THE TICHATECH JOURNAL

Education tech magazine

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THE TICHATECH **PROJECT**

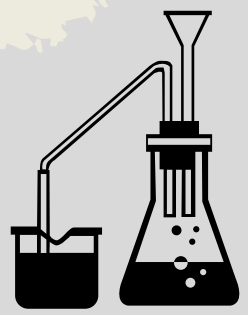—A NEW EDUCATION EXPERIENCE—

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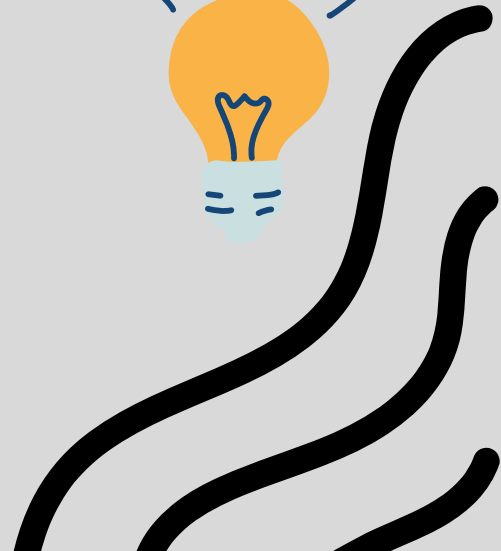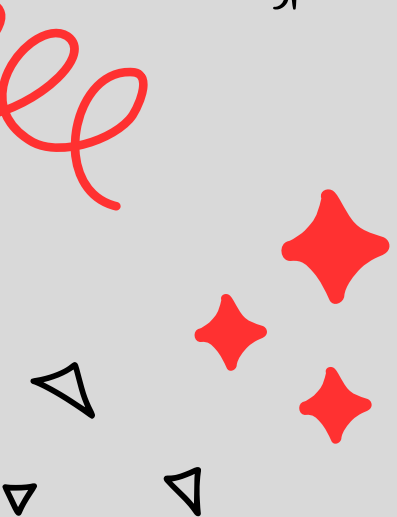
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January Event
Event Name:
Introduction to ICT in Education

Event Date: 11th January 2025
Event Link: Click here to open

February Event
Event Name:
ICT in Education

Event Date: 8th February 2025
Event Link: Click here to open

March Event
Event Name:
Introduction to Ai in Education

Event Date: 8th March 2025
Event Link: Click here to open

April Event
Event Name:
AI in Education

Event Date: 12th April 2025
Event Link: Click here to open

Happy New Year

Cheers to a year of greater possiblities, shared success, and making lasting difference. Happy New Year

Table of Contents

Message From the Editor-In-Chief

Hello Dear Educators, Innovators and Change makers,

Welcome to our first issue of The TichaTech Journal Magazine. This marks the start of a journey of empowering educators, school administrators, and all education stakeholders by providing information and insights about ICT and Technology and how it can be integrated into education. Technology is no longer just an add-on; it's at the heart of reimagining how we teach, learn, and connect in schools around the world. However, we cannot hide the fact that there's a gap between the Technology levels in production and available for use and the rate at which it is adopted by education institutions in our country. The TichaTech Project has taken upon the responsibility to assist in bridging the gap through different initiatives one of them being provision of information and research findings through periodic publications.

In this issue, we provide an insight as to Who is the TichaTech Project and why we chose the education sector to bring our influence and change. We get further insights of ICT in Education and discuss the impact by different technologies and how they can assist personalize education experiences and how to prepare for a tech-driven future. As we navigate challenges like digital equity, data security, and teacher training, it's clear that the conversation around ICT in education is about more than devices—it's about fostering creativity, critical thinking, and collaboration. In this edition, we barely scratch the surface of the impact of ICT in education and reveal the potential it holds. We therefore invite you to join the dialogue. Share your experiences, success stories, and questions with us through journal@tichatech.africa or any other communication platform you please. Together, we can build a community of educators committed to creating impactful and inclusive learning environments powered by technology.
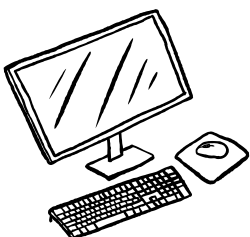
We are grateful for the team that made this issue possible and for their dedication to equipping teachers and the education sector with ICT knowledge.

We hope you enjoy reading this issue as much as our contributors enjoyed making it.

