REB RWANDA BASIC EDUCATION BOARD

The enduring journey to improve the quality of a Rwandan teacher

INTERVIEW

Strengthening education from foundation level is our priority – MoS Twagirayezu

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The Rwanda Basic Education Newsletter

VETERAN TEACHER REFLECTS on the transition from Normale Primaire to modern TTCs

HOW TEACHERS WITH VISUAL IMPAIRMENT are finding their eyes in mainstream education

FOSTERING STUDENTS' INNOVATION THROUGH MATH AND SCIENCE PROJECTS

FOREWORD

Dear valued leader;

We are back with our second edition of the Rwanda Basic Education Newsletter which provides insights within the realm of basic education in our country, ranging from efforts to incentivize teachers' training to inclusive education.

I want to invite you to delve into this publication and where possible, give us your feedback on how we can do it better.

This edition of our quarterly newsletter, is once again a product of Rwanda Basic Education Board (REB) in partnership with World Bank (WB) to chronicle milestones within the country's basic education sector, analyze the impact of policy and challenges faced as we move forward.
In this edition, we look at the transition from the old system of training teachers which mainly facilitated the delivery of knowledge-based education, to the new one that puts the learner at the center of academic delivery.

The main highlight of this edition is an extensive exclusive interview we had with the State Minister in charge of Primary and Secondary Education, Hon. Gaspard Twagirayezu, who emphatically talks about the importance of foundational learning in a child's academic journey and the efforts that the Government of Rwanda has put in place towards this endeavor.

We also tackled what is being done to promote inclusivity in our education system, especially by involving teachers with disabilities in our mainstream education system, the support given towards this and the challenges that remain.

As part of the competence-based curriculum which the Government of Rwanda rolled out in 2016, we have put focus on churning out students who after high school, already have foundational skills in different professional areas. In this edition, we shine a light to the deliberate efforts to promote accountancy and entrepreneurship right from secondary schools working closely with professional bodies like the Institute of Chartered Public Accountants of Rwanda (ICPAR).

As I conclude, I want to make a rallying call to parents as key stakeholders on our journey on academic delivery to play their part in the education of our children because, the efforts we put in would be in vain if we do not have the active participation of parents, and this does not necessarily mean that they should have an education themselves. All it requires is following up on a daily basis on the children's education.

Thank you

Dr. Nelson Mbarushimana
Director General of Rwanda Basic Education Board (REB)

INSIDE

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Fostering students' innovation through math and science projects

Students at FAWE Girls School in Gisozi Sector, Gasabo District which is one of the schools where PBL is being implemented.

Micheline Irasubiza, a senior-two student at FAWE Girls School in Gisozi sector, is a young vibrant girl who can programme instructions and give commands to a robot to carry out given tasks.

Confidence in expression with eyes full of light and smiles reflecting the enthusiasm could be seen on every girl's face as each took their turn to present the projects developed in different teams.

With a mastery in English language, the students explained how the solar energy project cuts costs, helps in electrification in rural areas, and plays part in climate resilience efforts or how the use of ICT in 3D printing projects allows them to not only solve real life problems but helps them understand the application of different coursework.

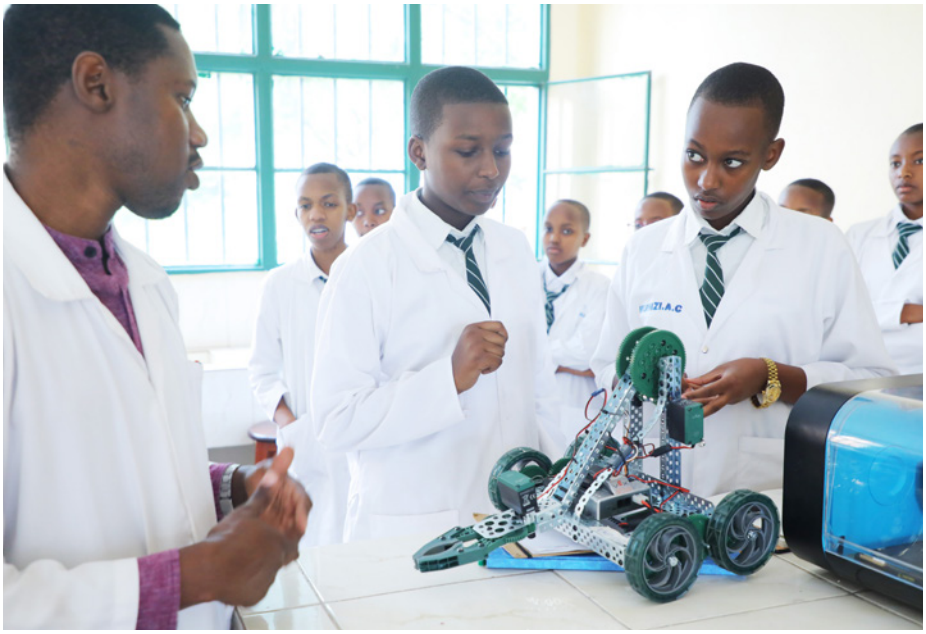
"It is very easy to study some subjects that are considered complicated because we are able to relate the theory with the practical part of it and hence, easy to memorize. For instance, we are able to use math formulas while designing and printing objects with the 3D printer or giving commands to robots," Irasubiza said.

It could be seen that Irasubiza and her colleagues dressed in laboratory coats could operate knowledgeably the different tools laid across tables in the four-walled room under the supervision of their teacher and lab technician.

Funded by World Bank, Rwanda Basic Education Board (REB) partnered with the University of Rwanda to introduce the Project-Based Learning (PBL) programme to support professional development of math and science teachers (sub-component 1.2) over five years (2019-2024).

PBL is an innovative teaching method in which students learn by actively engaging in real-world to identify societal problems or development needs and use hands-on projects to find possible ways of solving them.

This sub-component seeks to modernize instructional tools and enhance the



knowledge and pedagogical practice of Mathematics and Science teachers in upper primary through lower secondary grades (P4 to S3).

Emmanuel Shyaka, the Coordinator of Single Project Implementation Unit (SPIU) of World Bank-funded projects at REB, said that the programme was initiated to solve the issue in education system where students only learned theory but had no practical skills in sciences.

"Even the teachers had limited skills with limited equipment for practical experiments. This project allowed us to train teachers so that they can teach students with innovative approaches," he explained.

Rwanda Basic Education Board

Under the programme, REB provided packages for PBL including robots, 3D printers, and microbit kits to 16 model schools, 16 TTCs and 30 MS4SSA (Math and Science for Sub Saharan Africa) secondary schools in order to implement the Competence Based Curriculum projects.

> "They now understand how the concept of Mathematics and Physics can be applied in real life. This will allow students to graduate with an understanding of realities on the market and practical knowledge that they can use to even generate an income at a young age

Beneficiaries are students and maths and science teachers in 573 secondary schools and 418 primary schools from 16 districts which are not covered by MasterCard Foundation.

In total, 3,128 laptops and 3,128 projectors were provided to beneficiary schools in order to improve quality of mathematics and science studies.

The programme also includes providing formative assessment packages (plickers, voting cards, and show me boards) to schools to support formative assessment by collecting and providing a quick feedback from/to students as well as 18 scripted Math and Science lessons for teachers.

Shyaka encouraged parents and guardians to create a conducive environment and facilitate students with basic materials to revise their lessons as they endeavor to gain practical skills, even outside school premises.

This innovative approach was to implement the CBC whereby students develop deep content knowledge as well as critical thinking, collaboration, creativity, innovation, and communication skills.

Jean Pierre Nambajimana, a mathematics teacher at FAWE Girls School Gisozi, said that the introduction of PBL has helped learners to open their minds to see that the knowledge acquired in class can be applied to develop their own projects.

"They now understand how the concept of Mathematics and Physics can be applied in real life. This will allow students to graduate with an understanding of realities on the market and practical knowledge that they can use to even generate an income at a young age," he noted.

However, he said that they still need more materials and training for teachers in different fields to use the concept of PBL as well as additional time for students to develop projects.

Going forwards, REB expects to train a total of 252 teachers and tutors on PBL. At least 122 teachers, 25 females and 97 males have already been trained.

Irasubiza intends to pursue her upper secondary education in Math, Physics, and Computer Science because she understands that the future will be powered by technology across different fields.

"I have to specialize myself in that area to be relevant in the times to come," she said confidently.

The enduring journey to improve the quality of a Rwandan teacher

For the last 14 years, Teacher Training College (TTC) Bicumbi has been churning out quality teachers for both preprimary and primary schools.

It was previously known as GS Bicumbi, offering Normal Primaire, (a section training primary education teachers in the old system), Bio-Chemistry, languages and literature.

Later, other sections were dropped and the school only remained with the teachers' training department, then still under the *Normale Primaire* system.

It was not until 2009 when the government introduced Teacher Training Colleges to replace what was known as Normale Primaire that 16 TTCs, including TTC Bicumbi, were created.

TTCs were initiated with a vision of creating excellent training facilities that will train pre-primary and primary education teachers across the country.

The mission was to produce competent, professional and responsible pre-primary and primary teachers to provide the desired quality education for Rwandan children.

According to Bernadette Nikuze, the principal of TTC Bicumbi, the government recognized the need to improve the quality of education starting with training quality teachers.

