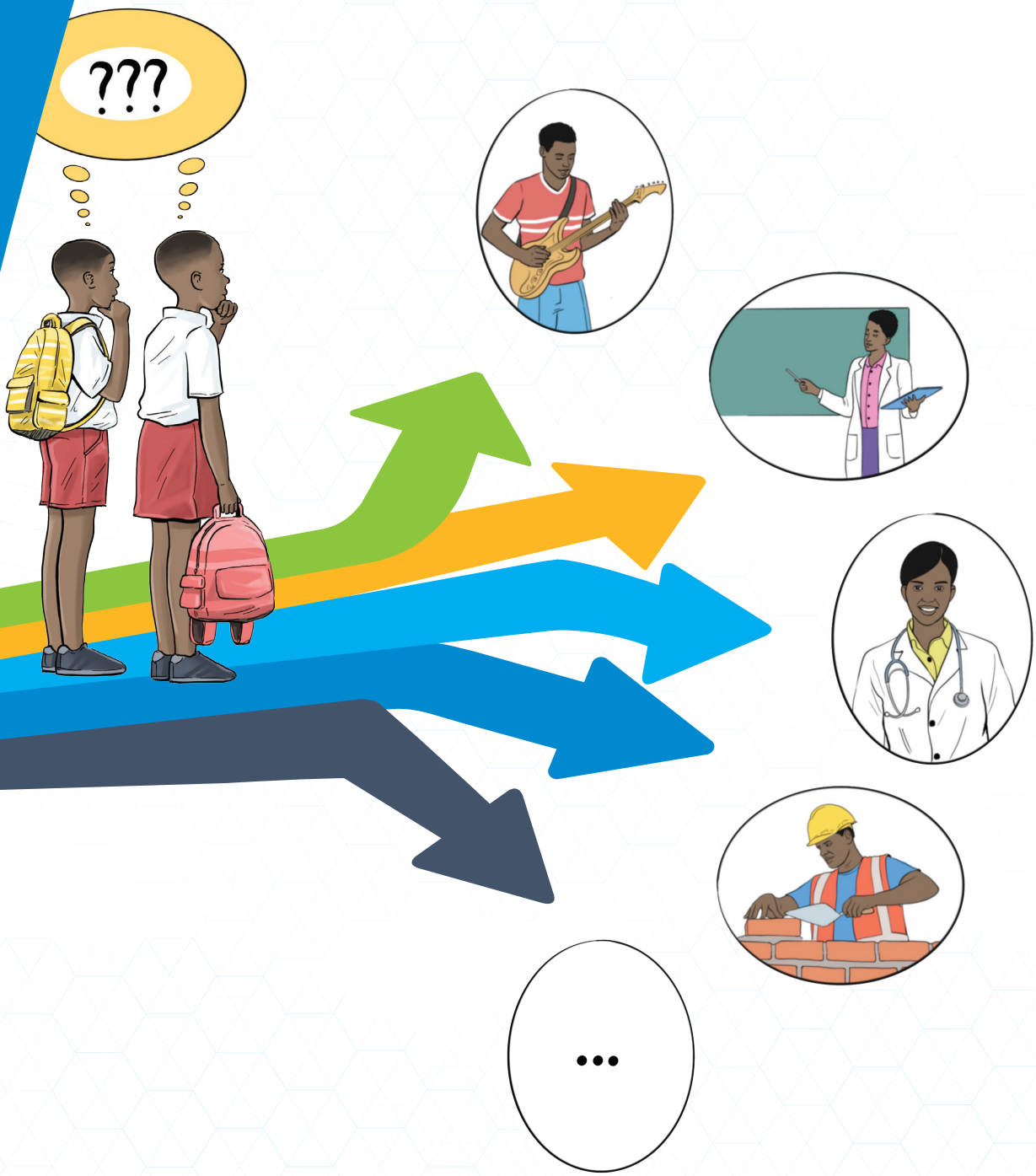
EDUCATION AND CAREER PATHWAYS IN RWANDA



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Republic of Rwanda
Ministry of Education

REB RWANDA BASIC EDUCATION BOARD

unicef

EDUCATION AND CAREER PATHWAYS IN RWANDA

FOREWORD

It is globally recognized that choosing the career that matches individual potentials, aspirations, labor market demands, and employability opportunities is a key drive for social - economic transformation and personal fulfillment. Hence, it is of a paramount importance for the youth and next generations to make informed decisions on their careers and fully embrace options that would equip them with required employability skills.

One of the aims of the Rwandan curriculum is to ensure that young people's skills are better matched to the needs of the Rwandan, regional, and global labor markets, and this is reflected in the competence-based curriculum (CBC) framework which identifies a range of basic and generic competencies as well as cross-cutting skills that children should develop as a result of being engaged in learning. Through career guidance programmes, the Government is establishing a comprehensive, developmental program through which learners will be assisted in making informed educational and occupational choices throughout their learning cycles. Rwanda Basic Education Board has ongoing programmes for teacher development, and teachers will be supported to raise awareness among young learners on the factors influencing students' career choice on their future.

It is in this framework that the Rwanda Basic Education Board is pleased to endorse the present report developed under financial and technical support of UNICEF Rwanda. This report constitutes another call for the youth to embrace viable career paths that will enable them to achieve personal goals and contribute to the socio-economic development of the country. It is expected that this report will be of vital use for educational institutions across all levels, lecturers, trainers, teachers, career advisors, parents and guardians and learners on how best to undertake career related practices that feed, challenge and widen youth aspirations and which leads the right choice for the learner. Rwanda Basic Education Board reiterates its commitment to support to career guidance practices within education institutions that will properly inform and guide learners in career choice process.

Dr. Mbarushimana Nelson
Director General
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ACKNOWLEDGEMENTS

The report on career pathways for Primary, Secondary, TVET and Higher Education is a product of combined efforts of various partners and stakeholders. A team of staff from REB and MINEDUC came together to guide the development process and the finalization of this document. Also, the Directors of Studies from some schools and IEE staff were involved in the process of validating this document to ensure its friendliness to end-users.

First and foremost, appreciation goes to UNICEF Rwanda for their financial and technical support which made the writing of this document possible, from the start to the final step.

In addition, gratitude is extended to the directors of studies, REB, RTB and MINEDUC staff who dedicated their time and supported the writing and validation of this document. Their commitment and invaluable inputs were very critical to finalizing this document.

Finally, sincere thanks are expressed to Dr. Bizimana Benjamin, and his team, Dr. Ndayambaje Irénée and Mr. Ngoga James, who undertook this valuable work from the inception to the completion. Their technical and professional know-how and contribution made possible to work out this valuable report which will assist both learners and education partners as well as stakeholders in career choice and career orientation respectively.

Leon N. Mugenzi

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Rwanda Basic Education Board

EXECUTIVE SUMMARY

Rwanda has made tremendous efforts in the areas of human resource development. Despite this attainment, the country is yet to achieve required educational quality standards as currently established in line with Sustainable Development Goals (SDGs). Indeed, transition from school to work is not yet adequately streamlined, which results into pushing graduates of different levels to fall in the category of unemployed populations in the country. In effect, the disparity between unemployment levels among adolescents and adults is high; adolescents are two times more likely to be unemployed, compared with other categories of the population. Consequently, there is an urgency to ensure the availability of adequate training and sustainable employment opportunities for the youth. The overall aim of this work was to map all pathways that would orient students, based on labor market skills set, needs and required practical knowledge.

The first objective was aimed to assess how learners form their opinions around career choice including who and what influences these choices. From a total of 300 participants selected from primary schools, general secondary schools, Technical Vocational Education and Training as well as Higher Education, the findings revealed that children form their career aspirations right from their young age. For instance, 46% made their choice when they were in primary school while a proportion of 44.6% reported making their career choice at ordinary level. A detailed disaggregation of students per gender in terms of when they make career choice has shown that 22% of male students against 23.7% of female students made their choice in primary school; implying the imperative for parents/guardians and teachers to understand and adequately play their role of career advisors. In career choice, family environment, parents' income, level of parents' involvement in the education of their children, young age beliefs and aspirations are pivotal determinants of career choices for children. Looking into individual related factors that drive career choice, students ranked them from access to information on career across the understanding of the work habits of the career, to the possibility for the career of choice to advance previously acquired knowledge, the marketability of the career of choice, and the comparison between personal abilities and possibilities with the career alternatives. This is because career pathways form an articulation of knowledge, skills, and competencies, and this connects education with the world of work. At policy and institutional levels, it was found that fields of studies are determined by the Government priorities as well as the affordability in terms of required resources to offer specified areas of training.

In response to the second objective that aimed to map all pathways that learners would go for and recommend options that learners would take from Primary, Secondary, TVET, and Higher Education, this report presents all potential subjects available in the mentioned levels of education, which also connect to further levels of education and career clusters. . Considering the available options for learners and the vision of the country, the report recalls the need to boost strategies towards more enrolments and better learning opportunities for STEM fields and TVET considered to be the backbone of the economic transformation. Indeed, this report makes a call for policy makers and education institutions to open up missing career training pathways as well as sharpening the existing ones to ensure quality graduates who fit for the purposes and by extension reduce the imbalances and mismatch in the labor market and required skills.

The third objective sought to identify all opportunities (internships, on-job training, apprenticeship, etc.) that are available to learners and match them to mapped pathways.. It responds to the belief that preparing young people for the world of work will benefit regional economies, increase security, advance the Sustainable Development Goals (SDGs) and improve the well-being of millions of families and communities. The present report also describes the National Professional Internship Program adopted in 2009 with the aim of equipping interns with practical skills that are required to facilitate the transition from school to the labor market Indeed, alongside with the eligibility criteria, this report shows local, regional, international and cooperation scholarships offered to aspirants for tertiary education in both TVET and general higher education.. The report also advocates for continued career growth at work place because 63.6% did not get the chance to participate in on job training, 27.3% of the workers do not see any possibility to build a career in the current employment and 68.2% of the surveyed employees -which is the majority -have the intention to change the career for better paying jobs.

The fourth objective aimed to identify platforms where learners can get career guidance information and the challenges they faced The findings indicate that the majority of students (55.8%) did not have any recommended platforms where to access career guidance related information, and (50.7%) never access career guidance platforms due to lack of access to ICT but also lack information about the existence of such platforms. The data in this report indicate that career related information comes mostly from teachers (37%) and parents (24.7%). The t challenge here is that there is no local customized framework or platform that brings together all information about career opportunities to students. The report concludes by highlighting the desired human resources to drive the current and future country labor market requirements that can be attained if children are adequately guided from younger age towards well framed careers that not only suit their potentials but also feed into the national well designed workforce plan.

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LIST OF ABBREVIATIONS

CIK : Catholic Institute of Kabgayi

DACUM : Developing A Curriculum

G.S : Groupe Scolaire

HEC : Higher Education Council

IEE : Inspire, Educate and Empower Rwanda

INES : Institut d' Enseignement Supérieur de Ruhengeri/Ruhengeri Institute of Higher Learning

IPRC : Integrated Polytechnic Regional College

MINEDUC : Ministry of Education

MIPC : Muhabura Integrated Polytechnic College

NESA : National Examination and School Inspection Authority

NST1 : National Strategy for Transformation

PSF : Private Sector Federation

RDB : Rwanda Development Board

REB : Rwanda Basic Education Board

RP : Rwanda Polytechnic

RTB : Rwanda Technical and Vocational Education and Training Board

TTC : Teacher Training College

TVET : Technical and Vocational Education and Training

STEM : Science Technology, Engineering and Mathematics

UR : University of Rwanda

RRT : Rapid Response Training

MVT : Massive Vocational Training

IBT : Industrial based Training

Chapter 1: Background and rationale for the development of career pathways

1.1 Introduction

This chapter entails the background of the study in the global and local contexts, the rationale and objectives of the survey.

1.2 Background

1.2.1 Global context

As the strive for the achievement of Education For All continues, it is also becoming imperative to foresee the kind of education that younger children should get for their future and overall national development. Therefore, education systems are mandated to put in place career pathways aiming at preparing students not only for today's career readiness skills, workplace demands, fast-changing and globalized economy (Hamilton, 2020), but also to motivate them to learn because they see a pathway for their future (Hull, 2004).

Career pathways should be understood as a systematic framework for connecting a series of academic credits, credentials, and work experience across the learner continuum for each student persona (Hull, 2004). Simply put, it is all about 'workforce development strategies to support workers as they transit from education into jobs (Schulte et al., 2017). Thus, Career Pathways (CP) enlighten the curriculum design, implementation and evaluation plans. Taking the example of the area of engineering, Cady and Reid (2018) underline that career pathways are driving tools towards transformative efforts in engineering education whereby engineering pathways are being made more viable to encompass changes, experiences and tools required by the inclusive engineering workforce continuum.

In effect, the establishment of sound career pathways is the backbone of a smooth transition throughout an education system (Moschella, 2020) and at the same time a guiding tool to address the issue of access and equity (Coleman, 2020). Career pathways also connect to economic opportunities and thus inform individuals, institutions and governments on how to make informed investments in forms of education that will make a sound impact in the future (Bragg, 2019). It has also been agreed that career pathways create impetus for opportunity gaps and economic competitiveness as they call education systems to respond to high priority problems through system alignment (Herbst, 2020) and inspire adult education and workforce development efforts (Cielinski, 2019).

In response to career pathways' call, education systems are now deciding on how best to remain open to the evolving world and thus institute new forms of learning such as work-based learning (Hamilton, 2020). In addition, Career Pathways (CP) are recognized to be the driving force for work opportunity and career advancement, especially for workers with lower levels of education and those in need of retraining (Bohn, Jackson & McConville, 2019). Therefore, career pathways are essential even after formal schooling. To confirm this, Anzetaka-Atumba (2017) showed that a successful integration of Congolese immigrants in

the United States as refugees requires assessments of candidates' skills and experience to determine the appropriate technological training, language skills, educational certifications, career placement they should be entitled to.

In the United States of America, a qualitative study by Stipanovic, Stringfield and Witherell (2017) was conducted on 71 high school seniors in South Carolina. It was found out that the grouping of a career pathways model along with the intended career counseling services boosted students' sense of career and academic self-efficacy by lifting up their motivation to finish school, enthusiasm and readiness to take more challenging courses, and sense of preparedness for college and work.

In the Asian context, it is observable through a study by Fujita (2020) that the emphasis on career pathways is motivated by the evolution of the corporate sector which is challenging the old elite's political and social backgrounds.

Career pathways in the African context are not a new concept. For instance, a study conducted by Mtemeri (2017) in Zimbabwe surveyed one thousand and ten high school students and 20 career guidance teachers concluded that family members, both nucleus and extended, had an influence on students' choice of careers. The study shows that the influence of mothers and fathers was rated high as compared to other family members. Indeed, the same study demonstrated that schools had also an impact on high school students' career choices. Other contributing factors enacted in the same study of Mtemeri (2017) included career guidance, especially school career days, which was found to have a high positive impact on students' career choices. Geographical location of schools was indeed quoted to have an influence on the choices of careers by students. Nonetheless, gender did not influence the students' choice of careers. The key outlined recommendations include training parents, peers and teachers to enhance students' choice of careers. It was particularly underlined that only trained career guidance teachers should be allowed to teach career guidance.

1.2.2. National context

Rwanda Vision 2050 articulates the long-term strategic direction for the country; sets a new pathway that is expected to lead towards the living standards of an upper middle-income country by 2035 and a high-income country by 2050. It has overarching objectives of promoting Economic Growth and Prosperity and High Quality of Life. It is anchored around five pillars of human development, competitiveness and integration, agriculture for wealth creation, urbanization and agglomeration and accountable and capable state institutions.

According to Rwanda vision 2050, it is expected that a reformed education sector will lay the foundation for the country's development with a market-driven education system. This entails increased investment in education, strengthened curricula and strategies to produce skilled job candidates in a shorter timespan– through skills training and other investments in the youth and adults. The school curriculum for different levels of education must be streamlined to ensure suitability to present and future new types of skill needs.

To respond to current challenges in line with matching the education system and labour market demand not only in Rwanda but also, regionally as well as globally; Rwanda has shifted from a knowledge based to competence based curriculum to impart students with employability skills that enable them to cope with job related demands and become problem solvers.

In this regard, there is a need to emphasize and strengthen Science, Technology, Engineering and Mathematics (STEM) courses across all levels of education to respond to the 7-Year Government Program about the National Strategy for Transformation (NST 1) 2017 – 2024. The continued development of a market-driven Technical and Vocational Education and Training (TVET) system will be crucial for development. It is imperative to train and up-skill workers to meet the needs of the changing labor force demand.

The mission of education in the Rwandan context is to provide all learners with inclusive quality education in order to achieve sustainable development (Republic of Rwanda, 2021a). The Rwandan education system is organized into three main broad sub-sectors: (i) the Basic Education (BE) that encompasses nursery, primary, general secondary and Teacher Training Colleges (TTCs), (ii) Technical and Vocational Education and Training (TVET) and (iii) Higher Education. National examinations are organized at the end of cycles to mark the transition from primary to secondary education, lower secondary to upper secondary and upper secondary (or Level 5 in TVET) to university. Hence, student orientation is done based on merit and choices made. It is against this background that the present work aims at developing career pathways for Primary, Secondary, TVET and Higher Education to inspire prospective candidates for Rwandan education system. It is also expected to enable Rwanda to respond to required skills and competencies to achieve the dream Vision 2050 in line with its long-term need for career pathways under structure, curriculum frameworks and qualification frameworks of the Rwandan education system.

As for in any other developing country, the Rwandan education system has experienced many disconnects in education and training delivery systems which impacted on the workforce development systems and the cost to retrain workers at different levels. Indeed, Rwanda experienced a massive lower-skilled population that needs employment in the fast-growing economy (Ministry of Commerce, 2021). It is therefore essential that the provisions of education and training be aligned not only with the demands of the world of work but also with persons' abilities and aspirations (Ministry of Labor, 2015). This paradigm shift aims indeed at fulfilling the 2050 vision, an endeavor that aspires to transform Rwanda's economy and modernize the lives of all Rwandans (Republic of Rwanda, 2020).

To achieve desired socio-economic transformation, Rwanda has prioritized areas such as (i) manufacturing (agro-processing), (ii) transport and logistics, (iii) energy; (iv) ICT; (v) Hospitality and tourism (vi), and (v) TVET. In fact, it is expected that the continued development of a market-driven Technical and Vocational Education and Training (TVET) system will be crucial to train and up-skill workers to meet the needs of the changing labor force demand while prioritizing study based competitive areas for all Rwandans with special focus on equal access for men and women. Accordingly, the curriculum for different levels of education will ensure adaptability to present and future new types of skill needed.

Referring to the World Bank Human capital index reports for Rwanda, the gross enrollment ratio in secondary education was 43 percent (2019) which is lower than the average in the region (50%), and 8 percent (2018) of adolescent girls were out of school. The indicator of expected years of school stands at 6.9 years (out of possible 14 years), meaning that the average child born today can expect to attend 6.9 years of school in the course of his or her life. This shows that despite a high enrolment in primary school (98.5% in 2019), the enrolment in pre-primary and secondary school remains low (below 30%) bringing the overall figure down. In addition, repetition rates remain high particularly at primary school level (at 10%). This shortage of basic education challenges late-stage up-skilling initiatives, as certain skills (e.g. languages) are more easily trained at a young age (NSDEPS, 2017-20240).

According to the tracer study by Higher Education Council (2015), it is recommended that the Ministry of Education continues to encourage students to join fields where there are critical gaps like Medicine, Health and ICT. If the situation continues as it is, the labor market is likely to be saturated by graduates from Management and Economics-related disciplines while critically lacking the skilled human resource to work in hospitals and the overall health sector. The government's recent decision to allocate government bursary to students based on the priority levels of the students' field of study such as STEM (Science, Engineering, Technology and Mathematics) is a step towards filling in these critical gaps. However, this initiative should be complemented by a well-designed strategy to retain graduates in these ill-resourced fields. This requires well organized and structured career guidance for students at all levels where students would be progressively enlightened and oriented according to the labor market trends.

Enrolment rates in lower secondary, general upper secondary and TVET level 6 to 7 have been consistently on the rise. This is happening while Higher Education and Adult Literacy acknowledge a decrease in enrolments. The decrease in enrolments in adult literacy may imply that the number of illiterate people has decreased among the general population while the decrease in enrolments in Higher Education may be connected to education costs, employability rate and skills required by the labor market. This is connected to the information revealed by the interviewees who commended that from now on people should look for professional courses that guarantee the likelihood for employability rather than accumulating university degrees grounded on mere theoretical knowledge.

Table 1: Student enrolment across various pathways from 2017 to 2019

SN	Category	Number of students enrolled			Increase /decrease	
		2017	2018	2019	2017/18	2018/19
1	Primary	2,540,374	2,503,705	2,512,465	-36,669	8,760
2	Lower secondary	382,661	422,093	481,138	39,432	59,045
3	General upper secondary	139,319	147,618	158,489	8,299	10,871
4	TVET level 1 to 5	79,595	79,388	83,157	-207	3,769
5	TTC	9,397	9,186	9,320	-211	134
6	TVET level 6 to 7	10,420	13,447	14,078	3,027	631
7	Higher Education	80,773	75,713	72, 128	-5,060	-3,585
8	TVET NEP	17,486	9,650	9,932	-7,836	282
9	Adult literacy	152,015	132,365	123,607	-19,650	-8,758
Total		**3,637,709**	**3,626,362**	**-11,347**	**127,070**	

Source: MINEDUC (2020)

In order to ascertain that the rate of illiteracy shall continue decreasing among the general population, the survey explored the promotion, repetition and dropout rates in primary schools as detailed in Table 2.

Table 2: Promotion, repetition and dropout rate in primary schools

Indicator/Year	2015/16	2016/17	2017/18	2018/19
Promotion rate	75.9%	78.0%	80.0%	82.2%
Male	74.4%	76.4%	78.6%	80.4%
Female	77.4%	79.6%	81.3%	84.0%
Repetition Rate	18.4%	16.4%	13.4%	10.0%
Male	19.9%	17.7%	14.4%	10.9%
Female	16.9%	15.1%	12.4%	9.2%
Dropout Rate	5.7%	5.6%	6.7%	7.8%
Male	6.0%	5.9%	7.0%	8.7%
Female	5.4%	5.3%	6.3%	6.8%

Source: MINEDUC (2020)

While the promotion rate in primary school has been on the rise, the repetition rate is decreasing and the dropout rate is still a variable to keep on the watch. Dropout in primary school is a potential socio-economical threat because these children are ill-prepared to embrace any career because of little age, low literacy level and low psychological maturity.

In Rwanda, primary education takes six years and does not per se open up to any career. That is why it is recommended that primary school leavers transit to lower secondary education upon passing a national examination that marks the end of primary education cycle. Table 3 provides the data in terms of transition rate from primary to lower secondary from 2015 to 2018.

Table 3: Transition rate from primary to lower secondary from 2015 to 2018

Indicator/Year	2015/16	2016/17	2017/18	2018/19
Transition rate (Overall)	71.1%	74.5%	71.6%	72.2%
Male	72.0%	75.4%	72.3%	72.1%
Female	70.4%	73.7%	71.0%	72.4%

Source: MINEDUC (2020)

The transition rate from the school year 2015/16 till 2018/2019 has never gone beyond 74.5% implying that there is closer to 25.5% of children that might be getting lost every year. In fact, it is not evident that they all repeat primary six- and hence should be absorbed in Level 1 and Level 2 of TVET so that they can at least acquire skills making them capable to live an independent life as they also contribute to the economy of the nation.

Table 4: Transition rate from lower to upper secondary from 2015 to 2018

Indicator/Year	2015/16	2016/17	2017/18	2018/19
Transition rate (Overall)	82.8%	85.1%	85.4%	86.1%
TR Male	84.8%	87.2%	88.7%	88.6%
TR Female	81.1%	83.4%	82.5%	83.9%

Source: MINEDUC (2020)

The data in table 4 illustrate the transition rate from lower to upper secondary from the school year 2015/2016 to 2018/2019. The figures indicate a positive general trend though it is still important to think about 13.9% of the students who are still unable to purse this level of education be it in general education, TTC or TVET, implying that more efforts are needed to ensure that this proportion of young Rwandans also acquire skills making them fit for well profiled careers. This concern about the 13.9% students unable to transit to upper secondary is indeed echoed by the fact that there is an exponential increase in dropout rate in secondary schools as reported in Table 5.

Table 5: Promotion, repetition, and dropout rate in secondary schools

INDICATOR/YEAR	2015/16	2016/17	2017/18	2018/19
Promotion rate	86.7%	90.4%	89.2%	87.6%
Male	87.2%	90.9%	89.4%	87.1%
Female	86.2%	89.9%	89.1%	88.0%
Repetition Rate	8.8%	5.2%	5.0%	4.2%
Male	8.4%	5.0%	5.3%	4.7%
Female	9.1%	5.4%	4.8%	3.8%
Dropout Rate	4.5%	4.4%	5.8%	8.2%
Male	4.1%	4.0%	5.4%	8.2%
Female	4.8%	4.7%	6.1%	8.1%

Source: MINEDUC (2020)

There is an alarming increase in the dropout rate in secondary schools as it almost doubled: from 4.5% in 2015/2016 school year to 8.2% in the 2018/2019 school year. Such a trend may be a hiccup in the attainment of a knowledge-economy and it is indeed a threat to returns on educational investments.

Table 6: Upper secondary students from 2016 to 2019 by learning area

Description/Year	2016	2017	2018	2019
Students in Sciences combinations	75,276	78,892	84,642	90,567
Male	33,733	35,031	38,022	40,276
Female	41,543	43,861	46,620	50,291
% of Male	*44.8%*	*44.4%*	*44.9%*	*44.5%*
% of Female	*55.2%*	*55.6%*	*55.1%*	*55.5%*

Description/Year	2016	2017	2018	2019
Students in Humanities combinations	28,842	30,562	31,900	34,981
Male	13,548	14,476	15,267	16,536
Female	15,294	16,086	16,633	18,445
% of Male	*47.0%*	*47.4%*	*47.9%*	*47.3%*
% of Female	*53.0%*	*52.6%*	*52.1%*	*52.7%*
Students in Languages combinations	27,794	29,865	31,076	32,941
Male	12,055	12,965	13,705	14,742
Female	15,739	16,900	17,371	18,199
% of Male	*43.4%*	*43.4%*	*44.1%*	*44.8%*
% of Female	*56.6%*	*56.6%*	*55.9%*	*55.2%*
Students in TTC	9,461	9,397	9,186	9,320
Male	3,870	3,776	3,474	3,649
Female	5,591	5,621	5,712	5,671
% of Male	*40.9%*	*40.2%*	*37.8%*	*39.2%*
% of Female	*59.1%*	*59.8%*	*62.2%*	*60.8%*
Students in TVET	65,583	61,124	79,388	83,157
Male	36,329 *(55.4%)*	33,392 *(54.6%)*	43,585 *(54.9%)*	46,573 *(56.0%)*
Female	29,254 *(44.6%)*	27,732 *(45.4%)*	35,803 *(45.1%)*	36,584 *(44.0%)*

Source: MINEDUC (2020)

Science related combinations are the ones absorbing many students from Lower Secondary, which falls under national priorities. Nonetheless, it is evident that efforts have to be doubled to boost the enrollments in TVET because if the Government of Rwanda target to have 60% of the Lower secondary graduates joining TVET by 2024, more educational investments and awareness should be now on the rise and should be the focus of the educational policy makers and implementers.

Table 7: TVET trainee's enrolment by level from 2017 to 2019

Levels	Sex	2017	2018	2019
Total	Total	90,015	92,835	97,235
	Male	51,381	53,246	56,708
	Female	38,634	39,589	40,527
Level 1	Total	11,274	8,810	15,464
	Male	5,932	4,707	9,244
	Female	5,342	4,103	6,220

Level 2	Total	2,077	602	324
	Male	1,026	273	168
	Female	1,051	329	156
Level 3	Total	24,603	28,732	25,885
	Male	13,590	16,218	14,459
	Female	11,013	12,514	11,426
Level 4	Total	19,846	20,361	22,748
	Male	11,011	10,924	12,469
	Female	8,835	9,437	10,279
Level 5	Total	21,795	20,883	18,736
	Male	11,941	11,463	10,233
	Female	9,854	9,420	8,503
Level 6	Total	529	1,371	560
	Male	117	421	324
	Female	412	950	236
Level 7	Total	9,891	12,076	13,518
	Male	7,764	9,240	9,811
	Female	2,127	2,836	3,707

Source: MINEDUC (2020)

It is observed that level 3 (equivalent to senior 4 in general education) still needs to boost numbers in terms of enrollment. Indeed, figures in Table 7 bring questions regarding the reasons why level 2 and level 6 have got declines in enrolment rates.

