partners to speed up service thereby giving them the possibilities to lead the competition. By teaching how networks operate and the benefits of networking (especially in competitive environments) not only increases students' awareness about business environment but also prepares their mindsets in relation to partnership relationships.

2.2.2.2. Functional and personality skills

Category two comprises a mix of functional and personality competences which may be context dependent. They include: job searching/getting skills (19.3%), pressure management (19.3%) and ICT skills (19.3%), Effective communication (16.1%) and Critical thinking/ decision making (16.1%).

2.2.2.2.1. Job searching skills

It is evident that graduates or unemployed people may struggle to secure a job not because jobs are unavailable but because the applicants lack information. It may also happen because of

poor job search skills leading to low-quality applications. When applying for a job, it is crucial to know the interest of the job provider (for what purpose is s/he looking for that person) and that of the applicant (what drives him/her to apply). It is also crucial to know how to market yourself in order to attract and meet the attention of the job provider. It is possible that the job seekers may be informed about suitable job opportunities but submitting low-quality applications may cost them the job. Though motivated to apply, they may lack basic skills to write an effective resume or an informative cover letter. If graduates were helped to know how to apply or improve self-presentation, they could be capable to get the job.

This is why it is important to know the basic job seeking or getting skills and help students practice them for getting and/or increasing experience. This implies the ability *to map the work goal* which specifies employers to target; the kinds of questions to ask possible employers; and how to tailor the résumé and other work search tools. In this mapping of the job that one wants, s/he should reflect the following: company information, job duties/tasks, work conditions (full/part time, salary…), work environment (office job, field), relevance of job to his/her skills, relevance of job to his/her interest, coworkers, management etc. (CCDF, 2015).

2.2.2.2.2. Pressure/stress management

Apart from job searching skills, pressure or stress management (19.3%) has also been highlighted as a missing skill. It is true that students are sometimes subject to pressure when it comes to assignment preparations, execution and assessment. However, these are not serious pressures which can result in serious consequences including loosing job or putting the organization into trouble. Job pressures are a result of a combination of many factors such as poor performance, meeting deadlines, overwhelming tasks, coordination challenges, external factors such as family or policy issues etc.

When a person is answerable to one or many tasks yet the environment does not facilitate this, s/he should find how (best) to manage the pressure so that s/he comes out the winner. Some strategies to manage or to minimize stress include delegating some work, sharing burden with colleagues, leaving and timing off work with family and loved ones, reducing work overtime etc. Once stress or pressure is managed there is high potential for greater levels of productivity. It is therefore recommendable that students perform in a professional environment. Beyond simulation, they have to join a particular active organization just to learn what job stress is and how to deal with it. In such an environment they experience how professionals exhibit self-control and good self-esteem; engage in continuous professional skills development for a better organization, integration of work within specified project constraints and delegation of assignment, authority and breaking work into manageable parts so as to be able to cope with

stress (Panigrahi, 2016).

2.2.2.2.3. ICT Skills, effective communication and critical thinking

ICT skills (19.3%), Effective communication (16.1%) and Critical thinking/decision making (16.1%) are other competences respondents perceived they were lacking most on the market. Although computer skills are taught on campus, majority of graduates use and rely on institutional laboratories to perform their works. This results in poor or little command of IT equipment. There are two main reasons: first, insufficient time for using IT facilities because other classes use the same. As a consequence, it reduces the availability of computers and concentration of users. Second, insufficient or inappropriate mentorship of students due to limited number of IT trainers. On top of this, ICT innovations and developments are faster than what institutions and trainers can afford thereby creating a conflict of generation. This conflict can manifest in terms of not-updated trainings or inaccessible new applications.

Lack of effective communication is mostly an issue of language barrier. It is also linked to the inability of individuals to present themselves and defend their work in English. In few words, it is a matter of lacking fluency in speaking, reading and writing skills, lacking basic organizational communication techniques including reporting, taking minutes or public relations. When it comes to Critical thinking/decision making, one can link it to lack of leadership experience. That experience could help graduates to demonstrate the ability to reason, argue, defend and command. Unfortunately, students don't get such opportunities to develop or enhance such skills in an external active and practical environment.