TTC Bicumbi is located in Nzige Sector, Rwamagana District in Eastern Province. It is a calm place with a lush green environment, with several trees and vegetation surrounding the school.

It has 12 classrooms and a staff wing. The school has four options and currently has a population of 599 students; 286 of them girls.

Towards a brighter future

For Nikuze, enrolled teaching students at TTCs are much more equipped than those in the former *Normale Primaire*, a system she says she is well acquainted with.

She says that in the current system, students have a chance to specialize in selected subjects unlike previously.

"The TTC model is very promising unlike the former system," says Nikuze.

"Students under Normale Primaire were overwhelmed as they had to study all the subjects and ended up mastering none," she notes, adding that this was a letter offloaded on students.

In addition, they had to study teaching methods and other professional subjects such as psychology.

With TTCs, this programme was abolished, giving the aspiring teachers the opportunity to choose one option to master.

The options include Early Childhood and Lower Primary Education (ECLPE), Social Studies Education (SSE), Languages Education (LE), and Science and Mathematics Education (SME).

They also study core subjects mainly Foundations of Education, Social Studies, Creative Performance, Physical Education, English, Kinyarwanda, French, Kiswahili, and Entrepreneurship.

Others are ICT, Teaching Methods and Practice, Special Needs and Inclusive Education, and Religious Education.

They also participate in co-curricular activities.

Nikuze says that from the time TTCs were introduced, a lot has changed which has helped to boost the quality of education and ways of nurturing future teachers.

"When the teaching students have one option, they are more motivated and are able to perform better than when they studied all the subjects. We have registered significant change in performance and the feedback from schools is impressive," she said.

"Students are no longer overloaded. Studying all the subjects was a bit tiring and quite boring," she added.

Students 'highly motivated'

Referring to her college, Nikuze said that on top of having options to choose from, there are qualified teachers to teach in the respective options, which is in stark difference with the previous system.

"We have a Teacher Resource Centre (TRC), where teachers and our students develop teaching aids that they use in teaching. At the facility, they get used to the aids which will help them offer courses in a friendly way," she says.

Another incentive, she says, is the government subsidy on school fees for O Level leavers who opt for TTCs, where the government pays 50% and parents pay the rest.

This, she says, is a huge motivation and beneficiaries learn hard, eager to serve their country as they know they are supported.

Teachers who are trained at TTCs are certified with Microsoft Educator (McE) certificate, which is internationally recognized.

"All students are trained in ICT and sit for an international online exam where they get Microsoft Educator (McE Certificate), this helps them to master ICT as a tool of education on top of normal courses," she says.

In ICT promotion, TTC Bicumbi works with different partners to co-implement a project dubbed Prism, where the school acquired over 90 smartphones with an internet connection to allow student teachers to learn science and other courses.

"We also have two Smart Classrooms with over 100 computers where student teachers acquire ICT skills and other courses related to it. Smart classrooms also help students to do research on their respective subjects while teachers use them to prepare lessons," she says.

Nikuze believes with ICT tools at school, the learners as well as teachers find it easier to study and dispense courses, making the learning process fun.

"Besides platforms, we have at school, the Rwanda Basic Education Board (REB) has set up a platform where students access online resources which make learning easier, it is something we are proud of and students and teachers no longer depend only on physical libraries," she adds.

Teachers also say that they are motivated by the increase of their salary by the government, which also inspires the prospective teachers at the school.

Students upbeat

Parfait Kami, 21, a second-year student at the college, is optimistic that he will excel in his teaching career after graduation.

"Becoming a teacher has always been my dream, I feel like it is a calling and that is why I chose to join TTC. I want to be a role model and make a positive contribution to society," he says.

"I am proud of the government's support. As aspiring teachers, we have all the requirements at school, we have quality teachers and adequate learning materials. We have ICT facilities that complement traditional ways of teaching, besides, teachers are no longer the least paid employees as was the case before," he adds.

Emmanuel Shyaka, SPIU-Coordinator at Rwanda Basic Education Board

Vincent Ndabamyenye, who graduated from TTC Bicumbi in Early Childhood and Lower Primary Education (ECLPE), went on to the College of Education to further his education.

Currently, Ndabamenye is a teacher at the same TTC offering Foundation of Education and teaching methods in ECLPE.

"I studied well at TTC and got a scholarship after passing the national exams . At University I also worked hard and acquired necessary teaching skills that I apply here, I feel like giving back to the community by being a teacher at the same college that trained me," he says.

"I am grateful that TTC student teachers also have a chance to further their education on top of other advantages, I don't regret having joined TTC as a student as I am paid almost the same as other people with the same level of education," he said.

Besides, Ndabamenye added that he paid less money than others paid as TTC students pay 50% of school fees and the government covers the rest.

The transformation of the TTC is being championed by REB working with partners such as the World Bank.

Emmanuel Shyaka, SPIU-Coordinator at REB, says that plans to renovate TTCs are underway to ensure that this, among other initiatives, continues boosting the colleges and enhancing the quality of education in the country.

Shyaka said that tens of billions of francs will be injected into the rehabilitation of TTCs and model schools – which have been identified near each college to offer practical skills to TTC students – over the next three years to ensure modern facilities.

The Ministry of Education not only plans to rehabilitate TTCs countrywide but also equip them, through REB, with good laboratories.

Veteran teacher reflects on the transition from Normale Primaire to modern TTCs

Jean Nizeyimana vividly remembers how hectic the teaching and learning process used to be during his time as a teacher under the Normale Primaire system through which teachers were trained.

The veteran teacher whose experience spans more than 20 years has never changed his career.

He began as a primary school teacher before upgrading to a tutor in the then Normale Primaire and was lucky to be part of the transition to the current Teachers Training College (TTC) where he now teaches.

"It was a frantic experience," he says, referring to teaching in the old system. "Though we had a syllabus from the Ministry of Education, there were not enough didactic materials such as textbooks and other learning aids. Sometimes teachers could share one book," he says.

"For teaching materials, teachers used to improvise. Some aids did not reflect context. At the time, most teachers came from neighboring countries especially DR Congo and each teacher could use different books to teach similar subjects," he adds.

Nizeyimana, 50, currently teaches Foundation of Education and Teaching Methods of Sciences and Mathematics at TTC Bicumbi in Rwamagana district. He speaks of a stark difference between both systems.

The father of four notes that teachers did not have limitations, it was up to an individual teacher to determine where the course ended, saying there were a lot of inconsistencies.

"For instance, there was no difference in course outline for senior four and senior five students," he says. "It was vague and tiring, teachers had to work hard to do their work and hardly assessed the results," he adds.

For instance, as a former teacher of pedagogy in the old system, he says he had to teach without any teaching materials and depended on old notebooks from his time as a student himself.

"If it was for instance general teaching method or developmental psychology, I could teach without taking care of the context," he notes adding that it was as difficult for teachers as it was for the students.

"A student under Normale Primaire had to study all subjects. They were also supposed to teach all the subjects in primary school after graduation," says Nizeyimana.

Jean Nizeyimana has been a teacher for more than 20 years.

He says that shortly after the 1994 Genocide against the Tutsi, there was shortage of teachers, especially tutors.

"The government had to recruit teachers from other countries and those who had completed universities but teaching qualification was not a requirement," Nizeyimana says.

All this, he says, greatly affected the quality of education.

Difficult experience

Nizeyimana recalls that teachers' morale was low before due to meager salaries as a graduate with a bachelors' degree earned a mere Rwf52,000 while an A1 diploma could get Rwf32,000 back in 2006.

"Being unmotivated and teaching students who knew they will be teachers as well was not helping education sector development in the circumstances," he says.

A new dawn

Nizeyimana says that things started to improve gradually when the government made changes and introduced Teacher Training Colleges (TTCs) to replace Normale Primaire.

The shift, he says, came with significant changes which meant aligning the teaching system with the needs on the labour market.

It allowed students to specialize and master specific subjects other than studying all the subjects taught in primary school, which in the end makes them better teachers.

"The curricula were revised and aligned with the needs on the labour market, it also became mandatory that teacher trainers should have been trained in education, options were introduced and students had to choose what they want," he says.

"It eased teaching because we had clear guidance, more didactic materials were developed and more books were provided," he added.

Competence-based curriculum

Years after the TTCs were introduced, the government, through Rwanda Basic Education Board (REB) introduced the Competence Based Curriculum which is learner centered approach to replace a knowledge-based curriculum.

"Student teachers became part and parcel of the teaching and learning process, education was not just about imparting knowledge, but students were more involved in the process," Niyeyimana says.

"After student teachers shifted from studying all the subjects to choosing options, they were motivated as they could choose their preferred options," he says.

According to the veteran teacher, this boosted the quality of education in TTCs and in Pre-primary and Primary schools where the trained teachers were deployed to teach.

"It is currently mandatory for Pre-primary and Primary teachers to have a TTC background and those who we produce are well prepared for the job," he says.

For Nizeyimana, being a teacher is as promising as pursuing another profession. In close to over two decades as a teacher, the veteran teacher has registered a lot of progress ranging from raising his family to educating his children as well as to furthering his education.

He works with Umwalimu Saving and Credit Cooperative (Umwalimu SACCO) to save and acquire loans that he uses to complement his salary and invest in different activities.