Table 8: TVET Trainees enrolled in level 1 to 7 by Sector from 2017 to 2019

Sector	2017	2018	2019
Agriculture and food processing	6,299	6,753	5,847
Male	3,076	3,184	2,683
Female	3,223	3,569	3,164
Arts and Crafts	5,275	5,287	7,077
Male	984	1,072	1,141
Female	4,291	4,215	5,936
Beauty and aesthetics	1,979	1,089	1,309
Male	393	222	232
Female	1,586	867	1,077
Business services	13,774	12,252	11,334
Male	2,662	2,341	2,130

Sector	2017	2018	2019
Female	11,112	9,911	9,204
Construction and Building services	24,358	31,159	25,573
Male	20,066	25,430	21,370
Female	4,292	5,729	4,203
Energy	437	112	6,070
Male	255	63	4,821
Female	182	49	1,249
Hospitality and tourism	9,062	7,035	10,493
Male	2,796	2,102	2,850
Female	6,266	4,933	7,643
ICT	9,901	13,464	13,136
Male	5,256	7,055	7,398
Female	4,645	6,409	5,738
Manufacturing and Mining	448	589	1,766
Male	350	497	1,511
Female	98	92	255
Media and Film Making	192	253	659
Male	85	160	383
Female	107	93	276
Technical services	18,277	13,684	5,161
Male	15,451	10,334	3,946
Female	2,826	3,350	1,215
Transportation	-	1,158	8,810
Male	-	786	8,243
Female	-	372	567
Water Management and Sanitation	13	-	-
Male	7	-	-
Female	6	-	-

Source: MINEDUC (2020)

Considering the information revealed by the interviewees, it is evident TVET sub-sectors need to widen the scope of trades offered in order to respond to the emerging labor needs and desired skills.

Table 9: Tertiary institution students enrolled from 2016 to 2019 by field of education

Field of Education/Year	2015/16	2016/17	2017/18	2018/19
Education	12,768	10,906	8,938	10,875
Male	7,709	6,892	5,513	6,402
Female	5,059	4,014	3,425	4,473
Arts and Humanities	2,787	2,741	1,533	973
Male	2,014	737	924	590
Female	773	2,004	609	383
Social Sciences, Journalism and Information	5,284	4,309	5,001	6,258
Male	2,608	2,065	2,861	3,151
Female	2,676	2,244	2,140	3,107
Business, Administration and Law	30,330	30,360	29,408	25,708
Male	13,786	12,999	13,361	11,481
Female	16,544	17,361	16,047	14,227
Natural Sciences, Mathematics and Statistics	3,877	3,977	2,984	3,775
Male	2,538	2,614	2,020	2,461
Female	1,339	1,363	964	1,314
Information and Communication Technologies	9,368	9,309	7,540	9,427
Male	5,936	5,984	4,930	5,888
Female	3,432	3,325	2,610	3,539
Engineering, Manufacturing and Construction	5,337	11,228	14,241	14,220
Male	4,087	9,292	11,391	11,423
Female	1,250	1,936	2,850	2,797
Agriculture, Forestry, Fisheries and Veterinary	4,100	4,302	2,576	2,907
Male	2,720	2,597	1,725	1,909
Female	1,380	1,705	851	998
Health and Welfare	7,962	7,230	8,251	6,726
Male	3,977	3,545	4,442	3,477
Female	3,985	3,685	3,809	3,249
Services	8,990	6,831	8,688	5,337
Male	6,922	3,183	3,952	2,308
Female	2,068	3,648	4,736	3,029

Source: MINEDUC (2020)

Indeed, the choices that young people make at school have a big impact on their careers but more so on their lives. The aspirations and expectations of learners change over time, hence the primary function of schools is to prepare them for successful transition towards a future career path. Education is meant to prepare learners for the workplace by providing and equipping them with knowledge, skills, attitude and values as well as the encouragement they need to get the most out of their desired career paths. According to CICA (n.d), students display higher levels of engagement and motivation when they have a clear understanding of what they want to do. This is because the information on Career pathways enables them to have focus and are able to make informed choices about their careers. Similarly, teachers and counsellors base on the available information on career progression to provide essential guidance that makes a bridge between education and career.

Career education is then an important aspect to be integrated in the school curriculum to ensure relevant experiences are fully incorporated in the education programs towards "making the curriculum challenging and relevant which is considered as one of the strongest ways that school teachers and principals can encourage students to prepare for and to identify benefits of different occupations" (Micki M. Caskey 2011, p.2).

Therefore, one of the aims of the Rwandan curriculum is to ensure that young people's skills are better matched to the needs of the Rwandan, regional, and global labor market, and this is reflected through the emphasis on developing entrepreneurship skills. There is also a specification for teachers to be trained to provide career guidance and counselling, and to raise awareness among young learners on the influence of social factors, behavior and personal attitudes on their futures.

Summarily, career pathways form an articulation of knowledge, skills, and competencies, and this connects education with the world of work. Career pathways clearly identify the steps students need to progressively take to gain the career readiness skills for a successful transition to a professional career after graduation. Accordingly, schools should prepare learners for their brighter future. Similarly, career pathways should streamline the development of knowledge, skills and attitudes through a planned program of learning experiences in education and training settings which will assist all students to make informed decisions about their study and/or work options and enable effective participation in their working life.

Employers tend to get frustrated with the inadequate work preparation that students receive while at school. The quality of training that students receive as they transit from one cycle to another determines the overall success as they transit from school to job market. As highlighted in the National Skills Development and Employment Promotion Strategy: 2019-2024, "TVET and university outcomes are hampered by the quality of the students that they can intake from secondary education. TVETs & universities are not effectively providing students with the skills they need for work – as shown by just 20% of recent TVET graduates being fully employed after graduation. Therefore, the integration of career education and curriculum as well as career services provided to students across the entire education system are expected to provide a greater connection between what students learn in the classroom and their preparation for a real-world of work. Career guidance and relevant pathways involve provision of curriculum opportunities to build students' general capabilities, support students' interests and aspirations, and support them to make informed decisions about their subject choices and career pathways.

It is against this background that the present work intended to respond to the following objectives:

- Assess how learners form their opinions around career choice including when and who and what influences these choices.
- Map all pathways that learners would go for and recommend options that learners would take from Primary, Secondary, TVET, and Higher Education.
- Identify all opportunities (internships, on-job training, apprenticeship, etc.) that are available to learners and match them to mapped pathways.
- Identify platforms where learners can get career guidance information and the challenges faced by adolescents to access these information or available options, and analyze challenges of different options and provide recommendations thereof.

Chapter 2: Assessing learners' opinions on career choices including who and what influences these choices

2.1 Introduction

This chapter presents the findings from the data gathered with the intent to collect students' opinions around career choice including when and who and what influences these choices. It also presents challenges faced by students to access information available about career advice and available options and concludes with well-targeted recommendations. The present survey concerns also opinions from different categories of employees in order to collect supplementary information related to their career choice.

The study mainly used a cross-sectional survey design with a mixed-methods approach where both quantitative and qualitative methods of data collection and analysis were referred to. The integration and triangulation of methods involved the use of both questionnaires to collect quantitative data, and interviews to gather qualitative data. The survey instruments were administered to these categories of respondents:

- Students/Trainees (Primary, Secondary, TVET, Higher Education): Both closed-ended and open-ended questions to collect information on lived stories with regards to opinions around career choice including when and who and what influences these choices and challenges to access career guidance information and challenges faced to access information on available options.

Officials in the selected institutions and schools: Semi-structured interview questions were used to get information on labor demand and supply, challenges, processes and success stories regarding recruitment and employment and opportunities (internship, on-job training, apprenticeship, etc.) that are available to learners with regards to their career pathways and platforms where learners can access career guidance information.

Data were collected from employees in selected sectors (formal and informal sectors: unregistered business). Both closed-ended and open-ended questions were used to collect information on their perceptions on career pathway dynamism, how they chose what they are doing, level of success and satisfaction in their chosen career and whether the current job is in line with their areas of training and what they think should be done to stream career pathways.

For variability in the required information, different categories of participants were involved. These included academic staff, students/trainees (exit points: P6, S3, S6, Lower Level of Education TVET, Higher Level of Education TVET, Higher Education), managers in public and private institutions in both rural and urban areas.

These categories of potential participants were selected based on the fact that they have knowledge and understanding of the career pathways and parameters of the labor market. Managers were selected considering that they are best placed for institutional planning and highly involved in policy formulation and implementation.

Purposive sampling was used to reach out these respondents. Quantitative data were analyzed using descriptive statistics of frequencies and percentages whereby the scores on “strongly agree” and “agree” were collapsed together and interpreted as “agree”

2.2 Demographic information from respondents

Among the 300 students who participated in the study, 168 (56%) were male while 132 (44%) were female. They were aged 9 years old and above, and the majority (38%) aged between 17-20 years old. In terms of level of education, 15% were primary school students, 15.3% from Ordinary Level, 20.3% were Upper Secondary Level while 7.7% were from Lower Level TVET and 20.3% from Higher Level TVET and 21.3% from Higher Education.

Table 10: Sampling frame for assessment of how learners form their opinions around career choice including when and who and what influences these choices

Respondent category	MINEDUC	NESA	REB	RTB	UR-CE	RP	HEC	IPRC KIGALI	IPRC Huye	INES	MIPC	CIK	TTC SAVE	Ecole des Sciences de Musanze	GS Gitarama	G S Remera Protestant	Ecole d'Art de Nyundo	GS St Aloys Rwamagana	Ecole Les Hyrondelles de Don Bosco	Lycée de Kigali	Total
Teachers/Trainers/ Lecturers					10			5	5	10	5	5	5	10	5	10	5	5	5	5	90
Manager/Officials	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	40
Students					30			20	20	20	20	20	20	20	20	30	20	20	20	20	300
Workers in formal and informal sectors																					22
Total																					452

In terms of type of institutions, most students (51.3%) were from government aided institutions. The public institutions were the least represented (20.3%) whereas private counted 28.3%. Concerning the school location, 70.3% were urban while 29.7% were rural.

Table 11: Targeted institutions for the Identification of opportunities (internships, on-job training, apprenticeship, scholarship opportunities etc.) that are available to learners and their matching to mapped pathways.

Institution	Number of respondents
1. Ministry of Public Service and Labor plus affiliated institutions	2
2. Ministry of Youth and Culture	1
3. Ministry of Commerce and Industry	1
4. The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) -Rwanda	1
5. Japan International Cooperation Agency-Rwanda	1
6. Belgian Development Agency-Coopération Technique Belge (BTC-CTB) Rwanda	1
7. US Agency for International Development - USAID Rwanda	1
8. Korea International Cooperation Agency (KOICA) | Rwanda	1
9. National Institute of Statistics for Rwanda	1
10. Private Sector Federation (Specific Chambers)	2
11. Rwanda Development Board	1
12. Selected manufacturing industries (2), garages (2) and hotels (2)	6
13. Embassies	3
Total	21

Among the surveyed students,48.3% had fathers with university background while 36% of them had mothers who studied the university. Parents' secondary level is 31% for fathers and 20.7% for mothers, while 20.7% of fathers and 9.7% of mothers had primary education.

In terms of parent's employment, the majority were Self-employed (39.2%), 21.3% unemployed and 19.6% were public servants.

2.3 Factors influencing student's career choice

The factors influencing students' career choice were categorized into:

- family environment.
- learning environment.
- information access.
- technological environment.
- individual factors.

These factors are represented by the following diagram:

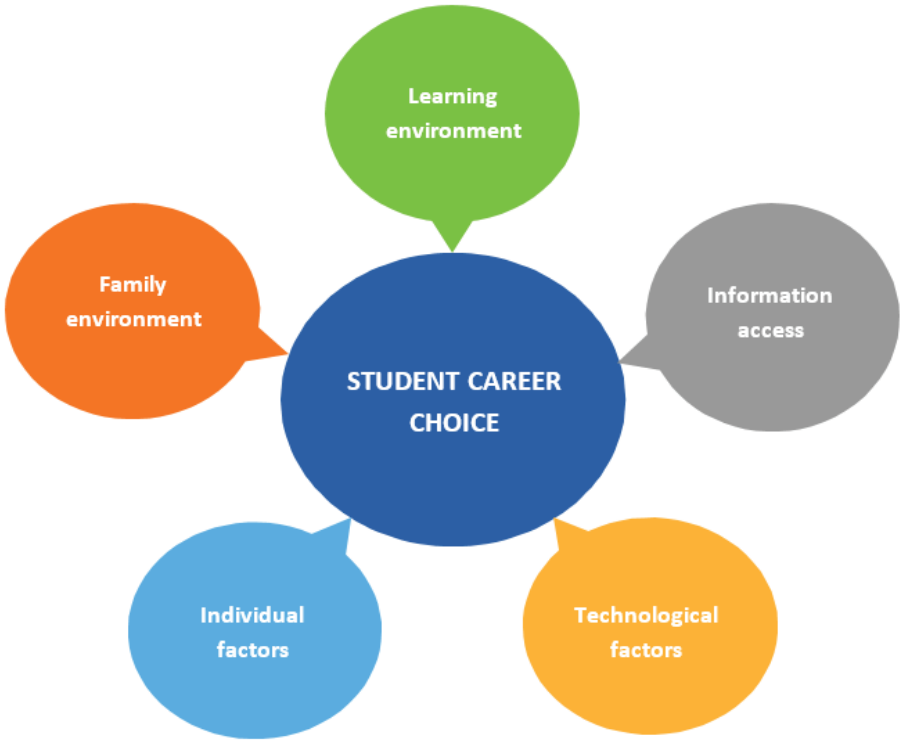


Figure 1: Factors influencing career choices among the learners

For each category, the students had to show their level of agreement with different indicators with the response mode of strongly agree, agree, neutral, disagree and strongly disagree. The data reported in this section are only about agreement in percentage (agreed and strongly agreed combined) and information in Tables are presented in descending order. Figure 1 summarizes the factors influencing career choices among the learners.

2.3.1 Learning environment and information access

The link between preferred career and the respondent's favorite subject were rated the highest (69.6%). This is followed by the influence of subjects offered at school on students' career decision (61.7%) and the availability of career advisor for students (42.7%).

About the students' views on the influence of information collection on career choice, inspiration from people working in the dream career scored the highest (72%), followed by talking to others to obtain information for easier decision-making on the career choice (65.3%) and consideration of other people's opinions and constructive ideas related to career choice (61%). Refer to the table below:

Table 12: Influence of learning environment and information access on career choice among the students

Factor category	Statements	%	Factor category	Statements	%
Students' views on the influence of learning environment on career choice	The link between preferred career and my favorite subject	69.6	Students' views on the influence of information access on career choice	Inspiration from people working in the dreamt career	72
	The subjects offered at school influence students' career decision	61.7		Talking to others to obtain information for easier decision-making on my career choice	65.3
	I had a career advisor	42.7		Consideration of other people's opinions and constructive ideas related to career choice	61
	School developed career plans for students	39.3		Peer advice on career	46.3
	Special programs for career development at my school	38.4		I was provided with a list of careers from which I made a choice	42.4
	School organized career interviews	37.7		Visits on many sites (blogs, forums, etc.) before career choice	38.7
	Teacher's influence	37.3		Influence of friends on school choice	36.7
	Influence of career fields trips	34.3			
	Our school has a person in charge of career guidance/ counselor who guides students' career choices	32			

Source: Primary data, 2021

2.3.2 Family environment and technological factors

According to table 11, the leading factor in influencing children' career choice is when parents always ask their children about their career choice factor (68%). Other factors include parents' income (56.7%), young age beliefs and aspirations (56%), parents' involvement in the child's education (55.7%) and home learning environment (54%).

In order to highlight the family influence, one of the respondents revealed:

...my family did not agree with me on the career option I chose, ...in secondary, I learned technical education but my parents needed me to study sciences.

Another respondent said for instance: "*....my parents have not gone to school, so they do not have an idea about the career to pursue. I have to realize my way".*

As far as students' views on the influence of the technological environment on career choice are concerned (Table 11), the belief that the Internet provides crucial career development opportunities emerged at the top (73.3%).

The advancement in the technological factors facilitates access and exchange of information between teachers and students, students and career advisors and among students themselves. This exchange of information enables students to be aware of the career opportunities and to make choices.

The technological advancement is gradually leading into the creation of websites/portals that provide information on the availability of career development opportunities and help students to use self-assessment tools to match their potentials with existing and foreseen career opportunities. The information above are presented in table 11 below.

Table 13: Influence of family environment and technological environment on career choice among the students

Factor category	Statements	%	Factor category	Statements	%
Students' views on the influence of family environment on career choice	Parents always asking about learners' career choice	68	Students' views on technological factors on career choice	Belief that internet provides crucial career development opportunities	73.3
	Parents' income	56.7		Regular use of technology to communicate with leaner's teachers and peers	55
	Young age beliefs and aspirations	56		Instructors' use technology to enhance learners' understanding	53.3
	Parents' level of involvement in the child's education	55.7		School staff providing important career and education information for learners through the school network	46.4
	The learning environment at home	54			
	Parents' lack of idea about career choice/Child's one choice	47.3			
	Relationship between the parents	39.3			
	Influence from extended family members	38.7			
	Influence from the mother's career	37.4			
	Parents' education level	37.3			
	Influence from the elder siblings	34.4			
	Influence from the father's career	33.7			

Source: Primary data, 2021

2.3.3. Time to make a career choice and individual factors

In accordance with the data reported in Table 12, individual factors on career choice are ranged in the following descending order:

- Understanding of the work habits of the career (74.9%).
- Alignment of career choice and student's capacity/knowledge (74.3%),
- The marketability of the career of choice (72.9%),
- The comparison between personal abilities and possibilities with the career alternatives (69.7%).

Regarding time, it was found out that 46% thought about their choice when they were in primary school while 44.6%) thought about it at ordinary level (

Table 14: Influence of individual factors on career choice among the students and time when career choice was made

Factor category	Statements	%	Factor category	Statements	%
Students' views on individual factors influencing career choice	Learners' understanding of the work habits of the career	74.9	Students' views on time when they made career choice	Learners making choice when they were still in primary school	46
	Alignment of career choice and student's capacity/knowledge	74.3		Learners making career choice at ordinary level	44.6
	Learner's understanding of the marketability of career of choice	72.9		Making career choice after completing advanced level	31.6
	Learners comparing their abilities and possibilities with their career alternatives	69.7		Being allowed to revise career choice after examination results were released and depending on grades	31.3
	Being aware of persona; abilities and possibilities	68		Making career choice after completing primary education	27.6
	Choosing career path after analyzing all possibilities	67.7		Never making any career decision	11.7
	Being able to assess my career alternatives	63.7			
	Learner knowing what they wanted to do in the future	60.6			
	Employment opportunities affecting learner's career choice	56.6			
	Exploring all career alternatives in details	52.7			
	Potential scholarships opportunities for further studies affect learner's career choice	50			
	Choosing the career based on the subject matter that is usually easy for the learner	49.4			
	Knowing the remuneration potential of the career	45.3			
	Waiting and see what the learner will end up with	44.5			

Factor category	Statements	%	Factor category	Statements	%
	Good prospects in obtaining a first job without any prior experience affect my career choice	38.3			
	I am uncertain about my future	36.3			

Source: Primary data, 2021

A detailed disaggregation of students per gender in terms of when they thought about career choice has shown 22% of male students against 23.7% of female when they were still in primary school, 23.7%, which shows a difference of 1.7%. 15.4% of male thought about their choice after completing primary education versus 12.4% of females, which shows a difference of 3%.

In addition, 19.7% of males thought about their choice after completing ordinary level compared to 12% of females showing a difference of 7.7%. 18.6% of males confirm having been allowed to revise their course options after release of national examination results and depending on their grades while only 12.6% of females fall in the same category.

It might be true that students are forced to undertake the existing programs which are also determined by the existing curriculum and national education targets in NST1…So, student's choices are limited and confined because even educational institutions must offer programs that are conditioned by financing model and government priorities.

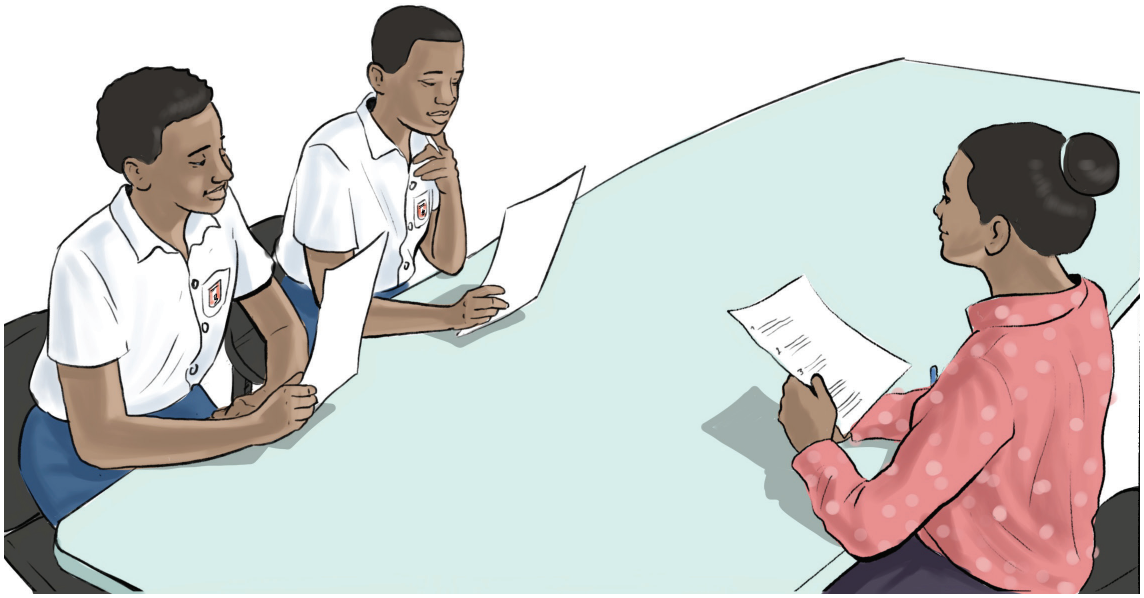
Respondent, 2021

2.4 Challenges related to career choices

A number of challenges related to career choice and development was reported by respondents at different institutional levels. In the views of the students, the challenges include the following:

- *Lack of capital to start own business,*
- *Family members who do not agree with the children on what they are to pursue,*
- *Information asymmetry*
- *Absence of advisors.*
- *Unskilled parents who do not value the importance of the child's own choices,*
- *Inadequate skills in technology access.*
- *Lack of self-confidence and decision-making,*
- *Lack of required materials to pursue a given options and school fees to attend a good school that matches their choice.*
- *Poor class performance that do not match the desired career options.*
- *Lack of knowledge of what they want, guidance and uncertainty.*
- *Lack of knowledge on different options and platform to access career information.*
- *Peer pressure.*
- *Discouragement and lack of role models.*

These submissions are not far from those stated by other respondents. In fact, most students complete primary and even secondary school without a clear idea about what they want to be or where their education pathways are leading them.



In brief, based on factors that inform learners' choice of career, every learner is advised to:

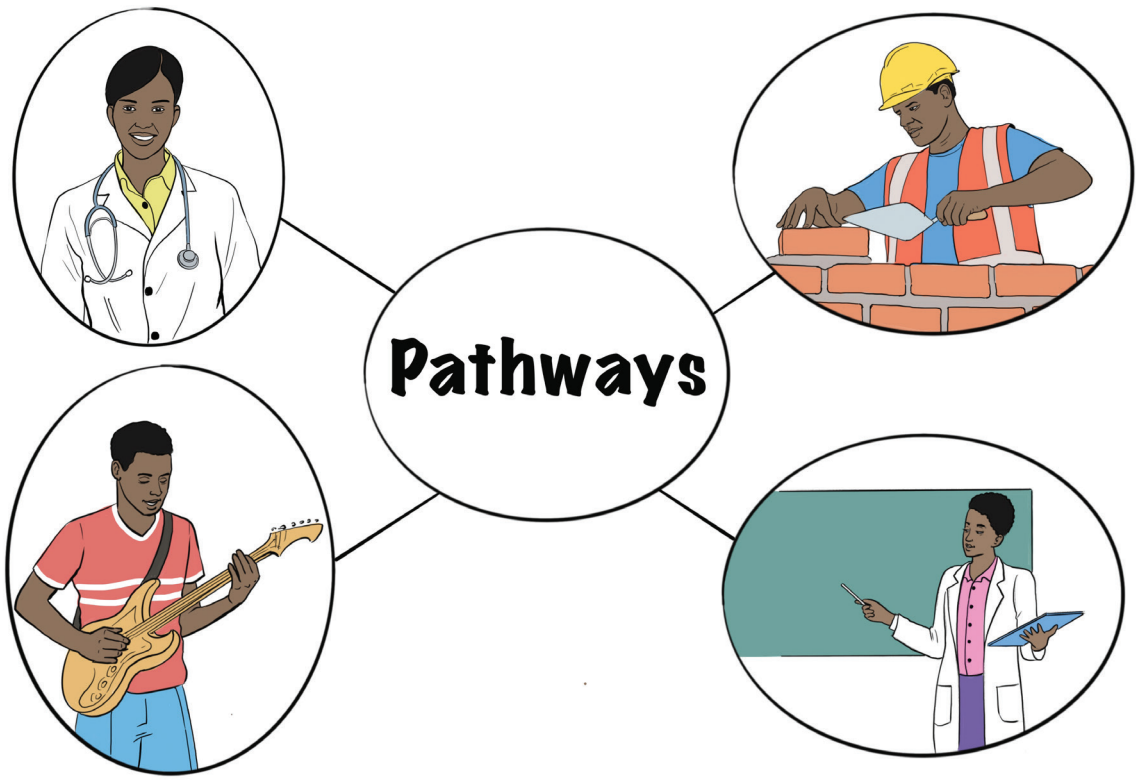
- Assess their capabilities/potentials and match them with their choice.
- Consult career advisors, counsellors, teachers, mentors, parents, etc. for guidance on suitable academic options and career choice.
- Explore more about their career interest (visit reliable career platform/website; listen to talks by influential people and role models).
- Keep abreast with career choice and employment trends.
- Search for latest information on available internship and scholarship opportunities.
- Set their own goals and make early decisions about what they want to be.
- Consider registering in an alternative pathway such as short courses, internship, and apprenticeship programs to acquire employability or entrepreneurship skills.

Chapter 3: Pathways and options learners would pursue in Primary, Secondary, TVET, and Higher Education

3.1 Introduction

This section describes pathways that learners would pursue and recommends options that learners would take from Primary, Secondary, TVET, and Higher Education. These pathways basically make a range of different routes that learners follow as they move into, through and out of an education and training system. Pathways present a picture showing the education systems having a range of different institutions and types of learning programs, such that learners can follow very different routes through the various programs and institutions (AG- Diplomatic Academy, 2018).

The mapping of pathways that learners would go for started with the identification of existing practices in terms of selection and orientation of students from one level of education to another. To achieve this, key educational institutions that have such responsibilities were visited. These included HEC, REB, NESA, RP and RTB. Upon the analysis of the provided data sheets, criteria and existing/offered fields of studies, these were matched with the desk review information on career clusters in Rwanda and beyond. Irrespective of the courses which students are currently pursuing, they were asked what would have been their preferences if they had the privilege to be given what they could choose without any sponsorship or availability of places. Also, specific questions were asked to students on their exit plan (job seeking, job creation and in which fields). A document review guide was also used to achieve this objective.



3.2 Rwandan education structure and pathways

3.2.1 Basic Education

The Basic Education is organized in three levels: Pre-primary, Primary, General Secondary and TVET. The pre-primary level is organized in nursery schools for a period of three years as a preparatory phase for entrance to primary schooling.

3.2.1.1 Pre-Primary Education

The importance of early learning is entrenched in the second target of Sustainable Development Goal 4, which seeks to ensure that, by 2030, "all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education". Pre-primary education is now considered an essential tool for achieving Universal Primary Education and the SDGs. Ensuring access to quality pre-primary education is a key strategy for improving learning and education outcomes as well as the efficiency of education systems.

Rwanda's Education Sector Strategic Plan (ESSP), 2018/2019 – 2023/2024, recognises pre-primary education and school readiness programmes as a vital foundation for future learning, particularly for children from disadvantaged backgrounds. It commits to expanding access to three years of early learning for children aged 3 to 6, with the national goal to increase access to 45%of children by 2023/2024.

Pre-primary education caters for children between 3-6 years of age and has three grades: grade one, grade two and grade three. The official entry age is 3 years. Quality pre-primary services are shown to promote the development of cognitive, language and numeracy skills, as well as social and emotional aptitudes. In promoting the development of key skills, pre-primary prepares children for their subsequent transition to primary school, improving the likelihood that they will perform well in primary school and beyond, and reducing the likelihood that they will repeat grades or drop out. These benefits are particularly important for disadvantaged populations, because it can help "level the playing field" giving them better chances for academic success.

In Rwanda Pre-primary curriculum, the program is redeveloped in the six learning areas: Discovery of the world, Numeracy, Physical and health development, creative arts and culture, language and literacy, lastly social and emotional development.

