ATUPANEWS





Ravibu Renya ATUPA Comes to Kenya

At the General Assembly of Heads of ATUPA Member-Institutions, held on Thursday, 31st August 2023 in Accra, Ghana, the Republic of Kenya was granted the hosting rights for the ATUPA 2024 International Conference. Consequently, the ATUPA family shall be converging in Kenya for the August 2024 Conference.

ATUPA is now ready for the tasks ahead, and on behalf of the Executive Board, the Secretary General and the Local Organising Committee extend a warm welcome to you all to Kenya.



EDITORIAL

Ladies and gentlemen,

The January — March 2024 edition of *ATUPANEWS* highlights some of the positive strides we have made as the TVET family in Africa.

Just like the West Africa Regional TVET Conference in Saly, Senegal, the ATUPA International Conference in Accra, Ghana, was a huge success, thanks to the concerted efforts of the ATUPA Executive Board and Secretariat, the Accra Local Organising Committee, chaired by Professor Ben Q. Honyenuga, and by extension, the support of the Government of the Republic of Ghana, not forgetting the attendees from across the continent.

This edition also enumerates the methodical strides towards economic freedom through the reengineering of TVET systems in Africa, as explained by our very own Chairperson of Executive Board. It is these strides, without a doubt, that have now made TVET the cornerstone of wealth-creation. The Secretary General delves deeper into the topic.

In this bulletin, the TVET discourse takes a Pan-African perspective, with our host during the all-important benchmarking mission, Professor Amevi Acakpovi, urging heads of African institutions of learning to think inside the box while initiating and undertaking collaborations and exchange programmes, for, therein, lie the experiences and opportunities unique and applicable to the African situation. And that is not all: Accra Technical University demonstrates how student and faculty projects are soaring into the sky.

Finally, on behalf of the ATUPA Executive Board, the Secretary General proudly announces and welcomes you all to *Kenya 2024*— The ATUPA International Conference to be held in Kenya, in August 2024!

Enjoy your read!

Towards Economic Freedom: Reengineering TVET Systems in Africa

> (Message from Prof. Laila Abubakar, Vice-Chancellor, Technical University of Mombasa, Kenya, and Chairperson, ATUPA Executive Board)

TVET: The Cornerstone of Wealth-Creation in Africa

[Message from Mrs. Jahou Samba Faal (Dr., Hc), ATUPA Secretary General]

Impressive Practical Projects Take to the Skies at ATU

The ATUPA benchmarking mission took to Accra Technical University, to sample some of the academic activities, with particular interest on the ongoing practical student and faculty projects.

Editorial Team

Editor-in-Chief Editorial/Design — Jahou Samba Faal (Dr. Hc)

Secretariat

— Alex Wamonje

— Sylvia Muteshi (Office Administrator), Mildred Nafula (Legal Officer), John Mararo (ICT Officer), Diana Syombua (Alternate Office Administrator/Marketing Executive), Aggrey Kalutu (Driver)



he ATUPA International Conference, held in Accra, Ghana, was a success. Themed "TVET for Skills Development, Mobility and Resilient Economies in Africa," the Conference drew participants, keynote speakers and paper presenters from across Africa, namely: Ethiopia, The Gambia, Ghana, Guinea Conakry, Kenya, Lesotho, Nigeria, Rwanda, Senegal, Tanzania, Uganda, Zambia and Zimbabwe.

Amongst the participants were students attending and presenting projects in the contest at the 5th Pan-African Youth Forum, which took place at the sidelines of the main Conference (see separate schedule on page 10).

Also happening alongside the ATUPA Conference, was the second China-Africa TVET Cooperation Conference (CATCC). This Conference is testament to the growing interest in TVET activities across Africa, by establishments outside Africa. It also reinforces the commitment of the People's Republic of China to build working relationships and linkages between their enterprises and TVET institutions in Africa, under the stewardship of ATUPA.