"I have built my own house and have been able to raise and educate my children, I have no other business other than teaching," he says.

"I was able to pursue a master's in education with focus in leadership and administration and I also helped my wife to study her bachelor's degree, we are both teachers and we manage to cater for our family," he adds.

Nizeyimana's future dream is to see his children growing well and acquiring quality education.

"I also plan to use the salary and other opportunities to build a commercial house," he says. "We are grateful to the government that teachers are better off just like other public servants, we are committed to educating future teachers," he adds.

Strengthening education from foundation level is our priority – MoS Twagirayezu

As part of the ongoing effort to boost the quality of education in Rwanda, the Government established the National Steering Committee on foundational learning. To get insights on this development and other efforts in place improve the quality of education and general learning outcomes, we interviewed the **State Minister in charge of Primary and Secondary Education, Gaspard Twagirayezu** to get his insights and below are the excerpts

Recently, the government a few days back, established the National Steering Committee for foundational learning. Briefly tell us about the mandate of the committee and its expectations.

We have recently established National Steering Committee for Foundational Learning and the idea of that committee is to make sure that we set foundational learning as one of our top priorities.

This steering committee includes some of the major stakeholders in foundational learning – and by that we mean literacy and numeracy – especially in the first three years of primary school.

What we intend to do with the steering committee is to catalyze or to find commitments among stakeholders to increase investments in foundational learning. Together with the steering committee, we also have a regular Foundational Learning Symposium, and this is also part of those efforts to ensure that we bring together all the stakeholders in that space.
And I think what is most important is not the committee or the symposium, but the role of foundational learning. We have made different efforts to increase enrollment in primary schools. There is still a very long way to go, but we have done a good job in enrollment in primary schools.

So, the big question is if kids are now able to go to school but what type of education do they get and when they go to school, what do they get

there? Quality of education has been a conversation for some time here and we believe that quality starts at the beginning.

The efforts we are putting in foundational learning is to ensure that students get a stronger early foundation. There is science that proves that if students start their first years of primary school with a solid foundation of numeracy and literacy, the rest of their journey in education becomes easier.

Globally, majority of students who are about 10 years old cannot read and understand a simple story, that shows you that the problem we are trying to tackle is not just a Rwanda problem but global.

Our unique approach to it is to ensure that we have a very high level of coordination. So this is why the steering committee in place and also the symposium that keeps coming in. And out of that, we have also built a strategy that revolves around foundational learning.

One cannot speak of foundational learning in isolation of the concerns over the declining knowledge of Kinyarwanda among Rwandan children. Is this something that is of concern for you?

If you look at what we have done, especially in the public education system, Kinyarwanda actually takes a very important place considering the timetable allocation and number of hours dedicated to Kinyarwanda.

At least in terms of curriculum and policy, it's there. However, if you look at it from families' perspective, you will see that there is also a question of mindset around Kinyarwanda. There are some parents who will tell you that your child speaks a lot of Kinyarwanda, meaning that there is an increasing feeling that our students, our children need to use foreign languages.

That's true, they need to know foreign languages, but we cannot forget Kinyarwanda. So, this why when we evaluate our children, we want them to be able to read and comprehend text in Kinyarwanda by the time they complete primary three.

We want to make sure that both languages, English as our language of instruction and Kinyarwanda as our mother tongue are given an important place in education.

I also have to admit that the level of Kinyarwanda spoken among adults has a source in how they have been educated. So, this is why we need to ensure that Kinyarwanda is given its right place in our education system but also make sure that our assessments are checking that our kids can speak, write, and comprehend both Kinyarwanda and English.

We have also started efforts to revamp French instruction.

UNESCO says that education in the mother tongue is a key factor for inclusion and quality learning, and also improves learning outcomes and academic performance. What do you have to say about this?

There have been several debates around the language of instruction, what's effective and what's not. But we know that there is also a science on language acquisition at early age.

We are focusing on ensuring that our children get sufficient instruction in both English and Kinyarwanda, especially in their first years of primary school. We have made several efforts to support teachers, have the right textbooks and materials.

But the bottom line is that Kinyarwanda holds an important place in education system.

There have been efforts to upgrade TTCs both in terms of infrastructure and in terms of academic delivery. How far is this journey?

We have 16 Teachers Training Colleges across the country and these institutions graduate over 2,000 young Rwandans who want to go into the teaching profession every year.

Our quality of education cannot exceed that of a teacher, hence, we want to invest in teacher training and education. This is why we decided to revamp the colleges and programmes.

In 2020, we published their competence-based curriculum framework to ensure that our students who are learning to be teachers are also trained on modern ways of teaching.

We also make sure that their teachers are supported and we pay 50 percent of tuition fees for students who join TTCs and we choose some of our best students who go into those TTCs.

We also thought that we should increase the capacity and infrastructure quality

at Teacher Training Colleges. Part of our World Bank-funded Quality Basic Education Projects. We have allocated funding towards upgrading all the 16 TTCs.

We have done a feasibility study at each college, some have chosen to increase the hosting capacity, others are prioritizing equipping laboratories and libraries, so these are the things that we are improving, and construction has started in some colleges.

It's not only the TTCs but also practice schools, meaning each TTC gets a nearby primary school for practice because getting the theory part and practice is equally important.

We are also building the new school at the University of Rwanda College of Education to ensure that the students learning at the university also get a place where they can practice and test the new pedagogies that they would want to implement.

Why did government find it necessary to transition from Normale Primaire to current TTC system?

In 2016, we established what we call the competence-based curriculum in our primary and secondary schools and the whole purpose was to put the students at the center of learning. To always ask ourselves whether our students are able to relate with the world they live in, to communicate, to work in teams and solve problems.

And of course, this kind of curriculum is implemented by teachers, so this is why education for teachers was also reinvigorated to ensure that our teachers have expertise in what they teach but also the methodology of teaching because we were transitioning from the knowledge-based system to the competence-based system.

That was the main rationale in revamping the teacher education but there also other things we are thinking about to improve our teacher education so they can support our students in classrooms and also have training for in-service teachers to upgrade their knowledge while they are teaching.

The State Minister in charge of Primary and Secondary Education, Gaspard Twagirayezu admires the work of a student during a recent inter-school VEX GO league robotics competition.

And what is being done to attract best teachers that graduate from these TTCs and university to teach in Rwandan schools?

It starts when they choose those who join TTCs. We have put in place different incentives for them where 50 percent of their tuition is paid for by the government and over the past few years, we started attracting the best performers from senior three students into TTCs.

Our efforts of improving TTCs also works towards making sure that they go to good schools, have good facilities, good teachers, and everything they need to succeed.

Of recent, the government also increased salaries up to 88 percent of primary school teachers and this was to ensure that they are almost at the same level as any other public servant at their level in local government.

We also embarked on a journey of providing the right technology and training as well as building proper structures around to serve them.

Recently, it was announced that some schools would be connected to the Starlink high speed internet. What is the nexus between this development and quality education?

We talked about technological efforts put in place to make sure schools increasingly have access to internet and devices, and we are working onincreasing the number of schools connected to internet which is very key to our modern way of teaching.

We have schools connected using fiber, 4G LTE, and recently with our partnership with Tony Blair Institute, we connected some schools using Starlink internet. This is a way to diversify our pool of technologies to connect our schools.

Satellite internet is good because there are some schools that do not have a physical connection to fiber and this is very key to ensure that they also have a higher bandwidth connectivity. We are always grateful for different partners who come on board to help us connect some of these schools.

Affordability is going to be a continuous discussion with our technology providers because we want to consider internet as any other basic utility.

The government has also highlighted Early Childhood Development (ECD) as a key aspect for healthy growth of children and their ability to develop to their full potential. In a broader picture what is their current impact, particularly as they transition to basic education?

For quite some time we have considered that a child goes to school when they go to primary school, and this is not right. In our system, a child needs school preparation when they are at least three years old.

We need to do that because it improves preparedness for when they are in primary school, and this also solves many problems that we face, especially foundational skills.

As of now, we have a little bit above 25 percent of our children who attend pre-primary school and this is a problem that we need to address because that means that we have many children who only get first experience of school when they are six years old.

However, we need to recognize the efforts of the government to invest in different ECDs. Our ECD and education policies are complimentary. At 3, that's when they are supposed to receive early childhood education which is basically pre-primary, and at 6, they begin primary education.

Whatever kind of education or stimulation they get, even before they are born by the way, have an impact on their educational journey.

We are working with NCDA (National Child Development Agency) and Ministry of Gender and Family Promotion and partners to ensure that children in home based ECDs also get numeracy and literacy education and ultimately ensure that they have access to formal schools.

What is the update on the construction of new schools and classrooms in different schools across the country?

When we started building these schools, we wanted to do two things; one was to reduce the distance travelled by learners and second, to reduce student per classroom ratios.

Since 2020, we have added more than 22,500 new classrooms and this has resulted into more than 615 entirely new schools. Of course, if a student is travelling lesser distance and teachers have more room to interact with students, then that has huge positive implication on the quality of education.

However, we are not there yet. If you look at the average students to classroom ratio, it reduced from 73 to 59 and we would want to have at least 46. This means we still have a long way to go.

The government has of recent embarked on a campaign to promote STEM learning in Rwandan schools. Why this and how far have you gone in this regard?