Career guidance has not yet become popular at the levels of pre-primary level. Generally, students are invited to think about career paths during upper secondary since career is considered an adult achievement.

Pre-primary being the golden age where learning starts, children should be introduced to basic career information to stimulate their career awareness.

Career information can be integrated in the content of all the six learning areas. This information may include jobs and careers in their community.

Career awareness can as well be promoted in the methodology of instruction. An example is where learners role play as different careers (shop keeper, builder, teacher, doctor etc.).

Pre-primary learners always learn through play. Children's play activities in learning corners are a great asset in promoting career awareness.

3.2.1.2 Primary Education

The fundamental objective of primary education is to inculcate basic literacy, numeracy and life skills, and it is recognized as the foundation for secondary and tertiary education levels. The official entry age to primary education is 6 years, and this level lasts 6 years, meaning that the expected primary school going age population is within the range of 6 and 11 years. At the primary stage, learners take 7 subjects at lower primary and eight (9) at upper primary as shown in table 15. All pupils sit for national examinations for 5 core subjects at the end of primary six (P6) before transition to secondary education.

Table 15: Subjects offered in primary education

Levels	Subjects
Lower Primary	Kinyarwanda; English; French; Mathematics; Social and Religious Studies; Science and Elementary Technology (SET); Creative Arts: Physical Education and Sports; Co-Curricular activities
Upper Primary	Kinyarwanda; English; French; Mathematics; Social and Religious Studies; Science and Elementary Technology (SET); Creative Arts: Physical Education and Sports; Co-Curricular activities

3.2.1.3 General Secondary Education

General Secondary Education comprises 3 years of Lower Secondary and 3 years of Upper Secondary. After three years of lower secondary education, students sit for an Ordinary Level National Examination which qualifies them to enter Upper Secondary. After the other three years, the students sit for an Advanced Level Certificate National Examination.

3.2.1.3.1 Lower Secondary Education (S1 to S3)

Lower secondary is an education cycle undertaken from the first to the third year of secondary education. Subjects at this level are in three categories as shown in the table 16 below: the core subjects, elective subjects, and co-curricular activities. Among the Elective subjects, schools can choose one subject.

Table 16: Subjects offered in lower secondary education

Categories	Subjects
Core Subjects	English, Kinyarwanda, Mathematics, Physics, Chemistry, Biology and Health Sciences, ICT, History and Citizenship, Geography and Environment, Entrepreneurship, French, Kiswahili, Religious and Ethics, Physical Education and Sports.
Elective subjects	Music, Dance and Drama, Fine arts and Crafts, Home Sciences, Farming (Agriculture and Animal husbandry).
Co-curricular Activities	

3.2.1.3.2 Upper Secondary (Advanced Level, S4-S6)

The upper secondary education is composed of General Upper Secondary Education and Professional Education. At this level, learners take subject combinations. At the end of Upper Secondary School (A-Level), all learners take final national exams leading to the award of Advanced Level Certificate of Education.

In upper secondary, learners make choices based on academic competencies and availability of teaching and learning resources. The different subject combinations offered are as follows in table below:

Table 17: Subjects offered in upper Secondary- General education

Categories	Combinations
General Upper Secondary Education	1. Literature in English– French - Kinyarwanda - Kiswahili (LFK) 2. History–Literature in English - Psychology (HLP) 3. History – Geography – Literature in English (HGL) 4. Physics - Chemistry - Mathematics (PCM) 5. Physics – Chemistry - Biology (PCB) 6. Mathematics - Physics - Geography (MPG) 7. Mathematics – Economics – Geography (MEG) 8. Mathematics – Computer Science - Economics (MCE) 9. Mathematics – Physics – Computer Science (MPC) 10. Mathematics - Chemistry - Biology (MCB)
Professional Education	1. Teacher training comprised of: i. Early Childhood and Lower Primary Education (ECLPE) ii. Social Studies Education (SSE) iii. Languages Education (LE) iv. Science and Mathematics Education (SME). 2. Associate Nursing Program 3. Accounting

Source: Ministerial order n° 002/MINEDUC/2021 of 20/10/2021 establishing curriculum in General, Professional and Technical and Vocational Basic Education

Every learner in each category must at least study citizenship, mathematics, English, Kinyarwanda, and information communication and technology (ICT).

3.2.2 Technical and Vocational Education and Training (TVET) (Certificate)

Technical and vocational Education and Training schools includes: a) Level one (1) and level two (2) that provide basic vocational training programmes which help beneficiaries access the labour market; but Level 2 graduates are also eligible for vertical mobility to join Level 3 b) Level three (3) to level five (5) provide technical, vocational, and professional programmes.

Table 18: TVET Qualification levels

	REQF LEVEL	DURATION	SUMMARY OF THE LEVEL DESCRIPTION	MINIMUM ENTRY REQUIREMENT	MEDIUM OF INSTRUCTION
TVET CERTIFICATE V	5	1 Year	Graduates at this level will have substantial theoretical and practical knowledge enabling them to proceed to the further learning and skills for skilled/ paraprofessional work.	•TVET Certificate IV •Recognition of Prior Learning certificates equivalent TVET certificate IV • Minimum age: N/A	English
TVET CERTIFICATE IV	4	1 Year	Graduates at this level will have theoretical and practical knowledge preparing them to pursue further learning and skills for specialized and/or skilled work.	•TVET Certificate III •Recognition of Prior Learning certificates equivalent TVET Certificate III • Minimum age: N/A	English
TVET CERTIFICATE III	3	1 Year	Graduates at this level will have knowledge and practical knowledge and skills for work and/or further learning.	• Completed 9Years Basic Education • VET Certificate II • A certificate of Apprenticeship program equivalent to VET Certificate II • Minimum age: N/A	English
TVET CERTIFICATE II	2	1 Year	Graduates at this level will have balanced knowledge and skills for work in a defined context enabling him or her to join the labor market and/or further learning.	• To have Completed Primary Sixls. • Minimum age: 16 Years	English
TVET CERTIFICATE I	1	3 to 9 months	Graduates at this level will have basic knowledge and practical skills for initial work and community involvement to enable individual to join the labor market.	• Basic reading, writing and numeracy skills. • Minimum age: 16 Years	Kinyarwanda

These programmes are based on the following economic sectors:

1º Construction and building services;
2º Energy;
3º Technical services;
4º Hospitality and Tourism;
5º ICT and Multimedia;
6º Arts and Crafts;
7º Agriculture and Food processing;
8º Transport and logistics;
9º Manufacturing and Mining;
10º Beauty and Aesthetics.

The Technical and Vocational Education and Training (TVET) was established to train the required technical workforce. There are various programs/trades offered in TVET schools leading to the award of certificates at each level, which leads to the award of either one of TVET Certificate 1 to 5. Students in basic education who complete primary and ordinary level (lower secondary) can pursue their education in TVET courses, while TVET students can vertically upgrade to a higher Education (both TVET and General academic streams). It is to be noted that level 1 TVET certificate does not have their specific modules and therefore trainees at these levels are trained using customized modules.

Training programmes are provided in various modes of learning from qualification level 1 to level 5. In partnership with the private sector, a learner will be provided with theoretical and practical trainings both at TVET Schools and at workplace (dual training approach). Learning acquired at workplace in different contexts especially at work without considering how, when or where the learning occurred is recognized through Recognition of Prior Learning (**RPL**) approach.

RPL is an approach of assessment and certification for acquired competences based on labour market needs from traditional apprenticeship (formal or nonformal) in line with Rwanda TVET Qualification Framework (RTQF).

Short training courses are delivered in various area of interest at different levels of qualification; between 3 to 6 months training duration. TVET training programmes are categorized into sectors and under each pathway, trades are reported as can be seen in the Table 19.

Table 19: Trades in Technical and Vocational Education and Training (Level 1 to Level 5)

#	Name of the Sector	Levels 3-5 Trades names	Level 2 -Trades Names	Level 1- Trades names
1.	Construction and building services	1. Building construction 2. Public works 3. Plumbing Technology 4. Interior design 5. Land surveying	1. Masonry-L2 2. Carpentry -L2 3. Road construction machinery operation-L2 4. Domestic Plumbing-L2 5. Painting & Decoration-L2	1. Masonry- L1 2. Carpentry-L1 3. Road construction machinery operation-L1 4. Domestic Plumbing-L1 5. Painting & Decoration-L1
2.	Energy	1. Electrical Technology 2. Renewable energy	1. Domestic electricity-L2 2. Peat energy-L2 3. Solar energy-L2 4. Biomass and improved cooking stoves-L2	1. Domestic electricity-L1 2. Peat energy-L1 3. Solar energy-L1 4. Biomass and improved cooking stoves-L1
3.	Technical services	1. Electronics and Telecommunication	1. Electronic Services-L2	NA
4.	Hospitality and Tourism	1. Food and Beverage Operations 2. Front office & Housekeeping operations 3. Tourism	1. Food and Beverage Services-L2 2. Housekeeping operations-L2 3. Culinary Arts-L2	1. Food and Beverage Services-L1 2. Housekeeping operations-L1 3. Culinary Arts-L1
5.	ICT and Multimedia	1. Computer systems and architecture 2. Multimedia Production 3. Software development 4. Networking and Internet Technologies 5. Software Programming and embedded systems	1. Computer application-L2 2. Computer maintenance-L2	NA NA
6.	Arts and Crafts	1. Fashion design 2. Fine and Plastic arts 3. Music and performing arts	1. Tailoring-L2 2. Graphic arts-L2 3. Ceramic and sculpture-L2 NA	1. Tailoring-L1 2. Graphic arts-L1 3. Ceramic and sculpture-L1 NA

7.	Agriculture and Food processing	1. Agriculture 2. Food processing 3. Animal Health	1. Beekeeping and processing-L2 2. Cash crop production and Processing-L2 3. Pig production and processing-L2 4. Fish farming and processing-L2 5. Food crop production and processing-L2 6. Poultry farming and processing-L2 7. Fruits and vegetables production and processing-L2 8. Ruminant farming and processing-L2 9. Baking-L2	1. Beekeeping and processing-L1 2. Cash crop production and processing-L1 3. Pig production and processing-L1 4. Fish farming and processing-L1 5. Food crop production and processing-L1 6. Poultry farming and processing-L1 7. Fruits and vegetables productionand processing-L1 8. Ruminant farming and processing-L1 9. Baking-L1
		1. Forestry 2. Wood Technology	1. Tree nursery operation-L2 2. Flower production-L2 3. Parks and garden-L2	1. Tree nursery operation-L1 2. Flower production-L1 3. Parks and garden-L1
		Water and Irrigation	1. Small scale irrigation-L2 2. Farm machines operation-L2	1. Small scale irrigation-L1 2. Farm machines operation-L1
		1. Leather Technology	1. Leather works-L2	1. Leather works-L1
8.	Transport and logistics	1. Heavy Machinery 2. Automobile technology	1. Driving-L2 2. Motorcycle repair and maintenance-L2 3. Automobile Body Works-L2 4. Automobile repair and maintenance-L2	1. Driving-L1 2. Motorcycle repair and maintenance-L1 3. Automobile Body Works-L1 4. Automobile repair and maintenance-L1
9.	Manufacturing and Mining	1. Manufacturing Technology 2. Mining Technology	1. Welding-L2 2. Small scale Mining-L2	1. Welding-L1 2. Small scale Mining-L1
10.	Beauty and Aesthetics	1. Beauty therapy and Aesthetics	1. Hairdressing-L2	1. Hair dressing-L1

3.2.3 Special Needs Education

Special schools are schools that receive and support learners with learning problems or disabilities that make it harder for them to learn than most children the same age.

Table 20: Special schools

No.	Province	District	Centers Name	Sector	Field of interventions
1.	Kigali city	Nyarugenge	Institut Filipo Smaldone	Nyamirambo	Special education: Hearing impairment Mental Problem
2.			Hirwa iwanyu	Nyamirambo	Special education and health
3.			CENTRE ESPOIR Umwana nk'abandi	Nyamirambo	Special education
4.			Centre de jour 'Rera Bose'	Rwezamenyo	Special education
5.		Gasabo	Centre de jour Humura	Ndera	Special education
6.			Centre de jour Tubiteho	Kimoronko	Health and education
7.			Jyamubandi Mwana	Jabana	Special education
8.			Silver Bell	Kimironko	Mental disability, developmental delays ECE
9.			Autism Rwanda	Jabana	Autism
10.		Kicukiro	Izere mubyeyi	Kanombe	Special education
11.			Centre amizero	Gikondo	Special education
12.			RBC inkuru nziza	Gikondo	Rehabilitation based community
13.			Centre INSHUTI ZACU Gahanga	Gahanga	Special education and vocational training
14.			Masaka Ressource Center for Blinds	Masaka	Rehabilitation center
15.			HVP Gataragara	Gikondo	Mental disabilities Nursery + Primary
16.			Association des Parents et amis des Enfants ayant le Handicap au Rwanda (APEH)/Heroes School	Gikondo	Physical disabilities
17.	Northern	Gicumbi	Centre Izere	Nyamiyaga	Inclusive education
18.		Gakenke	APAX Janja	Janja	Basic education
19.		Musanze	Centre Barerwe	Nyange	Special education
20.			Centre st Vincent de Paul	Muhoza	Reeducation center
21.			Blessing School	Muhoza	Special Education Visual impairment Primary
22.		Rulindo	Maison d'accueil d'esperance pain	Rusiga	Inclusive education

23.	Southern	Kamonyi	Centre de formation agricole et de petit elevage deKamonyi (CEFAPEC)	Gacurabwenge	Community based rehabilitation, inclusine education
24.			G.S ROSE MYSTICA	Gacurabwenge	Iclusive school O'Level
25.		Muhanga	HRD la Misercorde	Nyamabuye	Special education
26.		Nyanza	HVP Gatagara	Mukingo	Special education and rehabilitation: Physical, Visual, Hearing impairment and mentally challenged O'Level
27.		Gisagara	Centre Amizero y'ubuzima	Kibilizi	Special education
28.			Centres des handicapés de Mugombwa	Mugombwa	Basic education and vocational training
29.		Nyaruguru	Educational institute of blind of Franciscan Sisters servants of the cross	Kibeho	Special education
30.		Huye	ADAR tubahoze	Tumba	Basic education
31.			Centre des sourds muets des freres de Saint Gabriel	Ngoma	Special education: Hearing impairment O'level&A' level
32.			HVP Gatagara	Ngoma	Rehabilitation center, inclusive education: Physical disabilities, hearing impairment A'level
33.	Eastern	Nyagatare	Ecole des sourds muets de Nyagatare	Gatunda	Specialised education
34.		Kayonza	Centre de Readaptation fonctionnelle	Gahini	Readaptation center
35.		Gatsibo	Centre Wikwiheba Mwana	Ngarama	Rehabilitation center
36.		Rwamagana	HVP Gatagara	Kigabiro	Specilialzed education: Visual impairment 0 Level & A'level
37.		Ngoma	Urugo rw'amahoro mutendeli	Mutendeli	Basic and medical care
38.		Bugesera	Centre Saint Marie Rilima	Rilima	Orthopedic center

39.			AVEH Umurerwa	Nyamata	Special eductaion
40.			Institut Filipo Smaldone/ nursery program	Nyamata	Special education
41.	Western	Rusizi	Centre des handicapés de Nkanka	Nkanka	Rehabilitation center
42.			Centre des handicapés de Saint Francois d'Assise	Mururu	Rehabilitation center
43.		Nyamasheke	Centre Ngwino Nawe Ntendezi	Ntendezi	Inclusive education
44.		Rutsiro	Centre Komera	Mushubati	Education and rehabilitation for life
45.		Ngororero	Ineza kabaya	Kabaya	Special education
46.			APAX Muramba	Matyazo	Basic education and vocational training
47.			Centre Wibabara	Gatumba	Inclusive educationn
48.			Centre de Jour Nyange/ Day center	Nyange	Inclusive education
49.		Rubavu	Ubumwe community center	Gisenyi	Special education
50.			Vision jeunesse nouvelle	Rugerero	Special eductaion and vocational training

Table 21: Special program for gifted learners

No.	Province	District	School	Trades
1.	West	Nyabihu	Rwanda Coding Academy	Software Development Program
2.		Rubavu	Ecole d'Art de Nyundo	Graphic Ars, Scripture and Ceramic
3.	South	Muhanga	Nyundo Music School	Music

3.2.4 Higher Education

3.2.4.1. General Higher Education

The following table shows the classification of major programs offered in general higher education in Rwanda as classified in the above stated education fields. It also shows the entry requirements and exit award for each program.

Table 22: Pathways in General Higher Education

Education Field	Program	Entry Requirements	Exit Award
Education	Bachelor of Education (Hons) (named subjects e.g. Special Needs Education -English) (Primary Teacher Education)	Candidates must have passed the specific subjects on completion of TTC. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Education (Hons) (named subjects) (Primary Teacher Education)
	Bachelor of Education (Hons) (Named subjects e.g. Science-Mathematics Education) (Primary Teacher Education)	Candidates must have passed the specific subjects on completion of TTC. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Education (Hons) (Named subjects e.g. Science-mathematics education) (Primary Teacher Education)
	Bachelor of Education (Hons) (Named subjects e.g. French-English) (Secondary)	Candidates must have passed the specific subjects on completion of A-level. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Education (Hons) (Named subjects e.g. French-English-literature) (Secondary)
	Bachelor of Education (Hons) (Named Subjects e.g. Biology-Chemistry) (Secondary)	Candidates must have passed the specific subjects on completion of A-level. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Education (Hons) (Named Subjects e.g. Biology-Chemistry) (Secondary)
	Diploma in Education (Named subjects eg. Mathematics-Physics) (Lower Secondary Education)	Candidates must have passed the specific subjects on completion of A-level. The cut-off points are normally set by the institution/ university admitting students.	Diploma in Education (Named subjects eg. Mathematics-Physics) (Lower Secondary Education)
	Bachelor of Education (Hons) (named subjects e.g. Special Needs Education -English) (Primary Teacher Education)	Candidates must have passed the specific subjects on completion of TTC. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Education (Hons) (named subjects) (Primary Teacher Education)
	Bachelor of Education (Hons) (Named subjects e.g. Science-Mathematics Education) (Primary Teacher Education)	Candidates must have passed the specific subjects on completion of TTC. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Education (Hons) (Named subjects e.g. Science-mathematics education) (Primary Teacher Education)
	Bachelor of Education (Hons) (Named subjects e.g. French-English) (Secondary)	Candidates must have passed the specific subjects on completion of A-level. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Education (Hons) (Named subjects e.g. French-English-literature) (Secondary)
Arts and Humanities	Bachelor of Arts with Honors in Translation and Interpreting Studies	• At least two principal passes in the following subjects: Literature, English, French, Kinyarwanda, Kiswahili, Entrepreneurship and Drama. • TVET candidates must have at least three principal passes including Secretarial studies. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Arts with Honors in Translation and Interpreting Studies

	Bachelor of Arts with Honors in Linguistics and Literature	• At least two principal passes in the following subjects: Literature, English, French, Kinyarwanda, Kiswahili, Entrepreneurship and Drama. • TVET candidates must have at least three principal passes including Secretarial studies. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Arts with Honors in Linguistics and Literature
	Bachelor of Arts with Honors in Arts and Publishing	• At least two principal passes in the following subjects: Literature, English, French, Kinyarwanda, Kiswahili, Entrepreneurship and Drama. • TVET candidates must have at least three principal passes including Secretarial studies. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Arts with Honors in Arts and Publishing
	Bachelor of Arts with Honors in Arts and Creative Industry	• At least two principal passes in the following subjects: Literature, English, French, Kinyarwanda, Kiswahili, Entrepreneurship and Drama. • TVET candidates must have at least three principal passes including Secretarial studies. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Arts with Honors in Arts and Creative Industry
	Bachelor of Arts in History and Heritage Studies	At least two principal passes at A-level. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Arts in History and Heritage Studies
	Bachelor of Arts in Professional Police Studies	At least two principal passes at A-level. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Arts in Professional Police Studies
	Bachelor of Arts in Creative Design	Pass science subject combinations; Candidates from Technical Vocational Education and Training (TVET) must pass relevant subjects. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Arts in Creative Design
Social Sciences, Journalism and Media	Bachelor of Social Science with Honors in Social and Military Sciences	At least two principal passes at A-level. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Social Science with Honors in Social and Military Sciences
	Bachelor of Social Science with Honors in Sociology	At least two principal passes at A-level. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Social Science with Honors in Sociology
	Bachelor of Social Science with Honors in Social Work	At least two principal passes at A-level. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Social Science with Honors in Social Work
	Bachelor of Social Science with Honors in Political Science	At least two principal passes at A-level. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Social Science with Honors in Political Science

	Bachelor of Social Science with Honors in International Relations	At least two principal passes at A-level. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Social Science with Honors in International Relations
	Bachelor of Social Science with Honors in Development Studies	At least two principal passes at A-level. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Social Science with Honors in Development Studies
	Bachelor of Social Science with Honors in Governance Studies	At least two principal passes at A-level. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Social Science with Honors in Governance Studies
	Bachelor of Arts with Honours in Journalism and Communication Studies	At least two (2) principal passes in Languages, Literature, History and Entrepreneurship. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Arts with Honours in Journalism and Communication Studies
	Bachelor of Science with Honours in Economics	At least two (2) principal passes in: • Mathematics–Physics-Geography (MPG) • Physics–Chemistry-Mathematics (PCM) • Physics-Chemistry-Biology (PCB) • Mathematics–Economics-Geography (MEG) • Mathematics-Computer Science-Economics (MCE) • Mathematics-Physics-Computer Science (MPC) The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Economics
	Bachelor of Science with Honours in Applied Statistics	At least two (2) principal passes in: • Mathematics–Physics-Geography (MPG) • Physics–Chemistry-Mathematics (PCM) • Physics-Chemistry-Biology (PCB) • Mathematics–Economics-Geography (MEG) • Mathematics-Computer Science-Economics (MCE) • Mathematics-Physics-Computer Science (MPC) • Mathematics- Chemistry-Biology (MCB) The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Applied Statistics
Business, Administration and Law	Bachelor of Law	At least two (2) principal passes in two subjects relevant to Law: History, Literature, Economics, Entrepreneurship, Languages and Secretarial studies. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Law

	Bachelor of Business Administration (BBA) with Honours	At least two (2) principal passes in: • Mathematics–Physics-Geography (MPG) • Physics–Chemistry-Mathematics (PCM) • Biology–Chemistry-Geography (BCG) • Physics-Chemistry-Biology (PCB) • Mathematics–Economics-Geography (MEG) • Mathematics-Computer Science-Economics (MCE) • Mathematics-Physics-Computer Science (MPC) • Mathematics-Chemistry-Biology (MCB) • History–Economics- Geography (HEG) • History - Economics- Literature in English (HEL) • Literature in English– Economics-Geography (LEG) • Candidates from Technical Vocational Education and Training (TVET) must have a specialization in accounting. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Business Administration (BBA) with Honours
	Bachelor of Science in Accounting	Candidates should have at least two (2) principal passes in: • Mathematics –Physics-Geography (MPG) • Physics–Chemistry-Mathematics (PCM) • Biology–Chemistry-Geography (BCG) • Physics-Chemistry-Biology (PCB) • Mathematics–Economics-Geography (MEG) • Mathematics-Computer Science-Economics (MCE) • Mathematics-Physics-Computer Science (MPC) • Mathematics- Chemistry-Biology (MCB) • History–Economics-Geography (HEG)	Bachelor of Science in Accounting
		• History - Economics- Literature in English (HEL) • Literature in English –Economics-Geography (LEG) • Candidates from Technical Vocational Education and Training (TVET) must have a specialization in accounting. The cut-off points are normally set by the institution/ university admitting students.	

	Bachelor of Science in Business Information Technology	Candidates should have at least two (2) principal passes in: • Mathematics –Physics-Geography (MPG) • Physics–Chemistry-Mathematics (PCM) • Biology–Chemistry-Geography (BCG) • Physics-Chemistry-Biology (PCB) • Mathematics–Economics-Geography (MEG) • Mathematics-Computer Science-Economics (MCE) • Mathematics-Physics-Computer Science (MPC) • Mathematics-Chemistry-Biology (MCB) • History – Economics- Geography (HEG) • History-Economics-Literature in English (HEL) • Literature in English–Economics-Geography (LEG) • Candidates from Technical Vocational Education and Training (TVET) must have a specialization in accounting. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science in Business Information Technology
	Bachelor of Science in Transport Management	Candidates should have at least two (2) principal passes in: • Mathematics–Physics-Geography (MPG) • Physics–Chemistry-Mathematics (PCM) • Biology–Chemistry-Geography (BCG) • Physics-Chemistry-Biology (PCB) • Mathematics–Economics-Geography (MEG) • Mathematics-Computer Science-Economics (MCE) • Mathematics-Physics-Computer Science (MPC) • Mathematics- Chemistry- Biology (MCB)	
		• History–Economics-Geography (HEG) • History - Economics- Literature in English (HEL) • Literature in English –Economics-Geography (LEG) • Candidates from Technical Vocational Education and Training (TVET) must have a specialization in accounting. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science in Transport Management

Natural Sciences, Mathematics and Statistics	Bachelor of Science in Procurement, Logistics and Supply Chain Management	Candidates should have at least two (2) principal passes in: • Mathematics–Physics-Geography (MPG) • Physics–Chemistry-Mathematics (PCM) • Biology–Chemistry- Geography (BCG) • Physics-Chemistry-Biology (PCB) • Mathematics–Economics-Geography (MEG) • Mathematics-Computer Science-Economics (MCE) • Mathematics-Physics-Computer Science (MPC) • Mathematics- Chemistry- Biology (MCB) • History–Economics-Geography (HEG) • History-Economics-Literature in English (HEL) • Literature in English–Economics-Geography (LEG) • Candidates from Technical Vocational Education and Training (TVET) must have a specialization in accounting. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science in Procurement, Logistics and Supply Chain Management
	Bachelor of Science (Hons) in Physics	Candidates should have at least two (2) principal passes of Physics and Mathematics from the following subject combinations: • Mathematics, Physics and Geography; • Physics, Chemistry and Mathematics; • Physics, Economics and Mathematics; • Mathematics, Physics and Computer Science. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Physics
	Bachelor of Science (Hons) in Physics	Candidates should have at least two (2) principal passes of Physics and Mathematics from the following subject combinations: • Mathematics, Physics and Geography; • Physics, Chemistry and Mathematics; • Physics, Economics and Mathematics; • Mathematics, Physics and Computer Science. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Physics

	Bachelor of Science (Hons) in Mathematics	Candidates should have at least two (2) principal passes of Mathematics and Physics from the following subject combinations: • Mathematics, Physics and Geography; • Physics, Chemistry and Mathematics; • Physics, Economics and Mathematics; • Mathematics, Physics and Computer Science. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Mathematics
	Bachelor of Science (Hons) in Mathematics (Statistics)	Candidates should have at least two (2) principal passes of Mathematics and Physics from the following subject combinations: • Mathematics, Physics and Geography; • Physics, Chemistry and Mathematics; • Physics, Economics and Mathematics; • Mathematics, Physics and Computer Science. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Mathematics (Statistics)
	Bachelor of Science (Hons) in Biology (Biochemistry)	Candidates should have at least two (2) principal passes of Biology and Chemistry from the following subject combinations: • Physics, Chemistry and Biology; • Mathematics, Chemistry, and Biology. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Biology (Biochemistry)
	Bachelor of Science (Hons) in Biology (Biotechnology)	Candidates should have at least two (2) principal passes of Biology and Chemistry from the following subject combinations: • Physics, Chemistry and Biology; • Mathematics, Chemistry, and Biology. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Biology (Biotechnology)
	Bachelor of Science (Hons) in Biology (Botany and conservation)	Candidates should have at least two (2) principal passes of Biology and Chemistry from the following subject combinations: • Physics, Chemistry and Biology; • Mathematics, Chemistry, and Biology. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Biology (Botany and conservation)

	Bachelor of Science (Hons) in Biology (Zoology and Conservation)	Candidates should have at least two (2) principal passes of Biology and Chemistry from the following subject combinations: • Physics, Chemistry and Biology; • Mathematics, Chemistry, and Biology. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Biology (Zoology and Conservation)
	Bachelor of Science (Hons) in Chemistry (Bio-organic Chemistry	Candidates should have at least two (2) principal passes of Biology and Chemistry from the following subject combinations: • Physics, Chemistry and Biology; • Mathematics, Chemistry, and Biology. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Chemistry (Bio-organic Chemistry
	Bachelor of Science (Hons) in Chemistry (Environmental Chemistry)	Candidates should have at least two (2) principal passes of Biology and Chemistry from the following subject combinations: • Physics, Chemistry and Biology; • Mathematics, Chemistry, and Biology. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Chemistry (Environmental Chemistry)
Information and Communication Technologies	Bachelor of Science (Hons) in Information Technology	Candidates should have at least two (2) principal passes in Mathematics and Physics or Computer Science in the following combinations: • Physics, Chemistry and Mathematics; • Mathematics, Physics and Geography; • Mathematics, Physics and Computer Science; • Physics, Economics and Mathematics; • Mathematics, Economics and Computer Science. • Candidates from Technical Vocational Education and Training (TVET) must have a specialization in Computer Science The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Information Technology

