

African Universities and Industry Partnership for Quality Higher Education: Global Framework for Graduate Attributes

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ABSTRACT

Education, in general, and higher education specifically, should aim to empower learners to better themselves personally and make society a better place for its inhabitants through research and societal impact. Achieving such a feat entails equipping graduates with the right attitudes for proper professional development to impact society. Educational institutions partnering with industries is a sure way to achieve what education intends. Industries are significant stakeholders of the labour market and, as such, can go a long way to help educational institutions develop the right skills needed for job placement and entrepreneurship. This study explores the partnership between Higher Education Institutions (HEIs) and industry, the required steps, and global issues impacting graduate attitudes. The study outlines the need to implement a need-based curriculum, involve good graduate attitudes in academic planning through value-added courses, lifelong learning, involvement of digital resources and the creation of international networks among universities.

Keywords: University and Industry Partnership, Graduate Attitudes, Policy Framework, Quality High Education

1. INTRODUCTION

Education is primarily acknowledged as the preeminent weapon for fostering economic expansion [9]. Education, in modern terms, cannot be separated from development. Experts have indicated the need for nations to improve the quality of education provided to their citizenry to aid the development of countries at large. Reference [33] outlined that the globe has

understood that education systems are directly related to the economic performance of nations. Integral to the education process of countries in Higher Education (HE). According to the [45], HE is seen as one of the principal drivers of economic growth, wealth, and competitiveness. HE is generally considered tertiary education, seen as education after High School/Senior secondary school, which could be a graduate degree, a diploma or a post-secondary certificate to doctoral studies.

HE is possibly the most vital part of the education ladder of all nations, although it is the possible terminating point of education as a whole. Being the level where most professional career paths are forged, many see HE as significant concerning education. According to [42], currently, HE plays an essential role in achieving Goal 4 (Sustainable Development Goals) on Education: inclusive, equitable, and high-quality education for all.

HE in Africa has received a boost in recent times. According to [46], Africa had 1,682 universities in 2018, compared to 784 in 2000 and 292 in 1980, indicating an exponential rise in HE in Africa. Governments and policymakers in Africa recognise the critical role HE plays in building robust economies for nations, especially concerning the need to strengthen research and doctoral studies. Reference [9] outlined in their abstract that investing in HE in Africa may expedite technological proliferation, hence reducing gaps in knowledge and aiding in easing poverty in the region. The authors further asserted that regarding the economic benefits of HE, many commentators attribute India's rise to its decades-long achievement in providing high-quality, technically focused HE to a substantial majority of its population.

Although there has been substantial growth in HE in Africa, the system is not devoid of challenges. Without the African HE system's many difficulties, the growth would have been more recognisable than currently seen. The most notable challenges faced by Higher Education Institutions (HEIs) in Africa include financial constraints, lack of qualified personnel, lack of infrastructure and low output in research. Reference [46] mentioned financial constraints, lack of infrastructure, lack of enough human resources and low research output as the challenges facing African HEIs.

In light of these challenges which hinder the growth of HE in Africa, Africa's HE system must have a policy network to drive the developmental agendas of the HE system. Higher education has a role to play in societal development. HE institutions must be able to provide the knowledge for strengthening economies and supporting developmental processes predominantly through research. According to [46], A university's fundamental contribution to society is the quality of the knowledge it develops and disseminates, the habits of critical thought it institutionalises and teaches its graduates and the principles of transparency and democratic rule it advocates and shows.

The Association of African Universities (AAU), which unites most universities on the African continent, must be able to influence a sound policy framework towards African development. The AAU has the mission "to enhance the quality and relevance of higher education in Africa and strengthen its contribution to Africa's development". With one of its strategic priorities being a "Favourable Policy Environment: that is leading dialogue and policy debates around key issues in African higher education and promote the role of universities in sustainable development", it is a strong indication of how the AAU as a body consider the formulation of the right policies for HE in Africa important [1].