STEM is a huge part of our education system but also in our lives. The attributes of the competence-based curriculum itself are beneficial to STEM in our schools. We have seen increased numbers of students enrolling in science combination.

There are different ways to improve STEM education and it starts with the programmes that students learn, of which we made a few tweaks in 2020 to ensure that all students study mathematics, ICT, and English, and we wanted this to be cross-cutting.

That way we have also been increasing numbers of available materials in STEM and this includes some science kits that we distribute, but also increasing constant efforts to improve content in STEM.

But at the same time, we also looking at the modern ways of teaching STEM, we are talking about coding, robotics, among others, to become active citizens in this change by the time they graduate.

As we conclude, what message would you have for parents as key stakeholders in the education ecosystem?

Parental engagement in education at all levels is very important. We need to make sure that the parents are involved and support students when they get home.

This has implications on dropouts. A survey done a few years ago indicated that one of the main reasons of school dropouts is family issues. This is a huge issue that we want to tackle.

We have tried to reduce the burden of education on parents by affordability and scaling up school feeding program where a parent is only asked to contribute rwf15 per day. We ask parents to double their efforts not only in contribute to this program but also reminding their children to go to school and remaining there.

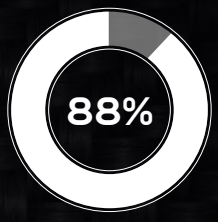
Thank you.

Teachers Training Colleges

2,000

There are 16 Teachers Training Colleges across the country and these institutions graduate over 2,000 young Rwandans

Teachers' salary



The government increased salaries up to 88 percent of primary school teachers

Internet connectivity

There are schools connected using fiber, 4G LTE, and Starlink internet thanks to the partnership with Tony Blair Institute

REB moves to instill Rwandan values, enforce English among TTC students

Students at TTC Save in Gisagara District during a physical exercise. DG Nelson emphasized the importance of growing the culture of sports.

The Rwanda Basic Education Board (REB) has embarked on a new campaign aimed at reaffirming cultural values, highlighting the importance of sports activities, as well as fostering English proficiency as a language of instruction in schools.

The campaign targets students in Teacher Training Colleges (TTCs) and will later on be expanded to education settings.

In a well-attended morning run at TTC Save by five schools in Gisagara, the Director General of REB, Dr. Nelson Mbarushimana, joined by the district vice-mayor, Donatille Uwingabiye, and other officials, participated and delivered key remarks.

Dr Mbarushimana reminded the students that as future teachers, they must uphold cultural values notably unity, patriotism, social cohesion, resilience, and hard work as they take on their courses and grow into their careers.

"By laying this foundation for these teacher students, we believe that they will take on the responsibility to pass on these values to the next generation that they will be teaching," Mbarushimana noted.
In his interactions with the aspiring teachers at TTC Save, he emphasised the need to focus on research to improve knowledge and urged the prospective teachers to always be thirsty for skills relevant in the 21st Century as the world continues to evolve.

"As teachers, you need to prepare lessons creatively using digital tools to improve the attention and memory capacity of students, simplify your teaching delivery and make a classroom a conducive environment for learning," he told them.

This, Mbarushimana added, goes in line with teachers' participation in sports and exercise activities that they also highly need not only for their health but also for enhanced productivity.

Fr Jean Bosco Uwizeyimana, principal of TTC Save, is of the view that sports plays a big role in developing one's memory capacity and discipline which both result in better academic performance and behaviour cohesion in society.

Meanwhile, Dr. Mbarushimana also visited Groupe Scolaire Officiel de Butare –Indatwa n'Inkesha where he took time to interact with students and delivered his message in line with the campaign.
The REB chief also witnessed the final inter-school sports competition in the Southern Province.

Proficiency in English

In Rwanda's education system, English

is used as the language of instruction in schools and the Ministry of Education aims at ensuring that teachers are trained to sharpen the students' fluency in the language so as to be competitive on the market.

Rwanda only adopted English as one of the official languages of instruction in 2008 after going decades on French language. Dr. Mbarushimana said that REB is investing more efforts and resources to strengthen English clubs in TTC schools and organize competitions among schools during the third trimester of the academic year.

The competition will take into account the reading, writing, listening, and debating capacity of students which will enable them to graduate with adequate skills –including in public speaking.

Uwizeyimana thanked the ministry for choosing TTC Save as a host school for these upcoming competitions which will serve as a motivation to do even better in the highlighted areas.

Visit to Zimbabwean teachers

The Director General also paid a courtesy call on Zimbabwean educators in their homes in Gisagara District and discussed their experience in the school, challenges, welfare and other key areas of partnerships.

The Ministry of Education last year recruited 154 Zimbabwean teachers and deployed them in TTCs, Technical and Vocational Education and Training (TVET) schools with rare skills requirements, three Integrated Polytechnic Regional Centres (IPRCs) and some in the University of Rwanda's College of Medicine and Health Sciences (UR-CMHS).

This is under the partnership on education personnel and expertise between the two countries to improve quality education since they have a common competence-based curriculum.

Dorcas Chinwa, one of the Zimbabwean teachers, said the experience has been good and the use of ICT is favourable but highlighted that there is room for improvement in harnessing the use of English and collaboration among teachers.

REB continues to make deliberate efforts in promoting digital learning by establishing smart classrooms and rolling out the internet in different schools across the country.
At the same time, digital learning materials in the form of edutainment and e-learning platforms in addition to in-house textbooks are one of strategies buoyed towards improving the quality of education in Rwanda.

How teachers with visual impairment are finding their eyes in mainstream education

Jovine Uwamariya, a teacher with visual impairment conducting a lesson to her students at Groupe Scolaire Ste Famille.

Jovine Uwamariya is an English teacher at Groupe Scolaire Sainte Famille in Kigali City. She might not know her surroundings by sight, but she definitely knows how to organise and distinguish her teaching materials, as well as navigate around the school premises by heart.

Other than relying on a colleague to double check the pages on which unit in an English textbook she is teaching, Uwamariya sets out all by herself to teach students in Senior One.

But before that, while in the teacher's room, she asks a colleague to page mark the unit from the English textbook with the day's lesson, and she then sets out to the classroom on her own with her braille book and box of chalks.

Loud and clear, she sounded, as she delivered the lesson with vivid explanations, examples and exercises using a braille textbook. Uwamariya walked around the class to reach and engage students through questions and answers.

For assessment, students are verbally told the questions whose answers they write down in their notebooks and exchange between themselves for marking while she engages them to write the correct answers on the chalkboard for all to see.

When Uwamariya got nerve complications that damaged her eyesight at a young age, her parents did not limit her growth but treated her like other children in terms of social participation and education. However, the question remained on whether she would ever secure a job.

"I could have been a mathematician or a doctor, but imagine me administering anesthesia while visually impaired," she laughed at the example while pointing out that there are some professions that she couldn't pursue because of her situation.

This, however, did not limit her career path. As someone who grew up aspiring to become a teacher, Rwanda's efforts to achieve inclusivity in all sectors, especially in education helped her land a job at GS Sainte Famille.

Uwamariya is one of the 25 teachers with visual impairment deployed in different schools around the country by Rwanda Basic Education Board (REB) after undergoing normal procedures of applications on teacher e-recruitment portal and receiving training sessions.

"I studied education at university and scored high. In 2021, I submitted my application like everyone else, I did not get any favour but my marks qualified me for this job. I was only facilitated to work from the nearest and accessible school," she said.

Uwamariya was hired through the e-Recruitment portal through which all teachers in public and government-aided private schools are recruited.

Venantie Mukanziza, specialist at REB's Special Needs and Inclusive Education (SNIE) Unit, noted that it required advocacy and extended awareness for school administrations to integrate these teachers in the environment and provide necessary assistance.

As part of the SNIE programme, the World Bank, through the inclusive education initiative, sponsored the training for schools' head teachers to welcome and integrate the visually-impaired teachers, and provided materials such as braille textbooks, assistive devices, and computers, among others.

The World Bank support is part of the broader Quality Basic Education Programme, which supported countrywide disability-inclusive school infrastructure expansion that enabled access to school facilities.

Consideration was also given for accessibility features in design to ensure that children with physical disabilities have easier access to facilities like classrooms, washrooms and blackboards, the development of professional training modules and delivery of teacher trainings on inclusive education, among other interventions.
"Inclusive education should start at an early stage by parents breaking the barriers for their children with disabilities to access education and having these teachers enrolled in mainstream education. It inspires the students to go beyond and attain success without excuse," she said.

Despite also being visually-impaired, Mukanziza brings in a wealth of expertise in inclusive education for people with special needs at REB.

The SNIE unit works to implement REB's mandate of mainstreaming gender and ensuring equitable access to quality education for students with hearing and visual impairments, as well as those with physical disabilities and intellectual challenges, among others.

What they say about Uwamariya

At first, Kezia Keza Irakoze, a senior one student, was surprised to see that her English teacher was visually impaired. She was, however, wowed by how well the new teacher delivered her lessons.

"The only difference (with other teachers) is the approach she uses to deliver lessons but she is able to explain and we understand without any problem," she said.

This is reiterated by Marie Claude Uwingabire, Director of Studies at GS Sainte Famille, who said that they were initially worried about how Uwamariya would teach when she first joined the school.

They are now confident in her ability to contribute equally in delivering quality education.