	Bachelor of Science (Hons) in Computer Science.	Candidates should have at least two (2) principal passes in Mathematics and Physics or Computer Science in the following combinations: • Physics, Chemistry and Mathematics; • Physics, Economics and Mathematics; • Mathematics, Physics and Geography; • Mathematics, Physics and Computer Science; • Mathematics, Economics and Computer Science. • Candidates from Technical Vocational Education and Training (TVET) must have a specialization in Computer Science The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Computer Science.
	Bachelor of Science (Hons) in Computer Engineering	Candidates should have at least two (2) principal passes in Mathematics and Physics or Computer Science from the following combinations: • Physics, Chemistry and Mathematics; • Physics, Economics and Mathematics; • Mathematics, Physics and Geography; • Mathematics, Physics and Computer Science; The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Computer Engineering
	Bachelor of Science (Hons) in Information Systems	Candidates should have at least two (2) principal passes in Mathematics and Physics or Computer Science from the following combinations: • Physics, Chemistry and Mathematics; • Physics, Economics and Mathematic; • Mathematics, Physics and Geography; • Mathematics, Physics and Computer Science; • Mathematics, Economics and Computer Science • Candidates from Technical Vocational Education and Training (TVET) must have a specialization in Computer Science The cut-off points are normally set by the institution/ university admitting students	

Engineering, Manufacturing and Construction	Bachelor of Architecture (Hons)	Candidates should have at least two (2) principal passes in: Physics and Mathematics or Mathematics with either Economics or Geography from the following subject combinations: • Physics, Chemistry and Mathematics; • Mathematics, Physics and Geography; • Mathematics, Physics and Computer Science; • Physics, Economics and Mathematics The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Architecture (Hons)
	Bachelor of Science (Hons) in Quantity Surveying	Candidates should have at least two (2) principal passes in: Either Physics and Mathematics or Mathematics with either Economics or Geography from the following subject combinations: • Physics, Chemistry and Mathematics; • Mathematics, Physics and Geography; • Mathematics, Physics and Computer Science; • Physics, Economics and Mathematics • Candidates from Technical Vocational Education and Training (TVET) must have a specialization in Construction and Public Works. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Quantity Surveying
	Bachelor of Science (Hons) in Estate Management and Valuation	Candidates should have at least two (2) principal passes in: Mathematics and Geography or Mathematics and Economics from the following subject combinations: • Mathematics, Physics and Geography; • Mathematics, Economics and Geography; • Mathematics, Computer Science and Economics The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Estate Management and Valuation

	Bachelor of Science (Hons) in Geography (Environmental Planning)	Candidates should have at least two (2) principal passes in: Geography and either Mathematics or Physics from the following subject combinations: • Mathematics, Physics and Geography; • Mathematics, Economics and Geography. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Geography (Environmental Planning)
	Bachelor of Science (Hons) in Geography (Urban and Regional Planning)	Candidates should have at least two (2) principal passes in: Geography and either Mathematics or Physics from the following subject combinations: • Mathematics, Physics and Geography; • Mathematics, Economics and Geography. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Geography (Urban and Regional Planning)
	Bachelor of Science (Hons) in Civil Engineering	Candidates should have at least two (2) principal passes in Physics and Mathematics in the following combinations: • Physics, Chemistry and Mathematics, • Mathematics, Physics and Computer Science; • Mathematics, Physics and Geography: • Physics, Economics and Mathematics. • Diploma in Construction Engineering The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Civil Engineering
	Bachelor of Science (Hons) in Transportation Engineering	Candidates should have at least two (2) principal passes in Physics and Mathematics in the following combinations: • Physics, Chemistry and Mathematics; • Mathematics, Physics and Computer Science; • Mathematics, Physics and Geography; • Physics, Economics and Mathematics. • Diploma in Transportation Engineering The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Transportation Engineering

	Bachelor of Science (Hons) in Engineering (Surveying and Geomatics Engineering)	Candidates should have at least two (2) principal passes in Physics and Mathematics in the following combinations: • Mathematics, Physics and Geography; • Physics, Chemistry and Mathematics; • Mathematics, Physics and Computer Science; • Physics, Economics and Mathematics. • Diploma Surveying and Geomatics Engineering • Candidates from Technical Vocational Education and Training (TVET) must have a specialization in Construction. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Engineering (Surveying and Geomatics Engineering)
	Bachelor of Science (Hons) in Mechanical Engineering	Candidates should have at least two (2) principal passes in Physics and Mathematics in the following combinations: • Mathematics, Physics and Geography; • Physics, Chemistry and Mathematics; • Physics, Economics and Mathematics; • Mathematics, Physics and Computer Science. • Candidates from Technical Vocational Education and Training (TVET) must have a specialization in General Mechanics. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Mechanical Engineering
	Bachelor of Science (Hons) in Energy Engineering	Candidates should have at least two (2) principal passes in Physics and Mathematics in the following combinations: • Mathematics, Physics and Geography; • Physics, Chemistry and Mathematics; • Physics, Economics and Mathematics; • Mathematics, Physics and Computer Science. • Diploma Energy Engineering • Candidates from Technical Vocational Education and Training (TVET) must have a specialization in General Mechanics. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Energy Engineering

	Bachelor of Science (Hons) in Engineering (Electronics and Telecommunication Engineering)	Candidates should have at least two (2) principal passes in Physics and Mathematics in the following combinations: • Mathematics, Physics and Geography; • Physics, Chemistry and Mathematics; • Physics, Economics and Mathematics; • Mathematics, Physics and Computer Science • Candidates from Technical Vocational Education and Training (TVET) must have a specialization in Electronics and Telecommunication The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science (Hons) in Engineering (Electronics and Telecommunication Engineering)
	Bachelor of Science (Hons) in Engineering (Electrical Power Engineering)	Candidates should have at least two (2) principal passes in Physics and Mathematics in the following combinations: • Mathematics, Physics and Geography; • Physics, Chemistry and Mathematics; • Physics, Economics and Mathematics; • Mathematics, Physics and Computer Science • Candidates from Technical Vocational Education and Training (TVET) must have a specialization in Electricity	
		The cut-off points are normally set by the institution/ university admitting students.	
	Bachelor of Science in Mining Engineering (Hons)	Candidates should have principal passes in Mathematics and Chemistry or Physics or Computer Science from one of the following combinations: • Physics, Chemistry and Mathematics; • Mathematics, Physics and Geography; • Mathematics, Physics and Computer Science; • Mathematics, Chemistry and Biology or equivalent. The cut-off points are normally set by the institution/ university admitting students.	

	Bachelor of Science with in Applied Geology (Hons)	Candidates should have principal passes in Mathematics and Chemistry or Physics or Computer Science from one of the following combinations: • Physics, Chemistry and Mathematics; • Mathematics, Physics and Geography; • Mathematics, Physics and Computer Science; • Mathematics, Chemistry and Biology or equivalent. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with in Applied Geology (Hons)
Health Sciences	General Nursing	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography Or • Candidates with an Advanced Diploma (A1) in General Nursing • Candidates who offered and passed A2 Nursing and have experience can be admitted. The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Nursing (General Nursing)
		Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography Or Candidates who offered and passed A2 Nursing and have experience can be admitted. The cut-off points are normally set by the institution/ university admitting students.	Advanced diploma in Nursing (General Nursing)
	Midwifery	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography Or Candidates who offered and passed A2 Nursing and have experience can be admitted. The cut-off points are normally set by the institution/ university admitting students.	Advanced Diploma in Midwifery

		• Candidates with an Advanced Diploma (A1) in Midwifery	Bachelor of Science with Honours in Nursing (Midwifery)
	Mental Health Nursing	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography Or Candidates who offered and passed A2 Nursing and have experience can be admitted. The cut-off points are normally set by the institution/ university admitting students.	Advanced Diploma in Mental Health Nursing
	Dental Therapy	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Dental Therapy
	Dental Surgery	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Dental Surgery
	General Medicine	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Medicine and Surgery
	Pharmacy	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Pharmacy

	Clinical Psychology	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Clinical Psychology
	Anesthesia	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Anesthesia
	Clinical Medicine & Community Health	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Clinical Medicine and Community Health
	Medical Imaging Sciences	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combination: • Physics-Chemistry-Biology Or • Candidates with Advanced Diploma in Medical Imaging Sciences The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Medical Imaging Sciences
	Medical Laboratory Sciences	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Biomedical Laboratory Sciences

	Ophthalmology	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography The cut-off points are normally set by the institution/ university admitting students.	Advanced Diploma in Ophthalmology
	Occupational Therapy	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Occupational Therapy
	Physiotherapy	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Physiotherapy
	Orthopedic Technology	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography The cut-off points are normally set by the institution/ university admitting students.	Advanced Diploma in Orthopedic Technology
	Environmental Health Sciences	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Environmental Health Sciences

	Human Nutrition & Dietetics	Candidates should have at least two (2) principal passes including Biology and Chemistry in the following combinations: • Physics-Chemistry-Biology • Mathematics-Chemistry-Biology • Biology-Chemistry-Geography The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Human Nutrition & Dietetics
Agriculture, Forestry, Fisheries and Veterinary	Bachelor of Science with Honours in Crop Production	Candidates should have at least two (2) principal passes in the following combinations: • Mathematics, Chemistry and Biology • Physics, Chemistry and Biology, • Biology, Chemistry and Geography • Candidates who offered Crop Production in TVET schools must have two (2) Principal passes The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Crop Production
	Bachelor of Science with Honours in Horticulture	Candidates should have at least two (2) principal passes in any of the following combinations: • Mathematics, Chemistry and Biology • Physics, Chemistry and Biology, • Biology, Chemistry and Geography • Candidates who offered Crop Production in TVET schools must have two (2) Principal passes The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Horticulture
	Bachelor of Science with Honours in Soil Sciences	Candidates should have at least two (2) principal passes in any of the following combinations: • Mathematics, Chemistry and Biology • Physics, Chemistry and Biology • Biology, Chemistry and Geography The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Soil Sciences
	Bachelor of Science with Honours in Rural Development	Candidates should have at least two (2) principal passes in any of the following combinations: • Mathematics, Economics and Geography • Physics, Economics and Mathematics	Bachelor of Science with Honours in Rural Development

		• Computer Science, Economics and Mathematics The cut-off points are normally set by the institution/ university admitting students.	
	Bachelor of Science with Honours in Agricultural Economics	Candidates should have at least two (2) principal passes in any of the following combinations: • Mathematics, Economics and Geography • Physics, Economics and Mathematics • Computer Science, Economics and Mathematics The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Agricultural Economics
	Bachelor of Science with Honours in Agribusiness	Candidates should have at least two (2) principal passes in any of the following combinations: • Mathematics, Economics and Geography • Physics, Economics and Mathematics	Bachelor of Science with Honours in Agribusiness
		• Computer Science, Economics and Mathematics The cut-off points are normally set by the institution/ university admitting students.	
	Bachelor of Science with Honours in Food Science and Technology	Candidates should have at least two (2) principal passes in any of the following combinations: • Mathematics, Chemistry and Biology • Physics, Chemistry and Biology • Biology, Chemistry and Geography The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Food Science and Technology
	Bachelor of Science with Honours in Forestry	Candidates should have at least two (2) principal passes in any of the following combinations: • Mathematics, Chemistry and Biology • Physics, Chemistry and Biology • Biology, Chemistry and Geography Candidates who offered Forestry in TVET schools must have two (2) Principal passes The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Forestry

	Bachelor of Science with Honours in Agroforestry	Candidates should have at least two (2) principal passes in any of the following combinations: • Mathematics, Chemistry and Biology • Physics, Chemistry and Biology • Biology, Chemistry and Geography Candidates who offered Forestry in TVET schools must have two (2) Principal passes The cut-off points are normally set by the institution/ university admitting students.	Bachelor of Science with Honours in Agroforestry
	Bachelor of Science with Honours in Agricultural Mechanization	Candidates should have at least two (2) principal passes in any of the following combinations: • Physics, Chemistry and Mathematics • Mathematics, Physics and Geography • Mathematics, Physics and Computer Science • Physics, Economics and Mathematics • Physics, Chemistry and Biology	Bachelor of Science with Honours in Agricultural Mechanization
		• Mathematics, Chemistry and Biology The cut-off points are normally set by the institution/ university admitting students.	
	Bachelor of Science with Honours in Irrigation and Drainage	Candidates should have at least two (2) principal passes in any of the following combinations: • Physics, Chemistry and Mathematics • Mathematics, Physics and Geography • Mathematics, Physics and Computer Science • Physics, Economics and Mathematics OR Physics, Chemistry and Biology • Mathematics, Chemistry and Biology The cut-off points are normally set by the institution/ university admitting students.	

	Bachelor of Science with Honours in Agricultural Sciences: Option Animal Production	Candidates should have at least two (2) principal passes in any of the following combinations: • Mathematics, Chemistry and Biology • Physics, Chemistry and Biology • Biology, Chemistry and Geography Candidates who offered Animal Production in TVET schools must have two (2) Principal passes The cut-off points are normally set by the institution/ university admitting students	Bachelor of Science with Honours in Agricultural Sciences: Option Animal Production
	Bachelor of Veterinary Medicine	Candidates should have at least two (2) principal passes including Biology in any of the following combinations: • Mathematics, Chemistry and Biology • Physics, Chemistry and Biology • Biology, Chemistry and Geography The cut-off points are normally set by the institution/ university admitting students	Bachelor of Veterinary Medicine

3.2.4.2. Technical and Vocational Education and Training (TVET) (Polytechnics)

Technical and Vocational Education and Training (TVET) in Higher Education programs lead to the award of Diploma/Advanced Diploma offered by Polytechnics institutions. To qualify for admission into polytechnics, candidates must have an Advanced Certificate of General or Technical Secondary Education, with at least two relevant principal passes permitting entry to higher education.

Students whose secondary education certificate were awarded by foreign institutions and wish to join RP must first submit their certificates to NESA in order to have equivalent qualification to ensure that they are of standards consistent with RP requirements.

The following table shows the classification of major programs offered in technical higher education in Rwanda in the various departments, the entry requirements and exit award for each program. Admission requirements are prescribed in the table below by each program/option which may include admission criteria.

Table 23: Pathways in Technical and Vocational Education and Training (TVET) (Polytechnic)

Department	Option/Program	Required combination/ area for entry	Core Module	Exit award
Civil Engineering	Construction Technology	Construction Technology		Advanced Diploma in Construction Technology
		Public works (PWO)		
		Physics- Economics-Mathematics (PEM)	PM	
		Physics- Chemistry-Mathematics (PCM)	PM/ MC	
		Mathematics- Physics-Geography (MPG)	PM	
		Mathematics- Chemistry-Biology (MCB)	MC	
		Mathematics-Physics-Computer (MPC)	PM	
		Mathematics-Physics-Biology (MPB)	PM	
		Surveying		
	Engineering Surveying	Construction		Advanced Diploma in Engineering Surveying
		Public Works		
		Physics- Economics- Mathematics (PEM)	PM	
		Physics- Chemistry- Mathematics (PCM)	PM/MC	
		Physics- Chemistry- Biology (PCB)	PC	
		Mathematics- Physics- Geography (MPG)	PM	
		Mathematics- Economics-Geography (MEG)	MG	
		Mathematics- Chemistry-Biology (MCB)	MC	
		Mathematics-Physics-Computer (MPC)	PM	
		Mathematics-Physics-Biology (MPB)	PM	
		Surveying		
	Water & Sanitation Technology	Construction		Advanced Diploma in Water & Sanitation Technology
		Public Works		
		Physics- Economics- Mathematics (PEM)	PM	
		Physics- Chemistry- Mathematics (PCM)	PM/MC	
		Physics- Chemistry- Biology PCB)	PC/BC	
		Mathematics- Physics- Geography (MPG)	PM/ MG	
		Mathematics- Chemistry- Biology (MCB)	MC/ BC	
		Biology-Chemistry-Geography (BCG)	BC	
		Mathematics-Physics-Computer (MPC)	PM	
		Surveying		
		Mathematics-Physics-Biology (MPB)	PM	

	Quantity Surveying	Construction		Advanced Diploma in Quantity Surveying
		Public Works		
		Physics- Economics- Mathematics (PEM)	PM	
		Physics- Chemistry- Mathematics (PCM)	PM/MC	
		Mathematics- Physics- Geography (MPG)	PM	
		Mathematics- Chemistry-Biology (MCB)	MC	
		Mathematics-Physics-Computer (MPC)	PM	
		Mathematics-Physics-Biology (MPB)	PM	
		Surveying		
	Highway Engineering	Construction		Advanced Diploma in Highway Engineering
		Public Works		
		Physics- Economics- Mathematics (PEM)	PM	
		Physics- Chemistry- Mathematics (PCM)	PM/MC	
		Mathematics- Physics- Geography (MPG)	PM	
		Mathematics-Physics-Computer (MPC)	PM	
		Mathematics- Chemistry- Biology (MCB)	MC	
		Mathematics-Physics-Biology (MPB)	PM	
		Surveying		
	Land Surveying	Construction		Advanced Diploma in Land Surveying
		Public Works		
		Physics- Economics- Mathematics (PEM)	PM	
		Physics- Chemistry- Mathematics (PCM)	PM/MC	
		Mathematics- Physics- Geography (MPG)	PM	
		Mathematics-Physics-Computer (MPC)	PM	
		Mathematics-Physics-Biology (MPB)	PM	
		Mathematics-Chemistry-Biology (MCB)	MC	
		Mathematics-Physics-Computer (MPC)	PM	
		Mathematics-Physics-Biology (MPB)	PM	
		Surveying		
Electrical and Electronics Engineering	Electrical Technology	Electricity		Advanced Diploma in Electrical Technology
		Industrial Electrical		
		Electronics and Telecommunication		
		Physics- Economics- Mathematics (PEM)	PM	
		Physics- Chemistry- Mathematics (PCM)	PM/MC	
		Physics – Chemistry – Biology (PCB)	PC	

		Mathematics- Physics- Biology (MPB)	PM	
		Mathematics- Physics- Geography (MPG)	PM	
		Mathematics-Physics-Computer (MPC)	PM	
		Computer Electronics		
		Mathematics- Economics- Computer (MEC)	MC	
	Electronics and Telecommunication Technology	Electricity		Advanced Diploma in Electronics and Telecom-munication Technology
		Electronics and Telecommunication		
		Physics- Economics- Mathematics (PEM)	PM	
		Physics- Chemistry- Mathematics (PCM)	PM/ MC	
		Physics- Chemistry- Biology (PCB)	PC	
		Mathematics- Physics- Biology (MPB)	PM	
		Mathematics- Physics- Geography (MPG)	PM	
		Mathematics- Economics- Computer (MEC	MC	
		Computer Electronics (CEL)		
		Mathematics-Physics-Computer (MPC)	PM	
	Biomedical Equipment Technology (BME)	Electricity		Advanced Diploma in Biomedical Equipment Technology (BME)
		Electronics and Telecommunication		
		Physics- Economics- Mathematics (PEM)	PM	
		Physics- Chemistry- Mathematics (PCM)	PM/MC	
		Physics- Chemistry- Biology (PCB)	PB	
		Mathematics- Physics- Geography (MPG)	PM	
		Mathematics- Economics- Computer (MEC)	MC	
		Mathematics-Physics-Computer (MPC)	PM	
		Computer Electronics		
		Mathematics-Physics-Biology (MPB)	PM	
	Electromechanical Technology	Electricity		Advanced Diploma in Electrome-chanical Technology
		Electronics and Telecommunication		
		Industrial Electrical		
		Physics- Economics- Mathematics (PEM)	PM	
		Physics- Chemistry- Mathematics (PCM)	PM/MC	
		Physics- Chemistry- Biology (PCB)	PB	
		Mathematics- Physics- Geography (MPG)	PM	
		Mathematics- Economics- Computer (MEC)	MC	
		Mathematics-Physics-Computer (MPC)	PM	
		Computer Electronics		
		General Mechanics (GME)		

	Renewable Energy	Electricity		Advanced Diploma in Renewable Energy
		Electronics and Telecommunication		
		Industrial Electrical		
		Physics- Economics- Mathematics (PEM)	PM	
		Physics- Chemistry- Mathematics (PCM)	PM/MC	
		Physics- Chemistry- Biology (PCB)	PC	
		Mathematics-Physics-Biology (MPB)	PM	
		Mathematics- Physics- Geography (MPG)	PM	
		Mathematics- Economics- Computer (MEC)	MC	
		Mathematics-Physics-Computer (MPC)	PM	
		Computer Electronics		
Mechanical Engineering	Automobile Technology	Motor Vehicle Mechanics		Advanced Diploma in Automobile Technology
		Physics- Economics- Mathematics (PEM)	PM	
		Mathematics- Physics- Computer (MPC)	PM	
		Mathematics-Physics- Geography (MPG)	PM	
		Mathematics-Economics - Computer (MEC)	MC	
		Physics- Chemistry- Mathematics (PCM)	PM/MC	
		Mathematics- Chemistry-Biology (MCB)	MC	
	Production and Manufacturing Technology (PMT)	General Mechanics		Advanced Diploma in Production and Manufacturing Technology (PMT)
		Motor Vehicle Mechanics		
		Physics- Economics- Mathematics (PEM)	PM	
		Computer Electronics (CE)		
		Mathematics- Physics- Computer (MPC)	PM	
		Mathematics- Physics- Geography (MPG)	PM	
		Physics- Chemistry- Mathematics (PCM)	PM/MC	
		Mathematics- Economics- Computer (MEC)	MC	
		Mathematics- Chemistry- Biology (MCB)	MC	
	Air Conditioning and Refrigeration	General Mechanics		Advanced Diploma in Air Conditioning and Refrigeration
		Physics- Economics- Mathematics (PEM)	PM	
		Mathematics- Physics- Computer (MPC)	PM	
		Mathematics- Physics- Geography (MPG)	PM	
		Mathematics- Economics- Computer (MEC)	MC	
		Physics- Chemistry- Mathematics (PCM)	PM/MC	
Mining Engineering	Mining Technology	Physics- Economics- Mathematics (PEM)	PM	Advanced Diploma in Mining Technology
		Physics- Chemistry- Mathematics (PCM)	PM	
		Physics- Chemistry- Biology (PCB)	PC	

		Mathematics- Physics- Geography (MPG)	PM/MG	
		Mathematics- Economics- Geography (MEG)	MG	
		Mathematics- Chemistry- Biology (MCB)	MC	
		Mathematics- Physics- Computer (MPC)	PM	
		Biology- Chemistry-Geography (BCG)	CG	
Information and Communication Technology (ICT)	Information Technology	Computer Science (CSC)		Advanced Diploma in Information Technology
		Computer electronics (CEL)		
		Electronics and telecommunication (ETL)		
		Mathematics- Economics- Computer (MEC)	MC/ME	
		Mathematics- Physics- Computer (MPC)	PM	
		Physics- Economics- Mathematics (PEM)	PM	
		Physics- Chemistry- Mathematics (PCM)	PM/MC	
		Mathematics- Physics- Geography (MPG)	PM	
	Digital Media Production	Computer Science (CSC)		Advanced Diploma in Digital Media Production
		Electronics and Telecommunication (ETL)		
		Mathematics- Economics- Computer (MEC)	MC/ME	
		Mathematics- Physics- Computer (MPC)	MC/ MP	
		Physics- Economics- Mathematics (PEM)	PM/ME	
		Physics- Chemistry- Mathematics (PCM)	PM/ MC	
		Mathematics- Physics- Geography (MPG)	PM	
		Mathematics-Economics-Geography (MEG)	ME	
Agriculture	Agriculture Crop Production	Agriculture		Advanced Diploma in Agriculture Crop Production
		Food Processing		
		Agronomy		
		Crop production		
		Forestry		
		Mathematics - Economics - Geography (MEG)	ME	
		Physics - Economics - Mathematics (PEM)	PM/ME	
		Physics - Chemistry - Mathematics (PCM)	PM /PC	
		Physics - Chemistry - Biology (PCB)	PC/CB	
		Biology – Chemistry – Geography (BCG)	BC	
	Irrigation and Drainage Technology	Agriculture		Advanced Diploma in Irrigation and Drainage Technology
		Crop Production/Agronomy		
		Irrigation and Drainage		
		Public Works		

		Forestry		
		Plumbing		
		Mathematics-Economics- Geography (MEG)	ME	
		Mathematics - Physics – Geography (MPG)	PM	
		Mathematics- Chemistry- Biology (MCB)	MC/CB	
		Physics - Chemistry - Mathematics (PCM)	CM/PM	
		Physics - Chemistry - Biology (PCB)	CB	
		Biology-Chemistry-Geography (BCG)	BC	
	Agriculture and Food Processing	Agriculture		Advanced Diploma in Agriculture and Food Processing
		Food Processing		
		Crop Production/Agronomy		
		Forestry		
		Mathematics - Economics - Geography (MEG)	ME	
		Physics - Economics - Mathematics (PEM)	PM/ME	
		Physics - Chemistry - Mathematics (PCM)	PM /PC	
	Veterinary Technology	Animal Health/Veterinary		Advanced Diploma in Veterinary Technology
		Physics - Chemistry - Biology (PCB)	CB	
		Biology – Chemistry – Geography (BCG)	BC	
Diploma in Wildlife Management	Wildlife Management	Mathematics-Chemistry-Biology (MCB)	CB	Advanced Diploma in Wildlife Management
		Physics-Chemistry-Biology (PCB)	CB	
		Biology-Chemistry-Geography (BCG)	CB	
		Biology-Economics-Geography (BEG)	BG	
		Mathematics -Economics -Geography (MEG)	EG	
		Veterinary /Animal Health		
		Forestry		
Diploma in Wildlife Tourism	Wildlife Tourism	Tourism		Advanced Diploma in Wildlife Tourism
		Biology - Chemistry- Geography (BCG)	BG	
		Biology-Economics-Geography (BEG)	BG	
		Mathematics-Economics-Geography (MEG)	EG	
		History-Economics-Geography (HEG)	EG	
		History-Economics-Literature (HEL)	HL	
Forest Engineering	Forest Resources Management	Forestry		Advanced Diploma in Forest Resources Management
		Agriculture		

	Forest	Carpentry		Advanced Diploma in Forest
	Engineering, Wood and Technology	Forestry		Advanced Diploma in Engineering, Wood and Technology
Hospitality Management	Hospitality Management Culinary Arts Food and Beverages Services House Keeping Operations Front Office Operations	Hotel Operations (HOT)		Advanced Diploma in Hospitality Management Culinary Arts Food and Beverages Services House Keeping Operations Front Office Operations
		Secretarial (SEC)		
		Tourism (TOR)		
		Food processing (FOP)		
		Finance and Banking (FB)		
		Accountancy (ACC)		
		Computer Science and Management (CSM)		
		History-Economy-Geography (HEG)	HE	
		English- French- Kinyarwanda (EFK)	EF/EK	
		English- Kiswahili -Kinyarwanda (EKK)	EK/EK	
		History-Economics-Geography (HEG)	HE	
		Literature-Economics-Geography (LEG)	LE	

Source: Rwanda Polytechnic Students' Handbook April, 2019

Important note:

For the people who are unable to complete the education cycle for primary, secondary or university levels due to different reasons; there are opportunities to progress horizontally (move to a different sub-sector, from general education to TVET). They can join technical courses offered by either TVET schools or Polytechnics which take a relatively short time considering that for each level completed a certificate is awarded. They are oriented to the appropriate levels with respect to their interests and abilities. This flexibility enables them to acquire specific knowledge and skills in order to be integrated into the labour market for employment or self-employment. Short term training and workplace learning cut across all levels. Those who completed any level and wish to gain special skills in any field can join short term trainings.