2. NEED-BASED CURRICULUM AND ITS TRANSACTION

Formal education is not complete without a working curriculum. The curriculum of an institution is one of its most significant aspects. A programme's curriculum determines the skill and how it is imparted to learners. The curriculum also stipulates how the intended skills of the programme will be evaluated. According to [34], education is the most fundamental purpose a curriculum serves in all educational systems and learning institutions. The author further stated that a curriculum embodies the goals of education; it is the educational programme and contains all of the beliefs, values, attitudes, skills, and knowledge that comprise education. Therefore, every academic institution must develop an excellent curriculum to impact the intended skills of an academic programme in its learners. Curriculum designers and educational stakeholders must ensure that the curriculum is

appropriately set up for development when there is a need to effect changes due to new trends.

The curriculum of a programme cannot be drawn without taking into consideration the needs of society. Education has a general duty of making life better for the people it serves; this makes it necessary to see to it that the curriculum of educational programmes is tailored to sort out the challenges faced by the citizenry that an academic institution serves. Reference [6] stipulated that curriculum is always a more or less accurate reflection of society's history, present, and desired future. The product of an academic programme is its graduates. These graduates are supposed to be able to integrate easily into society and have the necessary skills to solve societal challenges. Therefore, the curriculum must be set up for the needs of learners. Current and future trends show that the skills needed should dominate an academic curriculum.

Curriculums may be nicely described on paper, but the curriculum's transaction is essential. How learners are taken through the curriculum processes goes a long way in determining the output at the end of the programme. Reference [47] outlined that a training programme's transaction processes or procedures significantly impact prospective teachers' learning in acquiring the knowledge and competencies required to be a competent and effective teacher. Learners must be kept involved in the transaction process. It is understood that using student-centred approaches is the most effective technique to elicit the best out of learners. The student-centred approach allows learners to construct their knowledge and understanding from their experience. It can also encourage cooperation in the learning environment as learners are forced to mostly work in groups to come out with an understanding of concepts. The transaction process must also involve more practical activities, including industrial attachments, to expose learners to the realities and needs of their chosen careers. It is worth mentioning that the necessary conditions, such as teacher motivation, qualified personnel, infrastructure, etc., must also be made available for effective curriculum transactions.

3. LEARNING OUTCOME-BASED CURRICULUM (LOBC)

Globally, the essence of upgrading the quality of HE has been echoed on various platforms. HE forms an integral part of national and global development, pushing worldwide attention towards improving HE. Change is the only consistency in the modern world; as a result, educational systems must update and adapt their approach or risk becoming obsolete. The world and all its facets are changing rapidly at an alarming rate.

Presently, the Learning Outcome-Based Education (LOBE) approach is extensively utilised by major institutions around the globe, which has sparked a need to comprehend the underlying cause of the continuous learning change. The LOBE system has proven effective in assisting institutions in monitoring their learning outcomes and allowing students to develop new abilities that equip them to compete with their

peers worldwide. Reference [39] stipulated that outcome-based education (OBE) refers to clearly concentrating and structuring all aspects of an educational process on what all learners must be capable of doing effectively upon completing their learning programmes.

The learning outcomes-based curricular framework for undergraduate education is a framework that is based on the intended learning outcomes and academic standards that graduates of a programme of study and holders of certification are expected to achieve. Graduate Attributes, Qualification Descriptors, Programme Learning Results, and Course Learning Outcomes are the key outcomes that underpin the planning and implementation of curriculum at the undergraduate level [45].

The world's future rests with the youth, and the need to get the youth involved in global discourse is more than relevant. This, therefore, increases the need to put measures in place to get the youth involved in all aspects of the developmental processes worldwide. Strengthening HE is a vital means of involving youths globally in developmental activities. HE forms an essential stage in the education process. It is where most characters are forged, professional pathways are realised, understanding of the profession is established, networks are built, and, more importantly, characters are shaped. At this stage, learners are mature, more focused and mostly make decisions based on what they intend to do after their education. It is, therefore, crucial that at this stage, the experience is of quality and allows learners to develop to the fullest of their abilities. According to the [45], continuing to improve the quality of HE is deemed essential for empowering the effective participation of young people in knowledge production, participation in the knowledge economy, boosting national competitiveness in a globalisation era, equipping young people with skills meaningful to global and national standards, and bolstering possibilities for social mobility.

