

DECENT WORK AND ECONOMIC GROWTH: IMPERATIVES AND RESPONSIBILITIES FOR HIGHER EDUCATION TO DRIVE POSITIVE AND PRACTICAL CHANGE

Hellicy C Ngambi, Meiya G Nthoesane

Keywords

Decent Work; Economic Growth; Imperatives for Higher Education; Positive and Practical Change; SDGs, Proactive Response to Covid-19.

Abstract

Institutions of higher learning are revered as a force to drive change in society. Arguably, by both their ability and capacity to question the status quo through intense research and knowledge production and by transforming societies through empowering students. Noble as it sounds, the question that the institutions of higher learning of the 21st century should ponder lies in their ability and willingness to drive economic growth and advance the attainment of Goal 8 of the SDGs. This is more so critical on the backdrop of COVID-19 ravaged economies. The calamities resulting in the current spate of the pandemic further threatens the attainments and prioritisation of Sustainable Development Goals (SDGs). This is more so pronounced in the Sub Saharan Africa

and in countries like Zambia in particular. This reality demands for pragmatic solutions driven by focused leadership. Based on this realisation Mulungushi University positioned itself, both philosophically and practically as an institution of higher learning that develop targeted future looking scenarios for driving sustainable creation of livelihoods, through a myriad of work creation and entrepreneurship initiatives. This chapter, therefore outlines a near decade long period of how the University, transformed its systems and put in motioned a strategy that positively enhanced decent work and participated in economic growth, at the least of the Central Province of Zambia situated in Kabwe, thus actively ensuring the attaining of the SDGs.*

Introduction

Whose problem is Sustainable Development Goals anyway? The Millennium Development Goals (MDGs) were never reached for several reasons, including excuses. New goals were set, Sustainable Development Goals (SDGs as they are known), the question is whose problem it is for these goals to be reached. “Once upon a time, there was a family that kept a cow, a dog, a chicken and a cat. A rat was seen in the house and the owner of the house set a trap to kill it. The rat then called a meeting with other animals in the house and asked for their help

*Corresponding authors: Prof. Hellicy C. Ngambi, Mulungushi University, Zambia; Dr. Metya G. Nthoesane, University of South Africa, South Africa, nthoemg@unisa.ac.za.

To quote this chapter: Ngambi, Hellicy C., Nthoesane, Metya G., “Decent Work and Economic Growth: Imperatives and Responsibilities for Higher Education to drive positive and practical change”, in: Amélé Adamavi-Aho Ekué, Divya Singh, and Jane Usher (Eds.), *Leading Ethical Leaders: Higher Education, Business Schools and the Sustainable Development Goals*, Geneva: Globethics Publications, 2023, pp.261-289, DOI: 10.58863/20.500.12424/4278455 © Globethics Publications. CC BY-NC-ND 4.0. Visit: <https://www.globethics.net/publications>

in removing the trap. All the other animals, especially the chicken and the cow told the rat off, saying that the trap did not concern them since it could not trap them. The trap eventually caught a venomous snake, but not before the snake fatally bit the owner of the house while he was trying to stop a fight between the cat and the dog. The cat and the dog, each blaming each other for the owner's demise fought one another to death. For the owner's funeral, the cow was slaughtered, and for the last funeral rites, so was the chicken" (Ngambi, 1999:31). The question that is even more appealing is whether nations, organisation and individuals see the need to galvanise support and effort to ensure the attainment of SDGs. The parable above clearly indicates that it is always our collective problem. To this this end the chapter aims to share milestones achieved by Mulungushi University, a future looking institute of higher learning, in advancing the course for achieving Goal eight of the SDGs.

Theory and Concepts of Decent Work

International Labour Organisation (n/d) positions decent work as a critical part that amplify and sums up the dreams and aspirations of people during their productive working years. Among many elements that make up this summation of the aspirations is the provision of opportunities for work that is productive and can deliver a fair income commensurate to the effort put. Anker, Chernyshev, Egger, Mehran and Ritter (2003) provides six conceptual dimensions of decent work agenda as envisaged to achieve Goal eight of the SDGs, and they are:

1. The need to create work opportunities for work to all persons (men and women) who want to work, are willing to work to be able to find work. This dimension implicitly put in the centre the need for the availability of work and/or work opportunities in all its forms, ranging from formal to informal.

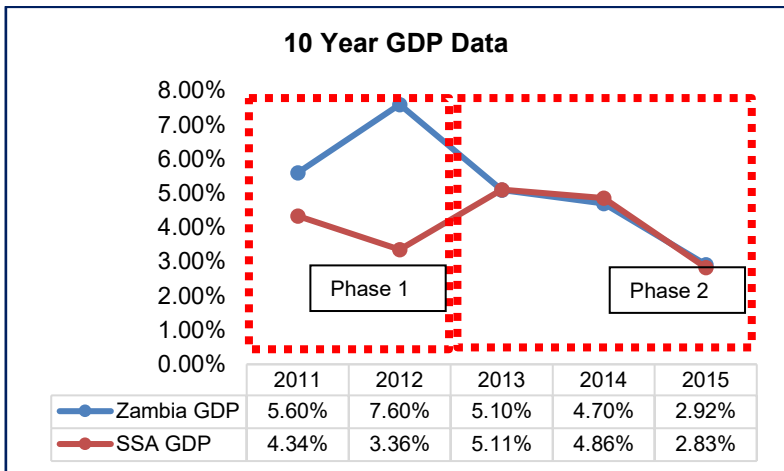
2. Work in conditions of freedom, that there should not be forced labour in all its forms and those who chose to work, are able to work and are in the legal age of work, should have the freedom to choose their work. This freedom is further extended to the ability to join workers labour organisations freely.
3. Those who can and are able to find work need to have “acceptable livelihoods for themselves and their families”. This dimension suggests that at the bare minimum there must be fair, just and sustainable monetary compensation commensurate to the skills brought by the employee.
4. Fourthly is of equity in work. This equity serves as insurance for fairness and equitable, moreover, there are equal opportunities void of discrimination at work.
5. Security at work is presented as the fifth dimension. Elements of this dimension include safeguarding health, pensions, livelihoods of the workers, provision of adequate financial health, and other contingencies. It also recognises worker’s need to limit insecurity associated with the possible loss of work and livelihood.
6. The sixth and final dimension of decent work is dignity at work. This dictates that workers must be treated with respect at work and be able to voice concerns freely and participate in decision-making about working conditions.