"We convened a parents' meeting to explain to them the new development. They bought the idea immediately. We must disabuse ourselves from the mindset of marginalising people with disability and instead empower them to become impactful in society," Uwingabire said.

However, she said that they are faced with the challenge of finding an assistant for the visually-impaired teacher. Assistants can be handy in supporting visually-impaired teachers in their class routines, as well as in navigating the school infrastructure that is not yet very accommodative for people with disabilities.

Marrakesh Treaty

The efforts to have Uwamariya and her colleagues integrated in mainstream education are not in isolation. Rwanda is a signatory of the Marrakesh Treaty that advocates for the production and scaling up of Accessible Digital Textbooks (ADT) for learners with visual impairment.

Uwamariya's text book is translated into braille to make it easy for her to read.

Examples of accessible formats include the braille, books on devices such as Orbit Readers, books with audio components among others.

The treaty is considered one of the key milestones in ensuring that persons with disabilities have the right to inclusive education.

It seeks to facilitate the production and international transfer of specially adapted books for people with visual impairments easier.

As of 2021, there were over 400,000 persons with visual impairment, including 2,236 students in all levels of education in Rwanda.

Joseph Munyurangabo, project coordinator at Rwanda Union of the Blind, commended REB's step towards inclusivity in the education sector.

"There is a significant number of persons with disabilities that went to school but cannot get a job anywhere. This is a clear message to other institutions to first see their knowledge and capacity rather than reject them at first sight because of their disabilities," he noted.

There are currently three schools where people with visual impairment can go up to secondary level and get the minimum needed materials for study. They include; Kibeho School for the Blind in Southern Province, HVP Gatagara Rwanda and Groupe Scolaire Gahini, both in Eastern Province.

Persons with visual impairment also have a chance to join University of Rwanda to further their studies.

Uwamariya said inclusivity starts when parents understand that they should treat and invest in the right upbringing of a child with disability. This way, she added, disabled persons will find their place in contributing to the society's development.

College du Christ Roi, where entrepreneurial spirit is preached to secondary scholars

Students at College du Christ Roi showing products they have produced after acquiring entrepreneurship skills and decided to start something small and grow with it.

It is a quiet atmosphere at College du Christ Roi located in the traditional town of Nyanza in Southern Province as students are writing exams.

The students have just completed their morning exam but still calm welcomes you at this Catholic-run old school. Some of the students are in groups engrossed not reading but doing handiwork.

One group is engaged in knitting while members from a second group are drawing postal cards of different art products. In another room, science students are busy in the laboratory blending liquid detergents.

All these students have been taken through entrepreneurship courses and had their minds awakened to become innovative and start small businesses even before they complete secondary education.

College du Christ Roi has positioned itself as one of the best schools that promote entrepreneurship skills and turn ideas into reality, in the quest to churn out job creators – before they even join college.

"Entrepreneurship is taught in all classes but our students are also taught to use the acquired skills to turn ideas into reality," says Fr. Jacques Hakizimana, the head teacher of College Christ Roi.

The college's entrepreneurship gospel is preached with assistance from REB and its partners like Educate, an NGO that provides technical assistance in the education reforms to schools to equip the youth with needed skills to drive the economy in Rwanda.

The Ministry of Education, through Rwanda Basic Education Board (REB), has introduced entrepreneurship courses in secondary schools to ensure students acquire entrepreneurial skills in addition to the conventional education they acquire.

The philosophy behind this initiative is to equip high school students with transferable soft skills that employers need or even give them the ability to create their own jobs once they graduate.

It feeds into the government's move to shift from knowledge to competence-based curriculum to ensure that students acquire academic skills as well as communication and team-work skills that can help them to think out of the box and graduate with the ability to contribute to the socio-economic development of the country.

According to the head teacher, embracing entrepreneurship courses has inspired positive change among the students and they have developed practical skills with innovative ideas that they are turning into reality.

Forming business clubs

According to Hakizimana, students from College du Christ Roi have formed a 'business club' where they meet and engage in different entrepreneurship activities.

The club currently has members involved in knitting, craft as well as those who are leveraging science and technology to produce assorted hygiene materials. The students now have products such as liquid and solid soaps, postal cards, hats, gloves and scarves.

"Students are sharp and have progressively grown as entrepreneurs to the courses they get here," Hakizimana says, not wasting the opportunity to show his management's

pride in the undertaking.

"Through the business club, students have managed to turn theory acquired in entrepreneurship courses into practice and now produce fascinating products on top of their usual studies," he adds.

"We have been working with Educate to empower our students and train them to think big; there is a significant improvement since our students started working on different products in the business club and our goal is to keep helping them to do more.

"We want to train students and ensure they graduate with practical skills needed for them to become entrepreneurs whether they go on with university studies or embark on business upon completing secondary education."

Scooping multiple awards

For about four years now, the college has participated in several competitions aimed at boosting entrepreneurship among secondary scholars and emerged the best. One of the popular competitions is 'Wavumbuzi' – literally translated as 'Discoverers' – which brings together hundreds of secondary schools from across the country.

The Wavumbuzi Entrepreneurship Challenge brings together learners from across Rwanda to compete in a web browser and mobile app-based game which tackles some of the country's most important problems.

Each challenge requires learners to apply new concepts in real-world situations and submit their experiences for review. The competition is organised by Allan & Gill Gray Philanthropy (AGGP) in partnership with REB.

The six-week annual online gamified learning programme focuses on developing five entrepreneurial mindset drive, resilience, self-efficacy, initiative and innovative thinking.

"We emerged the best among over 500 secondary schools that participated, three of our teachers including the best in the country were awarded with laptops that will help them in conducting research while five students were also awarded with laptops," Hakizimana said.

Another outstanding competition where the school excelled in, according to Fr Hakizimana is the Schools Quiz Challenge organised by the National Bank of Rwanda. "Our school emerged as the best in the last two years and we were runners-up in the previous two," he says, also noting that this year, four students and three teachers were awarded with bonds worth Rwf400,000 each from the Central Bank.

The Schools Quiz Challenge aims at building a critical mass of young people who understand what it takes to build an economy. It focusses on monetary policy education, financial literacy and financial inclusion and financial engagement among others.

"We are fully engaged in this journey to churn out students with highly needed entrepreneurship skills and we won't relent," he says.

Students speak out

Bavon Sanctus Nkurikiyumukiza,17, who is in Senior Three, emerged third in the Wavumbuzi competition and was awarded with a brand new HP laptop for his impeccable skills.

"I have learnt a lot of skills in this programme. I now know how to develop a successful business idea. It also helped me gain valuable knowledge on national aspirations like Vision 2050," he said.

"The process is tough and we have so many questions to attend to, I tried to answer all my questions and it required me more concentration and research to get better answers," he added.

Nkurikiyumukiza believes that the acquired laptop will help to conduct more research and enhance his skills to become a future entrepreneur.

Violette Nishimirwe 18, who is pursuing Literature in English, Kiswahili and Kinyarwanda (EKK), is a member of the business club. Her group is engaged in knitting and together with other colleagues, produce scarves, hats, gloves, among others. "I gained a lot from the entrepreneurship courses. Besides ordinary courses, I have knitting skills that I can apply to employ myself once I am done with studies," she says.

Velentine Uwagigira, an entrepreneurship teacher at College du Christ Roi, said the aim is to ensure they instill in students the culture of developing business ideas, exploring the environment and get opportunities to turn the ideas into products.

"We encourage them to be job creators right from the beginning of the entrepreneurship course," she says.

"We teach them how to develop a business plan, how to generate business ideas and to develop it and how to identify business opportunities and business model canvas among others," she adds.

Based in Nyanza district, Southern Province, College du Christ Roi offers three options; Literature in English, Kiswahili and Kinyarwanda (EKK), Mathematics Chemistry and Biology (MCB), and Physics, Chemistry and Biology (PCB).

Fr. Jacques Hakizimana shows trophies the school won thanks to its efforts to promote entrepreneurship in schools.

Smart classrooms creating indelible mark in Rwanda's education transformation

It was a hot sunny afternoon at GS Cyahafi in Nyarugenge District but that had nothing to do with the intensity with which the students here were on their laptops.

Seated across eight tables, the teacher moved among them with a microphone, explaining how they were supposed to do and submit their assignments about using Microsoft Excel on an e-learning portal.

Shaffy Munezero, a senior three student said the teacher showed them how to access the e-learning platform using a smartphone to revise their lesson materials and do tests at home – as he is yet to have his own laptop.

"It would be even great if we had an additional smart classroom in the school so that we can be able to spend more time familiarizing ourselves with the technological tools and increase our knowledge," he added.

Munezero shares the sentiments with his colleagues who enjoy whatever course they learn using ICT in this smart classroom.