The world is reachable for all in recent times. It must also be noted that the world's rapid evolution has not left Africa behind. African HE institutions should be thinking in a similar direction to that of the rest of the institutions across the globe. It is currently essential for educational institutions to position their systems to enable graduates to survive and effortlessly compete globally. African HE institutions turning their attention towards LOBC is a matter of necessity. LOBC will be better able to position graduates from Africa to compete globally. This can significantly reduce the unemployment rate among African graduates. Reference [29] stipulated that Outcome-Based Education is a learner-centred learning paradigm since the learner must acquire the required skills to achieve the desired outcome. It is a transition from merely imparting specific knowledge content or syllabi to assuring the development of certain student competencies and achieving targeted results. According to [10], the outcomes-based education or OBE framework (the underlying philosophy of South Africa's 'Curriculum' 2005), which is centred on the results of the learning process, was introduced in South Africa

in the last decade as a part of the initiatives to enhance the quality of education in post-apartheid South Africa and fulfil the need for a more skilled labour force. Although this indicates Africa's awareness of the need to switch to LOBC, more effort must be made to ensure more nations and institutions join the crusade.

4. SUPPORT OF INDUSTRY: NEED FOR A STRATEGIC ALLIANCE

There is an observable dramatic change in the industrial environment, which will constantly change with time. The Education system of nations has one primary objective: training to provide nations with a skilled workforce to push the developmental agenda of these countries. From Industrial Revolution 1 to Industrial Revolution 4, there has been a drastic change from the use of manpower to the use of artificial intelligence, predominantly in the industrial circus. This signifies a shift in the desired employability skills from brutal strength to ICT literacy. Higher education institutions are bent to ensure that graduates are capably equipped with the required skill set to survive the changes in employment requirements. According to [35], a vast void has emerged between industry and academic institutions, with the fourth industrial revolution gaining momentum. The author further stipulated that Higher education institutions must accommodate the digital skillsets expected of their graduates.

For HEIs to meet the needs of industries regarding the skills of graduates, there must be a strategic alliance between industries and HEIs. With such collaboration, HEIs will be enlightened on the specific skills these industries expect graduates to exhibit. Reference [5] stipulated that today, the university-industry partnership is crucial for promoting institutions, industries, and nations. Through such an alliance, academic institutions can also help upgrade in-service graduates' skills to remain relevant to their employers. With a promising partnership between industries and educational institutions, HEIs can design programmes that focus on specific skills needed by employers. The HEIs can also organise capacity-building workshops for graduates already employed to help upgrade their skills. Short upgrading programmes can also be designed to help the graduates in employment.

21st-century industrial skill development has changed completely compared to previous centuries. The 21st-century skills depend highly on ICT literacy. Reference [31] outlined that in a rapidly evolving knowledge economy, the digital skills of the twenty-first century drive enterprises' creativity and competitiveness. Although these skills are deemed essential, the digital component of 21st-century talents has not yet been fully defined. Change is constant in modern dispensations. It seems as if the only thing constant recently is "change". The world and everything in it regularly changes, so what will happen after the fourth Industrial Revolution (4)? This is a question to ponder and should trigger the idea of

training graduates to survive the needed skills of today and be able to adapt to future changes.

"We are currently preparing students for jobs and technologies that don't yet exist... in order to solve problems that we don't even know are problems yet" [19]. According to [36], to resist the uncertainties of a quickly changing labour market, 21st-century workers must possess information-processing skills, such as literacy, numeracy, and problem-solving, and "generic" skills, such as interpersonal communication, self-management, and the capacity to learn. Surviving with learned skills for over five years is almost impossible within the current global framework. The lifespan of learnt skills has reduced drastically, so professionals must keep learning daily to remain relevant. According to [18], Upwork CEO and World Economic Forum council member Stephane Kasriel mentioned that the half-life of a learnt skill is approximately five years, indicating that in five years, the current skill set of your staff will be valued roughly half as much as it is today. Collaboration between industry and higher education institutions will go a long way towards enhancing the training of students at the higher education level.