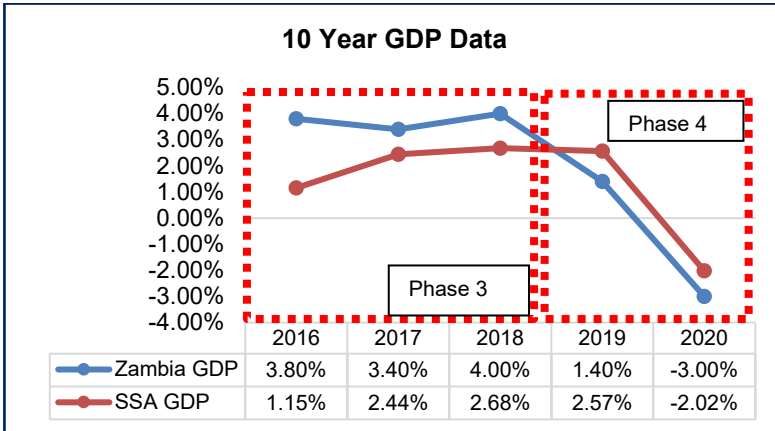
Malan (2019) urges organisations to provide employees with decent work, as this is arguably a proxy for decent life since decent work will potentially lead to increase employees’ work fulfilment and general wellbeing. Decent work does not happen in isolation, and therefore it

might be necessary to look at some of Zambia’s indicators that has a potentially direct relationship with decent work.

Zambian Economic Indicators

In order for us to look at the matter of decent work and economic growth as they intercept with higher education institutions, it is necessary to pay attention to some of the economic data from Zambia over the years. The first data to observe is that of Gross Domestic Product (GDP) over the past decade. The Zambia data is compared with that of Sub-Saharan Africa (SSA), on the premise that the region in some ways share similar or related economic, social and developmental challenges (and opportunities).

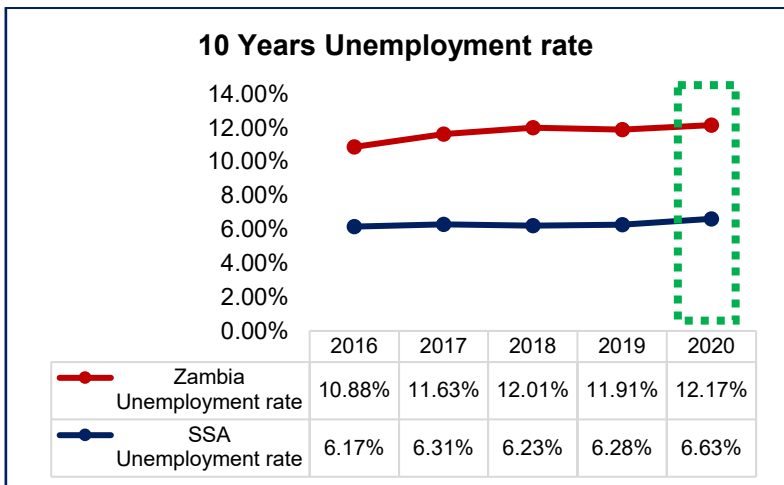
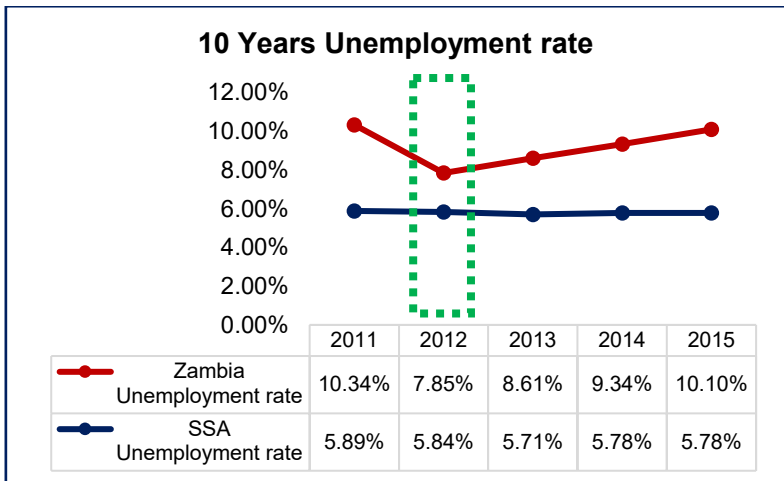




Figures 1: Ten years Gross Domestic Product (GDP) in Zambia. Data Source: Zambia (Bank of Zambia) and SSA (Macrotrends.com)

Figure 1 shows generally four phases of GDP performance between SSA and Zambia. The first phase, between 2011 and 2012, depicts GDP growth of Zambia being greater than that of the region. Peak performance shown in 2012, with the all time high of 7,60% in the period under investigation. Phase 2, as shown by period 2013, 2014 and 2015, here Zambia and the region have correlation in GDP performance, declining gradually. Phase 3, between 2015 and mid-2018; in this period Zambia experience a better growth than the region. The last phase that commences mid 2018 till 2020, the region performs slightly better than Zambia, however, both starts declining sharply from mid-2019. Like other economies and regions in the world, the 2020 GDP performance is negative (indicative of adverse impact of COVID-19 pandemic). During the decade under investigation, the Zambian economy performs the worst at -3.00%. This analysis is necessary because it is assumed that institutions of higher learning will have taken interest in this performance and develop curricula that will develop graduates who will be better positioned to improve the economic standing. Secondly, institutions could also seize the opportunity to partake in activities that

improve economic performance of the country. The next key economic datum observed is the unemployment rate, as shown in figure 2.

