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Chapter

Relevancy of New Higher Education Approaches in ‘Second Republic Zimbabwe’

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Abstract

Through face-to-face interviews with lecturers, this research explored the relevancy of new higher education approaches in Zimbabwe particularly Education 5.0 and virtual learning environments (VLEs). The main finding suggests that the five missions of Education 5.0 are not new in higher education and training in the country. However, they being nigh on greased following the outbreak of the coronavirus disease (COVID 19) is exceptional and unplanned for up take. Education 5.0 charges that turned to be virtually oiled have already been cherished under the auspices of Education 3.0. Thus, lecturers do not perceive it as new. But, only the means and ways upon which it is delivered to learners in the COVID 19 era. The hype around it coming from the ‘Second Republic’ government is factory-made and politically calculated. Besides, it is difficult to underpin the development given the economic problems the country is currently facing. This research also finds out that VLEs are just more than a saga in Zimbabwe since she still lags behind the world order of internet of things. A few of the interviewees were of the view that teaching and learning though virtual means and ways is not different from the old face-to-face model.

Keywords: Second Republic, curriculum, virtual learning, Education 5.0, teaching

1. Introduction

With the turn of the 21st century, poor economic performance and lack of a focused national education policy in Zimbabwe, has seen the country hopping from one policy to the next. This has been largely influenced by the country’s unstable politics experienced under the ruling Zimbabwe African National Union Patriotic Front (ZANU-PF) party since the arrival of independence in 1980. Inter alia, abrupt revision of the foundations, principles and issues of the curriculum of education and training became one of the prominent flagships of the ZANU-PF’s maladministration. Recently, the education sector has slowly turned virtual a development that further gave teachers’ a feeling that they are being forced to subsidise teaching and learning exercises. This is so because they have to go out of their way using their meagre earnings to buy state of the art Information and Communication Technology (ICT) equipment to use for teaching and learning of students and pupils. A phenomenon that also explains the extent to which curriculum variations can viewed to be as imaginative and molten in Zimbabwe. Transforming to VLEs
is yet to yield meaningful results. However, the Second Republic’s government abandonment of Education 3.0 for Education 5.0 which ignores all preliminary levels of education outside of tertiary and higher education is enough to prove that in the modern world it is difficult to follow a fixed education guide, forever. At the same time, the revolution has been scuppered by the outbreak of COVID 16 the world over. The disease has brought in new dimensions to the face-to-face forms of teaching and learning in higher education institutions (HEIs) in Zimbabwe. The outgrowths coincided with the adoption of Education 5.0 which is built around the following key components; teaching, research, community service, innovation and industrialisation. It is with profound impunity that this policy ambushed the higher education structure to change and never to look back to the golden days. This chapter is set to pinpoint the relevancy of Education 5.0 and virtual learning environments (VLEs). It also suggests the way forward post-Education 5.0. The study adopted a qualitative research approach during fieldwork utilising face-to-face interviews with five (5) lecturers in Department of Creative Art and Design at Chinhoyi University of Technology (CUT) in Zimbabwe. Purposive sampling was used to pick the interviewees basing on their knowledge and experience in HEIs teaching and learning. The main discovery suggest that Education 5.0 is not new particularly at CUT. Hence, the lecturers argued that HEIs are swallowing more than they can chew as they have been struggling to meet up to the billing of the previous education model – Education 3.0. Within, innovation and industrialisation were cherished particularly at CUT. In short, the new kid on the block - Education 5.0 doctrine is thus neither way past its predecessor nor sustainable given the lack of a straight policy framework that guide higher education and training in Zimbabwe. A similar post-Government of National Unity (GNU) policy, the Science, Technology, Engineering and Mathematics (STEM) soon became a white elephant after the unprecedented November 2017 ‘coup d’etat’. Though, the policy was started from the grassroots, it excluded arts. That, made it rather problematic. Hence, it was not holistic. This scenario has been commonplace in most prior and post multiparty republic of 2009-2013 educational policy initiatives. Former minister Lazarus Dokora’s curriculum review for primary and secondary education is another example of uncherished educational policies implemented almost at the same time with STEM in Zimbabwe. STEM has already been thrown suspended by the new dispensation. One good reason for that has been the need to rubber stamp political muscle by the incumbent government from time to time. The developments explicates what was happening during the late and former president Robert Gabriel Mugabe’s regime. A fact that cannot be proved or disproved not in black and white. This research also finds out that VLEs are just more than a saga in the context of Zimbabwe which is still lagging behind the world order of internet of things. A handful of the interviewees were of the view that teaching and learning via VLEs is not different from the old face-to-face model. The majority claim that through the utilisation of VLEs, HEIs are simply flogging a dead horse since the cost implications that characterise internet access in Zimbabwe are heinous. In addition to paying the normal tuition fees, a drop in an ocean of students attending higher education and training have surplus income to purchase digital equipment and access the Internet.

2. New higher education approaches: a brief

The need to review a curriculum can arise to: fulfil a new need, a new programmes is needed; goals have changed within the department; a new dean or chair has arrived; the original emphasis has been lost, and it is important to rationalise
years of untamed growth [1]; the curriculum must meet newly defined expectation and standards; students are disappointed or dissatisfied; faculty members have a sense that things may or should be improved somehow [2].