Present at the CATCC Conference were: Mr. Zong

Wa, Deputy Secretary General, China Education Association for International Exchange, CEAIE; Dr. Liu Yufeng, Senior Programme Specialist, Higher Education Section, UNESCO; Ms. Zhang Junqing, Senior Programme Director, Department of TVET and Professional Training, CEAIE; Prof. Laila Abubakar, ATUPA Executive Board Chairperson and Vice-Chancellor, Technical University of Mombassa, Kenya; Mrs. Jahou Samba Faal (Dr. Hc), Ben Q. Honyenuga, Chairman, Local Organizing Committee for the 2023 ATUPA Conference and Vice-Chancellor, Ho Technical University, Ghana; Rev. Prof. John Vice-Chancellor, Takoradi and Prof. Amevi Acakpovi, Ag. Vice-Chancellor, Accra Technical case sharing sessions and panel around the revitalisation of TVET

Participants were urged to take advantage of all available opportunities at the Conference to deepen skills acquisition for socio-economic development.

Representing the CEAIE Secretary-General Mr. Yu Yunfeng, Mr. Wa observed that China values the importance of international collaborations, hence the trust between China and Africa and the many years of dedicated efforts have yielded fruits in both parties. For this reason, he said, China plans new initiatives to support Africa, and in their bucket list is the training of some 500 administrators and teachers in Chinese and TVET areas

Mr. Wa also reported that China runs the largest and most diverse TVET educational programmes and has enrolled many TVET students, including Africans, on over 600 online courses, and in support of the Africa Union blueprint, the Agenda 2063, would focus their energies to empower young African students and graduates with the necessary skills.

Mr. Wa used his country as a case study, adding that 70% of China's new manpower are graduates of TVET programmes, not only for national development, but as an alternative career choice for young learners. He cited digital transformation as a vital driver of TVET, and emphasised the partnership with ATUPA as a conduit for sharing their best practice.



Towards Economic Freedom: Redefining/ Re-engineering TVET Systems in Africa

Message from Prof. Laila Abubakar, Vice-Chancellor, Technical University of Mombasa, Kenya, and Chairperson, ATUPA Executive Board



The journey towards economic freedom can be arduous, yet also virtually effortless. Arduous in the sense that there are numerous hurdles to be surmounted, and effortless if the right tools and processes are put in place, and implemented methodically.

Ladies and gentlemen, to some young learners, Technical and Vocational Education and Training (TVET) seems to be a new phenomenon, because everyone else is talking about it. But truth be told, TVET has been around since time immemorial. In fact, there is no known advent of TVET, save for the hypothesis that it is as old as the beginning of human civilisation. TVET has evolved over time, and as the debate rages, its approach changes from region to region. Factors such as the World War II (WWII) might have contributed greatly to this evolution. TVET is behind some of the most advanced; most developed economies in the world. When great economies such as the United States, China, Japan, Germany, the United Kingdom, Korea, Singapore, Taiwan, India and Australia are being discussed, TVET systems feature prominently. While TVET has failed to meet the expectations of some nations, this is largely because of the missing aspect of attitudes from the cocktail of skills and knowledge. In short, some think TVET is a second-rate, or even third-rate approach to learning.

The term TVET gained formal recognition at the second International Congress on Technical and Vocational Education, held in the Republic of Korea in 1999, through the collaboration of UNESCO, ILO and their respective

member-states. At that time, TVET was at the heart of the realisation of the United Nations Millennium Development Goals (MDGs). Ever since, developing nations have been working to adopt TVET, with institutions of learning at the forefront. However, since the institutions were already deficient in resources and other ingredients, the employers came in handy by not only offering material support, but also participating in the review of curricula from time to time.

The need for economic freedom has never been this paramount, particularly in Africa. This pressing issue has, slowly but surely, awoken the TVET stakeholders into action.

Right now, more than three-quarters of occupations lean towards TVET. This is why technical universities, polytechnics and technical colleges are focusing, or are being urged to focus on at least 60% of their various curricula being skills development.

Furthermore, tertiary institutions, under the auspices of the Association of Technical Universities and Polytechnics in Africa (ATUPA), of which I am the Chairperson of the Executive Board, have taken the advocacy gospel to not only the students, but also the industry players, especially the African governments, employers and development partners. We have used, and continue to use benchmarking, as a viable method of learning between member-institutions, and with other institutions outside the scope of ATUPA. The last such benchmarking mission was at Accra Technical University (ATU), at the close of the ATUPA International Conference in Accra, Ghana.