Thank you

Editor-in-Chief

Anthony Gitau

THE TICHATECH PROJECT

Who Are We?

The TichaTech Project is an organization of ICT Experts, Teachers, Administrators, and Research specialists among other stakeholders with a unified goal to integrate ICT into Education. We work in a collaborative environment, undertaking research on ICT needs in the Education sector and planning and implementing ways to handle these needs.

We seek to build a technologically savvy education sector where the teachers, school administrators, learners by extension, and other Education stakeholders can implement technology with ease in day-to-day teaching and learning. We focus on creating an effective and efficient journey by providing the information and knowledge on ICT and Technology, enhancing the skills set of educators and school administrators in matters technology and offering the specialized focus on ICT consultancy for schools to understand their needs and assist in planning a work plan and methodology on how to adopt ICT into teaching and learning.

Why Now

Introduction of the Competency Based Curriculum (CBC) in Kenya meant a turning point for the education sector calling upon educators and teaching institutions to adjust and embrace new approaches to align the teaching and learning to the new curriculum. Adoption of technology and In particular the Information and Communication technology (ICT) was one of the highly adopted approaches. The adoption required technological savviness to some extent to enable efficient use of technology in teaching and learning. Upon interaction with the educators and the institution administrators, a standing out factor was the gap between the desired technology adoption levels and the technology savviness of the educators. The onset of COVID 19 pandemic of 2020 further revealed the gap and the need for well equipped educators on Technology and the need for a well informed and equipped education sector.

The TichaTech project was established in 2023 as an ICT consultancy company that would help educators maneuver around the IT savviness demanding CBC curriculum. The main objectives were to create a platform to help educators navigate the dynamic technology world and get valuable ICT skills to enhance the adoption. Over the Period of the last 2 years, the TichaTech Project team has developed a dedication to not only understanding the Technology being adopted or that which can be adopted, but also learn and understand the Education sector. We have developed the understanding of the pedagogy employed by the educators, learnt on the setup of the education curriculum and have continually proposed, experimented and taught on ICT skills and ways which would make adoption efficient. We have developed a first line of support for technical needs of educators in matters ICT to enhance the adoption of ICT ro be as smooth as possible. We have carried on the organization slogan and mantra of bringing a new education experience in our day to day activities.

ICT in Education

ICT in education entails the use of Information and communication technologies to enhance teaching, learning and administrative processes in schools and other educational institutions. By adopting ICT in education, it involves the use of various digital tools and resources to enhance the classroom support and optimize the educational experience for both students and educators. ICT components that can be used in education include the Computing hardware such as computers, projector, whiteboards amazon others, software such as the learning management systems, educational software, productivity tools among others, communication networks, and multimedia content. These ICT components are used to access, share, and manage resources and information, which is beneficial for any learning environment. ICT in Education in Kenya is not a foreign or new concept. The government and different stakeholders have realized the immense potential ICT has to enhance teaching, learning and administrative processes. Among the most notable programs and initiatives across the country include:

Educational Apps

These are online resources that promote supplementary learning. Children can access these apps on a smartphone or tablet. Children can navigate these apps at their own pace. Examples are MwalimuPLUS, Enovate Exam, Zeraki Learning, Dawati, etc.

Learning Management Systems

These platforms allow schools to manage and deliver educational content to their students. These systems also allow tracking of student progress and enable communication between students and teachers. These platforms are critical for the technological era as they support the continuance of education when there are few resources, such as a lack of available spaces for physical classrooms. While these systems are not as popular in Kenya, technology is dynamic, and these platforms will be useful for schools that can deliver educational content through them. Examples are Google Classroom, Canva, Blackboard, and Moodle.

Digital Literacy Program

Launched in 2016 by the government, this flagship program aims to integrate ICT into primary schools by providing digital devices to learners and teachers. Key components of the program included; Distribution of tablets to learners and laptops to teachers, development of digital content that aligns with the Kenyan Competency Based Curriculum (CBC) and Training Teachers to use ICT efficiently in classrooms.

Kenya Education Cloud (KICD)

Managed by the Kenya Institute of Curriculum Development (KICD), this platform hosts digital learning resources for both teachers and students, accessible online and offline.