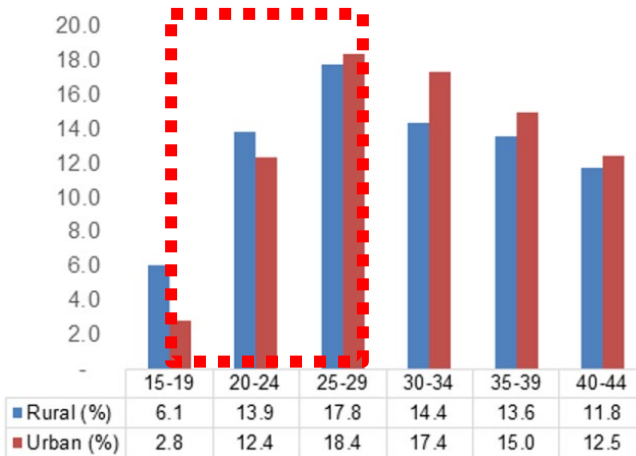


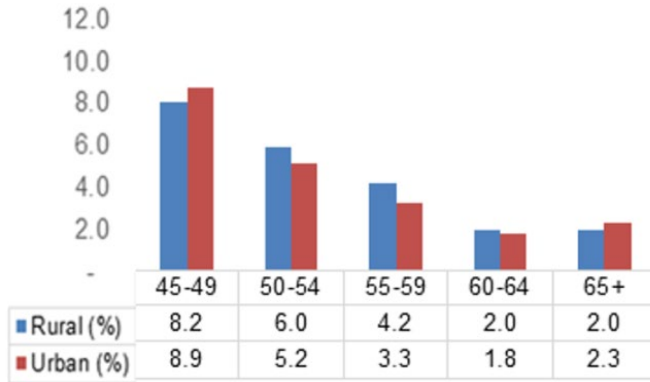
Figures 2: Ten years unemployment rate in Zambia. Data Source: Zambia (Bank of Zambia) and SSA (Statistica.com)

Zambia has had an unemployment rate above the region’s rate for the entire decade under observation. As from 2016 the country has experienced the rate in double digits with the worst recorded in 2020,

understandably due to the negative economic impact brought by the pandemic worldwide. In analysing the unemployment data, an inverse relationship between GDP and unemployment rate can be seen, especially in the years 2012 and 2020. In 2012 GDP was at its highest in Zambia and unemployment was at its lowest. Conversely, in 2020 GDP was at its lowest and unemployment at its highest. This observation suggests that if the country can find ways and put in measures of improving GDP (and other related variables and indicators) there is a likelihood to minimise unemployment. This observation lies at the core of SDG 8, or creating decent jobs, growing the economy and ensuring sustainable livelihoods.

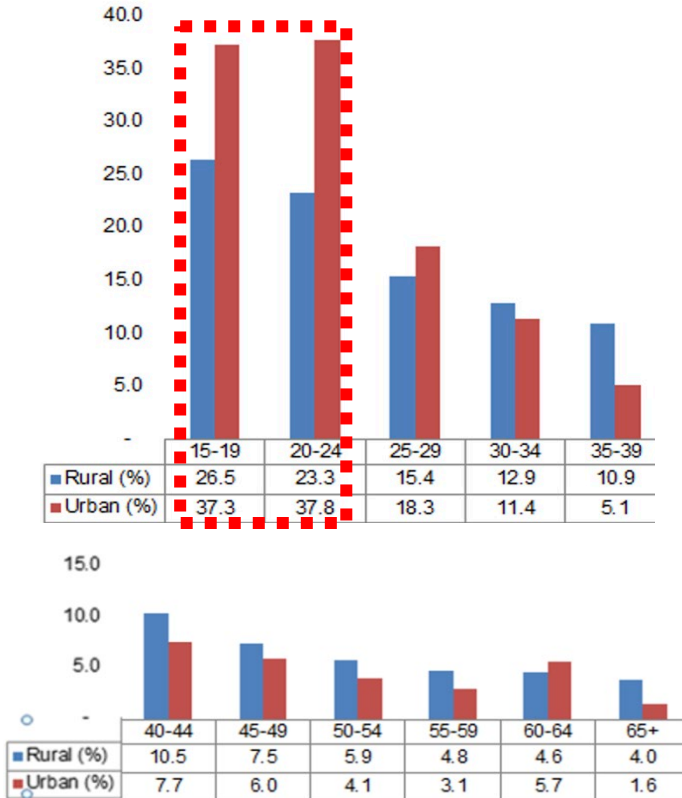
Placing institutions of higher learning at the centre of economic developments necessitates that a special attention be given to the age group that dominates these institutions. While it is factual to argue that student population cut across all age groups, it is equally factual to argue that majority of student population in higher education institutions, is between the years of nineteen (19) and twenty-nine (29). This positioning is premised on the observation that in this period an undergraduate and a postgraduate qualification can be attained.