ATUPA takes seriously these benchmarking trips on TVET matters, and this is why, at ATU, the call to collaborate and design exchange programmes amongst ourselves, was mooted (see separate article). With such homegrown exchange programmes, we are sure to use case studies relevant and applicable to our African situations to

create a ripple effect tin the economic journey of our continent.

As ATUPA member-institutions, we have also advocated for a hybrid system of delivering TVET curricula: That where lecturers who are stronger in the teaching of theory are sent to industry to learn new trends in a typical workplace setting, and practitioners who are wellgrounded in their respective professions, are offered part-time teaching jobs, to offer support on industry experience to students in a classroom setting. This approach has borne fruit in some TVET institutions.

With the formation of women's caucuses in the TVET sector — notably the Women in Technical Education and Development (WITED) - some stereotypes and myths associated with the involvement of women in technical fields of occupation have been demystified. Right now, ATUPA member-countries have formed their respective chapters, and regularly share case studies on how the involvement of women is changing the TVET landscape in Africa. Likewise, institutions for persons with special needs are getting involved in the nurturing of skills, knowledge and attitudes amongst persons who were hitherto relegated to oblivion, as far as economic freedom and social inclusion are concerned.

The journey towards reengineering TVET has been mutually beneficial to both the TVET institutions and their students on one hand, and the employers on the other. In this arrangement, while the industry offers internship and employment opportunities to our students, they also send cohorts of apprentices to enrol and obtain new academic credentials at the end of their study. As we speak, initiatives such as the Linking Industry with Academia (LIWA) programme are in place.

All said and done, the reengineering of TVET systems is age-old, and will keep evolving in Africa, in order to improve life and livelihoods. As ATUPA, we stand to be counted in this vocation.

TVET: The Cornerstone of Wealth-Creation in Africa

Message from Mrs. Jahou Samba Faal (Dr., Hc), ATUPA Secretary General

Ladies and gentlemen of TVET,

would like to express my sincerest gratitude to you all for being the dependable and staunch advocates of technical education, as exemplified by the commitments you have made in your various capacities. Indeed, you have demonstrated that ATUPA can count on your support and goodwill.



The year 2023 saw a number of milestones in the ATUPA family; most notably the ATUPA International Conference in the City of Accra, Ghana. Accra 2023 has been billed as one of the most successful and enviable conferences organised by ATUPA. These successes can be attributed to the invaluable contributions of all stakeholders in the TVET sector.

We are thrilled by the partnerships that we have initiated and entered into thus far, and are particularly elated that the positive results are trickling in. It is noteworthy that Accra 2023 was the very first Conference by ATUPA — and by extension, CAPA — to be attended by our worthy partner, the China Education

Association for International Exchange (CEAIE). This gives us the impetus and the resolve to champion the TVET cause in Africa. Indeed, when talking about wealth-creation in Africa, we shall no way miss to mention TVET as the most important ingredient. Little wonder that TVET skills are the most sought-after by employers today. TVET is the future!

The idea of ATUPA was conceptualised 45 yrs ago, in 1978 in Accra, Ghana, which, coincidentally, hosted ATUPA 2023 Conference. When the history of ATUPA and TVET initiatives in Africa is written, the Government of the Republic of Ghana will feature prominently. For the 2023 case, I have to thank, in a special way, the Minister of Education, for supporting the Local Organising Committee in Accra to plan and execute the Conference.

In the 45-year history of ATUPA, whose membership has now grown to 225 institutions across Africa, we

take pride in the fact that ATUPA has now opened its doors to all African countries, including those that are non-Commonwealth-associated, with Senegal being the first Francophone nation to come onboard, and going ahead to host the ATUPA West Africa Regional TVET Conference in April 2023 in Saly.

With pride and joy, I can report that

the Women in Technical Education and Development (WITED) is now fully-functional across Africa, and its programmes are now embedded and institutionalised in all ATUPA activities, as epitomised by our four most recent conferences. With the increased interest in Science, Technology, Engineering and Mathematics by the womenfolk, this development makes WITED a key fortress of ATUPA, and puts African women on a solid pedestal as far as TVET is concerned.