These programs stand out as the most popular just to mention but a few. These programs stand as a testament to the many benefits that arise from the use of ICT in Education. The gains that can be reaped from integration of ICT in education include:

Personalized Learning: ICT allows students to earn and

attend their lessons at their own pace, which differs from traditional learning. This encourages students who often feel left out in classrooms to learn according to their style, and no one is there to judge their way of learning. This also allows teachers or educators to track their students' progress and curate content that targets weak areas for their students. Tools such as Learning Management Systems and Educational Apps promote personalized learning.

Improved Communication and Collaboration:
These ICT tools promote communication and collaboration between students and their teachers. These tools are critical for remote locations where students cannot physically access educational facilities. Through collaboration, these tools promote teamwork among students. For example, a student in a remote location can access lessons or educational material through Learning Management Systems such as Canva or Google Classroom

Easy access to resources:
These tools enable students and teachers to gain access to resources such as the wealth of information available on the Internet, which improves and supplements the learning process. This wealth of information may include online courses and research articles that promote better learning and give students different perspectives.

Promote inclusiveness: ICT tools promote Inclusivity as long as teachers and students have access to ICT tools such as mobile phones or educational apps, they can share information and allow everyone to participate.

The benefits and potential of having ICT in education is great and offers the promise of immense experience in learning and teaching. However, the adoption of ICT in education still leaves a lot to be desired heavily owing to challenges affecting its adoption which include; digital divide, inadequate infrastructure, limited teachers training and high cost of implementation.

The TichaTech Project and ICT in Education

With the primary objective of facilitating and assisting the adoption of ICT into education, the TichaTech project joins the list of many initiatives that are running and rooting for ICT in education. The organization has put strategic approaches in place to address the key challenges that are hampering the adoption of ICT in education. With well and continuously improved courses and materials, the TichaTech project has made it a primary goal to see the skills enhancement for teachers and availability of information and knowledge on ICT specially curated for teachers. In our Core Values we have encompassed Technology,

Innovation, Collaboration, Honour and Affordability. We have continually developed programs and products to enhance the access of ICT into education like the affordable gadgets and infrastructure for schools. We have continually opened our doors for collaboration with other stakeholders to build impactful collaborations. We have further broken down through our analysis and assessments the different approaches and methodologies which work best for schools and educators while using ICT in education. We have made a commitment to ensuring that ICT is adopted to schools and used as a day to day approach.

ICT in education is something we can unanimously agree on that has the potential to shape the future of the country and the education sector for a tech-driven future. A focus on the emerging trends such as Artificial Intelligence (AI), Virtual Reality(VR) and Computer programming in school can create advanced traction to the drive for ICT in education. Continued collaborations and initiatives, would propel further the drive and enhance equitable, affordable and comprehensive use of ICT in education. In capitalizing on the opportunities and potential promised by ICT in Education, Kenya can harness the power of ICT to create a more inclusive, innovative, and effective education system for all.
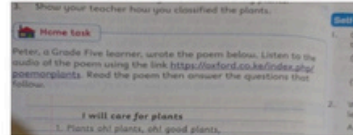
TECHNOLOGY HACK

The CBC curriculum introduced links in many textbooks. Here's how to open these links directly from the internet browser.

Step 1:

Locate the link you want to open, the links, in most cases, shall be printed in different text and underlined. Below is a sample of a link in a school learner's book
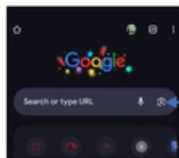
Step 2:
Open Chrome Browser app on your Mobile Device. The Chrome Browser has a round Icon with five colors Blue, white, red, green and yellow as illustrated below.

Step 3

Once the Application opens, click on the + icon on the Top to open a new tab.

The + icon to open a new tab

Step 4
The new Tab open shall be as illustrated below. Among the search features include a Camare icon as illustrated below. Click on the Camera icon

Camera Icon

Step 5
On clicking the Camera icon, it opens the Google lens/Camera feature. Focus the Camera till you can be able to see the entire link visible on the Camera screen and then click the Search Icon on the center at Bottom section
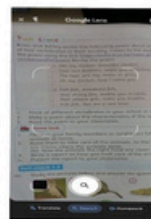
Step 6
Select the link by adjusting the two blue icons that appear after clicking the captured image where we have the link

Step 7
There will be provision of search results from the text/link highlighted on the section below. Click the result that matches the instructions on the book. You can scroll the section upwards to reveal more related results similar to the context that you were viewing on the book.
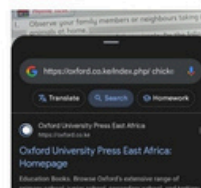
In the event you find any challenges accessing links this way, Kindly reach out to our technical team via WhatsApp: 0791 198 929