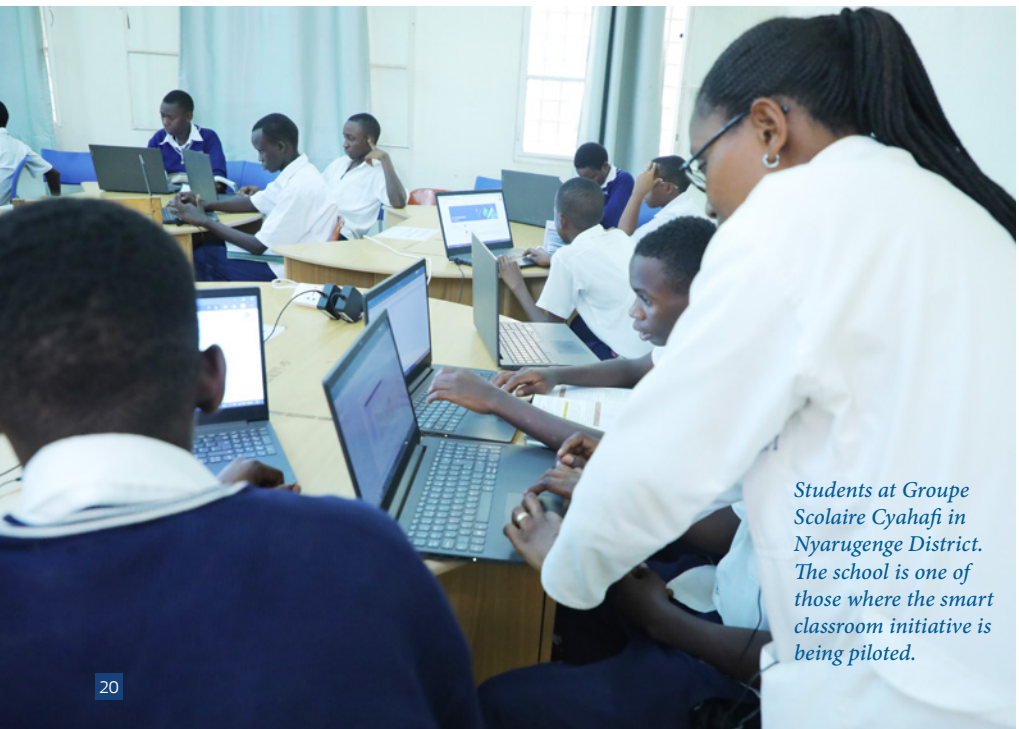
Rwanda has been leading the way in digital transformation in education with the introduction of the 'ICT-in-Education' policy in 2016, aimed at bringing technology into classrooms to make learning more interactive and engaging.

According to UNESCO ICT Competency Framework for Teachers, this approach requires rethinking the role of teachers in applying ICT to enhance and transform learning.

Further, the education enjoys special pricing owing to a negotiation between government and service providers to support the sector's technology adoption. This has seen the education sector receive technology services at pricing below commercial value.

In 2019, the Ministry of Education partnered with the Korean International Cooperation Agency (KICA) to launch a project that sought to empower teachers to use technology to improve the quality of education in Rwanda.

The four-year project, dubbed CADIE (Capacity Development for ICT in Education), implemented on a grant budget of $7.2 billion, established centres of excellence country-wide as a new and innovative concept to train Rwandan in-service teachers while contributing to the national strategic goal of improving quality education.



Students at Groupe Scolaire Cyahafi in Nyarugenge District. The school is one of those where the smart classroom initiative is being piloted.

In total, 60 centres of excellence across all 30 districts were rehabilitated and equipped with furniture (540 tables and 1,060 chairs), IT equipment (3,120 laptops and 60 projectors), 60 complete sound systems and internet.

Another centre of excellence was set up at Nkombo Island in Rusizi because the location was found to be isolated from other schools in the district.
Emmanuel Shyaka, coordinator of Single Project Implementation Unit (SPIU) of Funded Projects, REB, said the project equips teachers with skills to navigate the technological world and upgrade their knowledge.

"They are able to make research that informs and updates their lesson plan in line with the current global realities. They won't have to teach from an old book where they scripted lesson materials that were only relevant ages ago," he explained.

He said beneficiary teachers are selected at district level upon their willingness and ensure that the programme does not hinder their teaching schedule in schools.

Training sessions are given in the form of cohorts using a face-to-face approach at centres of excellence or blended/online model approach. It takes an average of two consecutive weekends for completion of training.

The project targets to train 24,000 secondary school teachers on the use of ICT in teaching and learning. So far, 19,934 have been trained.

Besides teachers, REB also developed inspectional manual on ICT use in schools for Education Inspectors (NESA, DEO, SEIs) to assess the efficient use of equipment provided to schools and whether they are not laying dormant somewhere in stock rooms.

Overall, 30 NESA district pool based inspectors were trained on the inspection of ICT use in schools, 60 District Education Officers (DEOs) in charge of nursery, primary, secondary and TVET. So far, 290

Sector Education Inspectors (SEIs) out of 416 were also trained.

To ensure the sustainability of such projects in the country, Shyaka disclosed that REB handed over smart classrooms to schools and districts. The board will only follow up on their maintenance plan, as it seeks to expand the centres of excellence to various parts of the country.

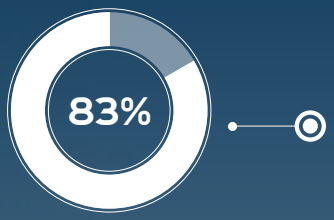
Mediatrice Umuhozawase, ICT teacher at GS Cyahafi, is among in-service teachers with seven years of experience, trained to train others. She said the initiative was a great step towards transforming the education system in Rwanda.

According to Umuhozawase, introducing this initiative in schools helped students to move from fearing to use ICT tools to being able to navigate the different online platforms used in education that stimulate their interests.

"I have been able to train other teachers on the use of these tools, they are now able to teach different courses using technology. For instance, a Chemistry teacher can bring students in the smart classroom to project some videos of different experiments, which helps the students to understand the subject even better."

Experts say it is important that strategies of human capital development are in tune with the technological era the world has entered and this is critical in designing an education system that brings out people relevant to the labour market.

For instance, Munezero, who wants to pursue Math, Physics, and Geography in his A Level classes, believes that the ICT skills will help him take on a career path that he is passionate about and enable him to be a problem solver with innovations in society.



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Smart Classrooms

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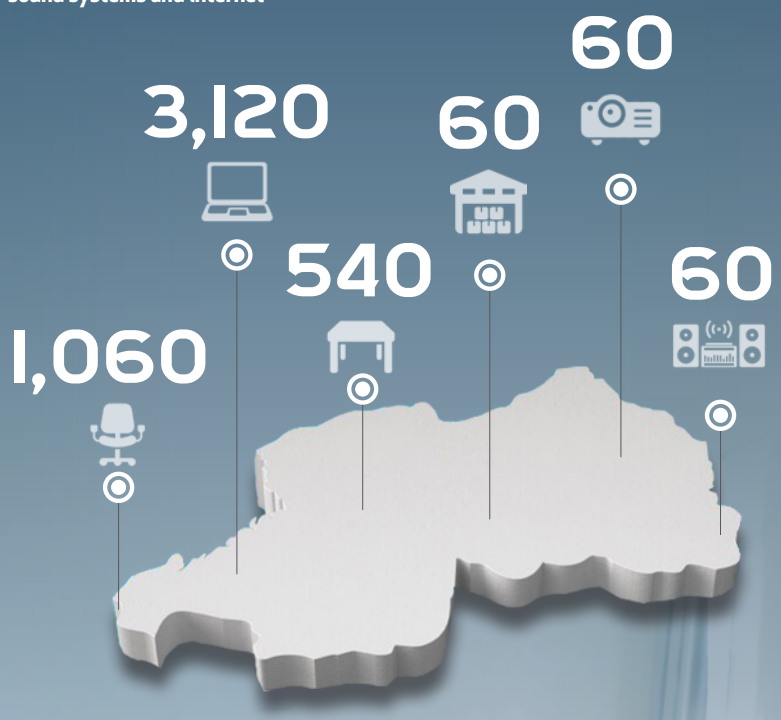


How Nyamata TTC students impressed in robotics competition

TTC Nyamata was one of the best performers at the First LEGO league robotics competion.

Enrolling in a Teachers Training College (TTC) did not kill Felix Mizero's thirst for science and thinking out of the box to bring about solutions to issues affecting society.

The student from TTC Nyamata in Bugesera district, together with his colleagues are now popular in their school after they applied physics and developed a locally made wooden multi-socket adaptor that is being used at school.

This was the project they presented at the just-concluded FIRST LEGO League (FLL) robotics competition where they competed with different schools from across the country.

Organized in Kigali, earlier in March 2023, the inaugural edition of FLL attracted over 350 students participating in the competition grouped in 33 teams from over 30 schools.