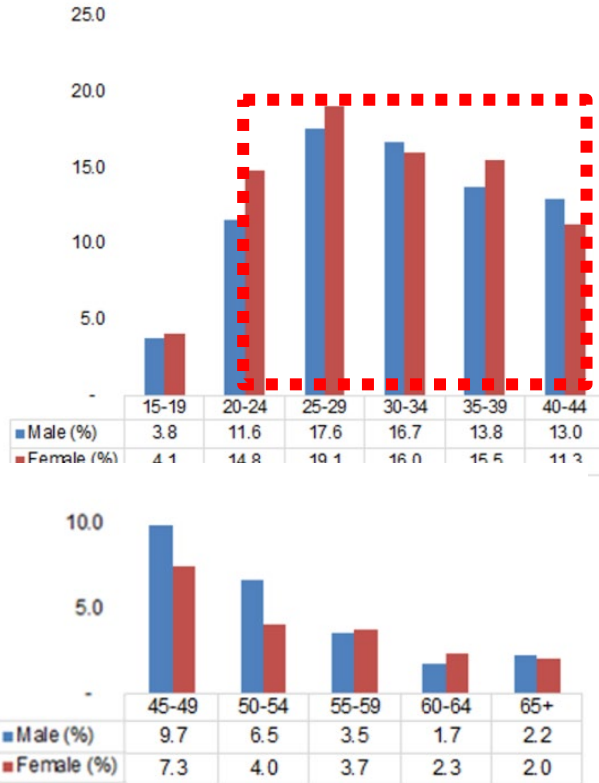
Figures 3: Percentage distribution of the Labour Force (15 years to 65+) by Rural/Urban and Age group, Zambia 2020. Source: Zambia Statistical Agency

Figure 3 shows that about a third of potential students are found in both rural and urban areas, (31.7% rural and 30.8% urban). This labour force that is needed for driving economic activity, and in return should have decent jobs is also a potential pool for institutions of higher learning to ensure that they are attracted to these instructions. Further, they need to be provided with education that is relevant to ensure that they thrive in their respective labour activities.



Figures 4: Age-specific unemployment rate by Rural/Urban, Zambia 2020. Source: Zambia Statistical Agency

Figure 4 shows that the same age category by rural and urban also presents the highest unemployment rate (combined) in 2020. There could be a number of reasons why this age group has the highest unemployment rate, whatever the reasons, institutions of higher learning at the least need to ensure that this cohort has requisite skills and education to equip them for prospects of employability and/or entrepreneurship.



Figures 5: Percentage distribution of the Labour Force (15 years or older) by age group and gender, Zambia 2020. Source: Zambia Statistical Agency

Figure 5 indicates that in this potential group of students, females dominate males, by 33.9% and 29.2%, respectively. This suggests to institutions of higher learning to be prepared to a changed student population, whereby there is a likelihood to have more female population than male population. Furthermore, in countries like Zambia where historically economic activities were seen to be that of males, it means a potential shift and change. Thus, universities must be prepared for this shift as they advance their pedagogical inclinations.

Philosophical and practical questions can be asked. Firstly, does education matter in promoting decent work and economic growth? Secondly, the twin question can and must be asked, do institutions of higher education matter in promoting decent work and economic growth? A part answer is found in figure 6, data showing that most of the unemployed population has grade 1 to grade 12 education, this is true for both males and females. There is about 10% of unemployed males and females who have post grade 12 qualification, a diploma or certificate. Likewise, only 0.7% for females and 2% for males with bachelor’s degree. This observation suggest that educational attainment is related to lesser prospects of being unemployed.

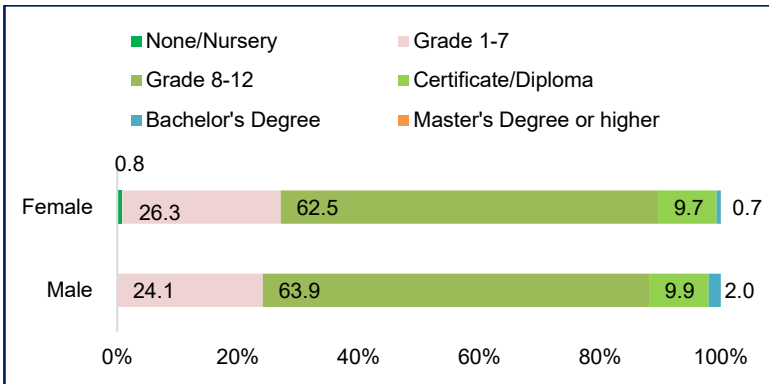


Figure 6: Percentage share of unemployed population by highest educational attainment, Zambia 2020. Source: Zambia Statistical Agency

These data further suggest that people with master’s degree and above are never unemployed. It is rather safe to posture that the chances of being unemployed with master’s degree or higher are negligible.

HEI Architecture as Change Agent

Nyerere (2018) explores the role of Higher Education Institutions as key drivers for addressing social and economic development, this work concludes that universities are pivotal as agents and instruments of social change and social development. Further, urges that this role should be harnessed to create the linkages between rural and urban segments. This finding suggest that higher education institutions must contribute to social development and change by shifting their focus in training to influence social change through, among other things, incorporating social enterprises training and practices in their curricula.

Syed (2018) postures that universities in the 21st century in general and those on the African continent, need to adopt an ‘entrepreneurial university’ approach mainly dominated by the Western Universities. Author presents several indicators for an entrepreneurial university, including:

- *Organisational capacity* – where there are clear incentives and rewards for staff who actively support and advance the university’s entrepreneurial mandate.
- *Entrepreneurship development in teaching and learning* – the systems, structures and curriculum need to be intentionally entrepreneurial in nature. For instance, promotion of collaboration with industry players and research finding that inform industry.
- *Pathways for entrepreneurs* – the university need to provide support to both staff and students, from idea to market and be a conduit for business incubation facilities.
- *Internationalised institution* – internationalisation is key and pivotal to entrepreneurial strategy and success; hence the university need to support and facilitate international networks and mobility.
- *Develop impact metrics* – to be a successful entrepreneurial university, there needs to be metrics to measure at its bare minimum,

start-up support, impact of entrepreneurial teaching and economic impact on society.