Snap it, Send it, Solve it
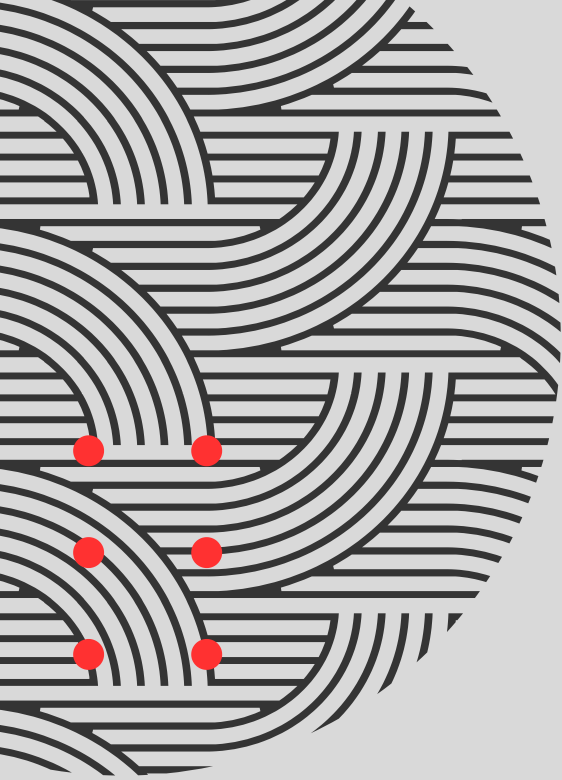
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Sieze the opportunity, get your brand known.

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Contact Us
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0791198929/0703858522

Our Products and Services

The TichaTech Project has strived and aimed to create affordable and sustainable goals for teachers, educators, education administrators and all involved stakeholders. Taking into account the dynamic nature of ICT and Technology, we have thought and reviewed thoroughly where ICT is coming from in respect to adoption in Education, assessed the present trends and moving points of ICT, and taken into account the future of ICT and technological advancements and the possible impact.

To offer quality and timeless impacts we offer the following services:
- ICT Training and Capacity Building
- ICT Technical Support and Computing Devices Maintenance
- ICT in Education Consultation

To Support the services, we have the following products:

1. **The TichaTech project Publications** – Termly, weekly and periodic publications with different hacks, articles on trends and information on ICT in Education and how to adopt and integrate ICT. The Publications Include; The TichaTech Journal, The TichaTech Blog, The TichaTech Templates, Ticha Assistant, and The TichaTech Project YouTube Channel, Monthly Webinars among others.

2. **The TichaTech Gadgets** – A premium termly subscription where youBuy, lease or hire computing devices for teaching and learning as per the school need. The Devices available for hire include; Laptops (Windows OS), Tablets (Android OS), Projectors, ICT Teaching models, among others. For more details visit: https://tichatech.africa/gadgets

3. **Mwalimu Digital Stores:** At affordable prices, whether in retail or wholesale, feel free to get all school supplies and ICT accessories from us. Thoroughly reviewed to ensure quality, we source nothing but the best products and have them delivered to wherever you are. We offer class-demonstration products and material for ICT that you will only get from us specifically prepared for you. For more details, visit: https://mds.tichatech.africa

Each service is tailored and customised as per the ICT needs of individual institutions. After reaching out to us for any product, we carry out a need assessment and an ICT adoption assessment to guide the customization of the service for each individual institution. The assessments are guided by The TichaTech ICT adoption Policy and regulations in place by different agencies providing oversight for ICT in education.

Reach out to us and commence your ICT journey today.

Science & Technology

Technology in syllabus review: Subjects, Strands and Topics

The integration of ICT (Information Communication Technology) in education is transforming the way students learn and educators teach, offering new opportunities to enhance engagement, interactivity and accessibility. However, the dynamic nature of ICT profoundly impacts education, constantly reshaping how knowledge is accessed. This continuous evolution drives both educators and students to adopt to new tools and platforms, fostering a culture of lifelong learning. The Competency-Based Curriculum (CBC) is transforming learning by emphasizing skills and competencies over rote memorization. In CBC, ICT is used as a tool to foster critical thinking, problem solving, creativity and problem solving among students, aligning well with its core objectives. The inclusion of ICT as part of the curriculum objectives sees the introduction of units(topics/strands) and subjects that focus solely on ICT as opposed to the predecessor curriculum that introduces it at a later stage in the secondary Section where it was taught as a selective subject.