Postmodern curriculum has influenced professional considerations that guided decisions made by lecturers in curriculum reform [3, 4]. Thus, an extensive research into the 21st century skills attempt to avail some insight into higher education curriculum [5]. Besides, [6–9] argue that there are three aspects of postmodern core curriculum. These include a focus on civic teamwork and not band rivalry, a rounded process position rather than distinct parts as well as a multi-layered, cross cutting or interdisciplinary curriculum, which include integration of the societal values. Through different state-controlled mass media channels, the government of Zimbabwe could not run short of superlatives to justify Education 5.0 as endogenous, not loaned out and avant-garde to Western values of higher education delivery in the country. On that basis the state, it was concluded that innovation and technology policy pay attention to the kind of incentives one would eventually get after the creation of a product that actually solves a problem in a particular sector or industry to enrich the lives of ordinary people [9]. However, it appears as though the calibration of the Zimbabwe's education path has had questionable relevancy. When modifying the curricular, it is significant to consider the difference between making minor and comprehensive alterations to the curriculum review.

[10] posits that Education 5.0 has been informed by the sense of the contemporary competitive markets, application of inducements for exceptional innovations and industrial activities and the process of professional self-regulation. While, belief and esteem for certified decisions must be earned and justified, valuable declaration and validation systems must support, not dent that professionalism. Responsibility to students, employers and government on the one hand, institutional self-improvement enhancement and innovation on the other, must be in sense of balance. It may be argued that a thorough in-ward looking profession, that learn from encounters, active and self-regulated system is sustainable than one which is imposed as well as external. Such education control mechanisms will never be successful. Thus, the ballistic nature of the uptake of Education 5.0 in universities and other tertiary institutions tend to force lecturers to simply scratch the surface. This is so because educators do not to perceive themselves as part of the curriculum reforms.

Many state-run systems have launched a matching set of education policy efforts and reforms meant at tuning what Harvard Professor Elmore termed the hub of learning practice. That is, “how teachers understand the nature of knowledge and the student’s role in learning, and how these ideas about knowledge and learning are manifested in teaching and classwork” [11]. Thus, a complete and collaborative curriculum demand a “full examination of how academics conceive their role and how the curriculum itself is defined, analysed, and changed” in the process of curricula reform especially [12]. Hence, the invention of higher education has evolved over the years from one generation to the next [13]. This is due to changes in the nature of economic problems being faced by people the world over and the need to provide solutions to the challenges. That guided the reason why the postmodern era curriculum has been changing over the years.

As such, [14] note that the postmodern curriculum is ‘a curriculum-in-action’ as it is fluid and flexible in nature. Similarly, [12] assert that curriculum variations are also imaginative and molten. This means that curriculum review and revision is not cast in stone. Elsewhere, curriculum reforms have yielded positive results [15–18]. Thus, Education 5.0 is non-linear as it is difficult to come up with a master plan and rationale for a fixed core curriculum. This is because global problems change every now and then. By default, they require different creative, innovative,
and enterprising ideas and solutions. Public education started off benchmarked on teaching specifically the ‘basics’ around 1780s [19]. Technology was remotely used in this education system as an aide by educators in the teaching and learning process [17]. Research was romped in later in the beginning of the 20th century [20], then community service. The kind of education that depended on these three variables became known as Education 3.0 which later led to the development of Education 4.0 and 5.0 [17], respectively.

In the year 1956, Bloom outlined the taxonomies of foundational stance that can be promoted to effectively make lesson plans in any course at different levels of teaching [21, 22]. The differences and densities of thought branded by Bloom and later updated by other scholars [15, 23], continue to play vanguard in teaching and learning.

An advocacy and lobby entity based in the U.S., the Partnership for 21st Century Skills or Learning (P21) argued that learners need proactive skills, knowledge and professional conduct to successfully enter the current competitive industry. That enables them to provide solutions to the ever-evolving economic challenges of the time. The year 2000 has been an annus mirabilis for the Zimbabwean economy following the fast track land reform programme (FTRLP) was put into order. Since then the country has been struggling to provide basics including education to its citizens. The country’s tension with the West grew to an extent that even until, the Brettonwoods institutions, namely the World Bank (WB) and the International Monetary Fund (IMF) ceased to avail funding to Zimbabwe. As a result, the country’s critical sectors were left to rot or some have been slowly collapsing including, the tertiary and higher education sector reforms due to lack of stable funding except for selected humanitarian causes. To make matters worse, the magnitude of local education decomposition grew after white commercial farmers and investors backed off in retaliation to the FTRLP. Higher education student upshots include foundation subjects and the 21st century themes; learning and innovation skills; information, media and technology skills life and career skills [24]. However, there are different ways to emphasise students’ capabilities and how they use what they learn in real life. In the evaluated literature, there is common consensus across studies on the desire for new forms of education and training to deal with global problems. Despite this contract, there is no only one of its kind and on its own approach to what can be referred to as the ‘21st Century Skills’ [11, 25].