When talking about wealth-creation in Africa, we shall no way miss to mention TVET as the most important ingredient.

— Mrs. Faal

I am also pleased to report that at the General Assembly of Heads of ATUPA Member Institutions, the long-awaited ATUPA Strategic Plan 2024 — 2027 was launched. I sincerely thank the Executive Board and Secretariat for their concerted efforts to have this important document in place and operational. It is my hope that the guiding principles therein will help us to achieve our goals in the years to come.

God bless you all; God bless the ATUPA family.



Prof. Amevi AcakpoviAg. VC, Accra Technical University

he Acting Vice-Chancellor of Accra Technical University in Ghana, Professor Amevi Acakpovi, has called for African institutions of learning to start academic exchange programmes amongst themselves. The VC challenged heads of African institutions to quit focusing too much on collaboration with overseas institutions, and emphasised that there were numerous better opportunities from within the African continent.

Professor Acakpovi made this remarks while welcoming delegates of the International Conference that took place in the City of Accra, Ghana, organised by the Association of Technical Universities and Polytechnics in Africa (ATUPA). His sentiments come at a time the clarion call for the amalgamation of all African nations under the umbrella of ATUPA is intensifying.

"It is imperative that we Africans should seek partnerships from amongst ourselves," Prof. Acakpovi posed. "I urge ATUPA to take the lead in fostering continental and regional partnerships, for the benefit of its

members... Right now, the Chinese are more aggressive in establishing memoranda of understanding with us, because of the plenitude of potential in Africa. Just the other day, they were here to establish ways of working with us."

While giving a brief history of the University, Prof. Acakpovi said ATU is the first technical university in Ghana, having been established in 1949 as a technical institute, and elevated to university status in 2016. He gave an example of the success stories in ATU's journey of transformation, being working with the Government to grant leave and offer scholarships to members of staff, with a view to improve their academic credentials, to enable them cope with the demands and expectations of the university status.

At the occasion, the ATUPA Secretary General, Mrs. Jahou Samba Faal (Dr., Hc), congratulated Prof. Acakpovi for his exemplary stewardship of ATU, and expressed her gratitude to the Vice-Chancellor and Management for extending the privilege to the ATUPA Executive Board, heads of member-institution and participants of the Conference to

undertake a benchmarking mission at his esteemed institution.

Professor Laila Abubakar, the Chairperson of the ATUPA Executive Board, who is also the Vice-Chancellor of the Technical University of Mombasa, Kenya, emphasised that information exchange should be at the centre of the collaborations. Professor Laila explained that the labour market is more interested in practicality, and technical colleges and universities were stepping up to the plate to satisfy the expectations of the employers. This, she said, was the basis of technical universities being and acting different from the traditional universities.

Professor this discourse, Acakpovi and Professor Laila were unanimous that as is characteristic of any technical university, industrial attachment programmes are in place for every student, preferably in every academic year, with constant evaluation to improve areas of weakness in every student. To further eradicate the technical skills mismatch, they observed, TVET institutions have made arrangements to take lecturers to industry, and hire practitioners, albeit on part-time, to augment practical skills development in class.

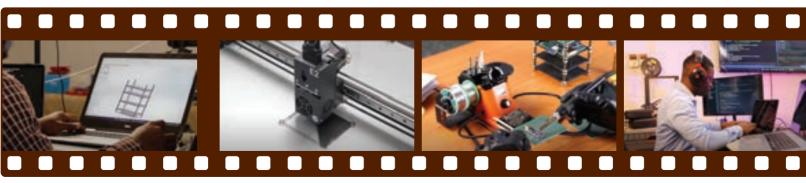


Impressive Practical Projects Take to the Skies at ATU

ot on the heels of the ATUPA International Conference, the benchmarking mission took to Accra Technical University, to sample some of the academic activities, with particular interest on the ongoing practical student and faculty projects.

At ATU, the delegation paid a visit to various workshops and laboratories, to have a look at some of the flagship student and faculty projects. Notably, the Fashion Design and Textiles workshop and the Drone Centre, attracted the curiosity of the participants, who interacted in-person with the ultimate potential of the young population of Africa.