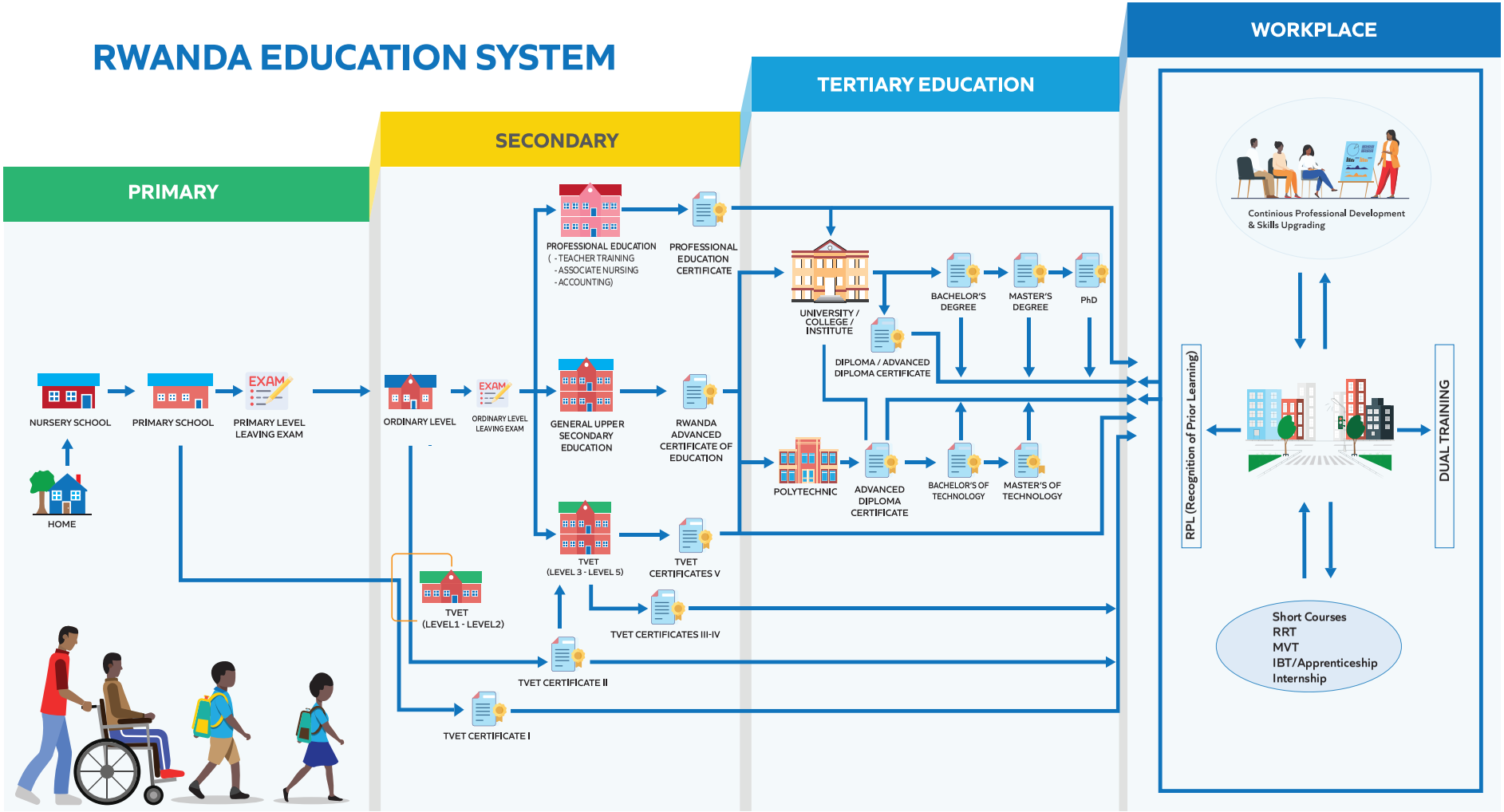


Figure 2: The Rwanda education structure and the pathways followed by the learners.

Chapter 4: Available opportunities for learners and their matching with mapped pathways

4. 1 Introduction

To pull together information on available opportunities, information beyond the educational institutions were collected in order to explore the internships, on-job training, scholarships and apprenticeship opportunities offered by employment agencies and other organizations having capacity building or skills development in their mandate.

4.2 Scholarships

4.2.1 National scholarships

4.2.1.1 Undergraduate program

Government institutions

For students who complete upper secondary education and TVET, there are scholarships for Diploma, Advanced Diploma,Bachelor's degree available for those who meet the requirements. Those scholarships are offered by government of Rwanda through HEC in partnership with BRD.

The government of Rwanda also extends the scholarship opportunities to Master's and PhD available in UR and other international Higher Learning institutions.

It is essential to underline that awarding these scholarship opportunities by the Government of Rwanda (Study loan, Every Year) is based on criteria including the aggregate from senior six and TVET level 5 national examination, and the course to be undertaken at the university.

Students have to choose from the following colleges and campuse.

Table 24: University of Rwanda (UR) Colleges

UR College	*Main topics taught /faculties/ Schools*	*Campus Location*	*Job orientation or exit expectation (career cluster)*
College of Business and Economics	Economics	Huye and Gikondo-Kicukiro	• Economists • Accountants • Human resource Managers • Financial and investment advisers • Financial analyst • Management and organization analysts • Policy administration professionals • Personnel and careers professionals • Training and staff development professionals • Advertising and marketing professionals • Public relations professionals • Project management • Insurance brokers • underwriters
	Business	Gikondo - Kicukiro, Huye, Rusizi and Nyagatare	
College of Education	Education	Rukara-Kayonza, Nyagatare	• Secondary school teachers • TTC Tutors • Special needs teachers • Other professionals in Education
	Inclusive and Special Needs Education	Rukara-Kayonza,	
College of Arts and Social Sciences	Arts and Languages	Huye Musanze	• Linguists • Visual artist • Musicians, singers and composers • Publishers • Dancers and choreographers • Film, stage and related directors and producers • Actors • Announcers on radio, television and other media • Creative and performing artists not elsewhere classified
	Governance	Huye Musanze college of Police) Gako- Bugesera	• Sociologists and related professionals • Historians and political scientists • Psychologists • Social work and counseling professionals
	Journalism and Communication	Huye,	• Authors and related writers • Journalists • Translators, interpreters and other linguists
	Law	Huye, Musanze college of Police)	• Lawyers • Judges • Legal professionals not elsewhere classified

College of Science and Technology	Architecture and Built Environment	Nyarugenge	• Building architects • Landscape architects • Product and garment designers • Town and traffic planners • Cartographers and surveyors • Graphic and multimedia designers
	Engineering	Nyarugenge	• Industrial and production engineers • Civil engineers • Environmental engineers • Mechanical engineers • Chemical engineers • Electrical engineers • Electronics engineers • Telecommunications engineers • Engineering professionals not elsewhere classified
	Science	Nyarugenge	• Physicists and astronomers • Meteorologists • Chemists • Geologists and geophysicists • Mathematicians • Biologists, botanists, zoologists and related professionals • Environmental protection professional
	Information, Communication and Technology	Huye, Musanze (college of Police)	• Systems analysts • Software developers • Web and multimedia developers • Applications programers • Software and applications developers and analysts not elsewhere classified
	Mining and Geology	Nyarugenge	• Mining engineers, metallurgists and related professionals
College of Medicine and Health Sciences	Nursing and Midwifery	Rwamagana	• Nursing professionals • Midwifery professionals • Health professionals not elsewhere classified
	Dentistry	Huye Remera	• Dentists • Health professionals not elsewhere classified
	Medicine & Surgery	Huye Remera	• Medical doctors • Pharmacists • Health professionals not elsewhere classified

	Health Sciences	Huye Remera	• Anesthetist • Radiologists • Optometrists and ophthalmic opticians • Physiotherapists • Health professionals not elsewhere classified
	Public Health	Huye Remera	• Environmental and occupational health and hygiene professionals • Dieticians and nutritionists • Health professionals not elsewhere classified
College of Agriculture and Veterinary Medicine	Agriculture and Food Sciences	Busogo	• Veterinarian • Agronomists • Farming, forestry and fisheries advisors • Other related professionals not classified
	Forestry and Biodiversity Conservation	Huye and Nyagatare	
	Agricultural Engineering	Nyagatare	
	Veterinary Medicine	Nyagatare	

Primary data: 2021

The students who wish to undertake TVET options can join Rwanda polytechnic at tertiary level and scholarship scheme is also available for them.

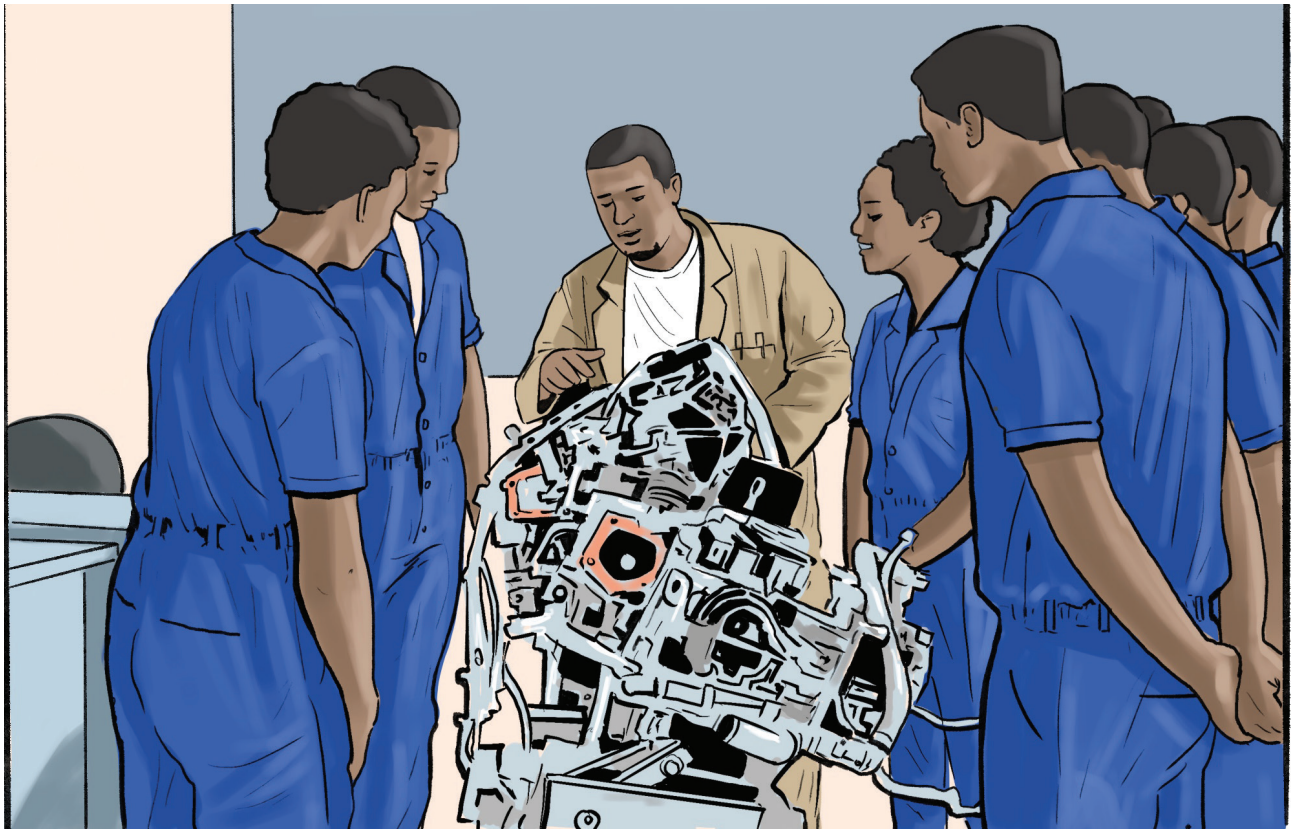
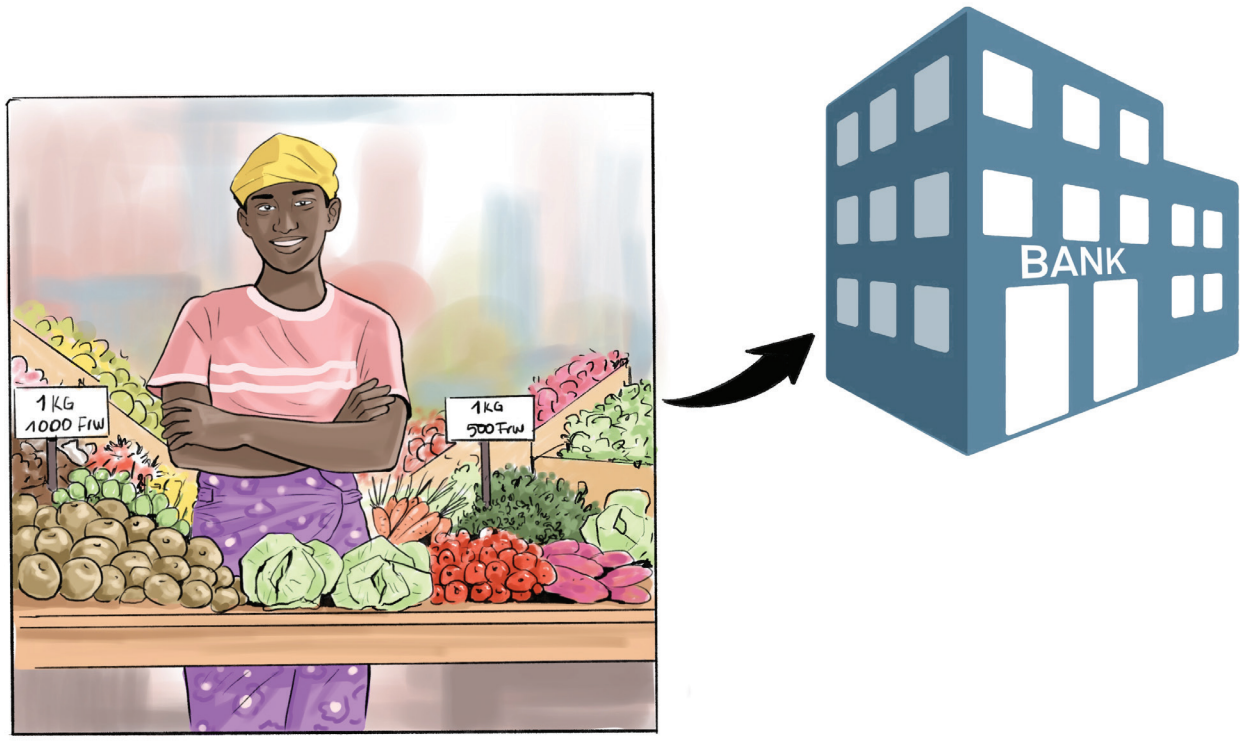


Table 25: Rwanda Polytechnic (RP) Colleges:

IPRCs	Main topics taught / faculties/ Schools	Campus Location	job orientation or exit expectation (career cluster)
IPRC Musanze	Agriculture Engineering	Musanze	Technicians in: Crop Processing; Irrigation and Drainage Technology; and Food Processing.
	Civil Engineering		Technicians/engineers in construction technology
	Electrical and Electronics Engineering		Technicians in electrical energy and electronics
	Hospitality Management		Professionals in cookery, Food & Beverage Services, Housekeeping Operations, Front Office Operations, and other related areas.
IPRC Gishari	Agricultural Engineering	Rwamagana	Technicians in: Irrigation and Drainage; Agricultural Mechanization
	Civil Engineering		Technicians in construction technology
	Mechanical Engineering		Technicians in Automobile Technology
	Electrical and Electronics Engineering		Technicians in Electrical Technology; Electronics and Telecommunication Technology
IPRC Kigali	Civil Engineering	Kicukiro - Kigali city	Technicians/engineers in construction technology, Water and Sanitation; Quantity Surveying, Land Surveying and Highway Engineering
	Electrical and Electronics Engineering		Technicians/engineers in Electrical Technology, Electronics and Telecommunication Technology, Electromechanical Technology, Biomedical Equipment Technology, and Mechatronics Technology.
	Fashion Design		Technicians/Professionals in Fashion design
	Information and Communication technology		Technicians in Information Technology and Digital Media Production
	Mechanical Engineering		Technicians in Automobile Technology, Manufacturing Technology and Air Conditioning and Refrigeration Technology.

	Mining Engineering		Technicians in Mining, Mineral processing, Quarrying and cement production, Mineral testing laboratory, Mineral and gemstone trading
IPRC Karongi	Electrical and Electronics Engineering	Karongi	Technicians in Electrical Technology
	Information and Technology Program		Technicians in Computer Hardware, Data management Systems, Multimedia, web design, Software designs and Networking
	Mechanical Engineering		Technicians in Automobile Technology and Production and Manufacturing Technology Programmes.
	Civil Engineering and Environmental Technology		Technicians in Civil Engineering and Environmental Technology
	Hospitality Management		Professionals in Culinary Arts, Food and Beverage Services, Front Office Operations and Housekeeping Operations
	Science and Generic Modules		Professionals in sciences, languages and Entrepreneurship
IPRC Tumba	Renewable energy	Rulindo	Technicians in Biogas Technology, Micro Hydro Power Plant, Solar Energy Technology, Improved Cooking Stove, Industrial and Domestic Electrical Installation, Methane gas Technology, Geothermal Technology, Peat Technology
	Electronics and Telecommunication Technology (ETT)		Technicians in Electronics and Telecommunication Technology
	Information Technology (IT)		Technicians in IT
IPRC Kitabi	Tourism	Nyamagabe	Professionals in: Tourism Product Marketing, Tour and Travel, Tourism Sales and Promotion, Tourism Information, Tour Guide, Visitor Management and Reservations
	Nature conservation		Professionals/Technicians in: Wildlife Management, Environmental Management, Herbarium management, Fish farming, Apiary management, Botanical garden management and Recreational park management

	Forestry		Technicians in: Forest Engineering and Wood industry
IPRC Huye	Information, Communication and Technology	Huye	Technicians in Computer hardware and software, Network Installation, administration and Network security, Web development, design and administration, Multimedia and graphics design.
	Crop Production		Technicians in Agriculture
	Mechanical Engineering		Technicians in industrial and systems engineering
	Veterinary Technology		Technicians in veterinary services
	Electrical and Electronics Engineering		Technicians in Electrical Technology; Electronics and Telecommunications.
	Civil Engineering		Technicians in Construction Technology
IPRC Ngoma	Civil Engineering	Ngoma	Technicians with computing skills in hardware, software, databases, security, systems, networks, and information processing.
	Mechanical Engineering		Technicians in Automobile Technology, Manufacturing Technology
	Information, Communication and Technology		Technicians in Information Technology.
	Hospitality Management		Professionals in Food and Beverage Management, culinary arts



Entrepreneurship is one of the pathways that learners need to think of rather than graduating waiting to get an employment from someone or some institutions.

Also, if students don't have a chance to attend tertiary education or did not complete high schools due to various problems, they can attend some TVET courses to acquire a technical skill that can immediately assist them to access labor market.

Additionally, secondary school finalists who don't meet the quota for Rwandan government bachelor's degree scholarship eligibility, they are all welcome to apply and pursue their university studies in different private university available in Rwanda once they meet minimum entry requirements. See in the table below.

Table 26: Private institutions

Institution	Main topics taught/ faculties	Location	job orientation or exit expectation
Institut d'Enseignement Supérieur de Ruhengeri (INES Ruhengeri)	Applied Sciences	Northern Province, Musanze	Civil Engineers Land Surveyors Biotechnologists Land Officers Professions in Biomedical Laboratories Statisticians, Professionals in Computer Science
	Economics, Social Sciences and Management		Economists, Accountants, tax accountant, tax officer/ advisor, Professionals in Public Administration
	Education		Secondary school teachers and other professionals in Education
	Law		Lawyers, Legal officers and Judges
Adventist University of Central Africa (AUCA)	Business Administration	Kigali, Gasabo	Economists, Accountants, Human resource Managers, Financial and investment advisers, Financial analyst, Management and organization analysts, Advertising and marketing professionals.
	Education		Secondary school teachers and other professionals in Education
	Theology		Pastors and other Religious Leaders
	Information Technology		Professionals in Information Management and Networking
	Health Sciences and Nursing		Professionals in Nursing
Catholic University of Rwanda (CUR)	Education	Southern Province, Huye and Gisagara	Secondary school teachers and other professionals in Education
	Science and Technology		Professionals in Computer Science and Bio Medical Laboratory
	Arts, Management & Social Science		Professionals in Accounting, Banking and Finance, Child and Family and Religious Science
	Public Health and Human Nutrition		Professionals in Public Health and Human Nutrition

	Faculty of social work		• Mental health and addiction counselor • Case manager • Healthcare social worker • Social or community worker/ counselor • School and career counselor/ advisors • School and human service assistant • Substance abuse, behavioral disorder and mental health counselor
	Faculty of commerce		• Administrative assistant, • Market researcher, • Insurance agent, • Cost accountant, • Budget analyst, • Investment banker, • Investment analyst, • Mortgage broker
University of Lay Adventists of Kigali	Economic Sciences and Management	Kigali City, Kicukiro Eastern Province, Rwamagana; Southern Province, Nyanza	Professionals in Accounting, Finance, Marketing, Human Resource Management, Cooperative Management, and Economics
	Law		Lawyers, Legal officers and Judges
	Computing and Information Sciences		Professionals in Information Technology; Software Engineering; Information Systems and Management
	Environmental Studies		Professionals in: Emergency and Disaster Management; Environmental Management and Conservation; and Rural Development
University of Arts and Technology of Byumba (UTAB)	Social Sciences, Management and Development Studies	Northern Region, Gicumbi- Eastern Region , Gatsibo (Kiramuruzi)	Professionals in: Social Work, Anthropology, Accountancy, Rural development, Entrepreneurship and Cooperative Management
	Agriculture and Environment Management		Professionals in Agribusiness, Agro-forestry, Animal Production and Crop Production, Forest Plantation, Renewable Energy
	Education		Secondary school teachers and Other professionals in Education

Kibogora Polytechnic (KP)	Health Sciences	Nyamasheke, Western Province	Professionals in Midwifery and Nursing, Biomedical Laboratory technicians
	Education		Secondary school teachers and Other professionals in Education
	Business and Development Studies		Professionals in Economics, Management and Development
	Theology		Professionals in Theology
Institut Catholique de Kabgayi (ICK)	Education	South, Muhanga	Secondary school teachers and Other professionals in Education
	Journalism and Communication Studies		Authors and related writers, Journalists, Translators, Interpreters and other linguists
	Faculty of catechesis and Religious science		• Teacher of catechesis programs • Evaluator of the religion program teaching activities. • Coordinator of a pastoral center. • Researcher in Pedagogy catechetic. • Coordinators of pastoral centre • Designer and evaluators of religious teaching programs • Teacher of Religion • Teacher within religious training centers • Researcher in Religious Sciences
	Social Economic Sciences and Business Management		Professionals in Marketing, Procurement, Economics, Accounting, Human Resource Management, Finance, Public Administration and Local Governance
	Sciences of Development		Professionals in Development Studies and Population Studies
	Leadership and Management		Professionals in Local Government
University of Tourism, Technology and Business Studies (UTB)	Hotel and Restaurant Management	Kigali, Kicukiro West, Rubavu	Professionals in Hotel and Restaurant Management
	Travel and Tourism Management		Professionals in Travel and Tourism Management
	Business Information Technology		Professionals in Business Information and Management

Kigali Independent University (ULK)	Science and Technology	Kigali City, Gasabo. Western Province, Rubavu	Professionals in Computer Science
	Economics and Business Studies		Professionals in Economics, Finance, cooperative management, Accounting, project Management and Rural Development
	Law		Lawyers, Judges and other legal professionals
	Social Sciences		Professionals in Development Studies, International Relations, Population Studies, Sociology and Administration
	Technical Courses		Technicians in Electrical Technology, Electronics and Telecommunication, Construction, and Surveying
Institut Supérieur Pédagogique de Gitwe	Education	Southern Province, Ruhango	Secondary school teachers and Other professionals in Education
	Computer Science		Professionals in Computer Science
	General Nursing Sciences		Professionals in Nursing
Protestant Institute of Arts and Social Sciences (PIASS)	Education	Southern Province, Huye Western Karongi	Secondary school teachers and Other professionals in Education
	Development Studies		Professionals in rural and community development, Conflict resolution, Urban Management
	Theology and Religious Studies		Pastors and other Religious Leaders
	Natural Resources and Environmental Management		Professionals in Natural Resources and Environmental Management
Ruli Institute of Health Sainte Rose de Lima	General Nursing	Northern Province, Gakenke	Professionals in General Nursing
	Midwifery		Professionals in Midwifery
University of Kigali (UoK)	Business Studies and Economics	Kigali City-Gasabo Northern Province-Musanze	Professionals in Marketing, Procurement, Economics, Accounting, Human Resource Management, Finance, Public Administration and Local Governance
	Computing and Information Technology		Professionals in Computing, Information Technology
	Law		Lawyers, Judges and other legal professionals

	Education		Secondary school teachers and Other professionals in Education
	Communication and Journalism		Authors and related writers, Journalists, Translators, Interpreters and other linguists
Ngoma Adventist College of Health Sciences (NACHS)	Nursing	Eastern Province, Ngoma	Nursing professionals
	Midwifery		Midwifery professionals
East African Christian College	Theology	Kigali City-Kicukiro,	Professionals in Theology
			Secondary school teachers and Other professionals in Education
	Education		Professionals in Marketing, Procurement, Economics, Accounting, Human Resource Management, Finance, Public Administration and Local Governance, project management
	Business Management and Economics		
Africa College of Theology	Theology and Leadership	Kigli City -Kicukiro,	Professionals in Theology and Leadership
	Bible and Theology		Professionals in Bible and Theology
East African University of Rwanda	Education	Eastern Nyagatare, Kigali City, Gasabo	Secondary school teachers and Other professionals in Education
	Film Making and Film Production		Economists Accountants Human Resource Managers Professionals in Hotel Management Event Managers Visual artist Publishers Dancers and choreographers Film, stage and related directors and producers Actors Announcers on radio, television and other media Journalists Creative and performing artists not elsewhere classified
	Leisure Tourism and Hospitality Management		
	Industrial and Design		
	Mass Communication		
	Arts in healthcare and Management		

Mount Kenya University (MKU)	Business and Social Sciences.	Kigali, Kicukiro	Marketing Professionals Event Managers Accountants Economists Public Relations Professionals Professionals in Public Administration Professionals in procurement and Supplies Management
			Announcers on radio, television and other media Journalists Professionals in Counselling Psychology Professionals in Hotel Management
	Finance		Professionals in Development studies and Demography Professionals in community Development and Social Work Professionals in Security and Criminology
	Health Science		
	Hospitality and Tourism Management		
	Education		
	ICT		Pharmacists Nurses Professionals of Biomedical Laboratories Professionals in Public Health
			Teachers of secondary schools and other professionals in education
			Professionals in ICT
AKILAH Institute for Women	Business Management and Entrepreneurship		Professionals in Marketing, Procurement, Economics, Accounting, Human Resource Management, Finance, Public Administration and Local Governance and Job creators

			Professionals in Hotel and Restaurant Management, Professionals in Travel and Tourism Management
	Hospitality and Tourism Management		
			Professionals in ICT
	Information System		
African Leadership University	Computer Science International Business and Trade Global Challenge Entrepreneurship Business Administration	Kigali, Gasabo	Professionals in computer Science IT Professionals Accounts Economists Professional in Global Challenge SMEs Managers Cooperative Managers
Muhabura Intergrated Polytechnic College	Accounting	Musanze	Advanced Diploma in Electrical Technology Advanced Diploma in Civil Engineering Advanced Diploma in Hospitality Management Advanced Diploma in Information and communication Technolog
	Electrical Technology		
	Civil Engineering		
	Hospitality Management		
	Information and communication Technology		

4.2.1.2 Post graduate program

Public institutions

1. University of Rwanda (UR)

Table 27: UR programs

S/N	Programme name	Programme Level (e.g Masters, PhD)	Programme Offering (mode of delivery)	Thematic area	UR-College
1	Master's in Translation and Interpretation Studies	Masters	Full time	Arts	College of Arts and Social Sciences (UR-CASS)
2	LLM Business Law Programme	Masters	Full time	Law	UR-CASS
3	LLM International Criminal Justice and Law of Human Rights	Masters	Full time	Law	UR-CASS

4	Masters in Development Studies	Masters	Full time	Social Science	UR-CASS
5	Masters in Local Governance Studies	Masters	Full time	Social Science	UR-CASS
6	Master's in Peace and Conflict Studies	Masters	Full time	Social Science	UR-CASS
7	Master's in Security Studies	Masters	Full time	Social Science	UR-CASS
8	Master's in Genocide Studies and Prevention	Masters	Full time	Social Science	UR-CASS
9	Master's in Social Sciences: Gender and Development	Masters	Full time	Social Science	UR-CASS
10	PHD by Research in Translation and Interpretation	PhD	Part Time	Arts	UR-CASS
11	PHD by Research in Literature	PhD	Part Time	Arts	UR-CASS
12	PHD by Research in Interpreting	PhD	Part Time	Arts	UR-CASS
13	PHD by Research in Translation	PhD	Part Time	Arts	UR-CASS
14	PHD by Research in Linguistics	PhD	Part Time	Arts	UR-CASS
15	PHD by Research in Human Rights	PhD	Part Time	Law	UR-CASS
16	PHD by Research in Transitional Justice	PhD	Part Time	Law	UR-CASS
17	PHD by Research in Public International Law	PhD	Part Time	Law	UR-CASS
18	PHD by Research in Investment Law	PhD	Part Time	Law	UR-CASS
19	PHD by Research in Criminal Law	PhD	Part Time	Law	UR-CASS
20	PHD by Research in Environment Law	PhD	Part Time	Law	UR-CASS
21	PHD by Research in Business Law	PhD	Part Time	Law	UR-CASS
22	PHD by Research in International Trade Law	PhD	Part Time	Law	UR-CASS
23	PHD by Research in Development Studies	PhD	Part Time	Social Sciences	UR-CASS