2.2.2.3. Life-learning skills

The third category comprises life-learning skills which are applicable to various environments. These include: Leadership, ethical behaviors, emotional management and creativity skills. Although they are the least missing skills compared to the others in the first and second categories, they are very crucial in every step of employment journey.

2.2.2.3.1. Leadership skills

Leadership skills apply at different levels in different situations. They don't necessarily need to be attached to position promotion (even if the promotion or position uncover the abilities to exercise it and exercise it well). Leadership here should be understood in the context of ability (for the employee or manager) to self-manage and manage others in the best interest of oneself and the organization; it should be linked to the capacity of the graduate/worker to set goals and achieve them; it should be attached to the efficiency and effectiveness at which one reaches and celebrates success, it should be interpreted in the overall capacity of individuals to lead for/to the collective good.

2.2.2.3.2. Ethical behaviors

For good leadership to happen members of organizations need to have ethical behaviors. These focus on evaluating the moral acceptability of the actions of management, organizational leaders and their employees (De Cremer et al., 2011). Some of the general characteristics of ethical behavior include honesty, fairness and equity in interpersonal, professional and academic relationships and in research and scholarly activities. They also include respect of the dignity, diversity and rights of individuals and groups of people. For students, it is important that they know such values and behaviors before they join the employing organization. It is also very necessary that they start to get familiarized to such ethical rhetoric when they are still young so that when they graduate they differentiate between school/academic ethical behaviors and employment ones. As they mature and nearly prepare to graduate (ie preparing for industrial attachment), students should be imparted with contextualized ethical behaviors in the sense of leadership/decision-making or organizational management.

They should know that ethical behavior especially in business deals with what managers, employees and people in general 'should' do to act as morally responsible actors; they should understand that even though individuals are rational human beings, there are some mistakes that can happen unintentionally and without the offender realizing the magnitude of the consequences and negative impact the mistakes can attract; they should be aware that in such a context, some managers propose normative perspective. The latter suggests that people interpret moral dilemmas in a conscious manner and that cognitive guidelines can be used to avoid ethical lapses (Ibid).

There are different models establishing the relevance of ethical behaviors in decision making process. According to Geeta et al. (2016), among many models, the five stage model developed by Ferrell, Gresham, and Fraedrich (1989) provides better grounds for ethical decision-making process. This model process passes through five stages including: *Awareness* (of ethical issue), *Cognition* (stage of cognitive moral development), *Moral evaluation* (Deontological evaluation - actions are good or bad according to a clear set of rules- and teleological judgment- belief that everything has a purpose or use), *Determination and Action* (ethical or unethical behavior and behavioral evaluation, feedback loop which may be influenced by organization action opportunity, individual moderator, which impact every stage of the process) (Geeta et al., 2016).

2.2.2.3.3. Emotional management

On the aspect of emotional management, individuals have to know and learn how to behave in a situation of joy or sorrow. Even though emotional management starts in early childhood and

typically evolves with age, the emotional management related to work behavior develops with the work status and position. On one side it is strongly related to handling painful situations which can be characterized by stress, failure or deception. On the other it is linked to handling and managing success and fame. In a student-training context, emphasis should be put on handling negative emotions because they are the most likely to be faced in the work environment. Criticism, threats, complaints, insults etc. are a routine in a job place compared to classrooms, although they vary depending on the type of job and position. Some are constructive others not and not always are they given with bad intentions behind. It is therefore important that students get trained in how to behave in either situation so that they become more forward looking and productive.