5. ESSENTIAL ISSUES CONCERNING INDUSTRY AND UNIVERSITY PARTNERSHIP CONCERNING GRADUATE ATTRIBUTES

5.1 Skill Development

An individual's ability to perform a task expertly indicates a skill to perform that particular task. Skill development is an essential aspect of the education system of nations. Every educational institution seeks to equip its graduates with the best skills possible. According to [20], a skill is the capacity to accomplish a task competently within a specified amount of time, energy, or both. Further, in his abstract, the author expressed that skill development is essential for self-employment and entrepreneurship in the current era of globalisation. Skills are "the bundle of knowledge, attributes, and capacities that enable individuals to successfully and consistently perform an activity or task, and that can be built up and extended through learning" [38]. For economic progress in the 21st century, this is an absolute necessity.

Skill development in the modern era should be strategically planned. Skills in the 21st century do not last. For example, computer programming languages have changed so much that computer engineers who wanted to stay relevant over the years had to keep learning new programming skills occasionally. Reference [34] stipulated that businesses and research continue to develop new programming languages as systems and applications grow. Skill development should be a serious aspect of every economy. Time and resources should be invested in the necessary skills needed at a particular time. Learners must also be trained to upgrade their skills with time.

Before COVID-19, although many advocated for integrating ICT tools in education and the teachers' need to be

ICT literate, it was not as urgent as it became during the COVID-19 pandemic. The pandemic necessitated using ICT platforms for teaching and learning since face-to-face meetings were almost impossible. Educational institutions were forced to train teachers on using these technological learning platforms. According to [2], the COVID-19 epidemic transformed education dramatically from traditional to online, a new state for teachers and students. Thus, the substantive situation elevates the significance of technology integration in education, and teachers are expected to upgrade their skills accordingly. So, during that period, ICT literacy became almost compulsory to have a skill as most employees had to work from home to avoid contact with possibly infected people.

This was a wake-up call for all employees to be ICT literate. Although ICT literacy was preached before the COVID-19 pandemic, the crusade intensified after the pandemic. Currently, there are a thousand activities made simple by ICT which employers want to utilise. For example, employers can travel far for business functions and still meet with their employees through Zoom meetings. Letters have turned into emails, and writing has turned into typing, printing, etc. During the COVID-19 epidemic, most of the world went online, speeding up a decades-long digital change. Children with an internet connection at home began taking classes online; many employees started to work from home, and countless businesses adopted digital business strategies to sustain operational activities and income flows [37]. The infiltration of ICT in all endeavours has made ICT literacy a must-have skill.

The 21st century and Industrial Revolution 4 (IR4) have almost defined specific skills employers desire to have in potential employees. Such skills include communication abilities, ICT literacy, teamwork, etc. Reference [40] categorised 21st-century skills into three; they are learning skills (critical thinking, creativity, collaboration, and communication), literacy skills (information, media, and technology) and life skills (flexibility, leadership, initiative, productivity, and social skills). According to [36], the required 21st-century skills include Learning and Innovation Skills (Critical Thinking & Problem Solving, Creativity and Innovation, Communication and Collaboration), Information, Media and Technology Skills (Information Literacy, Media Literacy), ICT (Information, Communications and Technology) Literacy, and Life & Career Skills (Flexibility & Adaptability, Initiative and Self-Direction, Social and Cross-Cultural Skills, Productivity and Accountability, and Leadership and Responsibility). As indicated by the above stipulations, today's individuals must possess these skills to be employable in the 21st century.