In addition, Kourilsky and Walstad (1998) support the notion and approach of entrepreneurial university through curriculum development, in that such curriculum prepare the students towards the “make-a-job” as opposed to “take-a-job” options.

HEI as a Driver of Practical Change: Case of Mulungushi University

Mulungushi University (MU) was established in 2008 under public sector with the core principles of a private sector. The university generates 85 percent of its revenue through entrepreneurial activities, like attracting students with demand-driven programmes, running a business center, poultry farming, bee keeping and selling honey in commercial outlets like Shoprite, and many more. The vision statement of Mulungushi University is linked to the vision 2030, MDGs/SDGs and national mandate as MU *‘pursues the frontiers of knowledge’*. The universities vision captures its innate role of fostering economic growth, namely: ‘The leading innovative, relevant and reputable university of excellence in Africa and globally’. Additionally, the Mission of MU is to provide high quality academic programs, research and consultancy services through stake-holder engagement. In order to drive its mission in pursuit of the vision, MU has seven strategic goals, namely:

- Produce high quality graduates that are relevant to the local and international market;
- Carry out innovative research for development;
- Promote community engagement and partnership;
- Enhance capacities and competences for running the university effectively and efficiently in line with the principles of corporate governance;

- Develop appropriate infrastructure to support institutional activities;
- Enhance viability of business and commercial ventures to contribute to the university's revenue
- Expand and promote the use of ICTs.

The University adopted the RARE (Responsible, Accountable, Relevant, Ethical) values in their strategic plan as their *modus operandi* based on Ngambi's (2011) research. These values have also shaped the way MU responds to challenges such as COVID-19. It is critically important to understand that COVID-19 directly had negative impact to the Goal 8 of SDGs, by way of people's work being under threat and nations' economies experiencing potential recessions. MU response was to ensure that the university agenda and goals are not entirely obliterated. For instance, during the break of the pandemic, MU Senate resolved to implement the Government directive for all students to leave the University campus to minimize the spread of the virus. MU Senate further resolved that students will continue to learn during the time the University is closed using ICT Technology (Learning Management System, Collaboration software and Virtual classrooms). Prior to physical closure, University Management met all the students to brief them and outline how online learning will be implemented. The University students were appreciative of this gesture and initiative from Management not to allow the pandemic to derail their future prospects.

Mulungushi University had proactively been using the learning management system and a lot of materials as well as assignment were already available on the platform. The learning management system was fully integrated with different systems in the university (Finance/SIS/library etc) and students were very familiar with the system. MU was the only Public University in Zambia that did not stop the teaching and learning when the institutions of higher learning were directed by the government's indefinite's closure of universities that

commenced 20th March, 2020. The following actions were taken by MU to ensure that the promotion of sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all (SDG8) is neither delayed not derailed¹⁹⁴.

To ensure that the existing e-Learning platform was fully usable:

1. ICT department created a video manual for Moodle for both students and staff to supplement the existing user manuals.

2. Procurement acquired and the resident engineer installed a generator dedicated to the server room that can run for at least 8 hours daily and is automated. This is to mitigate the ZESCO Nationwide load shedding schedule the University was experiencing.

3. Lecturers compiled all their course lecture materials in PDF/PowerPoint and submitted to Moodle.

4. A dedicated e-Learning support officer was assigned to coordinate the online learning and act as a focal point for students and lecturers.

5. Created and enhanced an integrated approach in teaching using techniques such as Zoom, WhatsApp, recorded PowerPoint, Moodle, Google classrooms delivered through the virtual classrooms.

6. Marketed tablets to students encouraged students to install the MU Android APP/Astria Digital Library and Moodle App.

7. Signed MoU with internet providers like MTN and ZAMTEL to zero rate access to learning management portal to address poor internet service in various locations and address huge cost of internet Data Bundles.

¹⁹⁴ Sourced from Quarterly Dean reports to the Vice Chancellor, Mulungushi University 2020

8. Enhanced Moodle platform and additional training to Lecturers to address the inadequacy and inaccessibility of the online learning management system.

9. Integrated BigbluebuttonsBN to allow lecturers to interact with students so that they reduce on sending a lot of reading materials and assignments at once.

10. Decided that the examination would be open book and students would be given 24hours because of Internet challenges and ZESCO power load shedding in their areas of residence.

11. Lecturers were (re)trained on how to conduct open book examinations. Moodle system was re-tested and was successful. Student participation in the mock examination was 95% and in final exam was 98%.

Students watched the livestream of the lectures or downloaded the recording of the lecture to (re)view it later. Students collaborated and responded to their lecturers through chats. Five rooms (virtual classrooms) were dedicated for recording of lectures and interacting with students. To implement these measures the MU immediately invested about K500,000 to enhance the existing IT infrastructure equipment.

Based on theory, MU can propose a four-pronged framed framework for universities to actively participate in ensuring the attainment of Goal 8 of the SDGs, and the framework includes:

- *Curriculum development*: this is how universities plan their curricula development to be future looking and responding to the national needs and attainment of SDGs;
- *Practice*: ability to put in place practical examples and close the gap between theory and practice. This behaviour makes is easier for graduates to enter the place of work;

- *Job creation*: either as students or staff members, efforts are made to implement initiatives that create jobs, either formal or informal; and
- *Entrepreneurship*: university's role in providing an enabling environment for entrepreneurship to flourish, for staff, alumni and current students.