24	PHD by Research in Social Sciences/ Social Work	PhD	Part Time	Social Sciences	UR-CASS
25	PHD by Research in History	PhD	Part Time	Arts	UR-CASS
26	PHD by Research in International Relations	PhD	Part Time	Social Sciences	UR-CASS
27	PHD by Research in Political Sciences	PhD	Part Time	Social Sciences	UR-CASS
28	PHD by Research in Governance and Public Administration	PhD	Part Time	Social Sciences	UR-CASS
29	MSc in Crop Science	Masters	Full time	Agriculture Science	College of Agriculture and Veterinary Medicine (UR-CAVM)
30	MSc in Agroforestry and Soil Management	Masters	Full time	Agriculture Science	UR-CAVM
31	MSc in Agribusiness	Masters	Full time	Agriculture Science	UR-CAVM
32	MSc in Animal Production	Masters	Full time	Agriculture Science	UR-CAVM
33	Master of Science in Agricultural Engineering (Soil and Water Engineering)	Masters	Full time	Agriculture Science	UR-CAVM
34	PhD by Research (all areas of of Agriculture and Animal Sciences)	PhD			UR-CAVM
35	PhD in Agriculture (by course work in all areas of Agriculture and animal Sciences)	PhD	Full time	Agriculture Science	UR-CAVM
36	Master of Business Administration, Option Finance	Masters	Full time	Business	College of Business and Economics (UR-CBE)
37	Master of Business Administration, Option Banking	Masters	Full time	Business	UR-CBE
38	Master of Business Administration, Option Insurance	Masters	Full time	Business	UR-CBE

39	Master of Business Administration, Option Marketing	Masters	Full time	Business	UR-CBE
40	Master of Business Administration, Option Human Resource Management	Masters	Full time	Business	UR-CBE
41	Master of Business Administration, Option Project Management	Masters	Full time	Business	UR-CBE
42	Master of Business Administration, Option Finance	Masters	Full time	Business	UR-CBE
43	Master of Science in Economics	Masters	Full time	Business	UR-CBE
44	Master of Science in Data Science (Data Mining)	Masters	Full time	Business	UR-CBE
45	Master of Science in Data Science (Econometrics)	Masters	Full time	Business	UR-CBE
46	Master of Science in Data Science (Biostatistics)	Masters	Full time	Business	UR-CBE
47	Master of Science in Data Science (Demography)	Masters	Full time	Business	UR-CBE
48	Master of Science in Data Science (Actuarial Science)	Masters	Full time	Business	UR-CBE
49	Master in Regulatory Economics	Masters	Full time	Business	UR-CBE
50	PhD in Economics	PhD	Full time	Business	UR-CBE
51	PhD in Business Administration	PhD	Full time	Business	UR-CBE
52	PhD in Data Science (Actuarial, Biostatistics, Data maning, Econometrics)	PhD			UR-CBE
53	PHD by Research in Soc. Sciences	PhD			UR-CBE
54	PhD In Management with Course Work	PhD			UR-CBE
55	Postgraduate Certificate in Learning and Teaching in Higher Education	Postgraduate Certificate	Full time	Education	College of Education (UR-CE)
56	Postgraduate Diploma in Education	Postgraduate Diploma	Full time	Education	UR-CE

57	Postgraduate Diploma in School Guidance and Counselling	Postgraduate Diploma	Full time	Education	UR-CE
58	Postgraduate Diploma in Vocational and Technical Pedagogy	Postgraduate Diploma	Full time	Education	UR-CE
59	Postgraduate Diploma in Special Needs Education	Masters	Full time	Education	UR-CE
60	Master of Education in Curriculum and Instruction	Masters	Full time	Education	UR-CE
61	Master of Education in Educational Leadership and Management	Masters	Full time	Education	UR-CE
62	Master of Education in English Education	Masters	Full time	Education	UR-CE
63	Master of Education in French Education	Masters	Full time	Education	UR-CE
64	Master of Education in Kinyarwanda Education	Masters	Full time	Education	UR-CE
65	Master of Education in Kiswahili Education	Masters	Full time	Education	UR-CE
66	Master of Education in Special Needs Education	Masters	Full time	Education	UR-CE
67	Master of Education in Biology Education	Masters	Full time	Education	UR-CE
68	Master of Education in Chemistry Education	Masters	Full time	Education	UR-CE
69	Master of Education in Mathematics Education	Masters	Full time	Education	UR-CE
70	Master of Education in Physics Education	Masters	Full time	Education	UR-CE
71	PhD by Research in Physics Education	PhD	Full time	Education	UR-CE
72	PhD by Research in Chemistry Education	PhD	Full time	Education	UR-CE
73	PhD by Research in Biology Education	PhD	Full time	Education	UR-CE
74	PhD by Research in ICT Education	PhD	Full time	Education	UR-CE
75	PhD by Research in Mathematics Education	PhD	Full time	Education	UR-CE

76	PhD by Research in History Education	PhD	Full time	Education	UR-CE
77	PhD by Research in Geography Education	PhD	Full time	Education	UR-CE
78	PhD by Research in Entrepreneurship Education	PhD	Full time	Education	UR-CE
79	PhD by Research in Education (Curriculum and Instruction)	PhD	Full time	Education	UR-CE
80	PhD by Research in Education (Educational Leadership and Management)	PhD	Full time	Education	UR-CE
81	PhD by Research in Education (Philosophy of Education)	PhD	Full time	Education	UR-CE
82	PhD by Research in Educational Psychology	PhD	Full time	Education	UR-CE
83	PhD by Research in Educational Policy and Planning	PhD	Full time	Education	UR-CE
84	PhD by Research in French Education	PhD	Full time	Education	UR-CE
85	PhD by Research in Kinyarwanda Education	PhD	Full time	Education	UR-CE
86	PhD by Research in English Education	PhD	Full time	Education	UR-CE
87	PhD by Research in Kiswahili Education	PhD	Full time	Education	UR-CE
88	PhD by Research in Science Education	PhD	Full time	Education	UR-CE
89	PhD by Research in Economics Education	PhD	Full time	Education	UR-CE
90	PhD by Research in Education (Social Studies)	PhD	Full time	Education	UR-CE
91	PhD by Research in Education (Primary and Early Childhood Education)	PhD	Full time	Education	UR-CE
92	PhD by Research in Special Needs Education	PhD	Full time	Education	UR-CE
93	PhD by Research in Education (Inclusive Education)	PhD	Full time	Education	UR-CE

94	PhD by Research in Education (Disability Studies)	PhD	Full time	Education	UR-CE
95	Master of Public Health	Masters	Full time	Health Sciences	College of Medicine and Health Sciences (UR-CMHS)
96	Master of Science in Epidemiology	Masters	Full time	Health Sciences	UR-CMHS
97	MMED IN ENT, Head and Neck Surgery	Masters	Full time	Health Sciences	UR-CMHS
98	Master of Science in Field Epidemiology and laboratory Practice	Masters	Full time	Health Sciences	UR-CMHS
99	Master of Science in Health Informatics	Masters	Full time	Health Sciences	UR-CMHS
100	Master of Science in Health Supply Chain Management	Masters	Full time	Health Sciences	UR-CMHS
101	Master of Hospital and Healthcare Administration	Masters	Full time	Health Sciences	UR-CMHS
102	Master of Science in Nursing (Oncology Nursing)	Masters	Full time	Health Sciences	UR-CMHS
103	Master of Science in Nursing (Critical Care Nursing)	Masters	Full time	Health Sciences	UR-CMHS
104	Master of Science in Nursing (Peri-Operative Nursing)	Masters	Full time	Health Sciences	UR-CMHS
105	Master of Science in Nursing (Nephrology Nursing)	Masters	Full time	Health Sciences	UR-CMHS
106	Master of Science in Nursing (Medical-Surgical Nursing)	Masters	Full time	Health Sciences	UR-CMHS
107	Master of Science in Nursing (Paediatric Nursing)	Masters	Full time	Health Sciences	UR-CMHS
108	Master of Science in Nursing (Neonatal Nursing)	Masters	Full time	Health Sciences	UR-CMHS
109	Master of Science in Nursing (Education, Leadership and Management)	Masters	Full time	Health Sciences	UR-CMHS

110	Postgraduate Certificate in Health Professions Education)	Masters	Full time	Health Sciences	UR-CMHS
111	Postgraduate Certificate in professional Counselling)	Masters	Full time	Health Sciences	UR-CMHS
112	Master of Medicine (Ear, Nose and Throat)	Masters	Full time	Health Sciences	UR-CMHS
113	Master of of Medicine in Internal Medicine	Masters	Full time	Health Sciences	UR-CMHS
114	Master of Medicine in Paeditrics and Child Health	Masters	Full time	Health Sciences	UR-CMHS
115	Master of Medicine in Anaesthesiology	Masters	Full time	Health Sciences	UR-CMHS
116	Master of Medicine in in Obstetrics and Gynaecology	Masters	Full time	Health Sciences	UR-CMHS
117	Master of Medicine	Masters	Full time	Health Sciences	UR-CMHS
118	Master of Medicine in Surgery (General Surgery)	Masters	Full time	Health Sciences	UR-CMHS
119	Master of Medicine in Surgery (Orthopaedic Surgery)	Masters	Full time	Health Sciences	UR-CMHS
120	Master of Medicine in Surgery (Neurosurgery)	Masters	Full time	Health Sciences	UR-CMHS
121	Master of Medicine in Surgery (Urology)	Masters	Full time	Health Sciences	UR-CMHS
122	Master of Medicine in Family and Community Medicine	Masters	Full time	Health Sciences	UR-CMHS
123	Master of Medicine in Psychiatry	Masters	Full time	Health Sciences	UR-CMHS
124	Master of Medicine in Emmergency Medicine	Masters	Full time	Health Sciences	UR-CMHS
125	Master of Medicine in Radiology	Masters	Full time	Health Sciences	UR-CMHS
126	Master of Medicine in Anatomical pathology	Masters	Full time	Health Sciences	UR-CMHS
127	Master of Science in Pharmaceutical Sciences, Quality Assurance and Quality Control	Masters	Full time	Health Sciences	UR-CMHS

128	Master of Science in Clinical Psychology and Therapeutics	Masters	Full time	Health Sciences	UR-CMHS
129	PhD by Research in Medicine	PhD	Full time	Health Sciences	UR-CMHS
130	PhD by Research in Pharmacy	PhD	Full time	Health Sciences	UR-CMHS
131	PhD by Research in Clinical Psychology	PhD	Full time	Health Sciences	UR-CMHS
132	PhD by Research in Public Health	PhD	Full time	Health Sciences	UR-CMHS
133	PhD by Research in Epidemiology	PhD	Full time	Health Sciences	UR-CMHS
134	PhD by Reearch in Nursing	PhD	Full time	Health Sciences	UR-CMHS
135	PhD by Research in Biomedical Sciences	PhD	Full time	Health Sciences	UR-CMHS
136	PhD by Research in Physiotherapy	PhD	Full time	Health Sciences	UR-CMHS
137	Master of Science In Biodiversity, Conservation and Natural Resources Management	Masters	Full time	Science	College of Science and Technology (UR-CST)
138	PhD by Research in Biological sciences	PhD	Full time	Science	UR-CST
139	Master of Science in Environmental Chemistry	Masters	Full time	Science	UR-CST
140	PHD by Research in Chemistry	PhD	Full time	Science	UR-CST
141	Master of Science in Applied Mathematics	Masters	Full time	Science	UR-CST
142	Master of Science in Atmospheric and Climate Sciences	Masters	Full time	Engineering	UR-CST
143	PhD by Research in Physics	PhD	Full time	Science	UR-CST
144	Master of ICT: Operational Communication	Masters	Full time	Engineering	UR-CST
145	Master of Information Systems: Egovernment	Masters	Full time	Engineering	UR-CST
146	Master of Information Systems : Internet Technology	Masters	Full time	Engineering	UR-CST

147	Master of Software Engineering	Masters	Full time	Engineering	UR-CST
148	Master of Communication Management	Masters	Full time		UR-CST
149	PHD by Research In ICT	PhD	Full time	Engineering	UR-CST
150	Master of Science in Highway Engineering and Management	Masters	Full time	Engineering	UR-CST
151	Master of Science in Transportation Engineering and Economics	Masters	Full time	Engineering	UR-CST
152	Master of Science in Water Resources and Environmental Management	Masters	Full time	Engineering	UR-CST
153	PhD by Reasearch in Civil Engineering	PhD	Full time	Engineering	UR-CST
154	PhD by Research in Electrical & Electronics Engineering	PhD	Full time	Engineering	UR-CST
155	Master of Geo-Information Science Environmental & Sustainable Development	Masters	Full time	Science	UR-CST
156	Master of Science in Iot Embedded Computing Systems (Msc –Iot-Ecs)	Masters	Full time	Engineering	UR-CST
157	Master of Science in Iot-Wireless Intelligent Sensor Networking (Msc.iot-Wisenet)	Masters	Full time	Engineering	UR-CST
158	PHD by Research in Internet of Things – Embedded Computing Systems	PhD	Full time	Engineering	UR-CST
159	PHD by Research in Internet of Things – Wireless Sensor Network	PhD	Full time	Engineering	UR-CST
160	Master of Science in Renewable Energy	Masters	Full time	Engineering	UR-CST
161	Master of Science in Electrical Power Systems	Masters	Full time	Engineering	UR-CST
162	Master of Science in Energy Economics	Masters	Full time	Engineering	UR-CST

163	PHD by Research in Renewable Energy	PhD	Full time	Engineering	UR-CST
164	PHD by Research in Electrical Power Systems	PhD	Full time	Engineering	UR-CST
165	PHD by Research in Energy Economics	PhD	Full time	Engineering	UR-CST
166	Master of Science in Physics (Specialiazations: High Energy Physics	Masters	Full time	Science	UR-CST
167	Master of Science in Physics (Condensed Matter Physics)	Masters	Full time	Science	UR-CST
168	Master of Science in Physics (Solid Earth Geophysics)	Masters	Full time	Science	UR-CST
169	Master of Science in Biomedical Engineering	Masters	Full time	Engineering	UR-CST

2. Institute of Legal Practice and Development (ILPD)

A Post Graduate Diploma in Legal Practice (commonly referred to as DLP) is a 9 months course designed to equip in service Advocates, prosecutors, judges, fresh law graduates and even court registrars with the necessary practical legal skills.

Table 28: ILPD programs

S/N	Programme name	Programme Level (e.g Masters, PhD)	Programme Offering (mode of delivery)	Thematic area
1	Diploma in Legal Practice (DLP)	Post graduate	Full time, Part time	Legal Practice
2	Diploma in Legislative Drafting (DLD)	Post graduate	Full time	Legislative Drafting
3	Diploma in Bailiff Practice (DBP)	Post graduate	Full time, Part time	Bailiff Practice
4	Diploma in Labor Law Practice (DLLP)	Post graduate	Full time, Part time	Labor Law Practice
5	Diploma in Procurement Practice (DPP)	Post graduate	Full time, Part time	Procurement Practice
6	Diploma in Tax Investigation (DTI)	Post graduate	Full time, Part time	Tax Investigation

Private Institutions

Table 29: Programs in private institutions

S/N	Programme name	Programme Level (e.g Masters, PhD)	Programme Offering (mode of delivery)	Thematic area	Institutions
1	Postgraduate Diploma in School Leadership and Management	Post graduate	Weekend Fulltime	Arts	Institut Catholique de Kabgayi
2	Postgraduate Diploma in Education	Post graduate Diploma	Full time and Part time	Education	Institut Polytechnique de Byumba (IPB)
3	Master of Science in Global Health Delivery (Health Management Option)	Masters	Full time	Science	University of Global Health Equity
4	Master of Science in Global Health Delivery (One Health Option)	Masters	Full time	Science	University of Global Health Equity
5	Master of Science in Global Health Delivery (Gender and Sexual and Reproductive Health Option)	Masters	Full time	Science	University of Global Health Equity
6	Post graduate Diploma in Education	Post graduate	Full time	Education	Kibogora Polytechnic
7	Post graduate Diploma in Theology	Post graduate	Full time	Arts	Kibogora Polytechnic
8	Master of Science in Electrical and Computer Engineering (MS ECE)	Masters	Full time	Engineering	Carnegie Mellon University - Africa
9	Master of Science in Information Technology (MSIT)	Masters	Full time	Engineering	Carnegie Mellon University - Africa
10	Master of Science in Engineering Artificial Intelligence (MS EAI)	Masters	Full time	Engineering	Carnegie Mellon University - Africa
17	Master Degree in Public Health	Masters	Full time	Science	Mount Kenya University - Rwanda
18	Master of Business Administration	Masters	Full time	Business	Mount Kenya University - Rwanda
19	Master of Arts in International Relations and Diplomacy	Masters	Full time	Arts	Mount Kenya University - Rwanda

20	Master of Public Administration and Management	Masters	Full time	Arts	Mount Kenya University - Rwanda
21	Master of Arts in Governance and Ethics	Masters	Full time	Arts	Mount Kenya University - Rwanda
22	Master of Education	Masters	Full time	Education	Mount Kenya University - Rwanda
23	Master of Arts Counselling Psychology	Masters	Full time	Arts	Mount Kenya University - Rwanda
24	Master in Development Studies	Masters	Full time	Arts	Mount Kenya University - Rwanda
25	Post graduate Diploma in Education	Post graduate	Full time	Education	Mount Kenya University - Rwanda
26	Master of Arts in Monitoring and Evaluation	Masters	Full time	Arts	Mount Kenya University - Rwanda
27	Master of Science in Procurement and Supplies Management	Masters	Full time	Arts	Mount Kenya University - Rwanda
28	Diploma in Community Development and Social Work		Full time	Arts	Mount Kenya University - Rwanda
29	Diploma in Business Management		Full time	Business	Mount Kenya University - Rwanda
30	Postgraduate in Education	Post graduate	Part time	Science	Catholic University of Rwanda
31	Bachelor of Education in Mathematics (minor Subject Geography)		Full time	Education	Protestant Institute of Arts and Social Sciences (PIASS)
32	Postgraduate diploma in Education	Post graduate	Full time	Education	Protestant Institute of Arts and Social Sciences (PIASS)
33	Masters of Theology in Christian ethics and leadership	Masters	Full time	Arts	Protestant Institute of Arts and Social Sciences (PIASS)
34	Masters of Theology in Community Care and Development	Masters	Full time	Arts	Protestant Institute of Arts and Social Sciences (PIASS)
35	Master of Educational Quality	Masters	Part time	Education	Protestant institute of Arts and Social Sciences (PIASS)
36	Master of Accouting	Masters	Weekend Fulltime	Business	Kigali Independent University ULK

37	Master of Business Administration	Masters	Weekend Fulltime	Business	Kigali Independent University ULK
38	Master of Finance	Masters	Weekend Fulltime	Business	Kigali Independent University ULK
39	Master of Science in Economics	Masters	Weekend Fulltime	Science	Kigali Independent University ULK
40	Master of Governance	Masters	Weekend Fulltime	Science	Kigali Independent University ULK
41	Master of Development studies	Masters	Weekend Fulltime	Science	Kigali Independent University ULK
42	Master of Law in Public International Law	Masters	Weekend Fulltime	Science	Kigali Independent University ULK
43	Master of Internal Economics and Business Law	Masters	Weekend Fulltime	Science	Kigali Independent University ULK
44	Master of Science in Internet Systems	Masters	Weekend Fulltime	Science	Kigali Independent University ULK
45	Master of Science in Mathematical Sciences (3 options: Structured, Cooperative Education, and Climate Science)	Masters	Full time	Science	African Institute of Mathematical Sciences Rwanda (AIMS- Rwanda)
46	The African Ma sters of Machine Intelligence (AMMI)	Masters	Full time	Science	African Institute of Mathematical Sciences Rwanda (AIMS- Rwanda)
47	Bachelor of Science with Honours in Business and Administration	Masters	Full time	Business	African Leadership University (ALU)
48	Bachelor of Science with Honours in Computer Science	Masters	Full time	Science	African Leadership University (ALU)
49	Bachelor of Science with Honours in Entrepreneurship	Masters	Full time	Business	African Leadership University (ALU)
50	Bachelor of Science with Honours in Global Challenges	Masters	Full time	Business	African Leadership University (ALU)
51	Masters of Business Administration	Masters	Full time	Business	African Leadership University (ALU)
52	MBA with 3 options: Accounting,Business Management, Human Resource Management	Masters	Part time	Business	Adventist University of Central Africa (AUCA)

53	MA in Education with 2 options:Educational Administration, Curriculum, Development and Instruction	Masters	Part time	Education	Adventist University of Central Africa (AUCA)
54	Master of Business and Administration	Masters	Part time	Business	Independent Institute of Lay Adventists of Kigali (INILAK)
55	Master of Science in Information Technology	Masters	Part time	Science	Independent Institute of Lay Adventists of Kigali (INILAK)
56	Master of Science in Management Information Systems	Masters	Part time	Science	Independent Institute of Lay Adventists of Kigali (INILAK)
57	Master of Science in Environmental and Development Studies with 3 options:(i) Environmental Economics and Natural Resources Management,(ii) Environmental Information Systems, (iii) International Development Studies	Masters	Part time	Science	Independent Institute of Lay Adventists of Kigali (INILAK)
58	LLM in International Environmental and Land Use Law	Masters	Part time	Law	Independent Institute of Lay Adventists of Kigali (INILAK)
59	LLM in International Criminal Law	Masters	Part time	Law	Independent Institute of Lay Adventists of Kigali (INILAK)
60	Masters of Science in Taxation	Masters	Full time and Part time	Business	Institut d'Enseignement Supérieur de Ruhengeri (INES)
61	Master of Entrepreneurship and SMEs Management	Masters		Management	Institut d'Enseignement Supérieur de Ruhengeri (INES)

62	Master of Arts in Cooperative Management	Masters	Full time and Part time	Business	Institut d'Enseignement Supérieur de Ruhengeri (INES)
63	Master of Microfinance	Masters	Full time and Part time	Business	Institut d'Enseignement Supérieur de Ruhengeri (INES)
64	Postgraduate Diploma in Education	Postgraduate Diploma	Part time	Education	University of Kigali (UoK)
65	Masters of Education Management and Administration	Masters	Part time	Education	University of Kigali (UoK)
66	Master of Arts in Public Administration	Masters	Part time	Arts	University of Kigali (UoK)
67	Master of Science in Procurement and Supply Chain Management	Masters	Part time	Business	University of Kigali (UoK)
68	Master of Science in Information Technology	Masters	Part time	Science	University of Kigali (UoK)
69	Master of Commerce	Masters	Part time	Business	University of Kigali (UoK)
70	Master of Science in Project Management	Masters	Part time	Business	University of Kigali (UoK)
71	Master of Science in Human Resource Management	Masters	Part time	Business	University of Kigali (UoK)
72	Master of Science in Finance	Masters	Part time	Business	University of Kigali (UoK)
73	Master of Science in Business Information Technology	Masters	Part time	Business	University of Kigali (UoK)
74	Master of Science in Entrepreneurship	Masters	Part time	Business	University of Kigali (UoK)
75	Master of Science in Economics	Masters	Part time	Business	University of Kigali (UoK)
76	Master in Public Policy and Management	Masters	Part time	Business	University of Kigali (UoK)
77	Executive Master of Business Administration	Masters	Part time	Business	University of Kigali (UoK)
78	Master in Business Administration	Masters	Part time	Business	University of Kigali (UoK)

79	Master of Business Administration (MBA)	Masters	Part time	Business	Oklahoma Christian University (OCU)
80	Postgraduate Diploma in Theology	Postgraduate Diploma	Part time	Arts	East African Christian College (EACC)
81	Post Graduate Diploma in Theology and Leadership	Postgraduate Diploma	Part time	Arts	Africa College of Theology (ACT)
82	Membership of the College of Surgeons	Membership	Part time	Science	College of Surgeons of East, Central and Southern Africa (COSECSA)
83	Fellowship of the College of Surgeons	Fellowship	Part time	Science	College of Surgeons of East, Central and Southern Africa (COSECSA)

International Universities

Rwanda is also home to international universities that have established their campuses in Rwanda with post graduate program. Among others we can cite:

Table 30: International universities in Rwanda

Institution	Main topics taught/faculties	Location	job orientation or exit expectation (career cluster)
Carnegie Mellon	Information Technology	Kigali, Gasabo	IT Professionals
	Electrical and Computer Engineering		Professionals in wireless networks, machine learning, data analytics, robotics, energy systems, internet of things, and software engineering
African Institute of Mathematical Sciences (AIMS-Rwanda)	Mathematical Sciences Machine Intelligence	Kigali, Gasabo	Professionals in Structured Mathematics, Cooperative Education, Climate Sciences and Machine Intelligence
College of Surgeon of East, Central and Southern Africa (COSECSA)	Membership of the College of Surgeon Fellowship of the College of Surgeon	Kigali, Gasabo	Surgeons

Eastern Africa University of Rwanda	Business Administration Leisure, Tourism & Hotel Management Mass Communication Film making and Film Production Industrial Art & Design Education	East, Nyagatare	Economists Accountants Humana Resource Managers Professionals in Hotel Management Event Managers Visual artist Publishers Dancers and choreographers Film, stage and related directors and producers Actors Announcers on radio, television and other media Journalists Creative and performing artists not elsewhere classified Teachers in secondary schools
Mount Kenya University (MKU)	Business and Social Sciences.	Kigali, Kicukiro	Marketing Professionals Event Managers Accountants Economists Public Relations Professionals Professionals in Public Administration
			Professionals in procurement and Supplies Management Announcers on radio, television and other media Journalists Professionals in Counselling Psychology Professionals in Hotel Management Professionals in Development studies and Demography Professionals in community Development and Social Work Professionals in Security and Criminology
	Education.		Teachers of secondary schools and other professionals in education

	Health Sciences.		Pharmacists Nurses Professionals of Biomedical Laboratories Professionals in Public Health
	ICT		Professionals in ICT,
University of Global Health Equity	Global Health Delivery Medicine and Surgery	Northern Province, Burera	Professionals in Health Deliver, Medical Doctors, and Surgeons
Vatel school Rwanda	International Hotel Management	Kigali City, Nyarugenge	Professionals in Hotel Management
Oklahoma Christian University (OCU)	Business Administration	Nyarugenge, Kigali	Economists, Accountants, Human resource Managers, Financial and investment advisers, Financial analyst, Management and organization analysts, Advertising, and marketing professionals.
Rwanda Institute for Conservation Agriculture (RICA)	Conservation Agriculture	Eastern Province, Bugesera.	Professional in Conservation Agriculture

4.2.2 International scholarships

4.2.2.1 Cooperation Scholarship Opportunity Awarded (Every year)

Table 31: Available Cooperation scholarships

Name Scholarship	Levels of study
Commonwealth Scholarship tenable in the UK.	PhD, Masters
Scholarship from Kingdom of Morocco	Bachelors, Masters, PhD
Scholarship from China	Bachelors, Masters, PhD
Scholarship from China (Alibaba E-Commerce)	Masters
Scholarship from Germany (German Academic Exchange Service and the German Rectors Conference)	PhD
Scholarship for Beijing Institute of Technology BIT - China scholarship.	PhD and Masters
Scholarship from RUSSIA	Bachelors, Masters, PhD
Scholarship from India	Masters, PhD
Scholarship from Colombia	Masters
Scholarship for China University of Geosciences (CUG)	Masters
Scholarship from Canada (Droit d' Exemption des Frais de Scolarité)	Bachelors, Masters, PhD

Scholarship from Cuba	Bachelors
Scholarship from Thailand	Masters
Scholarship from south Korea Kyungdong University KDU	Masters
Scholarship from South Korea	Masters
Scholarship from Japan	Bachelors, Masters, PhD
Scholarship from Netherlands	Masters, PhD
Scholarship for North China Electrical Power University	Masters

4.2.2.2 Chevening and Fulbright scholarships

The Chevening scholarship is an international scholarship scheme which enables students with leadership qualities from over 160 countries and territories to undertake postgraduate study or courses in universities in the United Kingdom. The funding for this scheme comes from the British Foreign and Commonwealth Office and its partner organizations.

The selection criteria for Chevening Scholarship target high-calibre graduates with the personal, intellectual and interpersonal qualities necessary for leadership, though they can vary from country to country, and from year to year. Most scholarships include a living stipend, airfares and the full or partial cost of tuition fees. The Chevening scholarships, guidance, eligibility and criteria can be accessed via https://www.chevening.org

The US Fulbright Scholarships bring students from 140 countries to the US. The Fulbright Foreign Student Program, the largest Fulbright program, is designed primarily to strengthen African universities through higher degree training (Master's degree). Although core Fulbright Exchanges are with universities, candidates who are affiliated with other educational, cultural, or professional institutions are eligible to apply. The Fulbright scholarships, guidance, eligibility and criteria can be accessed via

https://rw.usembassy.gov/education-culture/

The application of Fulbright scholarship opens between ***March and April*** every year.