Referring to Gross's (1998a, 1998b) "emotion regulation theory", Kluemper at al. (2013) highlight that among many strategies to regulate emotions, a two levels approach can be considered. In the first place, an individual can engage in antecedent-focused strategies by modifying the situation or perception of the situation in an effort to adjust emotions. S/He can choose or modify the situation that will invoke emotions, select which aspects of the situation one focuses on by distracting attention away from the elements of a situation that are harmful and reappraising the situation by selecting the least emotionally harmful of many possible meanings. In the second place, individuals can engage in the response-focused strategy of manipulating their reactions to the situation by changing their emotional expressions (Kluemper at al., 2013, p.880).

Whatsoever offensive or defensive strategies individuals may opt for, reading between the lines to understand the context and background is crucial. It is only when individuals understand clearly what is happening and why that they can choose suitable behaviors corresponding to their emotional status. This must be put into real contexts if HEIs have to train students in such emotional management. Best ways to train them may include: narration of emotional stories (face-to-face or virtually), firsthand experience in a stressful environment where learners become active participants, field visits where they can observe and compare work conditions and employee behaviors, etc.

2.3. Personal gains from AGEA's entrepreneurship training program

After identifying and discussing skills and competences missed and needed the most in the market, the attention was turned towards the benefits and contribution of AGEA to who beneficiaries became today and, to what can be done to improve entrepreneurship promotion beyond the current achievements.

Figure 6: The contribution of AGEA to current beneficiaries' life

Source: Author 2021

According to the figure 6 above, major contributions (by order of appreciation) include the acquisition and expansion of experience in planning skills, openness and networking, self-confidence, shaping business idea, improved presentation skills, prototyping, job search skills and, pro-activeness. Others include creativity and hardworking, training and coaching and start-up creation.

2.3.1. Experience and planning skills, shaping business idea and start-up creation

This is related to the ability of students to know and understand the process of starting a business. In a university's environment two types of students can be identified when it comes to the desire for starting a business. Type number one includes individuals with desire to start something, with many or few ideas, vague, not focused and, in most of the cases, with or without entrepreneurship skills. Type number two includes those students with technical skills (mostly hands-on skills), with a clear orientation of what they want to do or achieve, sometimes with prototypes and seed capital, but lacking entrepreneurship skills, connections or skills for market entry. Despite good ideas and prototypes, they lack basic or sufficient skills in market assessment, business planning and financial management (accessibility, resource allocation) which are very needed for start-ups or for long-term sustainability.

For starters, getting a business idea and assessing whether it is a promising one becomes the first challenge in the start-up creation journey. The business idea generation process involves

identification, assessment, planning and decision-taking for implementation or not. The best idea must have the highest potential for easy execution in the market (given the owner's resources and whether it is desired in the market), and must also have the potential to generate profit with less effort. Even if the idea's execution might be difficult, as long as it can generate high profit, the owner is encouraged to look at other risk factors and then decides. In the AGEA' entrepreneurship promotion, students were taken into the whole process and found themselves enlightened about different considerations in the start-up process. Each process was sanctioned with a competition in which trainers and mentors gave advices and recommendations on and about what to do next. To enhance the experience in idea generation and planning skills, at least each participant in the summer school competed twice:

- First, during the first selection of participants for summer schools,
- Second, when checking the progress made after acquiring new skills during the summer schools and after implementing the business idea. This opportunity to compete again was reserved to students who participated in the previous summer school, fellows who competed at the same time but failed to pass (mostly because of limited places), but still went on improving their business ideas or projects.

In this initial planning process, students were also trained in product/service development. This learning-by-doing experience increased their knowledge and skills which also fed into prototyping practices. As competitions at national level considered only prototypes (at whatever stage), it was helpful for competitors to reflect on their learning perspectives. Based on such perspectives, there were serious commitments and engagements in own project development so that something tangible comes out and outcompetes the rest. However, prototyping faced a number of challenges including lack of or insufficient technical support (experts, lab tests etc.) as well as financial support to develop, test and sell in the end. Though that happened, at least 30% of participants (30) have created, within the next two years, businesses that were running successfully.