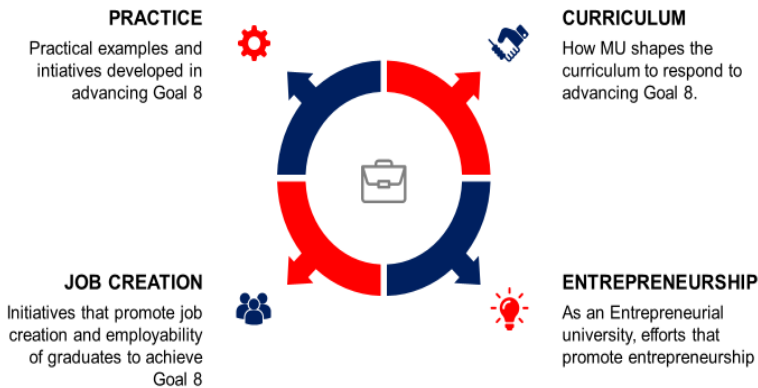


Figure 7: Four step approach to achieving Goal 8 of SDGs at MU

Curriculum Development and Employability

Multidisciplinary approach in curriculum development necessitated the establishment of three additional schools. These are the School of Science Engineering and Technology, School of Medicine and Health Sciences and Schools of Education¹⁹⁵. The context and reality of the STEM (Science, Technology, Engineering, Mathematics) Programmes in general and engineering, technology and health sciences have the ability to produce graduates that usually become self-employed, thus a possibility for expanding on decent work argumentation. The Mulungushi University Medical School is based in Livingstone, within

¹⁹⁵ Sourced from Quarterly Dean reports to the Vice Chancellor, Mulungushi University 2020

Livingstone Central Hospital premises. It was opened in September, 2017. The current curriculum offering of the school at its Livingstone campus includes Bachelor of Medicine and Bachelor of Surgery (MBChB); Bachelor of Sciences in Biomedical Sciences; Master of Science in Human Anatomy; Master of Science in Biochemistry; Master of Science in Chemical Pathology; Master of Science in Immunopathology. The other three following programmes are offered at its MU's town campus in Kabwe: Bachelor of Sciences in Nursing (BSc Nursing) (offered on full time and open distance learning mode); Bachelor of Pharmacy (BPharm); Abridged Nursing Programme (ANP).

The programmes that will be rolled in in subsequent years, include, Bachelor of Dental Surgery, Master of Medicine Degree in Paediatrics and Child Health, Master of Medicine Degree in General Surgery, Master of Medicine Degree in Obstetrics and Gynaecology, Master of Medicine Degree in Internal Medicine.

Through the School of Agriculture¹⁹⁶, Mulungushi University is implementing a project called “Problem-based-learning bioeconomy entrepreneurship and capacity building programme” (PBL-BioAfrica project). The project is funded by the Finnish Ministry for Foreign Affairs and it contributes to the University's programme's long-term impact by Strengthening the capacity of bioeconomy higher education institutions to provide pedagogically innovative, work-life relevant and accessible higher education for large student numbers in Sub-Saharan Africa. This impact is enabled by PBL-BioAfrica's specific outcome, which is improved climate-smart bio-entrepreneurship curricula, teaching, and management capacity.

PBL-BioAfrica's activities are focusing on four key outputs:

¹⁹⁶ Sourced from Quarterly Dean reports to the Vice Chancellor, Mulungushi University 2020

- Improved institutional capacity to provide climate-smart bio-entrepreneurship education with problem-based learning (PBL) methodologies through open distance learning (ODL) formats and open education resources (OER);
- Enhanced quality of climate-smart bio-entrepreneurship education through student-centred teaching that leverages PBL-methodologies;
- Strengthened institutional network-based learning ecosystem with academia, societal/industry partners and educational governance;
- Strengthened institutional capacity to further contextualize and develop curricula, pedagogical methodology, and learning ecosystems through national and international partnerships.

By making students research projects and internship compulsory before graduation. The student projects are assessed to check how they address the 17 SDGs, for example MU, through its School of Science Engineering and Technology (SSET), have had the projects on how ICTs facilitate smart water and sanitation management, an Internet of Things (IoT) Smart Broiler Farming Model for Low Income Farmers and software application of health delivery service

By offering courses to our students such as Engineering, Artificial Intelligence, Internet of Things and mobile technology that specifically targets SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. Further the University has produced Engineering and Information Communication Technology qualified personnel in order to address Government vision for SMART Zambia as articulated in vision 2030 and 7th National Development Plan.

By undertaking research that address the SDGs, for example COVID-19 pandemic had its impacts on productive employment SDG8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. The University in partnership with other institutions undertook development of a Mobile Application for COVID-19 Contact Tracing with Data Mining Techniques and Application of Predictive Analytics for Possible COVID-19 Pandemic Epicenters. The goal of the project was to exploit the potential of ubiquitous mobile technologies and application predictive analysis to predict the impact of COVID-19 and related diseases in Zambia. This will assist the efficiency of rapid response to curb the spread of the pandemic in the nation.

By partnering with other institutions to achieve the SDGs, for example MU signed an MoU with Huawei to offer practicum courses to students and to allow students participate in national and international competitions. Below are some of the further activities from SSET's Department of Computer Science in contributing to meeting the SDGs/ vision 2030;

- Encouraging students to undertake final year research projects that seek to address some of the challenges posed by the current era of COVID19. For example, the department currently has a students' project on *Smart Digital Flushable Toilet for Efficient Water Mgt and Enhanced Hygiene in Zambia*. While this speaks to SDG 6 (ensure availability and sustainable management of water and sanitation for all), it interlinks with the possibility for job creation a target for Goal 8 and SDG3 (ensure healthy lives and promote well-being for all at all ages); it is equally relevant for Goal 8, in the sense that countries need healthy work force for sustainable economic growth.

- By undertaking interdisciplinary research that addresses the challenges of financial insecurities and literacy. The COVID19 era

has seen a heavy shift towards increased online presence and activities. Novice online users have potentially been victims of bogus online investment opportunities (Ponzi and Pyramid Schemes) which has resulted in financial insecurities as the Internet is increasingly becoming unsafe. The department commissioned a cyber security research on financial cybercrime, this is necessary because online businesses are in the all-time high, further, the costs of establishing an online business are much lesser compared to the traditional brick and mortar. This work will prove critical in supporting entities, and indirectly, ensure sustained existence, which should feed in sustained economic growth.