Note: The survey conducted revealed that there is a mismatch between training and employment. For proper career choice, the learners are advised to note the following:

- Employment today requires soft skills (communication, interpersonal relations) which several graduates are missing.
- Enrollments in different courses are not based on market surveys.
- Most of the higher education aspirants want to study in Kigali yet not all colleges/ campuses have those programs in Kigali. This pushes some candidates to study what they are not passionate about just because they do not want to go to study upcountry.
- Most of the employment opportunities are under small and medium-sized enterprises (SMEs) yet these are run by young people with limited financial to employ graduates and honor all labor related obligations (contracts, taxes, etc.).
- Several university graduates are unable to prove what they have learnt when they are taken to test or once they are hired.
- Rwanda Management Institute used to do recruitment. For some areas, candidates would turn in thousands while for others would fail to get candidates.

4.3 Internships opportunities

An internship can be understood as a short-term experience in which the candidate gets trainings and builds skills in a specific field or career area. An internship can be offered by any type of organization or company and come from any industry or economic sector. Internship differs from a short-term job or community service in the sense that its intention is "learning agenda". This implies that by applying for internship the driving forces for the intern are:

(i) Apply knowledge learned in the classroom to the workplace,

(ii) Gaining knowledge of the qualifications and duties of a position and exploring interest in a particular field,

(iii) Gaining an understanding of the skills and knowledge required in the workplace.

Internship is therefore meant to supplement learned material by providing students with 'real-world' experiences not readily available in the classroom environment. Internship uses experiential learning approach or practical reflection and enables interns to showcase relevant and tangible proficiency through the creation of a work product/project, with guidance from their mentors/preceptors (Cortelyou-Ward, Sumner & Rotarius, 2012).

Types of internship

Internships come in all shapes and sizes; no two are identical. In addition, an internship can be paid or unpaid and can vary in hours and length. Therefore, while searching for internship, it is advised to check on a number of factors. These include compensation, supervision, design/structure, timeframe, funding source, third party involvement, location, credit requirement and terms of contract. In terms of internship designs, there are four main:

- *Internship Programs:* These offer to candidates a structured (sometimes rotational) program typically with experienced supervisors within an individual company or department within the government. These programs are often competitive; hiring a handful of students each term or summer. In the Rwandan context, these are similar to what is offered by RDB.
- *Sponsored Internships:* These are funded by a particular individual, professional organization, or governing body. They are governed by specific guidelines from the sponsor. In Rwandan context these are for instance those that used to be offered by projects like Hinga Weze (https://rw.usembassy.gov/usaid-hinga-weze/)
- *Third-party Internships:* These are commonly found with international internships or 'hot spot' internship sites, for example, New York City or Washington D.C. Third-party organizations help students locate internships with other organizations in a variety of occupations and offer administrative, housing, and travel support. Students often pay a fee for the third-party's services.
- *Individual Internships:* These are often one-time positions with a particular department within a company. The department may hire only one or two interns. The intern gains practical experience on one area of interest or with a particular project. This is mostly what happens with retailing/marketing entities.

4.3.1 Main internships opportunities for youth and graduates in Rwanda

4.3.1.1 National Professional Internship Program under Rwanda Development Board (RDB)

The National Professional Internship Program was adopted in 2009 with the aim of equipping interns with practical skills that are required to facilitate the transition from school to the labor market. More specifically, the program aims at re-enforcing the Rwandan graduates' practical capacity by linking theoretical skills to the practice. It also sought to provide Rwandan graduates with opportunities to gain valuable experience that increase their chances for employment.

Interns are placed in public, private, Non-Government organizations (NGOs) and civil society institutions related to their area of study for a period of 6 months. However, given the nature of fields like agriculture and others that are technical in nature and require more time of practice, the duration of internship program in such cases can be extended for up to twelve (12) months. This program has the following objectives:

- To equip interns with practical skills that are required to facilitate the transition between schools to the labor market.
- Re-enforce the Rwandan graduates' practical capacity by linking theoretical skills to the practice.
- Develop professionalism, communication, interpersonal and organizational skills.
- Create positive work ethics amongst youth- effective work competences and employability skills for workforce development.
- Help gain valuable experience, increasing marketability after internship.

The program is open to all Rwandan fresh graduates from Higher Learning Institutions (HLIs), Integrated Polytechnic Regional Centres (IPRCs) that offer Technical Vocational Education and Training (TVET) equivalent to university qualifications in Rwanda or from abroad, in need of employability skills and professional experience.

Application process

The process of application is done online. Eligible applicants fill out the online form available on RDB website: www.rdb.gov.rw

- E-Services
- Apply for internship: Applicants can also approach the RDB Internship Office or call 1415 for support.

Documents required for application of internship

- Copy of degree

It is essential to underline that interns are posted in government entities where the need arises, get a contract and thus monthly transport allowance. Upon successful completion of the internship, these internees get a recognition letter from the host institution which can also serve as work certificate for future job employment opportunities.

Transit recommendations for internship:

In the spirit to support skills development and smooth transition from school to work, we would recommend:

To government:

- Establish policies governing internships to ensure their relevance, quality and instill the culture of excellence among interns.
- Strengthen internship program for TVET and tertiary education graduate to bridge the gap between training and employment.
- Ensuring subsidy per intern to curb down financial and administrative burden of internships on employers and private sector.
- Ensure all institutions **both public and private sectors cater for a number of interns on annual basis.**

To students:

- Develop portfolios of their achievements and let these be widely accessible to increase their marketability.
- Assess their needs and potentials and match these with potential internship opportunities.
- Plan and apply for the internship in advance, so that both sides (internship providers and interns) are informed ahead about the demands, expectations, expertise and needs of the potential interns.
- Consult friends, parents, guardians, teachers, trainers, professors, mentors or advisors about their past internships or if they know of any internships that match his/her interests.
- Not just considering the organization name, rather focus on the responsibilities and the type of skills and experience they will gain from it.
- Have spirit of becoming entrepreneurs using the knowledge and skills obtained from internship.

To organizations (private companies and civil societies)

- Institutionalize a procedure to host, follow up and evaluate interns.
- Subsidize internship opportunities to increase profit and delivery from interns.
- Publicize their goals, missions, visions, value and ethics so that prospective interns are aware of these and make informed choices through their websites and social media platforms.

4.3.1.2 Generation Unlimited initiative

Generation Unlimited initiative – or "GenU" brings together partners from government, multilateral organizations, civil society, the private sector and young people from around the world. It responds to the belief that preparing young people for the world of work will benefit regional economies, increase security, advance the Sustainable Development Goals (SDGs) and improve the well-being of millions of families and communities. Hence, the aim behind GenU is to ensure that all young people between

the ages of 10 and 24 are in school, training or employed by 2030. By doing so, young people gain skills and opportunities to unleash their full potential, innovate, create jobs and wealth.

The focus on youth is again aligned with the United Nations Secretary-General Antonio Guterres' proclamation that "Young people must be at the forefront, with decision-making power, bringing their creativity, energy and problem-solving skills to the world's greatest challenges" International Labor Organization (2019). With Covid-19, it is expected that the global economy shall be shaken and thus pressure for jobs and employment shall go on the rise globally. The only way to go is to ensure that youth voices are heard, and youth is actively taken in the processes and platforms that inform decisions because they constitute both the present and future of the desired development.

Launched in Kigali by the Government of Rwanda and UNICEF on 3rd September 2020, the GenU is of paramount importance because youth below 25 years old make up 60 percent of the entire population in Rwanda. Hence, the youth must be adequately prepared for the transition from school to work, lead productive lives for the general population, increasing entrepreneurship capacity and civic participation. In Rwanda, the multi-sector GenU partnership will help meet the need for:

- Education and training, helping young people build skills for productive lives;
- Employment, increasing quality work opportunities for young people;
- Entrepreneurship as a mindset; and
- Equity and engagement, promoting equitable access to opportunities, equipping young people as problem-solvers and engaged members of society, and addressing mental health concerns.

GenU has equipped different **youth centres** which young people can access and make use of.

4.3.1.3. K-Lab

As Rwanda strives towards establishing a knowledge-based economy and achieving its Vision 2020 goals, fostering innovative ICT based SMEs becomes critically important. K-Lab (knowledge Lab) is a unique open technology hub in Kigali where students, fresh graduates, entrepreneurs and innovators come to work on their ideas/projects to turn them into viable business models. The growing k-Lab community is also made of experienced mentors who provide both technical and business assistance to needy members. K-Lab also hosts events, workshops, boot-camp, hackathons and networking sessions to promote collaboration/partnerships, investment and financing.

K-Lab's mission is to promote, facilitate and support the development of innovative ICT solutions by nurturing a vivid community of entrepreneurs and mentors.

4.3.2 Government's interventions in apprenticeship

In accordance with the Vision 2050 where Rwanda aims to become an upper middle-income country, skills and jobs at the core of economic transformation. In this spirit, different programs are in place to empower youth and graduates with required on the job skills.

4.3.2.1 The National Employment Program (NEP)

NEP was established in 2014, with the vision to:

(i) Equip the workforce with employability skills,

(ii))Creating jobs that are adequately remunerative and sustainable with special focus on youth, women and People with Disabilities (PWD) and

(iii) Provide a national framework for coordinating the planning and the implementation of employment interventions (RDB, 2019).

One of the implementation channels of pillar 1, has been the Skills Development Fund (SDF), which was established as part of World Bank Priority Skills for Growth Program (PSG) to rapidly close skills gaps with the objective of "increasing the supply of skills in high demand in the labor market". To achieve this goal, the SDF provides sub-grants to eligible applicants on a competitive basis to develop scarce skills among the Rwandan workers. The fund has three main windows to apply for funding49: Window 1 "Rapid response training", Window 2 "Out of school youth, Recognition of Prior Learning, Informal Sector Training", "Window 3 "apprenticeship and internships". The primary program for Window 1 is the Rapid Response Training program; "MVT" for Window 2 and Window 3 includes the Industry Based Training and Internship programs.

To achieve its objectives and goals, the NEP is organized into four pillars:

Pillar 1: Employability Skills development (implemented by the Ministry of Education)

Pillar 2: Entrepreneurship and business development (Implemented by the Ministry of Trade and Industry)

Pillar 3: Labor Market Interventions (Implemented by the Ministry of Local Government)

Pillar 4: Coordination and Monitoring and Evaluation (M&E) (Implemented by the Ministry of Public Service and Labor)

The main training programs under pillar 1 of NEP included: (1) Short-term Massive Vocational Training, (2) Rapid Response Training, (3) Industrial Based Training, (4) Internship, (5) Recognition of Prior Learning, (6) Reconversion Program (RTB, 2020).

a) Rapid Response Training (RRT) has been effective in upskilling the workforce, particularly women, with 93% of trainees finding employment. The RRT program targets private and public sector projects that need additional skills and knowledge to enhance the performance of their employees.

b) Massive Vocational Training (MVT) has been successful in providing market-relevant skills for youth and women, with an 85% employment rate for trainees. The MVT program provides short-term training of no more than three months, for the youth and women.

c) The National Internship Program (NIT) has achieved less than a 60% employment rate, suggesting the need for restructuring. The NIT program was adopted with the aim to equip students with a practical skillset to smoothen their transition from school to the labor market.

Table 32: TVET Special program trainees by type of intervention

Interventions	2016/17	2017/18	2018/19
Total NEP	17,486	9,650	9,932
Male	13,946	4,397	6,540
Female	3,540	5,253	3,392
% Male	79.8%	45.6%	65.8%
% Female	20.2%	54.4%	34.2%
Recognition of Prior Learning	10,283	347	1,044
Male	9,868	321	1,012
Female	415	26	32
Industrial Based Training	1,448	386	58
Male	820	185	30
Female	628	201	28
Massive Vocation Training	3,973	1,942	886
Male	2,305	1,241	413
Female	1,668	701	473
Rapid Response Training	1,300	1,250	300
Male	624	308	99
Female	676	942	201
Reconversion program	482	291	107
Male	329	134	60
Female	153	157	47
Entrepreneurship and work readiness/ICPC (UDUKIRIRO)	-	5,434	310
Male	-	2,208	271
Female	-	3,226	39
SDF (Skills Development fund)	-	-	7,227
Male	-	-	4,655
Female	-	-	2,572
MINEDUC (2020)			

Table 32 summarizes the statistics of enrolments under NEP allied programs. The data indicates that NEP is a quick win to ensure that youth and graduates acquire employability skills on the basis of which they embrace specific careers. This is in line with the National Skills Development and Employment Promotion Strategy (NSDEPS) which aims at upskilling Rwanda's workforce for long-term economic transformation by putting private sector at the helm. In doing so, it follows the principles embedded in the National Strategy for Transformation, the Private Sector Development and Youth Employment strategy, and other relevant national documents.

As reiterated by the interviewees, it is essential that all programs embed core and soft skills such as financial literacy, communication, critical thinking, Decision-Making, Creativity, Ideation, and Innovation, Collaboration, Negotiation, Self-Reflection / Mindfulness, Resilience / Stress-Tolerance as well as Adaptability / Flexibility.

4.4 Opportunities that can provide start-up capitals

4.4.1 Generation Unlimited initiative

Generation Unlimited **initiative** is global partnership working to prepare young people to become productive and engaged citizens. It connects secondary-age education and training to employment and entrepreneurship, empowering every young person to thrive in the world of work.

Generation Unlimited calls on young innovators to design solutions to improve education, employment and civic engagement. It aims to inspire young people with brilliant ideas, but without the resources to bring them to life. This includes young refugees, those who face daily discrimination due to their ethnicity, their gender or their disability and those who are disadvantaged by poverty.

The initiative was launched in Kigali by the Government of Rwanda and UNICEF in September 2020 for Rwandan youth below 25 years old make up 60 per cent of the entire population. Hence, youth must be adequately prepared for the transition to work, lead productive lives for the general population, increasing entrepreneurship capacity and civic participation. In Rwanda, the multi-sector GenU partnership help the youth to meet the need for:

- *Education and training,* helping young people build skills for productive lives;
- *Employment,* increasing quality work opportunities for young people;
- *Entrepreneurship as a mindset;* and
- *Equity and engagement,* promoting equitable access to opportunities, equipping young people as problem-solvers and engaged members of society, and addressing mental health concerns.

Norrsken: **Entrepreneurship hub**

Located in Kigali, Norrsken is space where people can forge meaningful connections, spur innovation and grow their businesses to create scalable economic and social development. The hub will house a mix of start-ups, incubators and VCs, accelerators and corporates, forming an ecosystem that enables entrepreneurs to tackle the world's toughest problems

Note:

There are other opportunities which are not described here which learners should tap into. For example:

- Kigali innovation centre
- 250 startups
- BDF: BUSINESS DEVELOPMENT FUND
- Bridge to Rwanda
- And others (new or existing)
- TVET Youth Challenge
- Worldskills Africa
- Pitch Africa Competition for TVET Student

Chapter 5: Platforms for career guidance information and adolescents' challenges to access these information or available options.

Whereas career choice might be randomized or driven by non-substantiated motives, it was expected that a desk review be conducted to search around renowned affordable or freely accessible internet websites or platforms that provide information, tutorial and online support around career guidance. This is based on the proven potential of the Internet to be the hub of a wide range of information that can support the student and any other party playing the role of career advisor and other education stakeholders (parent, teacher the community around the school, peer groups, etc.).

5.1 Online career guidance platforms

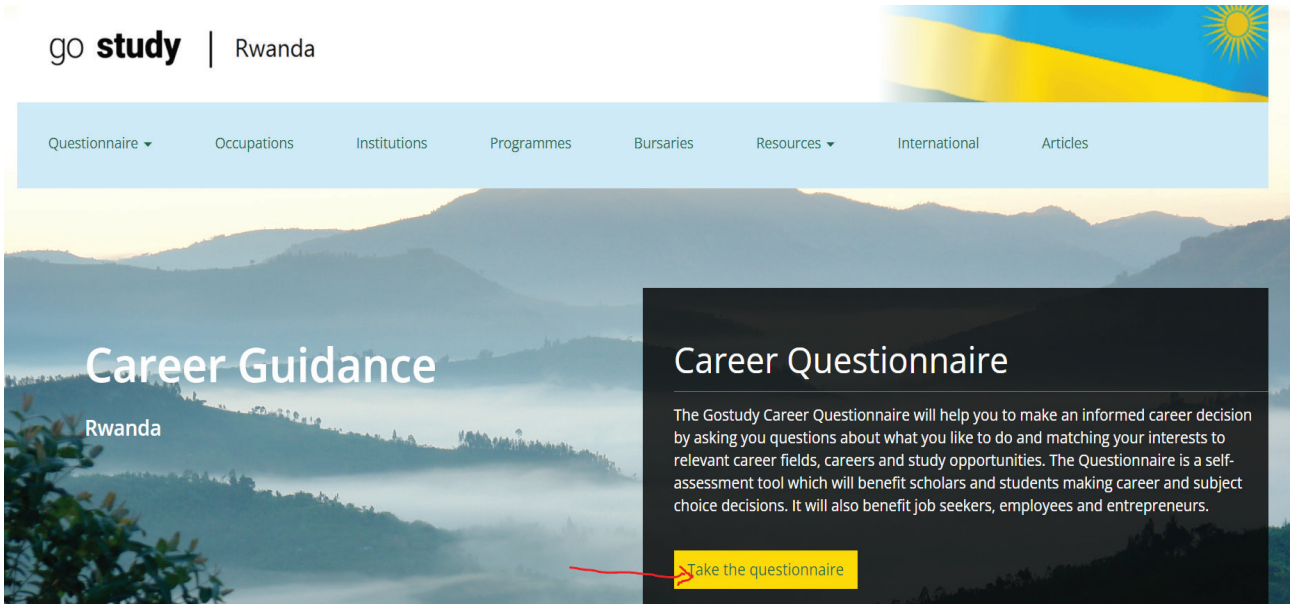
With the advancement of Information and Communication Technologies (ICTs) in education, career guidance and advisory services are gradually available online. This has given rise to career guidance platforms that provide a career decision model based on psychometric career tests and other tools. To properly function, such Career Guidance Platforms recruit/employ professional career counsellors and career coaches whose role is to support school, college as well as university students in career related decisions. It is also expected that online career guidance can reach a wide range of people who wish to have information related to career choice. Such platforms are also known as Computer Aided Career Guidance Systems (CACGS). The following section presents some of these platforms.

5.1.1 Gostudy Guidance Platform

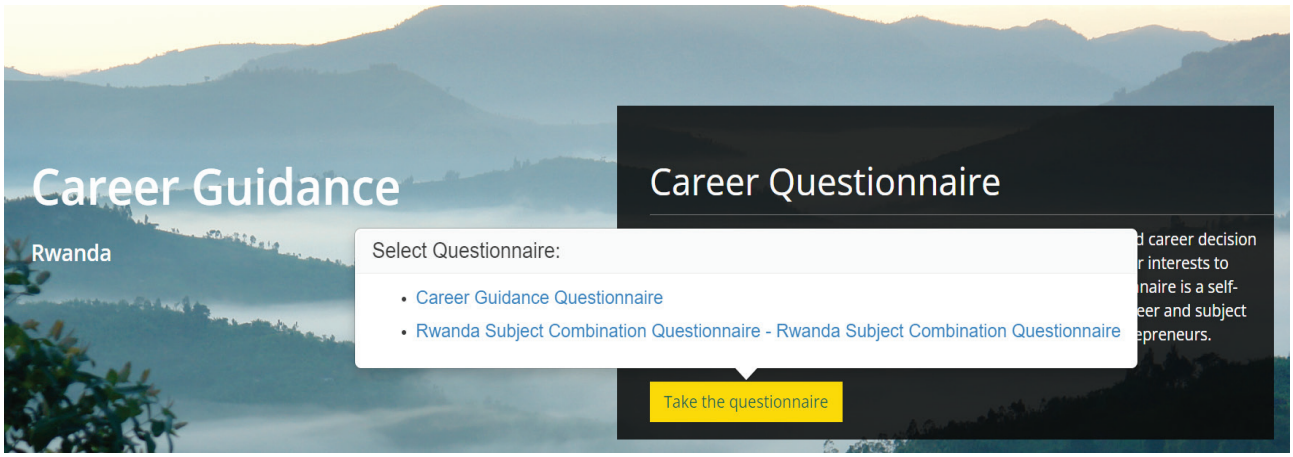
The Gostudy platform provides a career questionnaire that helps learners to make informed career decisions. The questions are about the preferences of learners which are then matched with relevant career fields, careers and study opportunities. The questionnaire is in the form of a self-assessment tool to benefit learners in making career and subject choice decisions. Apart from the questionnaire, the platform provides information on careers, scholarships, occupations, institutions, programs and other links. The platform is accessed on http://www.gostudy.net

Step to get to the test:

step 1: Welcome page

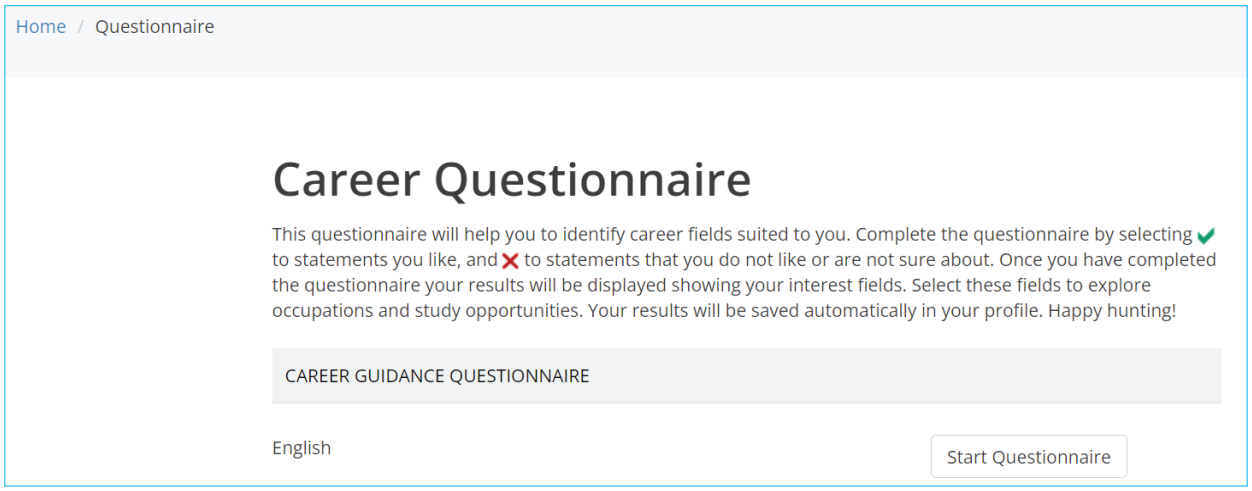


Step 2: then, CLICK to “take the questionnaire”

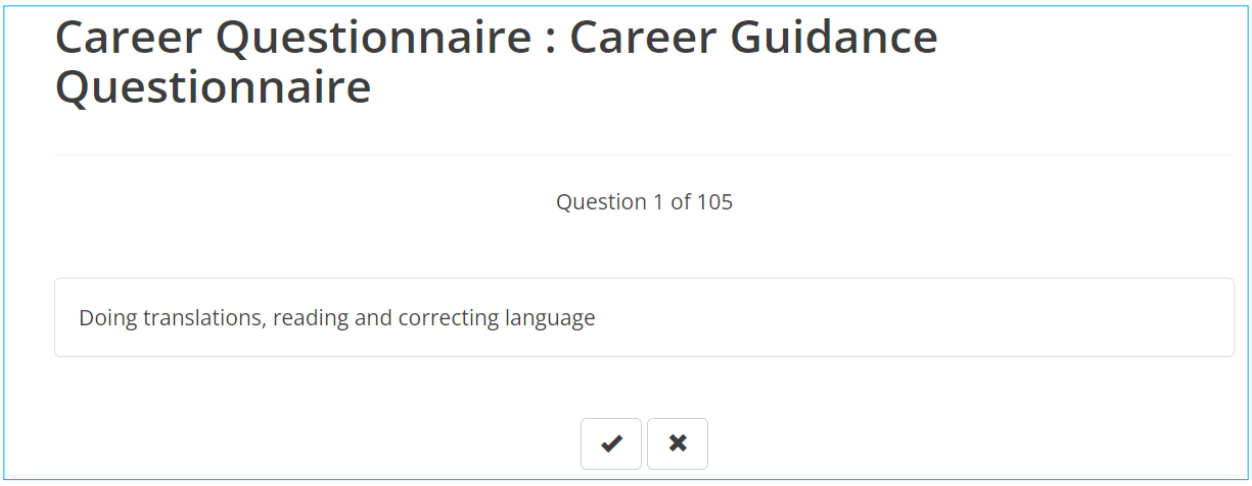


Step 3: choose Career guidance questionnaire

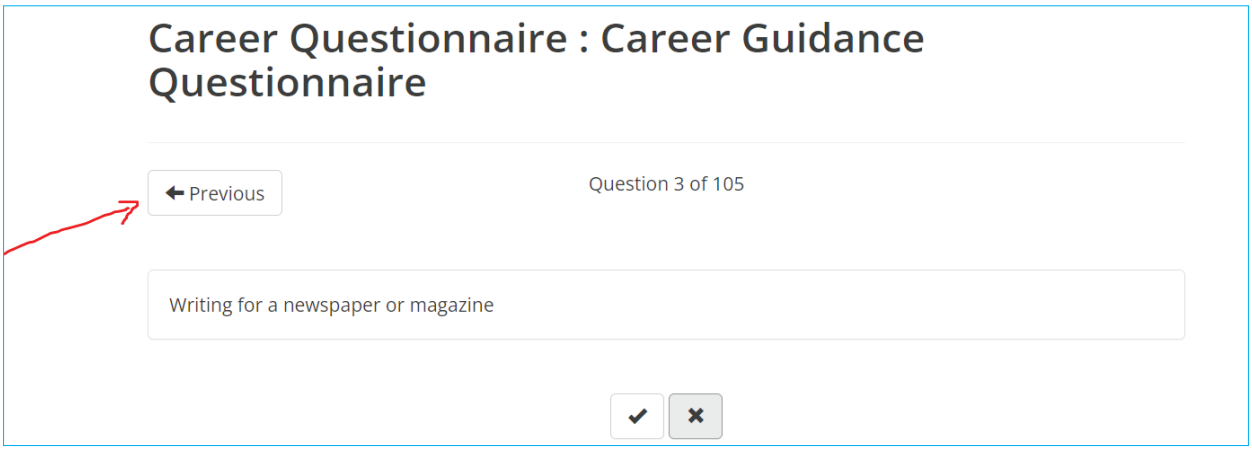
Then click on "**start questionnaire**"



Step 4: When you are taking the test, for whatever question matches your interest, click on (v) and click on (x) for whatever question that does not match your interest. For whatever choice you make, the next question poops up immediately until you reach question 105. After this, you get an overall evaluation or view of interest.



Step 5: Use "previous" if you want to go back or retake the previous question



5.1.2. RIASEC Test

This test is designed to help learners discover which careers are most suitable depending on their uniqueness in terms of abilities, interests, skills and traits.

RIASEC stands for Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. It helps students to decide which academic field is the right path to follow. It asks questions about aspirations, activities, skills and interests in different careers.

Steps for accessing the RIASEC Test

https://www.thecareerproject.org

Step 1: welcome page

Find your ideal career match.

If you feel a bit lost about which career to pursue then you are in the right place. Give us a chance to help guide you towards a career that you can be enjoy and be proud of. The Career Project has hundreds of career guides to help you explore the possibilities. And we've got thousands of job profiles that give you the inside scoop on what its really like to work in a certain occupation.

At The Career Project, we believe that everyone deserves to have a career that is both fulfilling and financially rewarding – one that puts your unique skills and talents to good use. Ready to get started? Great. Let's get to work!

Step 2: Scroll down

1. Understand YOURSELF

The first step is choosing the best career for you is getting a better understand of yourself. You need to drill a little deeper into your skills and interests and how they relate to various job opportunities. The same goes for your personality – some careers just fit certain personality types better than others. Lastly, develop your criteria for your career choice so that you can evaluate each option appropriately.

- ✓ Assess your unique skills & interests
- ✓ Take a personality test
- ✓ Take a career match test

Explanation of step 2: A learner can take the three tests.

First, you need to know yourself

Then, know your interest and skills

And finally, the career that matches your interest/yourself

Step 3:

2. Explore Possible CAREERS

There are LOTS of interesting and financially rewarding careers out there that many people simply don't know about. So take a step back and explore a little bit. There may even be some options that pay a little better than you think, or allow more flexibility than you assumed.