After successfully starting their businesses, these fresh entrepreneurs are utilized to inspire fellow youth especially those students who are still on the bench of school and who think they lack time to venture into something else. They also motivate those who think that academia and business are mutually exclusive, those who see no hope for having start-up capital or have no skills in financial management etc. Together with their fellows who went through the selection process with similar challenges until the end of summer schools, they feel capacitated

in various subjects they were trained in and are able to transfer the knowledge and skills, mentor and coach the peers.

2.3.2. Openness in business mindset thinking and acting

Openness is here expressed in terms of connecting and networking with fellow students from local as well as international universities. It is also looked at in terms of visiting different private and public institutions intervening in entrepreneurship development; discussions and exchanges on opportunities and challenges youth in business or who want to establish businesses face and, how these institutions help them; cultural experiences which help the individual to understand how others do business and on what cultural basis they can collaborate; visits to touristic sites which house a lot of historical and business opportunities; feelings of travelling abroad and having the opportunity to compare lives and lifestyles, etc.

From such openness can result pro-active behaviors, self-confidence and improved marketing skills. Once one's mindset is open, capacities to observe, analyse, think critically and decide also increase. Little by little, openness excludes shyness and increases impulses that push somebody to interact, to question, to debate and conclude on contemporary or future matters in his interest. In this perspective, openness of the mindset help students to increase their self-confidence for participating in other local and international competitions. By participating in competitions at various levels, this inculcate active and proactive attitudes in them. Being aware of meeting trainers and judges in competitions, potential investors or foreign students who exchange in another language only, students make extra efforts to improve their communication skills (language). They also improve presentation skills in the context of business (understanding and using business terminologies, pitching business ideas, explaining the prototypes in a business presentation style). In addition to that, they get the opportunity to market their ideas or products to supporting institutions, fund providers and, finally, consumers. They learne to articulate their reasoning, stand on their feet in the pursuit of their goals, and assume responsibilities in case of success or failure.

In summary, for participants who created their own businesses, or who sought employment, or who are still studying, entrepreneurship trainings and other events induced changes in their learning mindset. That could be observed in terms of working hard, creativity, etc. Students also became more conscious and internalized the economic reality facing them after graduation. As a result, they increased awareness that chances for being employed keep reducing as the number of graduates increases daily; that being equipped with sufficient skills for creating a

business is profitable; that having disciplinary skills and basic technical competences for creating a product should not be underestimated.

In this framework, there was desire for a strong platform for learning, creating and developing knowledge. No matter the form the learning process takes, important is to see good results in the end. For some the development can take place through hard ways (ie. Real product/service development), for others through soft ways (ie. acquiring skills for earning a job, contributing to the performance of the employing organization).

2.4. What to focus on most in developing entrepreneurially minded and employable graduates

After the identification of the most needed skills on the market, competences students lacked most after graduation and, contribution of the entrepreneurship program on personal development, it was time to know what should be the major focus when developing entrepreneurially minded and employable graduates. From their experiences as students serving now as employers (self-employed) or employees, from employees at the same time trainers and mentors in AGEA, opinions expressed in the figure 7 identify four major priorities which can be associated with the rest of the ideas. Priorities include: more trainings and coaching, provision or access to start-up capital and toolkits, support to implement the best ideas and, lastly, linking students to the industry.