Practice

Beekeeping Project

The beekeeping project at Mulungushi University under the School of Agricultural and Natural Resources, arises from the milestone which aimed at establishing a fully functional self-sustaining Beekeeping Center under the “Capacity Building in Beekeeping and Honey Production Value Chain Task.” The Task was supported by the Southern African Science Service Centre on Climate Change and Adaptive Land Management (SASSCAL) programme. This SASSCAL project was implemented in late 2013 and wound up in 2018. Since the winding up of the project under SASSCAL, the project has run entirely as Mulungushi University project through the School of Agriculture and Natural Resources.

The rationale of the project is to provide an alternative livelihood to forest-dependent communities as a way of reducing forest degradation caused by charcoal production, firewood collection, settlements and agricultural activities. This project therefore directly addresses climate change mitigation (SDG# 13) while providing opportunities for improved livelihoods among the communities (SDGs #1 and 2). While

Mulungushi University has its own apiaries, the institution has entered into partnership with local forest-dependent communities in North-western Province. Rather than degrading forests through charcoal burning and other undesirable activities, these communities keep bees which produce honey. Then twice in a year (July and December), Mulungushi buys honeycomb from these beekeepers and processes it into liquid honey. This honey is then sold to the public through retail channels such as Shoprite Chain of Stores. The Mulungushi University honey is 100% organic and thus contributes to the health of all those who consume it.

Job creation

Job creation is done by producing graduates with practical experience in Engineering and Information Technology and other science related subjects as well as through the entrepreneurship degree programme offered in the School of Business, so that they are self-employed. For example, a student produced an Internet of Things (IoT) Smart Broiler Farming Model for Low Income Farmers and IoT based Warehouse Intrusion Detection (E-Perimeter), Grain Tracking Model for Food Reserve Agency. These projects are aimed at empowering small-scale farmers with the technology to improve their agricultural production to alleviate poverty.

Also, jobs are created through business activities at the business centre and farm related activities. Beyond Mulungushi University, a study conducted by Shameenda and Imasiku (2018) across Zambian Universities for distance students, found that industrial internship is one of the effective modalities and approaches to equip university students with preliminary job knowledge and experience, thus enhancing their employability in the competitive labour market. This suggests an active involvement by Zambia universities to explore a plethora of

opportunities and initiatives in advancing better prospects for job creation to their respective students.

Entrepreneurship

Increase Project

INCREASE stands for *Increasing Climate Resilience in Energy & Agriculture Systems and Entrepreneurship*. The project is funded by Swedish International Development Agency (SIDA) and the Lead Partner is SNV (Netherlands Development Organization). Mulungushi University through the School of Agriculture and Natural Resources is the Implementing Partner. The project aims to strengthen the adaptive capacity of agricultural and energy systems as well as the promotion of climate smart (CS) diversification practices and productive use of renewable energy (RE). The project envisions to make agricultural and energy systems more resilient to a changing climate (IMPACT). Horticulture, Cotton and Dairy are the economic sectors the intervention targets. These sectors are in turn defined by an inter-play of 1) farmers, 2) small and medium sized enterprises (SMEs), and 3) larger companies and agents. For farmers, this means improving income, food and energy security, largely through adoption of CS practices and increasing access to CS products, services and finance. For SMEs and the larger companies, they work with, this means facilitating better linkages between SMEs and companies, improving the CS services they offer and improving CS extension capacities of companies.

The main purpose of the project is therefore to set the stage for wider adoption by other stakeholders and businesses within the respective three economic sectors. A key instrument to facilitate the coordination are multi stakeholder platforms. These platforms are multi-functional – covering the promotion of the CS practices developed under the project, lobbying, networking and knowledge sharing. Institutionalisation is achieved in part by advocating sector specific policy briefs and engaging

with governmental partners and institutions to implement the project. Lasting behavioural change leading to widespread adoption of CS practices by smallholder farmers is ensured through the economic benefit of every actor along the supply chain.

Within the INCREASE project are two other important components addressing climate change. These are 1) Agroforestry project and 2) Biogas project. A demonstration plot measuring about 1 hectare within the University Farm is housing these two components. With regard to agroforestry, citrus trees and *Leucaena* trees have been planted. These trees will take approximately five years to grow and mature. During this period, other crops such as vegetables will be grown for sale and consumption. The purpose of this demonstration plot on agroforestry is to show that integrating trees within agricultural systems has many benefits. These include increased agricultural productivity, reduced hunger and poverty, women's empowerment, biodiversity support, regenerated soils, enhanced farm resilience, improved and diversified diets, as well as climate change mitigation.

Regarding Biogas, this is a renewable energy generated from the decomposition of organic matter. In this case, livestock manure is deposited into a bio-digester without air, generating biogas and bio fertilizer. Biogas, in addition to household uses such as cooking and lighting, it can also be used to fuel engines for milking systems, farm machinery and water pumps, among other uses. This project has been placed near livestock houses at the University Farm. The proximity to the livestock accommodation is to ensure that manure can easily be obtained. Biogas provides a means of mitigation to reduce the sources or enhance the sinks of greenhouse gases. It captures organic wastes (in this case manure), producing renewable energy, and returning nutrients and organic content to the soil.