5.2 Employability

Reference [16] defined employability as the capacity to enter and persist in the labour market and to realise one's potential through secure and accessible employment. Further, it was

stated that individual employability is determined by the individual's knowledge, skills, and attitudes, how personality traits are presented in the labour market, the environmental and social setting in which employment is sought, and the economic context in which employment is sought. The employability of graduates of an academic programme should be the concern of education stakeholders. The more employable the graduates of a programme are, the more attractive the programme becomes, which increases patronage, thereby growing the programme.

Employability depends on the skills possessed by potential employees. According to [40], considering the complaint of various employers that most higher Education (HE) graduates lack employability skills and are consequently unemployable, it is necessary to examine the labour market (LM) expectations of HEIs in Nigeria and how these demands may be addressed. The above stipulation shows HEIs' vital role in graduates' employability skills. HE institutions must ensure that students and graduates are equipped with the skill set relevant for employment.

Graduates must be equipped with 21st-century skills to be employable. Creativity, critical thinking, communication, collaboration, information, media, technology skills, flexibility, leadership, initiative, productivity, and social skills are among the most desired by companies, and graduates must exhibit them. These skills are called 21st-century skills. Reference [42] stipulated that communication, problem-solving, decision-making, and teamwork are the most important employability skills. According to the authors, several personal characteristics, including self-awareness, self-confidence, independence, emotional intelligence, flexibility and adaptability, stress tolerance, creativity and initiative, willingness to learn, reflectiveness, lifelong learning, and professional conduct, are also expected of graduates.

HEIs should be working towards mounting academic programmes to equip graduates with such skills for employability. Old programs should be faced out or restructured to fit the current employers' skill requirements. According to [21], possessing both technical and employability skills increases a graduate's employability; hence, higher education institutions must instil graduates with profound intellectual and practical skills. Some of the activities to ensure the development of the necessary employable skills include Educating students intellectually, personally, and professionally, developing curricula and offering courses that are pertinent to the needs of the economy and society and are in response to employer demands, using proper teaching and learning strategies that have an educational impact and provide learners with information and direction to aid in career decision-making and to begin the job search.

Entrepreneurship

Enough employment opportunities for graduates is the ideal situation many envisage, but mostly, this has not been the

situation. Unemployment worldwide has been an issue of concern, particularly in Africa, Asia and some parts of Europe. It is projected that in 2023, the number of unemployed individuals worldwide will increase by almost 3 million, reaching 208 million (5.8%), the global unemployment rate. The moderate extent of this predicted growth is primarily attributable to the restricted labour supply in high-income countries [27]. Regardless of their skills, most graduates fail to get employment or suitable jobs in good conditions. Due to the challenge of unemployment, graduates' ability to create employment after graduation is essential.

Reference [41], through Statista, reported a global unemployment rate of 6.18 % as of 2021, which is a substantial number considering the population of employable persons worldwide. According to [14], via Statista, as of 2022, it was predicted that roughly 3.32 billion people would be employed globally. These numbers indicate many people struggling to gain employment amid a global population of approximately 8 billion. The individuals' possession of the necessary skills to create employment becomes vital since it is evident that governments and private institutions cannot generate enough employment for the world's populace. Therefore, HE institutions should equip graduates with entrepreneurial skills and the relevant skills required for whatever profession they are being trained for.

Reference [43] outlined that entrepreneurship, one of humanity's most potent economic forces, enables individuals to uncover opportunities where others see insurmountable obstacles. Entrepreneurship exemplifies business perseverance and success; it is a crucial societal change agent. Reference [17] stated that "translated from the French, entrepreneur literally means "one who undertakes." With the problem of unemployment worldwide, especially in Africa, equipping graduates with entrepreneurial skills is more than necessary for HE education institutions globally. Reference [45] outlined on Statista that South Africa has the highest unemployment rate of 29.95% of its employable population, whilst Djibouti, Eswatini, Congo, Gabon, and Botswana have at least 20% of their workable population unemployed.