Figure 7: Recommendations for developing entrepreneurially minded and employable graduates
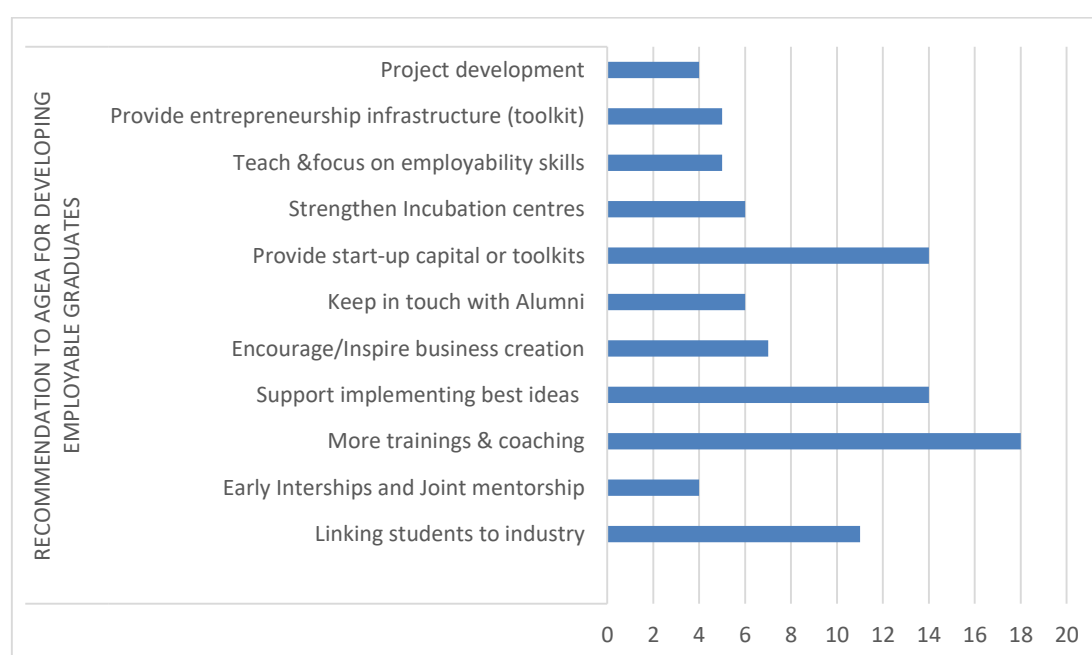
Source: Author, 2021

2.4.1. More trainings and coaching

The appeal for more trainings and coaching is linked to imparting students with business and management skills. Majority of students do not have background in such concepts yet they are encouraged to create their own companies after graduation. Students see and understand well the situation of unemployment facing their elder graduates. They don't want to face the same challenges. Despite this wish, trainings they receive concentrate much on their academic disciplines (as applied and registered for). On the other side, institutions fall short to deliver core knowledge and skills that are relevant and supportive enough in case one wants to create own business or is employed by an entrepreneur who is expecting immediate delivery. Given the quick transformation of markets' behaviors today, most businessmen and women (would) apply "hit and run" strategies because the competition does not allow them to delay in addressing customer needs. Therefore, not only should graduates be appreciated as best performers in their academic technical quality but also should they be appreciated much more in terms of "work-readiness".

2.4.2. Linking students to industries

Effective work-readiness presupposes that there are a at least connections between academic institutions and business organizations where the basic academic skills, critical thinking and personal skills, necessary to acquire and maintain employment, are exercised. Such skills are enhanced in an environment of doing, reason why industry-academia collaboration is needed. This collaboration can be established through individual or organizational efforts. Individually, students may build connections with company workers or managers and profit the established relationships to solicit internships or industrial attachments. On the other side, academic organizations may formally or informally establish partnerships with companies thereby paving the way for their students to get admitted for professional developments.

It is however recommended that internships start earlier so that the integration of academic and professional skills develops earlier too. This would lead to early coaching and mentorship which eventually result into a more focused learning approach. Moreover, as institutions develop strong relationships for effective collaboration with industries, it is also crucial that students develop solid links between them and industries as well as with mother institutions. A platform of alumni can serve as a good tool for keeping such links. It is out of such relationships that academic institutions would know the market trends thereby revisiting curricula accordingly; industries would benefit new knowledge and skills brought by interns; and it is

via alumni platforms that they can lobby different stakeholders for the benefits of new generations of students.