At the Drone Centre, Mr. Justice Nyarko, a member of staff at ATU, and a specialist in electronics and programming, took the delegation through a step-by-step design, development and deployment of a drone satellite. Codenamed "J-Force One," this particular drone was designed to monitor air quality and transmit data in real-time, albeit, under the circumstances, the drone is not designed to fly into space, but within a specific geographical location,





typically near to a ground station.

The motivation behind this drone project was the fact that certain metropolitan areas, particularly industrial production zones, have been severely clouded in carbon monoxide, thereby compromising the quality of the air we breathe.

Particularly interesting about this drone, was its ability to pick up and transmit Global Positioning System (GPS) locations of severely affected areas in terms of not only carbon emissions, but also environmental and climatic conditions such as the presence of particulate matter, sulphur gas and humidity, and the temperature of the atmosphere.

During the J-Force One development, Mr. Nyarko explained, his team came up with a conceptual drone structure comprising five compartments stacked vertically, namely: The camera, the power pack, the microcontroller, the sensors and the antenna. Most of these components were made from scratch, with some of them modelled using computer-aided Three-Dimensional (3D) modelling software and advanced 3D printing, and assembled locally.

Asked about the public safety at the deployment his drone project, Mr. Nyarko explained that as is the norm the world over, all the stakeholders in this project were alive to the fact that they were dealing with an unmanned aerial vehicle, and as such, secured not only the cooperation, but also the accreditation by and the permission from the civil aviation authority in the Republic of Ghana, with periodic checks and balances, and monitoring by the authorities.

The birth of the J-Force One at ATU upholds the long-held notion that Africa can nurture young talent and find relevant homegrown solutions, and eventually hold their own industrial revolution through energy, resilience and creative and critical thinking, using locally-abundant raw materials and expertise, without looking either side.







A filmstrip of a section of the chronology of the development of *J-Force One*. Pictures courtesy of Nyarko's YouTube channel. More on his YouTube channel, "Justice SK Nyarko."



Creative Ideas Come Alive at the 5th Pan African Youth Forum

he 5th Pan African Youth Forum was held alongside the ATUPA International Conference in Accra, Ghana, under the theme: "Future Skills, Transnational TVET Value Chains and Youth Empowerment in Africa."

The objective of the Youth Forum, which is now an integral part of the annual ATUPA conferences, was to give the youth an opportunity to exchange ideas, and showcase youth talents and skills through exhibitions from TVET institutions. To realize this objective, youth from TVET institutions in Africa were competitively selected to pitch in project teams as part of their entrepreneurship training. The pitching competition was titled: "2023 ATUPA-Startup Africa Innovation Olympiads for TVETs."

Speaking at the Opening Ceremony of the Youth Forum, Professor Ben Q. Honyenuga, Vice-Chancellor of Ho Technical University and Local Organising Committee Chairman, advised the young people to take advantage of the Forum to network, learn new things and be creators and not seekers of jobs, in order to prepare to solve the challenges African societies.

Mrs. Jahou Samba Faal (Dr., Hc), the Secretary-General of ATUPA, urged the students to make their trainers proud, and use the competition as a platform to market their skills and become competitive worldwide.

Ghana's Deputy Minister of Education in charge of TVET, Hon. Mrs. Gifty Twum Ampofo, informed the Youth Forum that her Government has attached a lot of importance to TVET as the catalyst for training employable graduates, hence they have equipped all technical universities with the necessary laboratory and workshop equipment to make TVET a reality.

Dr. Tapiwa Uchizi Nyasulu-Rweyemamu, emphasised the need for the skilling and upskilling of students in TVET, to tap the potential of the huge youth population in Africa. She urged the youth and their trainers to adapt to artificial intelligence and general technological trends, if they want to remain relevant.

Of the 18 Teams selected for the semi-finals pitching, seven were shortlisted for the finals of the contest, with the best three being identified by a team of judges of high repute.

Presentation of Awards

This marked the climax of the pitching competition among brilliant

and skilful students from TVET institutions across Africa. JB Tech from Ho Technical University emerged as the best pitching team, followed by Chicks Carrier, and Kiplele's Farm. StartUp Africa, sponsors of the event, presented \$3000 to the Overall Best Project JB Tech; \$2,000 to Chicks Carrier as the second position; and \$1,000 to Kilele's Farm as the third position.