African HEIs and African industries must ensure that graduates trained in these institutions are employed after their training. Employment should not only be left for governments but also for all developmental stakeholders. Since all graduates cannot be absorbed into the job market, HE institutions and industries must ensure they can create their employment after graduation. Reference [11] outlined the findings of a study the author conducted to support the significance of industry for strategic entrepreneurship, which has significant management and public policy consequences. There are various activities and practices HE institutions and industries can undertake to improve collaboration, increase graduate employability, and train graduates to be entrepreneurs. According to [44], a series of strategies and/or methods by which Business/Industry engaged institutions develop and enhance graduate employability, the most

well-known and prevalent of which were cooperative study programme technical support and programme delivery, representation in the institution Governing Council, and collaboration through shared facilities. The outcome of the partnerships can be a framework for graduate attributes towards curriculum reform.

5.3 Graduate Attributes: A Framework for Curriculum Reform

HEIs design academic programs to help graduates acquire specific skills, competencies, and general attributes expected of graduates. The skills, competencies and general attitudes expected of graduates towards their profession and society at large can be termed as the attributes expected of graduates of an academic programme.

Graduate Attributes are fundamental qualities that all degree programmes at Imperial College London seek to inculcate in leavers [26]. Graduate attributes, the abilities and competencies students are expected to gain during their studies, can promote higher education. Universities can connect with students, businesses, the government, and other stakeholders using graduate attributes. Graduate attributes are qualities that higher education institutions believe their graduates should possess [32]. According to [22], "graduate outcome" encompasses graduate attributes and profiles. Graduate attributes are the abilities, knowledge, attitudes, and beliefs that differ from the typical discipline competence associated with higher education but contribute to the profession. Graduate attributes are broader than "employability," contributing to developing academic, citizenship, and professional competencies.

All HEIs have developed a set of attributes. These attributes are the skills and competencies these institutions want to instil in their graduates. They want these attributes to be the trade mark skills of their graduate to set them apart from graduates from other institutions. Undoubtedly, the world is connected in this century, making it easy for graduates to move from one country to another for employment. HE education institutions should, therefore, set up their preferred graduate attributes with global intentions. Reference [23] outlined that the transition from an industrial society to an information and knowledge society has far-reaching effects on the kind of skills required by the labour and the general population. The author further stipulated that, from his deliberations, employers value teamwork skills the most, followed by sector-specific skills, communication skills, computer abilities, the capacity to adapt to new conditions, reading/writing ability, and analytical and problem-solving skills.

Graduates are trained for the labour market, of which employers are essential stakeholders. Therefore, the preferred skills from employers' perspectives are highly considered when determining the expected graduate attributes of HEIs. According to [25], when questioned about college graduates, most employers seek candidates with specific technical,

professional, or discipline-specific knowledge and skills, as noted in an academic degree in a specified field of study. HEIs worldwide, especially African HE education institutions, should endeavour to collaborate with industries to be aware of these preferred skills. These skills should be the basis upon which graduate attributes should be formulated. These employer-preferred skills and qualities should also inform curriculum reforms. Curriculum reforms should target these global employer-preferred skills to make graduates competitive globally for accessible employment opportunities.

5.4 Integrating Graduate Attitudes in Academic Planning

Graduate attitudes are outlined by institutions to be seen later in the institution's graduates. This can only be achieved by putting in procedures to ensure these attitudes are taught to the learner. It is through the integration of graduate attitudes in the academic planning of institutions that this can be achieved. It is necessary to ensure that graduates exit with the best possible skills for survival in today's continuously complex world. Reference [7] stipulated that there should be deliberate decisions on curriculum content and co-curricular activities, pedagogies, the nature and use of learning spaces, and the nature and use of learning spaces to furnish graduates with the essential knowledge, skills, and values to navigate dynamic employment opportunities. Further, through the advantages and limitations of their disciplinary perspectives, they must also understand who they are and how they can positively contribute to the diversity they will encounter in their local, regional, and global communities. Some of the aspects that must be looked at to improve the integration of the graduates' attitudes toward academic institutions include:

A. Adding Value-Added Courses to Programmes

Curriculums must continuously be developed to suit the current demands of employers and the labour market at large. Employers preferred skills keep changing with changes in the way work is executed. ICT literacy is an essential requirement for employment due to the proliferation of technology in all aspects of today's world. If universities can offer a novel curriculum through its development that is in demand on local or international marketplaces, many students, including those from outside, will enroll [3]. Also, HE institutions can rebrand to make old programmes relevant by adding courses which add value to the programme.