2.4.3. Supporting the implementation of best ideas and access to finance

When students get on-campus trainings (especially in business skills), they have greater chances to continuously benefit coaching and mentorship services, for free or at student price. The get them from the teachers, supporting staff or entrepreneurship promotion units. They are very likely to be accessible without losing much time finding the experts (especially for generic expertise that is provided by the institution) or identifying who else can support (especially by using institutional networks to access specialized experts and equipment). The establishment of entrepreneurship support centers within HEIs would facilitate the creation and transfer of knowledge/skills. Being a unit within the institution along with academic departments intervening in different knowledge sectors facilitates the access to resources (human, infrastructure, technology) as well as collaboration between the units. Instead of hiring external experts for the center, professors and other support staff can become part of its team members and assume training and mentorship roles. Through such collaboration aspect, R&D can improve and the possibility to have community based solutions increases. Students get to know more about issues in their surroundings, work on them, reflect and relate more their academic disciplines with community or market issues.

In this context, best ideas get the opportunity to be scrutinized before they go to the market, students get enough time to explore and reflect on their applicability in the market. In other words, there is enough time for planning and revisiting the plans; there is a big opportunity to attract the attention and support of an internal expert; there is time and opportunity to link up with industries operating in the sector of the business idea; there is even the possibility to conduct market intelligence during industrial attachments or internships, etc. To make the list of opportunities longer, there is a possibility to access funding agencies using organizational (HEI or internship site) channels or networks; there are many avenues for exposing and exploiting the business idea either by the owner doing it her/himself or, by selling it to agents with resources and ability to implement it.

For young graduates facing constraints in starting a business, careful exploration of avenues for accessing start-up capital need to be emphasized in their studentship. Information on available funding opportunities need to be flown to students and graduates. For example, information on special funds with soft conditions; funds where money cannot be provided

without collateral or can only be provided to groups of individuals; tips on where business ideas requiring hands-on skills have more chances to be given start-up funds or toolkits for execution, etc.

In few words, it is important that students know different sources of funds (savings, family, banks, investors, donors, etc.), but most importantly, how best to develop financial plans fitting within budget lines of the funding agent. When the individual is not capable for that because of academic backgrounds, as it frequent is for students, there is a possibility to seek support by approaching fellows who study economy or business. Even if in this case one is not expecting high quality financial plans, the collaboration between the two students (peer learning) improves the understanding of the planning process and what needs to be captured in the plan. For the purpose of learning, the more the students invest in this exercise the more they improve their managerial capabilities. If they completely fail to apply these approaches, experts in financial consultancy can be called upon.

2.5. Conclusion

The human being is always in constant status of learning. This learning takes different forms depending on the objectives to attain. Learning entrepreneurship as an extra-curricular program enhances the ability of learners to not only understand business concepts but also develop practical skills that may graduate into successful businesses. When individuals fail to create businesses (multiple factors can play), they may use entrepreneurship competences for effective performance in employment by others. It is the reason why promoting entrepreneurship at HEIs in Rwanda is essential for developing both entrepreneurship and employability skills. In what was covered in this case study, there is a demonstration of the journey that students from different HEIs went through in start-up creation and how far they benefited as individuals (business skills, support in forms of infrastructure and mentorship) and as institutions (establishment of entrepreneurship centers, networks/partnerships). It is also demonstrated how the journey is still long especially when it comes to putting in place a conducive environment (mostly the one allowing product development practices).

Although the referenced entrepreneurship program achieved good results, comparison between the school and employment markets by beneficiaries shows that a lot needs to be done for effective transition from graduation to employment. Serious gaps in functional as well as personality skills have been identified by the graduates, employees and employers. These are gaps that can be addressed at school through formal channels but can also be addressed through

training opportunities in support of curricular studies. That is why it is very vital to establish and maintain strong collaborations and synergies between stakeholders in academia and industry. It is true that many young graduates think that if they get money they will be able sustain their life. However, the training program helped them to understand that "yes, money matters but ideas matter most".