Prof. Ronald Tuninga, Vice President for the Association to Advanced Collegiate Schools of Business (AACSB) International, observed, thus:

"Today, I had the pleasure to be part of the 5th Africa Youth Forum in Accra, Ghana. At the Forum, the best student teams from technical universities all over Africa presented their ideas for starting their businesses. Many of these proposals when worked out will have a positive societal impact for African countries. My good friend, Vice-Chancellor Prof. Ben Honyenuga, the Deputy Minister of Education, the Secretary General of ATUPA, CEO of StartUp Africa and many more distinguished guests were all here to show support for these young people. The future of Africa looks bright. I wish all the young entrepreneurs success with their Projects."

The 18 project teams:

S/No.	Name of Project Team	Institution	Country
1.	Power-hub production of electricity:	Mutare Polytechnic	Zimbabwe
2.	Up lifters-Solar-plants:	Mutare Polytechnic	Zimbabwe
3.	Sensor Actuated Hank-Reeling machine	Arba Minch Polytechnic	Ethiopia
4.	Coffee washing, grinding machine	Hawasa Polytechnic	Ethiopia
5.	Bio-Missiles - biodegradable water bottle:	Mutare Polytechnic	Zimbabwe
6.	African-Bridal Dress from cornhusk	RECTEM	Nigeria
7.	Green Revolution	Mutare Polytechnic	Zimbabwe
8.	Multi-Fuel Engine for power generation in Africa		Ghana
9.	Murgan Company	Harare Polytechnic	Zimbabwe
10.	Chicks-carrier (First Runners-up)	Harare Polytechnic	Zimbabwe
11.	Happy brands, Happy pack	Harare Polytechnic	Zimbabwe
12.	JB Tech (Winning Team)	Ho Technical University	Ghana
13.	Fraud Detect	Ho Technical University	Ghana
14.	Kiplele's Farm (Second Runners-up)	RVIST	Kenya
15.	BSIM Health Solution	RVIST	Kenya
16.	Lenok Hypermarket	RVIST	Kenya
17.	Charging Bioenergy Company	RVIST	Kenya
18.	Smart Agriculture	RVIST	Kenya



ATUPA Executive Board Meeting Takes Place in Naivasha, Kenya



Members of the ATUPA Executive Board and Secretariat in Naivasha.



A demonstration of processes and equipment when members of the ATUPA Executive Board took a benchmarking trip to the Kabete National Polytechnic, Kenya

The 68th ATUPA Executive Board was held at the Naivasha Beach Resort in Kenya, on 27th November 2023. This was following the approval by the General Assembly of the Association of Technical Universities and Polytechnics in Africa to hold the 2024 Annual International Conference in Kenya. The Board meeting devised and deliberated strategies for the hosting of the Conference.

At the meeting, the Principal, Ukwimi Trades Training Institute in Petauke, Zambia, Dr. Daniel Nyirenda, and Mr. David Maina Mwangi, Principal, The Nyeri National Polytechnic, were awarded medals and formally inducted into the Executive Board.

On the 28th of November, The board members were privileged to benchmark at the Kenya School of TVET and the Kabete National



Mr. David Maina Mwangi and Dr. Eng. Tafadzwa Mudondo share a light moment after the former receives a medal



Dr. Daniel Nyirenda receives a medal from Dr. Eng. Tafadzwa Mudondo

Polytechnic. The Board members were impressed by the availability and state of the learning and production equipment, which play a pivotal role in the offering of quality technical and vocational education. They thanked the Ministry of Education of the Republic of Kenya for their support in TVET.



Western Region: The Gambia, Ghana, Nigeria, Senegal and Sierra-Leone

Eastern Region: Kenya, Mauritius, Rwanda, Seychelles, Tanzania and Uganda

Southern Region: Botswana, Lesotho, Malawi, Namibia, Eswatini, Zambia, Zimbabwe,

Republic of South Africa











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Tel: +254-20-3343672/251300; Cellphone: +254-792-688383; Email: info@atupa-sec.org