B. Encouraging lifelong learning

Encouraging lifelong learning is a vital component of contemporary education, recognising the ongoing need for individuals to acquire new skills and knowledge throughout their lives. In an age of swiftly advancing technology and changing labour markets, cultivating a culture of lifelong learning is crucial [37]. The world is regularly evolving at a faster rate than ever. The world of work has also changed

drastically and will keep on changing. According to [31], the majority of companies are still managed based on models developed for the industrial age, even though the world has shifted to the much faster-changing Digital era—an era so dissimilar that operating in the old manner is analogous to attempting to apply Newtonian physics in a quantum world. The authors' assertions clearly show that industrial management needs to move along with changes in industrial operations. This makes lifelong learning very important as it is through lifelong learning that employees can keep up with the pace of change at their workplaces. HEIs must train graduates to position them to learn while in employment to upgrade their skills to remain relevant professionally. According to [33], workplace initiatives and government policies supporting ongoing education and training create an environment conducive to lifelong learning. In essence, the encouragement of lifelong learning ensures that individuals remain adaptable, resilient, and equipped to navigate the complexities of the modern world.

C. *Emphasis on ICT Literacy*

ICT literacy has become almost a fundamental skill for employment in recent times. Due to the influence of technology in all activities, individuals' ability to use ICT tools has continuously become substantial with time. Reference [8] stipulated that numerous aspects of our existence, including medicine, education, and socialization, have been infused with technology. Further, the author opined that this holds for the past, the present, and probably the future. The importance of digitalization has been outlined in the assertions made by the author. The famous quote from Confucius, "I hear, and I forget, I see, and I remember, I do, and I understand," indicates the importance of the involvement of resources. HE institution should prioritize the involvement of digital resources to help learners realize the relevance of using digital tools.

D. *International Networks with Foreign HEIs*

Another area HEIs can utilise for integrating graduate attitudes in academic planning is the creation of international networks with foreign HE institutions. International networks have various benefits for learners as well as institutions. Reference [35] outlined that networking also significantly incentivises nations and higher education institutions to extend their international activities, share best practices, transfer information, and manage risks. Global networking allows students access to exchange programs in other HE institutions. Such an opportunity enables learners to learn from other students outside their institution. Students can also create their personal international networks for better professional growth. Working with people from different cultures gives students a broader perspective of their study area. Educators also benefit massively from international institutional networks. Reference [44] outlined that professional learning networks that are accessible anytime, anywhere, and that may react to educators' different interests and needs appear to offer opportunities for supporting the professional development of teachers. The

advantages of internationalization in higher education are the translation and acquisition of information, the mobilization of talent supporting global research, and the enrichment of the curriculum with worldwide content [27]. The internationalisation of HE is essential and beneficial to all stakeholders in education.

E. *Restructuring of Old University Programmes*

In the ever-evolving landscape of education, restructuring old university programs has become imperative to align academic offerings with the dynamic demands of the 21st century. This change directly results from the need to give learners the pertinent knowledge and skills they need to thrive in a world that is becoming more interconnected and complex. Reference [36] argued that traditional university programs may become obsolete if not adapted to meet the evolving needs of industries and society. The restructuring process involves a comprehensive evaluation of curriculum, pedagogy, and assessment methods to ensure they are up-to-date and responsive to current challenges. Furthermore, integrating emerging technologies is crucial in enhancing the learning experience and fostering student digital literacy [30]. By undertaking these measures, universities can maintain relevance and continue providing education that prepares students for success in an ever-changing world.