As an experiential case study, this document is structured in a manner that facilitates the reader to identify the content, processes and methodologies used in transferring knowledge and skills (first section). It discusses also different functional and personality skills in a way that describes the importance of the identified skills and, where to put emphasis (second section). In brief, not only this case study serves as a source of inspiration in experiential entrepreneurship training, but also as a source of reflection on how best students can be equipped with market oriented competences that transcend disciplinary contents.

References

AQF, 2013. *The ten core skills (Core Skills for Work Framework (CSfW)*

Beebe, S. & Mottet, T., 2013. *Business and professional communication: principles and skills for leadership*, 2nd ed., Pearson Education inc

Carpenter, A. M., Bauer, T., & Erdogan, B., 2010. *Principles of Management,* Version 1.0.1, ISBN (Digital): 978-1-4533-2878-1

Collie, R.J. & Martin, A.J., 2016. Adaptability: An important capacity for effective teachers. *Educational Practice and Theory*, 38(1), 27-39

De Cremer, D., Rolf van Dick, Tenbrunsel, A., Pillutla, M., & Murnighan, J. K., 2011. Understanding Ethical Behavior and Decision Making in Management: A Behavioural Business Ethics Approach; *British Journal of Management*, Vol. 22, S1–S4, DOI: 10.1111/j.1467-8551.2010.00733.

Dzemyda, I., 2014. *S*trategic management of business organizations, *Student workbook*, Mykolo Romerio universitetas, Vilnius, ISBN 978-9955-19-634-1

European Foundation for the Improvement of Living and Working Conditions, 2007. *Teamwork and high performance work organization*,

Freeman, D.W. & Burns, R. W. Jr., 2010. *Developing an Adaptability Training Strategy and Policy for the Department of Defense (DOD)*, IDA, Paper, P-4591

Geeta, M., Pooja, J. & Mishra P.N., 2016. Ethical Behaviour in Organizations: A Literature Review, *Journal of Research in Business and Management*, 4 (1): 01-06, ISSN(Online): 2347-3002

Global, I., 2017. *Evolution of E-Learning*. Retrieved from igi-global: https://www.igi-global.com

Kluemper, H. Donald, DeGroot, T. & Choi, S., 2013. Emotion Management Ability: Predicting Task Performance, Citizenship, and Deviance, *Journal of Management*, 39 (4): 878-905, DOI: 10.1177/0149206311407326

Nshimiyimana, G., 2020. *Effectiveness of entrepreneurship education on entrepreneurial orientation of undergraduate science students in Rwanda*, Thesis, University of Leipzig

Osterwalder, A., & Pigneur, Y., 2010. *Business model generation: A handbook for visionaries, game changers, and challengers*. Willey.

Pachler, D.C.N., Mor, Y. & Mellar, H., 2010. Exploring formative e-assessment: using case stories and design patterns, *Assessment & Evaluation in Higher Education,* 35 (5), 619–636

Panigrahi, A., 2016. Managing stress at workplace, *Journal of Management Research and Analysis*, 3(4):154-160, DOI: 10.18231/2394-2770.2016.0001

Rhonda, A. M., 2010. *The successful business plan: Secrets and strategies*, 4th ed., Planning Shop.

Schwetje, G.& Vaseghi, S., 2007. The Business Plan: How to Win Your Investors' Confidence, Springer

SİPAHİ, E., 2017. Creativity and the importance of business management, *International Journal of Scientific & Engineering Research,* 8 (8), ISSN 2229-5518

Stein, S., 2014. *Creative Techniques Handbook,* Innovation Digital Futures

Stein, S., 2015. *Creative Techniques Handbook*, Innovation Digital Futures

Tarricone, P. & Luca, J., 2002. *Successful teamwork: A case study*, HERDSA

The Canadian Career Development Foundation (CCDF), 2015. *Job search workbook*

Vaari, A., 2015. *Flexibility in the Core of Effective Leadership*, Thesis