Paying homage to the 8.4.4. curriculum, we find the Computer Studies Subject which is taught from Form 1 to Form 4. We can criticize its impact on ICT adoption and introduction to learners from a young age since it was taught as a selective subject seeing a majority of learners not taking it up as it never passed as a critical subject. We can however commend the curation and practical approach to how it was set up across the four classes. In form one it gives a deep focus on introducing the learner on what a computer is and how it builds up to computer systems. In form two, the learner is taught to utilize the computer and Computer systems by introducing them to data handling through, word processing, spreadsheets, databases and Internet among other critical computer systems. The student with an already well-set foundation is now introduced to Data and data processing and systems development. The cherry on the cream, in the final year the student is now introduced to the applications and application areas of ICT in real-life. To evaluate the impact the learner is assessed with a computer studies project to put the knowledge learnt in to test. After four years, the learner is equipped to handle real-life scenarios using the technology. There are benefits, there are drawbacks, but one thing we can all agree on, the curation of the computer studies subject was spot on.

The CBC Curriculum curation has seen the integration of ICT into learning from the 4th Grade onward. For the 4th, 5th, and 6th Grades, the ICT strands/topics is in the Science and Technology while for the Junior high school, grade 7 ,8 and 9 ICT shall be taught as a subject, Computer Science.

At the Primary level, the learners at grade 4 are introduced to Digital devices. They are taught on the various parts of a digital devices and uses of the digital device. The learners are also briefly given an overview of coding and coding patterns which more or less are just definitions. At grade 5, learners advance the knowledge introduced into the previous grade and they cover Handling data and coding. They are taught on Word processing, learning how to create word documents, how to format the documents and save the files. In coding, learners will be introduced into programming. They shall be introduced to visual

programming where in most publication they use the Scratch Visual Programming Language. Scratch is a high-level block-based programming language and website aimed primarily as an educational tool. Learn more about the Scratch Program from our YouTube channel: The TichaTech Project. In grade 6, learners continue enhancing skills on data handling. At this level, they learn about Spreadsheets and dive in depth about the use of spreadsheets.

At the Junior School level, ICT is taught as a subject on its own curated as Computer Science. The Subject is divided into four strands: Strand 1: Foundations of Computer Science, Strand 2: Computer and Society, Strand 3: Computer Networks and Strand 4: Computer Programming. In grade 7, the learners are introduced to computing devices and dive in depth on input and output devices. The learners are also taught on the evolution of computers and taught on how to protect the computer and also the best practices to protect themselves from strain injuries. They also get to learn on computer basics on the components inside of a computer. In grade 8, learners dig deeper into the computer components under the foundation of computer science. They get to learn

about components like motherboards, buses, Storage devices and different functional computers especially those connected to the motherboard. The learners also get to learn about Cyber bullying and addiction that comes with use of computers in the computer and society strand. In the computer networks strand, learner get to learn about the different types of computer networks and the different elements of the computer networks. The learners also get a detailed introduction to the internet by learning about web browser concepts. In the computer programming strands, the learners get on computational problem-solving concepts, coding blocks and robotics concepts. In grade 9, The learners shall get to learn in-depth about computer software in the first strand. The learners shall learn about Data Security and data encryption concepts. They shall also get to learn about Data communications, learning about different communication modes and data signal transmission. The learners shall also get to learn about algorithms, pseudo codes, flowcharts, program control structures, selection control structures and looping control structures.

The inclusion of ICT in the syllabus and the perfect curation of computer science

subjects to build and help with the technological learning and integration for students. It will help create the perfect foundation for learners to use technology and ICT to solve real life issues. However, some questions that still beg for answers; Are we ready for ICT being taught in schools from early levels? Are the teachers well equipped? And more importantly, do we have the resources and architecture to support the subjects being taught? Only by striving to get answers and fill these gaps, shall we be able to comprehensively uptake the teaching and learning of ICT and reap the maximum benefit that comes with Technology and ICT in general.

To understand more about teaching and learning of ICT, while encompassing the principles of education, get in touch with The TichaTech Project team today. Learn how you can use the available resources, in an affordable and sustainable way to teach and build the best foundation for the learners as an educator or an education instructor. Reach us through our communication channels for various inquiries or issues as we strive to bring a new education experience.