F. *Involvement of Industry in the Design of Educational Programs*

The participation of the industry in the design of educational programs has emerged as a crucial factor in shaping curricula that align with contemporary professional demands. Universities must proactively engage with stakeholders, including employers, to identify skill gaps and tailor programs accordingly [28]. Collaborations between academia and industry serve as a bridge to narrow the gap between theoretical knowledge acquired in educational settings and practical skills required in the workforce. As [4] highlighted, this collaborative approach enhances the relevance of educational programs by incorporating real-world perspectives and industry-specific insights into the curriculum. The infusion of industry expertise ensures that educational programs are dynamic, responsive, and equipped to meet the evolving needs of the job market [38]. This collaboration often takes various forms, including industry advisory boards, internships, and joint research projects, fostering a symbiotic relationship between educational institutions and the professional sphere [14]. Through the active engagement of industry stakeholders in the design of educational programmes, academic institutions can eventually improve the efficacy and applicability of academic offerings by better-preparing students for the opportunities and problems of the workforce.

G. Intensification of Practical Aspects of Educational Programs

The intensification of practical aspects within educational programs has gained prominence as a strategic approach to enhance experiential learning and better prepare students for the demands of the professional landscape. Integrating hands-on experiences and practical applications into academic curricula is crucial for bridging the gap between theory and practice [43]. The study emphasises that intensifying practical aspects involves incorporating real-world scenarios, case studies, internships, and laboratory exercises to provide students with tangible skills and a deeper understanding of their field of study. This approach is essential in cultivating critical thinking, problem-solving abilities, and a holistic understanding of the subject [12]. The findings of Taylor and Williams highlight the transformative impact of intensifying practical elements in educational programs, enriching the learning experience and better-preparing students for the challenges of their future careers.

H. Emphasis on 21st-Century Skills

Emphasising 21st-century skills has become a cornerstone in contemporary education, recognising the evolving demands of the globalised and technologically advanced society. The focus on 21st-century skills goes beyond traditional academic knowledge, encompassing competencies essential for success in the modern world [28]. The authors indicated that these skills typically include critical thinking, creativity, communication, collaboration, and digital literacy. Educational institutions must prioritise cultivating these skills to prepare students for a dynamic job market and foster their ability to adapt to rapid technological changes. By strongly emphasising 21st-century skills, educators aim to equip students with the competencies required for success in the complex and interconnected world of the 21st century.

I. Higher Education Policies Should Prioritise 21st Century Skills

In the dynamic landscape of higher education, there is a compelling argument that policies should prioritise the development of 21st-century skills to prepare students for the challenges of the modern world adequately. Higher education institutions play a pivotal role in shaping the future workforce, and their policies should reflect the need for graduates equipped with skills such as critical thinking, creativity, communication, collaboration, and digital literacy. Higher education policies should focus on integrating innovative teaching methods, project-based learning, and technology-enhanced approaches that foster the acquisition of 21st-century skills [38]. By aligning policies with cultivating these skills, higher education institutions can better fulfil their role in preparing students to navigate the complexities of the 21st century and contribute meaningfully to society.

6. CONCLUSION

The 21st Century and Industrial Revolution 4.0 has changed how industries conduct production processes. This makes most of the previous attributes institutions inculcated in their graduates seem outdated. Continuously, HEIs are being left at a crossroads due to the constant changes in the preferred skill set expected of graduates for employment. HEIs are always left in the dark as to what specific skills should be taught and even how to teach these skills. Due to the fact that graduates are being trained for the world of work in which industries and employers are stakeholders, industries and HEIs in Africa must work together to ensure these partnerships benefit all parties involved. The partnership of HEIs and industries should be the basis for establishing pathways for determining attributes to be inculcated into graduates. Strategic partnerships between industries and HEIs are essential as we advance to train graduates with the best of abilities and professional know-how for advancing the developmental agenda of nations.

CONFLICT OF INTEREST

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