- ✓ Browse our career guides
- ✓ Read real-life job profiles
- ✓ Talk with a career mentor

3. Identify Your CAREER MATCH

Once you've done sufficient self-reflection and also career exploration, its now decision time! We've got a plan to help you identify your "top 3" career options and then get real-world input from mentors and even some hands-on experience to then help you identify the ideal career match for you.

- ✓ Understand true fulfillment
- ✓ Evaluate your top choices against your criteria
- ✓ Get guidance from a Career Counselor
- ✓ Choose your ideal career match
- ✓ Sample of RIASEC test

THE RIASEC TEST

Follow these easy steps to see where your interests are.

1 Read each statement. If you agree with the statement fill in the circle. There are no wrong answers!

		R	I	A	S	E	C
1.	I like to work on cars	○					
2.	I like to do puzzles		○				
3.	I am good at working independently			○			
4.	I like to work in teams				○		
5.	I am an ambitious person I set goals for myself					○	
6.	I like to organize things, (files, desks/offices)						○
7.	I like to build things	○					
8.	I like to read about art and music			○			
9.	I like to have clear instructions to follow						○
10.	I like to try to influence or persuade people					○	
11.	I like to do experiments		○				
12.	I like to teach or train people				○		
13.	I like trying to help people solve their problems				○		
14.	I like to take care of animals	○					
15.	I wouldn't mind working 8 hours per day in an office						○
16.	I like selling things					○	
17.	I enjoy creative writing			○			
18.	I enjoy science		○				
19.	I am quick to take on new responsibilities					○	
20.	I am interested in healing people				○		
21.	I enjoy trying to figure out how things work				○		
	Total						

		R	I	A	S	E	C
22.	I like putting things together or assembling things	○					
23.	I am a creative person			○			
24.	I pay attention to details						○
25.	I like to do filing or typing						○
26.	I like to analyze things (problems/ situations)		○				
27.	I like to play instruments or sing			○			
28.	I enjoy learning about other cultures				○		
29.	I would like to start my own business					○	
30.	I like to cook	○					
31.	I like acting in plays			○			
32.	I am a practical person	○					
33.	I like working with numbers or charts		○				
34.	I like to get into discussion about issues				○		
35.	I am good at keeping records of my work						○
36.	I like to lead					○	
37.	I like working outdoors	○					
38.	I would like to work in an office						○
39.	I'm good at math		○				
40.	I like helping people				○		
41.	I like to draw			○			
42.	I like to give speeches					○	
	Total						

Grand Total

R	I	A	S	E	C

2 Add up the number of filled in circles in each column and then add the two columns together for a grand total.

3 Using your grand total scores from above transfer the scores for each lettet into the appropriate column below.

R	=	Realistic	Total: ____
I	=	Investigative	Total: ____
A	=	Artistic	Total: ____
S	=	Social	Total: ____
E	=	Enterprising	Total: ____
C	=	Conventional	Total: ____

4 Take the three letters with the highest scores and record them under "My interest Code".

MY INTEREST CODE

_____ _____ _____

5 Turn the page to see what this means!

RESULTS OF THE RIASEC TEST

R = Realistic

These people are often good at mechanical or athletic jobs. Good college majors for Realistic people are...

- Agriculture
- Health Assistant
- Computers
- Construction
- Mechanic/Machinist
- Engineering
- Food and Hospitality

Related Pathways

Natural Resources
Health Services
Industrial and Engineering Technology
Arts and Communication

I = Investigative

These people like to watch, learn, analyze and solve problems. Good college majors for Investigative people are...

- Marine Biology
- Engineering
- Chemistry
- Zoology
- Medecine/Surgery
- Consumer Economics
- Psychology

Related Pathways

Health Sevices
Business
Public and Human Services
Industrial and Engineering Technology

A = Artistic

These people like to work in unstructured situations where they can use their creativity. Good majors for Artistic people are...

- Communications
- Cosmetology
- Fine and Performing Arts
- Photography
- Radio and TV
- Interior Design
- Architecture

Related Pathways

Public and Human Services
Arts and Communication

S = Social

These people like to work with other people, rather than things. Good college majors for Social people are...

- Counseling
- Nursing
- Physical Therapy
- Travel
- Advertising
- Public Relations
- Education

Related Pathways

Health Services
Public and Human Services

E = Enterprising

These people like to work with others and enjoy persuading and performing. Good college majors for Enterprising people are:

- Fashion Merchandising
- Real Estate
- Marketing/Sales
- Law
- Political Science
- International Trade
- Banking/Finance

Related Pathways

Business
Public and Human Service
Arts and Communication

C = Conventional

These people are very detail oriented, organized and like to work with data. Good college majors for Conventional people are...

- Accounting
- Court Reporting
- Insurance
- Administration
- Medical Records
- Banking
- Data Processing

Related Pathways

Health Services
Business
Industrial and Engineering Technology

In fact, there are many websites providing information on career guidance, some of which should be treated with caution.

Career guidance services are now given in some schools and REB has so far trained over 1500 career guidance advisers (deputy head teachers in charge of studies). Career guidance advisors, students and parents can also access and make use of materials uploaded on REB website. They include teachers' guide on career guidance, brochures on career guidance and posters.

From the information that emerged from the survey, the majority of students (55.8%) informed that they did not have any recommended platforms where to access career guidance related information. Less than a half (44.2%) reported having been recommended platforms where to get career guidance information. However, what they highlighted such as philosophical books, social media (WhatsApp, twitter, email, telegram and Facebook), Webpages, and E-learning platform does not qualify for the platform, which is indication of lack of information on career guidance platforms among the learners.

Discovering hidden opportunities: Value chain analysis

As learners discover their interest and potentials for potential careers, it is critical to analyze value chain of every sector for better and informed career path.

Value chain analysis determines the business' primary and support activities. It is used to describe all the business activities it takes to create a product from start to finish (e.g., design, production, distribution, and so on.

For learners, value chain analysis will help them to identify hidden opportunities or to uncover opportunities at the value chain links and support services providers. Using the example of agriculture sector and thinking about the market of coffee, the opportunities identified are also highly feasible market with many opportunities. The process is done into different steps:

Step1: Identify high growth sectors: Agriculture

Step 2: Identify the market: coffee

5.2. Other platforms

5.2.1 General education, TVETs and Universities' career guidance services units

Schools and universities have specialized units that provide career guidance services to students. Part of the information provided helps students to overcome issues related to:

- Professional identity
- Future profession
- Skills and qualifications for work
- Transition into appropriate employment.

Despite the existence of such units, more efforts should be invested to ensure students are aware of the existence of career guidance services and understand well how such services help them to make the right choices in regard to learning pathways and make the right employment choices;

In addition, **Career day events are key for Universities** and general/TVETs students. These events need to be promoted so that students can understand the relevance of them and what they are likely to learn for better employment choices.

5.2.2 Alumni Networks (Garuka ushime) and Job fairs

Alumni networks and job fairs are also important avenues for students to learn more about available opportunities as well as have access to coaching and mentorship services. Job fairs provide more opportunities to fresh graduates to transition to employment. Students and fresh graduates get to learn available opportunities by meeting employers. The City of Kigali has been organizing such job fair events, however there is a need to extend the same to secondary cities for a wider access.

However, some challenges are associated with the alumni networks and job fairs. Members of such networks are not well prepared to support the career guidance initiatives due to lack of information about career guidance. Therefore, more trainings as well as campaigns should be organized to help members to understand their role and gain required knowledge and skills to support the career guidance services. As for job fairs, more employers should be encouraged to join this event so that they can meet job seekers.

5.2.3 Universities fair

Some universities organize talks with schools to attract potential students for their future intakes. They provide adequate information regarding their university. During such event, career fairs give students the opportunity to explore career opportunities, meet prospective employers, and practice professional behavior. University career fair is valuable to students not only for their first ventures into the professional world but relevant for future job changes. They also get a chance to network with national and international employers.

5.2.4. Parents and Guardians

Parents and Guardians are also a reliable source of information that can help students to make right choices for available learning pathways as well as employment opportunities that match their knowledge, skills, abilities, interests and aspirations. As stated by Sally-Anne Barnes et al., 2015, parents and Guardians influence young people through behaviours by shaping their values, attitudes and self-concepts..... parental and Guardian support include:

(i) Instrumental and practical support (writing CVs, Application, search important information online, financial support etc.);

(ii) Career related modeling and informational support-use of parents' own relevant examples of career related behaviours, experiences and knowledge;

(iii) Verbal encouragement-Parents and Guardians encourage their children through praise about choices made in terms of learning pathways and employment choices;

(iv) (iv) Emotional support-find appropriate space for careers conversations to shape young people self-efficacy, discussions on feelings as well as offering empathy.

However, young people are not learning much from their parents or guardians due to the following reasons:

- Some students were born from illiterate parents or being supported by illiterate guardians who cannot help in any way about learning pathways and career choices.
- The students from literate parents or guardians, they are not well supported because their parents or guardians do not have sufficient time to lead career conversations given they are fully involved in daily office/remote work or they are doing business to earn money.
- Parents and guardians are not always confident about the advice and support they provide because they lack sufficient information on available learning pathways and labour market options.

To resolve all the challenges highlighted, more trainings and campaigns are required to engage parents and guardians. Such trainings and campaigns would help not only to raise awareness but also provide relevant information that can help parents or guardians to guide their children about leaning pathways and employment opportunities.

5.2.5. Internship Programs

Internship programs are one the best avenues for students to get first-hand information about job opportunities that strongly match their interests and aspirations. If well implemented, internship programs provide a wealth of information about available job opportunities and required knowledge & skills. Students get an opportunity to learn on the job and gain experience on a daily basis.

5.2.6. TV, Radio and Social media platforms shows

Some Radios and TVs broadcast shows that are more in line with employment or entrepreneurship. A practical example is ***"Inspire me" on RTV***. During this show, some young entrepreneurs are invited to share their success stories:

- How they developed feasible projects.
- How they had access to financial support; the challenges they faced.
- How they become resilient and aligned everything
- How profitable they are and next move, etc.

This is an important avenue that can help young people especially those with entrepreneurial mindset.

However, students from poor families don't have sufficient information about such shows simply because they don't own radios or TVs; as a solution, a *career center can be set and made operational at the level of each sector and ensure it is open to all young people.*

5.3 Challenges faced by learners to access information related to potential careers

The conducted survey with learners in schools highlighted some challenges they face to access information related to career guidance or available options. More than a half of the students (60%) reported that they have challenges in accessing career guidance information platforms. This reality was backed up by the findings from the responses on open-ended questions in the questionnaire saying that:

- It is very expensive because it needs data for Internet connection
- Low level of knowledge of using Internet
- Network challenge and poor connection
- Lack of information on where to find platforms because they are few in numbers and also are not known by everyone.
- Lack of knowledge on what they want.
- Lack of technological equipment (laptops, tablets, smart phones)

Interviewees at different levels highlighted that most students complete primary and even secondary school without clear idea about what they want to be or where their education pathways are leading them. There are no systematic and consistent career advisory services across institutions. Students lack information about existing careers and what is required to join these career (skills, attitudes, values, personality, health conditions, and ethics) because usually people choose from what they know. There is lack of strong and continued coordination around agencies in charge of career development, skills development, education/training and employability. There is lack of foresight and planning in skills of the future so that education institutions can timely revisit their curriculum and training patterns to produce the people required. Instability and inconsistencies in education policies/instructions/directives couples with policies that are not research informed. Our society still undervalues some professions.

It was also highlighted that poor orientation of students (many candidates were forced to undertake sciences simply because it is a priority yet they would better do elsewhere). On the other hand, many students were denied opportunity for further studies in their areas of choice simply because those areas are not among priorities).

Chapter 6: Conclusion and recommendations

6.1 Conclusion

Career guidance plays a crucial role in supporting the education system to meet its goals as well as satisfy the needs of individuals and those of the labor market. Based on the findings, it is concluded that desired human resources to drive the current and future Rwandan labor market can only be obtained if children are adequately guided from young age towards well framed careers that not only suit their potentials but also feeds into the national well-designed workforce plan. It is on this ground that the following recommendations are made.

6.2 Recommendations

In view of the data presented in this report, it is recommended that:

a) Students

1. Make an early decision on what they aspire to become and seek information on the related education pathway
2. Assess their capabilities and match them with the choice to be made and make effort to excel in the related fields (readings, exercises, project-learning, consultation with experts in the domain, etc.) starting with the lower levels of education
3. Seek continuous guidance from career advisors, parents and teachers, etc. to better shape the career of choice
4. Search information around the career of choice and employment demands
5. Consider registering for an alternative pathway (TVET courses/internship/apprenticeship programs) as a means to obtain employability or entrepreneurship skills.

b) Educational institutions

1. Invite professionals in a specific area and people in careers to offer career guidance to students
2. Have an office of career guidance, which provides information to students on potential careers. Provision of career guidance should be an ongoing process and must start as early as possible.
3. organize career day and career related exhibitions on annual basis and provide students opportunities to visit industries and other educational institutions so that they can be inspired and increase their level of openness
4. Have a systematic approach to detect their potentials, talents and aspirations and match these with their career plans
5. Establish functional internships and on the job training framework, conduct close monitoring to ensure that students graduate with clear sense of the job that await them.
6. Identify potential role models across all professions/sectors of activities to inform, inspire and guide prospective candidates in related professions/careers

c) Parents

1. Create opportunity to discuss with their children about the education and potential career
2. Expose their children to a wide range of career opportunities
3. Carefully listen, advise their children on how best to shape better the career dream they have right from young age
4. Orient children in career choice depending on children's interest and capacity rather that forcing them to choose a certain option

d) Ministry of Education

1. Establish a dynamic online platform providing information to students about existing career pathways, skills required and employment opportunities in public as well as in the private sector.
2. Conduct regular assessments of existing practices and initiatives around career development as well as regular tracer surveys to know where graduates go and how they fit in the labor market
3. Raise awareness on some neglected undervalued professions
4. There should be intermediate plans/wings for re-orientation in case the candidate finds that s/he did not do the right choice (option/field of studies) be it while still being trained or after training/graduation. This would be a strategy to reduce unemployment rate and potential related psychosocial problems
5. Involve different stakeholders in curriculum development including government as the leading partner, private sector, non-governmental organizations (NGO), parents, independent consultants, practitioners, students' unions, etc.
6. Establish more skills incubators for youth

e) The Ministry of Labor

1. Establish a platform that registers all professions and the same would be used to rate their services and on job competences. This would push the quality of their work, facilitate the hiring and recognition
2. Mobilize all public and private institutions/organizations to have a well-structured and institutionalized internship program.

f) The Private Sector Federation

1. Contribute in the elaboration of the curriculum, program delivery, quality assurance and certification. There is a need that a framework be established to ease its involvement in these matters
2. Have regular open days where they show to the public and students (from different levels of education) what they do. This may attract students and help them develop love of some professions based on facts.
3. Work together with the Ministry of education, the one in charge of Labor, civil society and RDB to put in place coordination mechanism to ensure that the issue of training and employment imbalances as well as poor/inadequate skills from graduates are fixed.
4. Fully engaged in IAP [Industrial Attachment Program]

g) Development partners and International Organizations

1. Mobilize funds and provide technical expertise in building strong career guidance structures and professional develop communities
2. Connect local career guidance services with well establish global centers
3. Help in creating employability and income generating opportunities for youth
4. Support job readiness, industrial attachment, rare talents and excellent projects.

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Appendix

Questionnaires and Interview guide

I. Questionnaire for students

Opinions around career choice

1. Please rate your level of agreement with the statements around family influence on your career choice You would say: 1=Strongly disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly agree. Tick (✓) in the right box.						
Family environment		1	2	3	4	5
1	My parents' education levels influenced my career choice					
2	The relationship between my parents influenced my career choice					
3	My parents always ask me about my career choice					
4	The learning environment at home influenced my career choice					
5	My parents' level of involvement in my education influenced my career choice					
6	My young age beliefs and aspirations are the ones driving my career choice					
7	My education is determined by my parents' income					
8	My elder siblings had an influence on my career choice					
9	My extended family members had an influence my education and career choice					
10	My father's career had an influence my education and career choice					
11	My mother's career had an influence my education and career choice					
12	My family members did not have an idea about the career to choose, I did it myself					
2. Rate the extent to which you agree with the statement around the influence of learning environment on your career choice. You would say: 1=Strongly disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly agree. Tick (✓) in the right box.						
Learning environment		1	2	3	4	5
1	My teacher was influential in my career choice					
2	My school organized career interviews that helped with my career choice					
3	I had a career advisor who helped me with my career and education choices					
4	My school developed career plans for students					
5	There are special programs for career development at my school					
6	Career field trips influenced my career choice					
7	Our school has a person in charge of career guidance/councilor who guides students' career choices					
8	The subjects offered at school influence students' career decision					
9	My preferred career is linked to my favorite subject					

3. Please rate the extent to which you agree with the statement about the influence of information collection on your career choice.

You would say: 1= Strongly disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly agree. Tick **(✓)** in the right box.

Information collection		1	2	3	4	5
1	My friends influenced my school choice					
2	Peer advice on career was helpful to me					
3	I visited many sites (blogs, forums, etc.) before choosing my career					
5	I talked to others to obtain information for easier decision-making on my career choice					
6	I considered other people's opinions and constructive ideas related to career choice					
7	I was inspired by people working in my dreamt career					
8	I was provided with a list of careers from which I made a choice					

4. Please rate the extent to which you agree with the statement about the influence of technological environment on your career choice.

You would say: 1= Strongly disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly agree. Tick (✓) in the right box.

Technological environment		1	2	3	4	5
1	I regularly use technology to communicate with my teachers and peers					
2	My instructors use technology to enhance our understanding					
3	My school staff provide important career and education information for us through the school network					
4	I believe that Internet provides crucial career development opportunities					

5. Please rate the extent to which you agree with the statement about the influence of individual factors on your career choice.

You would say: 1= Strongly disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly agree. Tick (✓) in the right box.

Individual factors		1	2	3	4	5
1	I always knew what I wanted to do in the future					
2	I am aware of my abilities and possibilities					
3	I can assess my career alternatives					
4	I can compare my abilities and possibilities with my career alternatives					
5	I explored all my career alternatives in details					
6	I chose my career path after I analyzed all possibilities					
7	I am uncertain about my future					
8	I will just wait and see what I end up with					
9	I chose the career based on the subject matter that is usually easy for me					
10	Employment opportunities affect my career choice					
11	Potential scholarships opportunities for further studies affect my career choice					
12	Good prospects in obtaining a first job without any prior experience affect my career choice					
13	I know the remuneration potential of the career					

14	I understand the marketability of my career of choice					
15	I understand the work habits of the career					
16	My career of choice will advance previously acquired knowledge					

Time when students form their choices on career pathway

5. Please rate the extent to which you agree with the statement about the time at which you made your career choice. You would say: 1= Strongly disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly agree. Tick (✓) in the right box.						
Time when career choice was made		1	2	3	4	5
1	I made my choice when I was still in primary school					
2	I made my career choice after completing primary education					
3	I made my career choice at Ordinary Level					
4	I made career choice after completing Advanced Level					
5	I was allowed to revise my career choice after examination results were released and depending on my grades					
6	I have never made any career decision					

Access to career guidance information

1. Do you have any recommended platform for career guidance? Yes [ ] No [ ]
   If yes, specify.....
2. How often do you visit the career guidance platform? Never [ ], Rarely [ ], Often [ ], Very often [ ]
3. Do you get the relevant information about career guidance? Yes [ ], No [ ]
4. Who recommended you the platform? (e.g. School, teacher, parents, relative, friend)
   .....
5. Do you have any challenge in accessing the career guidance platform? Yes [ ] No [ ]
   If yes, specify.....

Level of satisfaction with the current career choice/course of enrollment

1. Which option are you undertaking? .....
2. Was it the option of your choice? Yes [ ], No [ ]
3. Are you happy with your current option that you are undertaking? Yes [ ], No [ ] Give reason for your answer .....
   .....
4. Are you ready to embrace the career cluster connected to the current option you are undertaking?
   Yes [ ], No [ ]
   Give reason for your answer.....
   .....

5. Do you foresee any employment opportunities linked with your option? Yes [ ] No [ ]?
   Why?.....
   .....
6. Do you any people who graduated in the same option as yours who are employed Yes [ ] No [...]?
   Why?.....
   .....
7. Are they employed in a career cluster linked to your career pathway Yes [ ] No [ ]?
   Why?.....
   .....
8. i. Upon graduation, do you find yourself seeking for a job or creating your own employment?
   .....
   .....
   ii. Give reason for the above response
   .....
   .....

Challenges in career choices

As a student/trainee, what major challenges did you face when making a choice of the career option?

1. .....
2. .....
3. .....

Recommendations

What do you recommend to facilitate Rwandan students in making choices of the career options?

1. .....
2. .....
3. .....

Thank you

II. Semi-structured interview guide for selected staff in the Ministry of Education and affiliated institutions and employment stakeholders

1. How is the institution you are heading/working for working towards ensuring that training is matching today and future employments (career clusters?). Would you kindly elaborate picking one career pathways as an example?
2. Would you kindly share with us what you foresee to be priority professional areas or skills of the future? Is the /institution you are heading/working for having a plan to respond to these specific career clusters?
3. In which professional areas/domains does the Rwandan labor market experience labor shortage and labor surplus? What are the reasons behind and what mechanisms are in place to mitigate this?
4. Do you also agree with the public claim that there is skills mismatch between graduates and labor market? How can this be addressed?
5. To what extent do employers consider the employees' competence or proficiency for the jobs they are hired for?
6. What do you consider to be the factors that give rise to the mismatch between the required qualifications and those available in the labor market?
7. Can do you describe how employers have managed to cope up with the shortage of the required qualifications in the labor market?
8. What are the strategies do suggest to solve the persistent shortage of qualified professionals across sector in Rwanda? Would you say career pathways are important? How should this built and what role is the institution you are heading/working is playing or should play?
9. What are the priority professional areas in the next five years?
10. What is the employers' main role in the preparation and enhancement of the labor force in Rwanda? a) Internship, b) Apprenticeship? c) Short courses for prospect workers, d) Mentorship and coaching, e) Continuous Professional Development programmes?
11. What areas do you focus on in workers' a) Internship, b) Apprenticeship? c) Short courses for prospect workers, d) Mentorship and coaching, e) Continuous Professional Development programmes?
12. How do you describe prospect workers' access to these programmes?
13. What are the challenges that you think need to be addressed for the sustainability of a) Internship, b) Apprenticeship? c) Short courses for prospect workers, d) Mentorship and coaching, e) Continuous Professional Development programmes?
14. Is there anything about this topic that we have not talked about here? If so, what? Describe.....

Thank you.

III. Questionnaire for teachers, Lecturers, Trainers, Registrars, Dean of students, Career Guidance Officers

Provision of career guidance

1. Please rate your level of agreement with the statements around your provision of career guidance to the learners You would say: 1=Strongly disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly agree. Tick (✓) in the right box						
Career guidance provision to leaners		1	2	3	4	5
1	I take time to inspire my students about adult life and work related roles					
2	I regularly discuss with my students how their career choices affect their lives as adults					
3	I often guide students in after-school profile planning					
4	I guide students to develop and maintain academic and career portfolio					
5	I motivate students to share their concerns about academic choices					
6	I motivate students to develop work interests and aims					
7	I initiate classroom discussions that can serve to trigger points for career choices					
8	I play a role in identifying students with special talents and hence guide them accordingly					
9	I guide students in understanding the usefulness of their studies and the related importance					
10	I dedicate special time to explain possible occupations to students					
11	I spend time explaining to students the implication of their academic choices on employment					
12	I guide students to related educational choices and possible occupations					
13	I make follow-up on students' performance in their areas of choice					
14	I involve community members' (alumni, parents, employers, labor union representatives, etc.) in giving talks and mentoring programmes and in providing work experience opportunities					
15	I take time to orient students to ICT resources that can help them develop a profile that can relate to learning and work opportunities					
16	I guide students to match their personal profiles to learning or work opportunities					
17	I guide students to opportunity awareness					

Challenges in offering career guidance to students

As a teacher, Lecturer, Trainer, Registrar, Dean of students, Career Guidance Officer, what major challenges do you face when offering career guidance to students?

1. .....
2. .....
3. .....

Recommendations

What do you recommend to facilitate Rwandan teachers, Lecturers, Trainers, Registrars, Dean of students, Career Guidance Officers in offering career guidance to students?

1. .....
2. .....
3. .....

Thank you.

IV. Questionnaire for employees in the formal/informal sector

Employment

1. **Area of specialization: ----------**
2. **Employment history**

#	Employment	Tick (✓)
1.	Casual day labourer	
2.	Domestic worker	
3.	Industrial outworker	
4.	Undeclared workers	
5.	Part-timer workers/Temporary worker	
6.	State employee	
7.	Self-employed	
8.	Professional hawker	
9.	Not employed	
10.	Work with private institution/Company	

Skills required for job

Make your choice in III.1, or III.2, or III.3, or III.4 appropriately and jump to Part IV

1. **Level One skills (Simple and routine physical or manual tasks)**

#	Skill type	Tick (✓)
1	Cleaner	
2	Garden labourer	
3	Kitchen assistant	
4	Lifting and carrying materials by hands	
5	Sorting	
6	Storing	
7	Assembling goods by hands	
8	Picking fruit and vegetables	
9	Operating non-motorized vehicles	
10	Digging	

2. **Level Two skills (requiring ability to read information and make written records)**

#	Skill type	Tick (✓)
1	Bus driver	
2	Secretary	
3	Account clerk	
4	Sewing machinist	
5	Dress makers	
6	Shop sales assistant	
7	Police offer	
8	Hair dressers	
9	Building electricians	
10	Motor-vehicle mechanist	
11	Butcher	

3. **Level Three skills (Involves the performance of complex technical and practical tasks)**

#	Skill type	Tick (✓)
1	Shop manager	
2	Medical lab technician	
3	Legal secretaries	
4	Commercial sales representatives	
5	Diagnostic medical radiographers	
6	Computer support technician	
7	Broadcasting and recording technicians	

4. **Level Four Skills (Involves performance of tasks that require complex problem-solving, decision-making and creativity**

#	Skill type	Tick (✓)
1.	Sales and marketing managers	
2.	Civil engineers	
3.	Teachers	
4.	Medical practitioners	
5.	Musicians	
6.	Nurses	
7.	Computer system analysis	

Job obtainment

How did you secure the current employment?

Criteria	Tick (✓)
Open competition	
Recommendation	
Completion of internship	
Self-employment	
Other (specify)	

Career Development

1. **Does your job match your expected job before you completed your education?**

   Yes [...] No [ ]

   How.....

   .....?

2. **Concerning that work, what were the reasons you are engaging in it?**

Criteria	Tick (V)
You had no other option	
It is the only work you knew how to do	
It was a secure work	
The business belongs to your family	
Your boss was from the same area	
It was nicely paid	
It was a work that is socially well accepted	
You were able to engage with friends and colleagues	
You were able to learn a lot	
You had the option to upgrade your position	
It matched my qualification	
I do not know	

3. **How confident are you about the possibility to realize your wishes concerning your professional career in the future?**

   1: Not confident [ ], 2: Slightly confident [ ], 3: Neutral [ ], 4: Confident [ ], 5: Very confident [ ]

4. **Do you see yourself building career in your current job? [Yes] [No]**

   Give reason for your answer .....

   .....

5. **Are you intending to change your current career? [Yes] [No]**

   Give reason for your answer .....

   .....

6. **Have you ever had any on-job training? [Yes] [No]**

   i. If yes, when

Last 1 year	
Last 2-4 years	
Above Last 5 years	

   ii. Who sponsored the training? ----------

7. **How important were the following institutions in offering the necessary orientation that prepared you to secure a job?**

Please rate the level of the contribution of the following institutions/people in offering the necessary orientation that prepared you to secure a job. **You would say: 1= No contribution at all, 2: Very little contribution, 3: Not sure, 4: High contribution, 5: Very high contribution. Tick (✓) in the right box.**					
Criteria	**1**	**2**	**3**	**4**	**5**
My school					
My university					
My friends					
My classmates					
Civil society organizations					
My former jobs					
My teachers/Lecturers/Tutors					
My school/University Officers					
My family					

8. How important were the following institutions for offering the necessary skills and for preparing you for the demands of your job?

Please rate the level of the contribution of the following institutions in offering you the necessary skills and for preparing you for the demands of your job. **You would say: 1= No contribution at all, 2: Very little contribution, 3: Not sure, 4: High contribution, 5: Very high contribution. Tick (✓) in the right box.**					
Criteria	**1**	**2**	**3**	**4**	**5**
Experiences within the family					
Knowledge achieved in school					
Knowledge achieved in university					
Doing things and developing ideas with friends					
Engagement in civil society organizations					
Experiences in former jobs					

9. Challenges

As an employee in the profession, what are the major challenges did you face in relation to your career pathway?

1. .....
2. .....
3. .....

Recommendations

What do you recommend to facilitate your career development?

1. .....
2. .....
3. .....

Thank you