Examples¹⁹⁷ of two successful MU Alumni entrepreneurs: Tabonga Musukwa Kalabi and Arnold Nyendwa

Tabonga Musukwa Kalabi

She graduated at MU in 2019 as best graduating student MBA specialization in entrepreneurship prize by professional insurance. She was awarded by the district commissioners office a certificate of recognition for entrepreneurship and motivational speaking March 2019. She graduated from the Academy for women entrepreneurs' program under the US embassy top of her cohort and won the pitch challenge 2020. She was awarded a \$25,000 grant under USADF agroprocessing which has allowed her to set up a production plant. She is currently serving as the Vice President Kabwe Chamber of Commerce and Trade having served as the Vice Treasurer. She continues to host various masterclasses aimed at propelling business growth as well as financial literacy across the country. This is in addition to being the founder and owner of Kwitu Cafe.

Arnold Nyendwa

He is currently a student at MU, a one of a kind inventor with multiple accolades attached to his his name. He is a TEDx Speaker and Global Winning Inventor and Entrepreneur. He is the winner of the Global Youth Awards 2021 Environmental Innovation at Round Table; Innovator of the Year Award 2021 UK at Black Impact; Listed on the Top 30 under 30 Future of Zambia by the Dream Factory; Africa Focus Awards Nigeria 2021 at Focus on Africa; Top 20 Finalist Destination Zero Competition 20221 at British Council; Finalist Winner 2021 South Africa at Africa Genius Awards; 2020 Most Outstanding Entrepreneur Winner USA at Mwape Peer Awards; Global Student Entrepreneurship Awards Winner at Global Students Entrepreneurship; Winner SAAADA Awards South Africa 2018 at Columbus Stainless Steel and Village

¹⁹⁷ Mulungushi University records and personal interviews, 2021.

Development Best Practice in Zambia 2015 at Junior Engineering Technology. He is an inventor and innovator of First dry cleanable pillows in Zambia¹⁹⁸ and the inventor of first stainless steel stove in Africa.

These two examples are an epitome of how institutions of higher learning can change the landscape of students in ensuring that they are pioneers in achieving the goal on decent work and economic growth.

Conclusion

SDGs are a call to humanity to come together in its diverse existence, from rich to poor nations; from the developed to developing nations, from public institutions to private corporates and respond to these goals in however, small way they can. Work, particularly decent work will not present itself if people of the globe do not put concerted and active effort in creating these jobs. In the absence of work, economic activity and growth are but a pipe dream. The dichotomy of opulence in the sea poverty observed between the rich nations and poor nations, the latter predominantly presented by the global south must be obliterated with speed. Testament to this need, had been made real by the emergence of COVID-19 pandemic that continues to create havoc globally. The pandemic is a real danger to the attainment of decent work and sustainable growth worldwide. It is in this reality and context that Mulungushi University is positioning itself proactively in its national mandate to proactively advance the attainment of SDGs. The university has presented its strategic and practical approach in achieving the goals

¹⁹⁸ A 24-year-old Zambian Inventor and Innovator Has Made The First Dry Cleanable Pillows In Africa - The African Dream (theafricandreamsl.com): https://theafricandreamsl.com/a-24-year-old-zambian-inventor-and-innovator-has-made-the-first-dry-cleanable-pillows-in-africa/?utm_source=rss&utm_medium=rss&utm_campaign=a-24-year-old-zambian-inventor-and-innovator-has-made-the-first-dry-cleanable-pillows-in-africa

(other goals were not presented in this chapter, as they are not part of the chapter) in this chapter. The world cannot afford to postpone the attainment of these goals, so in our collective effort we must all realise that the SDGs problem is all ours, individually and collectively, personally and organisationally. As the world, we shall not falter, as the pandemic has shown us.

Bibliography

Anker, R., Chernyshev, I., Egger, P., Mehran, F. and Ritter, J. A. (2003). Measuring Decent work with Statistical Indicators, *International Labour review*, Vol. 142, No. 2, pp. 147–177, Copyright © International Labour Organization 2003.

International Labor Organization [ILO] (2008a). ILO Declaration on Social Justice for a Fair Globalization. Available at: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/genericdocument/wcms_371208.pdf, accessed on 26 December 2021.

International Labor Organization [ILO] (n/d). *Decent work*. Available at: <https://www.ilo.org/global/topics/decent-work/lang-en/index.htm>. Accessed on 16 December 2021.

Kourilsky, M.L., and Walstad W. B. (1998). Entrepreneurship and female youth: Knowledge, attitudes, gender differences, and educational practices. *Journal of Business Venturing*, Vol.13, No.1, pp. 77-88. [http://dx.doi.org/10.1016/S0883-9026\(97\)00032-3](http://dx.doi.org/10.1016/S0883-9026(97)00032-3)

Malan, D. (2019). *From Decent Work to Decent Lives: An Empirical Test of the Outcomes of Decent Work in the Psychology of Working Theory*, Unpublished Thesis. Available at:

thesis_com_2019_malan_danielle.pdf;sequence=4 (uct.ac.za),
Accessed 27 December 2021.

Ngambi, H.C. (1999). Community leadership: A case for an African village and an American firm. *South African Business Review*, Vol. 3, No. 2, pp. 27 -34.

Ngambi, H.C. (2011). *RARE Total Leadership: Leading with the head, heart and hands*. Juta and Company Limited. Cape Town.

Nyerere, J. (2018). Social Enterprises Skills Development: The Role of Higher Education in Rural and Urban Development. *Proceedings of the Zambia Association of Public Universities and Colleges (ZAPUC) International Conference*, Avani Hotel, Livingstone, Zambia, 29th April to 3rd May 2018.

Syed, A. (2018). Entrepreneurial Universities for Sustainable National Development in Zambia. *Proceedings of the Zambia Association of Public Universities and Colleges (ZAPUC) International Conference*, Avani Hotel, Livingstone, Zambia, 29th April to 3rd May 2018.

Zambia Statistics Agency (2020) Labour Force Survey report. Available at: <https://www.zamstats.gov.zm/phocadownload/Labour/2020%20Labour%20Force%20Survey.pdf>. Accessed on 20 December 2021.