CLASSIFIEDS

Ken Academy

Ken Academy is an educational centre of excellence that provides both 8-4-4 and 2-6-3-3 curriculum. It is located in Limuru, Kikuyu Sub-County, Kiambu County, about 30km from Nairobi City. The objective of the institution is to make the pupils connect with the real world through their holistic approach to both academic and extracurricular activities. The institution embraces the use of technology in order to help our learners fit in today's dynamic world.

Call us : 0722 877 578

🌐 : https://kenacademy.ac.ke/

Motto
Make That Move

Roots Kindergarten and Primary

Roots Kindergarten and Primary is a learning institution located in Kikuyu along Kikuyu/Nderi road. It is a Christian school that believes in Jesus Christ, the son of God, as our saviour and Lord. We understand our mandate well, and that is to give an all-rounded foundation to our learners, putting a lot of emphasis on Biblical values. We believe that every child is created in the image and likeness of God, and they are here on earth for a specific purpose. We also believe that children who are nurtured consistently under the guidance of godly values are able to reach their potential and are able to glorify God with their talents and skills as they serve humanity!
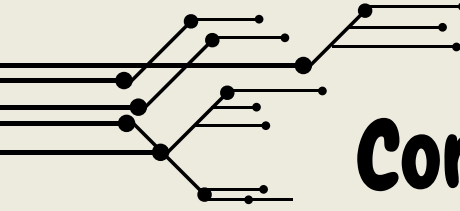
Call us : 0715717439.

🌐 : https://rootskindergartenandprimary.sc.ke/

Motto
Engaging the heart, Educating the mind

Communication channels

You can always reach us at:
The TichaTech Project
Email: info@tichatech.africa
📞: 0791 198 929
💬: 0791 198 929
📷: thetichatechproject
♪: thetichatechproject
f: The TichaTech Project
✕: TheTichatech
▶: The TichaTech Project

Website: https://tichatech.africa

The TichaTech Support:
For any technical issue, be it an error, a configuration challenge, or any other ICT-related issue, get technical support:
WhatsApp: 0791 198 929
Tel: 0791 198 929 / 0703 858 522
Email: support@tichatech.africa

For a visually applicable issue: Take a picture of the issue, send it via WhatsApp, and receive a solution from our technical team.
Snap it, Send it, Solve it

The TichaTech Communities
Engage, interact, and learn from ICT enthusiasts, like-minded individuals, and tech professionals. Receive tech updates, news, insights, and how-to on different issues.
Whatsapp Group link: https://chat.whatsapp.com/Ce29eSbV2y3L9eyLFzyu5h
scan Qr code below to join:

Whatsapp Channel: The TichaTech Project
Blog: https://blog.tichatech.africa

THE TICHATECH PROJECT
—A NEW EDUCATION EXPERIENCE—

Credits and acknowledgement

We would like to extend our heartfelt appreciation to everyone who contributed to the production of this magazine. Your dedication, hard work, and unwavering support have been instrumental in bringing this project to life.

To our writers, editors, and designers, thank you for your creativity and commitment to excellence. To our sponsors and contributors, we are deeply grateful for your generous support and belief in this initiative. Finally, to our readers, your encouragement and feedback continue to inspire us to deliver meaningful and impactful content.

With much gratitude from,
The TichaTech Project.

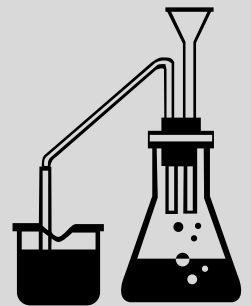## Call for articles for our next publication

We are now accepting materials and articles for the next edition of our EdTech magazine! If you have insights, success stories, or ideas about innovation in education, we'd love to hear from you. Share your experiences, projects, or research by submit your articles to journal@tichatech.africa

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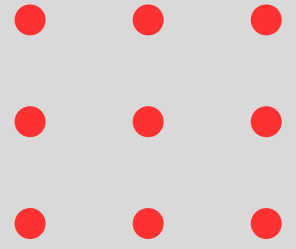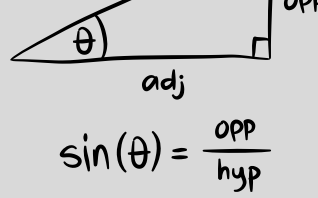
The TichaTech Journal

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2025