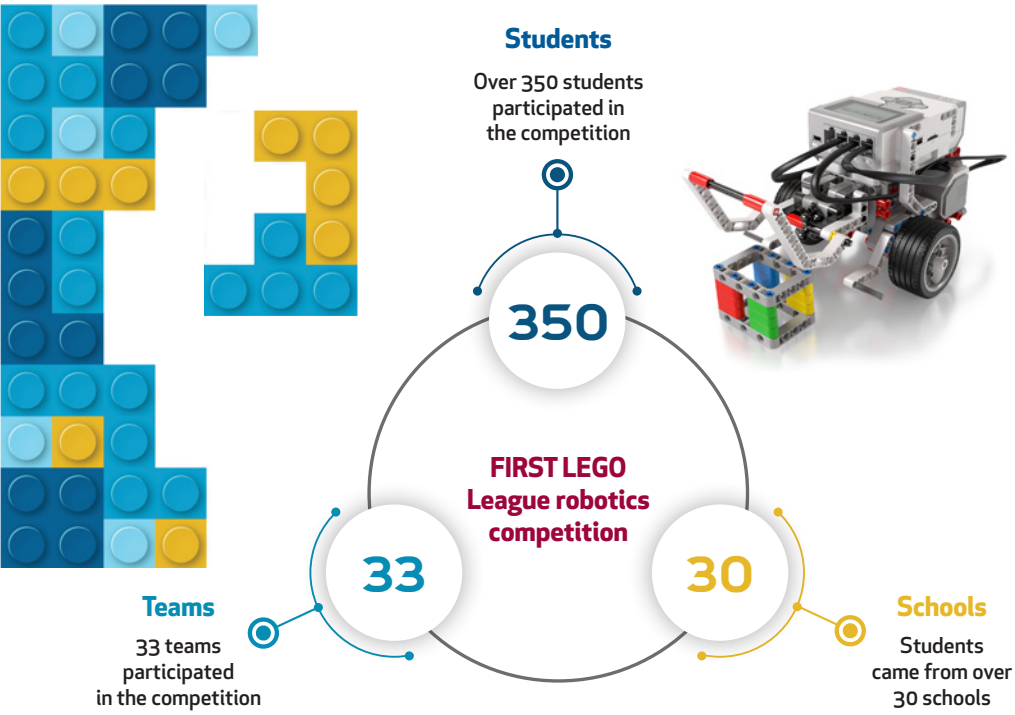
The competition, held at the Intare Arena was organised by the Ministry of Education, Ministry of ICT and Innovation, Coderina Education and Technology Foundation, STEM Inspires, and was supported by UNESCO Rwanda, FIRST LEGO Foundation and GIZ-Rwanda.

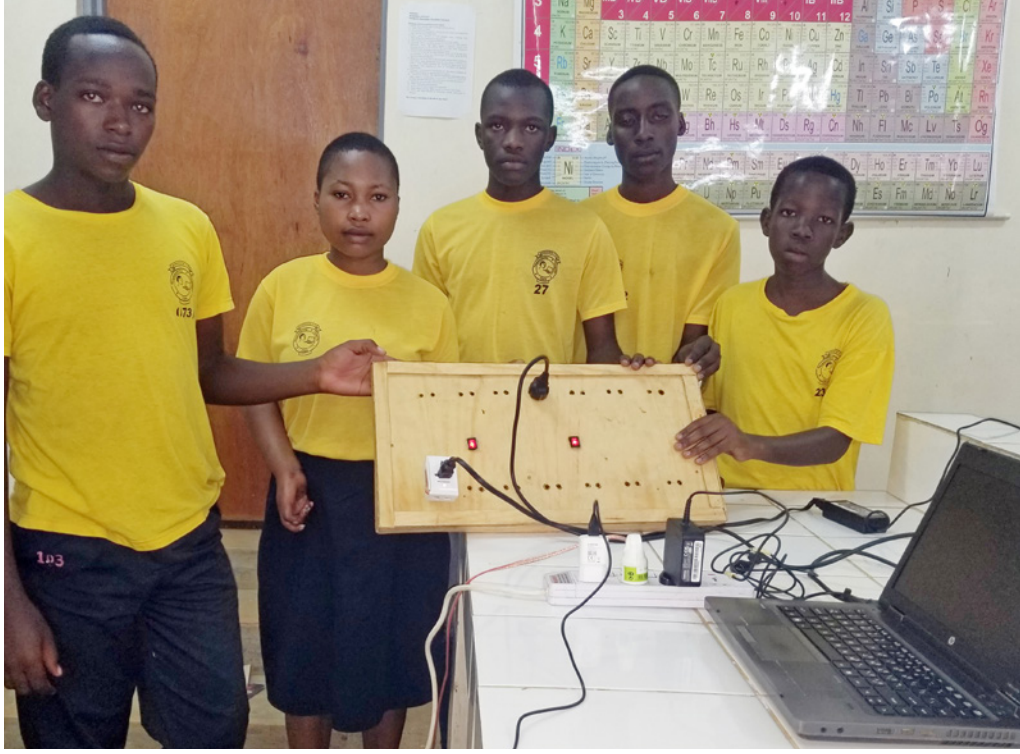
It attracted students aged 9-16 and sought to inspire young people to pursue Science, Technology, Engineering, and Mathematics (STEM) careers.

It challenged teams to design, build, and programme autonomous robots using LEGO kits to complete a set of missions on a themed playing field.

The theme for the inaugural competition was "SUPERPOWERED," which focused on finding innovative solutions to real-world problems related to energy.

Mizero, 16, was very excited about participating in the competition. Much as his team of 10 could not emerge the best, their project was awarded as a promising and innovative project countrywide.





The S5 student who is majoring in Sciences and Mathematics with Education at TTC Nyamata, together with his team developed a wooden power extension cord or multi socket plug adaptor which they considered as a solution in their school.

"We applied physics and produced a wooden multi socket adaptor that can be used to charge 14 electrical appliances at once," Mizero said.

"We thought about this as a solution as our school has more teachers who struggle to get where to charge their computers or even their phones within the staff-room," he added.

Mizero says that the team was also motivated by the fact that the ordinary multi-sockets adaptors are made of plastics and can pollute the environment as they are non-biodegradable.

"Ours is environmentally friendly and it is easier to get raw materials, we wanted to use innovations and produce locally-made products as part of the Made in Rwanda," he added.

Mizero and the team emerged second in the competition and scooped the motivation award and each was given a medal as an award.

On robotics

Apart from the solution to produce the multi socket adaptor, the TTC Nyamata students also participated in a robotics competition where they worked on an energy generation project.

"We tried all we could to prepare the robot game through programming and our project impressed the jury though we could not become the overall winners," said Olivier Hakorimana, 15, and a form four student in Sciences and Mathematics in Education adding.

Nyamata TTC emerged fourth among over 30 groups.

"We are happy because we got exposed to science and met other students who proved to be more innovative than us, we managed to learn a lot and we will use the gained experience to do better in the next competition," Hakorimana added.

Gov't pledges more support

Speaking at the event, Minister of State in charge of Primary and Secondary Education, Gaspard Twagirayezu hailed all participants and their schools for their enthusiasm and eagerness to leverage STEM to work on issues affecting the society even at their age.

"The challenges you solved using robots and codes exemplify the real world we live in. We are all impressed by the way you demonstrated such remarkable creativity and ingenuity in tackling these tasks," he said.

"As we all know, the world is constantly evolving, and so are the challenges we face. We can only anticipate that these challenges will become even more complex as time goes on," he added.

He noted that the students have access to better and more robust tools to help them innovate and tackle these challenges head-on.

"It is our duty to equip you, our youth, with the necessary skills to leverage these opportunities…this is an opportunity we must seize, and we owe it to you. As a result, we will be enhancing our science, elementary, and ICT courses in upper primary and secondary schools to include coding and robotics," he added.

During the challenge, Maranyundo Girls School team emerged the overall winners impressing the judges with their innovative robot design and problem-solving approach.

The team will represent Rwanda at the international Open of FIRST LEGO League, which will take place in May 2023 in Morocco.

Students of TTC Nyamata during their presentation at the competition held at Intare Conference Arena in Rusororo Sector, Gasabo District.

How secondary schools are churning out the next generation of accountants

As Rwanda seeks to position itself as a financial hub in Africa, it is critical to ensure that the right approach for human capital development is used to deliver the necessary skills for public finance management.

To bridge the skills gap in the accounting profession on the labour market, the Ministry of Education transferred the teaching and learning of accounting from Rwanda TVET Board (RTB) to mainstreaming in general education under Rwanda Basic Education Board (REB).

Currently, there are at most 900 certified accountants in Rwanda, yet the demand is as high as 10,000 accountants in both the public and private sectors.

According to Nehemie Bacumuwenda, the curriculum officer in charge of entrepreneurship and accounting at REB, the approach of studying accounting module per module under RTB proved not effective, and this called for a transfer into mainstream education for progressive module learning over three years in upper level classes.

The Government, in partnership with the Institute of Certified Public Accountants of Rwanda (ICPAR) conducted a need assessment survey on labour market which informed REB's decision to modify the curriculum.

"People shouldn't be worried about the changes in curriculum because it contains everything with additional elements that were not included before," he assured the accounting professionals.

The new curriculum is improved to teach extensively about the tax system in Rwanda, take into account the depth of general accounting and analytical accounting, mathematics, and languages, etc.

Simon Habarurema, the Director of Studies at Lycee de Kicukiro-APADE, opined that accounting should be considered a discipline that combines science and art because it involves applied mathematics and also requires a passionate talent in management.

"With the ever increasing number of businesses buoyed by the ease of doing business in Rwanda, players in the industry need well-trained accountants at every level. However, to achieve this, students need to be exposed to the theoretical and practical part of it," he noted.

Habarurema also added that accounting teachers also need regular training from professionals in the field so that they can have a sense of different trends in economy and how students can relate with them.

"The good performance of students can, to some extent, be attributed to the quality of teachers who seek to always sharpen their knowledge through research and not limited to teaching materials they developed ages ago."

According to him, accounting is a profession that requires discipline, discretion, and neatness. "We want our students to leave here when they are market-ready because they underwent proper industrial attachment."

To further understand the context of accounting skills gap, Wilson Thomas Nteziryayo, an accounting teacher at APADE explained that there are circumstances where employers decry the lack of labour force and yet graduates also claim unemployment on the market.

To tackle this, he said, that it was necessary to have a different kind of approach in terms of learning content that students consume and create partnerships with the public and private sector to enable the ease of acquiring academic internships that provide students with hands-on skills and in the end, graduate competent on the market.

"We can be confident that with the combination of enhanced curriculum and ICT skills, the students will perform

Kicukiro-APADE is one of the secondary schools offering accountancy in the country.

Rwanda Basic Education Board

outstandingly and be very promising for the labour market," Nteziryayo cited.

Amin Miramago, CEO of ICPAR, said that the financial industry in Rwanda is ever-growing, which sets the need to enhance the accountancy of great paramount.

Rwanda Basic Education Board

> "If Rwanda is to be among top financial centres, then we need to train these professionals to meet the demand of investors coming in the country. This is an ever-green career with significant monetary reward for certified accountants

According to him, it is critical to establish a collaborative understanding between institutions to ensure a continuous pipeline of graduating accountants with market relevant skills.

"If Rwanda is to be among top financial centres, then we need to train these professionals to meet the demand of investors coming in the country. This is an ever-green career with significant monetary reward for certified accountants," he said.

Deborah Tuyizihirwe, a senior four student pursuing accounting at APADE, has always wanted to take on this field because she believed one is hirable as soon as they finish high school due to the nature of skills they acquire.

"Unlike other courses that require one to further their studies in tertiary education to receive the minimum qualification, I believe that once I finish my secondary studies, I will have the requisite skills to compete on the labour market," she noted.

Tuyizihirwe encourages parents to play an active role in their children's education by supporting their choices and following up on their performance.

REB developed the new curriculum in collaboration with ICPAR and it is also developing related textbooks for learners and guiding books for teachers at each level of education.

The role of technology in building a brighter future for young learners

At Groupe Scolaire Kimironko II, learners are taught using projector screens instead of the traditional blackboards.

As we walked through the gates of GS Kimironko II, we couldn't help but feel a sense of excitement, watching kids running all over the place, playing, giggling, and racing against each other during their break time.

After the break time was over, our team followed Allen, a five-year-old girl, and her friend Keza back to their P1 class where they joined 57 other classmates.

Their teacher, Mr. Emmanuel Manirasfasha, was already waiting for them as he set up his projector and laptop for the next lesson - mathematics, which involved basic counting for the kids.

It was evident that this was a hub of innovation and progress, where conventional teaching techniques were being boosted by state-of-the-art technology.

We were excited to witness firsthand how the integration of technology was revolutionising the learning experience for these young students, and what effect it was having on their academic performance.

After everyone had settled, bright colored numbers began to appear on the large projector screen, and the kids shouted them out excitedly in a melodic tune that was being played through the speakers.

"Twenty other classes are now learning with a projector. This is not only exciting for the students but for the teachers as well. We know that this will be transformative, and you can tell by just seeing how all the children are concentrating in class, glued to the projector," stated Dominic Bihozagara, Director of GS Kimironko II.

The projectors and laptops being utilized at GS Kimironko II were provided by the World Bank through its partnership with the Rwanda Basic Education Board. The aim is to ensure that all pre-primary schools in Rwanda transition from the traditional blackboard and chalk to the use of projectors.

Allen's teacher, Emmanuel Manirafasha, has been using the projector for several months now and has observed a significant improvement in his students' engagement

Rwanda Basic Education Board

and academic performance.

"It is exciting to see how eager the students are to come to class. Some of these kids used to fall asleep during lessons, but now they all have fun when I use the projector. The use of technology has revolutionized the way we teach. It makes learning more fun, interactive, and engaging for students," he said.

Dominic Bihozagara, Director of Groupe Scolaire Kimironko II, added, "Teaching must evolve with the times, and what we are currently doing by incorporating technology into our teaching methods is evidence of Rwanda's commitment to enhancing the education sector."

The Rwandan government has made the utilization of technology in education a top priority, investing heavily in the development of infrastructure and the training of educators in digital tools.

The goal is to ensure that every child has access to quality education and gains the skills necessary to succeed in the 21st century.

The Rwanda Education Board reports that the use of technology in classrooms has steadily increased in recent years.

In 2019 alone, more than 33,000 tablets were distributed to teachers and students in primary and secondary schools throughout the country, a number that doubled the following year.

Additionally, over 40,000 teachers have received training in digital tools and teaching methodologies.

"Technology in education is not merely a trend but the future. Its implementation helps bridge the gap between urban and rural areas, thus providing every child with equal access to quality education," stated teacher Manirafasha.

With Rwanda's continued investment in education and technology, the future looks bright for young learners who are eager to embrace new ways of learning.

Under its Inclusive Education Initiative, the Rwanda Education Board (REB) created 48 edutainment animated episodes featuring text-to-speech for early and blended learning in 2022.

Furthermore, the initiative produced and broadcasted sign language interpretation nationwide using technology. REB is currently conducting a pilot study in partnership with the World Bank to evaluate the programme's impact on learning and create more episodes based on the results.

The Government of Rwanda has prioritised the use of technology in education and made significant investments in building infrastructure and training teachers to equip every child with access to quality education and the skills necessary to thrive in the 21st century.

This is part of the efforts to position the country as a knowledge-based economy.

33,000

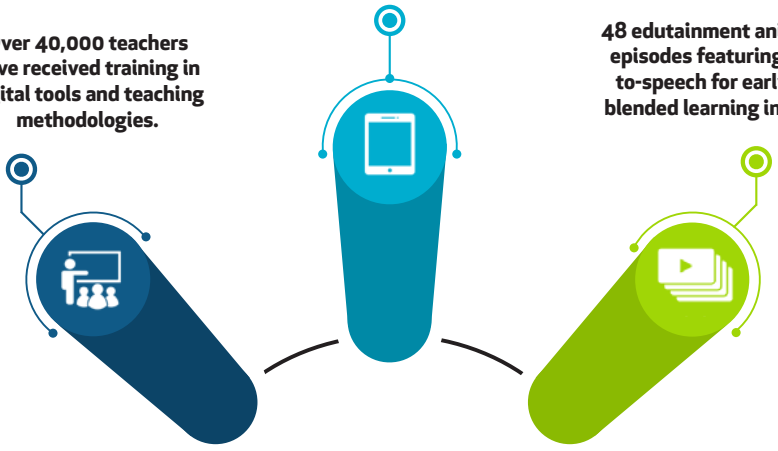
In 2019 alone, more than 33,000 tablets were distributed to teachers and students in primary and secondary schools throughout the country.

40,000

Over 40,000 teachers have received training in digital tools and teaching methodologies.

48

48 edutainment animated episodes featuring text-to-speech for early and blended learning in 2022.



IN PICTURES: How the FIRST LEGO League robotics competition went down

In March 2023, the first-ever edition of FIRST LEGO League (FLL) was held, bringing together up to 350 students aged 9-16 with an aim of inspiring the young generation to pursue STEM subjects in their academic career.

Held at Intare Conference Arena, the competition, which brought together 33 teams from 30 schools countrywide, was organized by the Ministry of Education, Ministry of ICT and Innovation, Coderina Education and Technology Foundation, STEM Inspires, and supported by UNESCO Rwanda, FIRST, LEGO Foundation, LEGO Education, and GIZ-Rwanda.

Overall, Maranyundo Girls School emerged the best with their innovative robot design and problem-solving approach.


FIRST


Coderina

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Requirements for private schools that want to order for Competence-Based Curriculum (CBC) textbooks from printing companies which were contracted to print and supply them

- **A letter addressed to the Director General of REB requesting to have access to CBC textbooks at affordable prices**
- **In addition to the letter, the following information should be provided:**
  - ☑ *Address of the school*
  - ☑ *Telephone number and email of the school head teacher*
  - ☑ *Title and quantity of needed textbooks per title and per level/class*
  - ☑ *Number of students per class*

Required information for private schools to order for CBC textbooks

The Schhol Address:

- ☑ *School name:*
- ☑ *District:*
- ☑ *Sector:*
- ☑ *Cell:*
- ☑ *Tel. Number for school Headteacher :*
- ☑ *Active school/ Headteacher's email:*

Textbooks' titles		Textbooks quantity per level													
		N1	N2	N3	P1	P2	P3	P4	P5	P6	S1	S2	S3	S4	S5	S6
1																
2																
3																
4																
...																

Note: Information regarding the number of student per level should be also provided.

P.O Box 3817
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books@reb.rw
+250 788658622

MISSION

The primary mission of REB is to promote the quality of education in basic, specialised and adult schools.

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REB has the following main responsibilities:

To prepare and distribute curricula, teaching materials, teacher's guides, methodologies and establish teaching methods for nursery, primary, secondary, specialised schools and adult literacy schools;

To establish and monitor the E- learning program in basic education;

To promote the use of information and communication technology in basic education;

To coordinate programs and activities to ensure teachers development, build their capacities and monitor their management;

To contribute to the development of education policy;

To coordinate and fast track basic education programmes and activities aimed at providing to all categories of Rwandans the quality education;

To advise Government on all activities which may fast track basic education development in Rwanda.

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