The 21st Century Skills education discourse was a result of the spread of technologies; more and more globalisation and internatonalisation; and the shift of industrial social communities and knowledge-based social economies. Therefore, demand for innovation and industrialisation and its diversity in education may be informed by variations in developmental situations. Large probable demands of 21st Century Skills should be known at the broader spectrum of development across the globe. The absence of facts about the effective delivery of 21st Century Skills also points to a need to come up with new educational paradigms. To obtain information on the brunt of the sort of the system-wide intrusions linked with their release remains a huge task.

It appears as though innovation and industrialisation are not new 21st Century Skills, but only that may see them as ‘newly important’. Industry today wants workers that are able ‘to find and analyse information from multiple sources and use this information to make decisions and create new ideas’ ([26], p. 631). Way back, Dewey proposed education ‘grounded in experience’ ([27], p. 13). That implies students’ should learn skills for the future usually those that enable them to be inventors so that through interaction with phenomena they can eventually solve the
ever evolving people’s problems in life. Furthermore, ([27], p. 14) argue that Dewey was a visionary who defined an educated person as someone who thinks and reflects before acting. As someone who also responds intelligently to a problematic situation and finally assesses the consequences of the shown plan of action. This outlines the nature of the new millennium learner.

In the year 2009, the United States Secretary for Education Duncan was quoted in the press as arguing the 21st century skills ‘…increasingly demand creativity, perseverance, and problem solving combined with performing well as part of a team’ ([19], p. 121). After all, the continuum of the development of the education system transformed slowly while the groundwork for wider change has been on the cards. Major changes came necessitated by developments in technology, social networking, and deeper understanding of educational processes as well as new legal and economic frames of reference resulting in the birth of as alluded to earlier on, Education 3.0 [28]. Education 3.0 was fluid and was strongly distinguished by teaching, research and community service [29]. The system like the former education paradigms treated students as the same, but allows for a mutual learning-community.

It is argued by [30] that this third education landscape was ‘... rich, cross-institutional, cross-cultural educational opportunities within which learners themselves play a key role as creators of knowledge artifacts that are shared and where social networking and social benefits outside the immediate scope of activity play a strong role’.

Also, [29] shared similar views about the state of Education 3.0. They aver that students can be creators of knowledge which they can as well share with society to solve problems. However, the difference between artefacts, people and process turns out to be distorted, as do distinctions of space and time. Higher education institutional positioning, including policies and strategies, change to meet the challenges of prospects presented by changes in the world such as the need to create new products and improve the standard of living. Education 3.0 among other significant factors, tertiary, college or university dispositions allow endorsement of education attained from the same institutions, not just of programme courses taught. Besides, Education 3.0 holds much promise for higher education in general, it poses serious challenges to existing universities including its failure to groom creators of goods and services [29].

Yet [29] argue that administrative challenges intensify as teaching become more and more linked to technology. To offer and share knowledge, e-learning was often used as the technology of utility. Several e-learning platforms such as Moodle, Eagle, and Changamire were developed and ready to use. This development led to a dualised teaching and learning approach. Online routine made use of e-learning and the offline line or the traditional face-to-face teaching and learning, add [29]. This implies that somehow circumstances forced lecturers’ at CUT to design a curricular fit for the virtual mode.

In broad terms, the first, second and third education paradigms downgraded the academic apprentice to a submissive function whereby the student was treated as an empty slate to be filled with knowhow rather than a decisive and inventive crisis resolver [28, 31]. The models force difference in stages of mastery among learners and frowns at guaranteeing proficiency in education for all. Resultantly, the three generations of education grew irrelevant in the current post-industrial society globally and have been accused for ‘failing, or passive and unmotivated learners’ [31]. This is because technology was used by teachers to oil the learning process rather than to change how things were done in teaching. Learning is supposed to be...
individualised, learner-centred, made to order, and impressionable so that learners can show mastery of skills and knowledge during and after higher education and training.

Over the years, world problems have become so tense. The subsequent upshots of the short falls of Education 3.0 led to the development of Education 4.0 [32–34]. It evolves right from pedagogy. Through Education 4.0 students are allowed to learn in solitude with the aid of the Internet. That also enables critical and creative thinking as well as societal interface in inquiry-based learning. Creative thinking concerns thinking beyond the bounds of convention so that learners can solve challenges they face in life [20]. Whereas, societal interaction is about how learners’ involve themselves in teamwork or collaborative skills that are needed for the functioning of the communities they live in [35]. Hence, there is need to further break the jinx of the mould of the paradigm past the information age to align with the evolving education reforms to try and mend the fading fortunes of the globe.

In Malaysia, Education 4.0 has been used as the starting point for the revision of tertiary education curriculum [20]. The Malaysian Ministry of Higher Education tabled the Malaysia Education Blueprint (MEB) 2015–2025 with an intention to align the country’s education system with global trends. The purpose of the MEB further aims to revamp the Malaysian higher education paradigm with the desire to “balance between both ethics and morality along with knowledge and skills” [6, 20]. It is in the interests of the MEB that students are supposed to carry the country’s flag high and understand overly the gist of Malaysia’s international relations with other states regionally and overseas. This is one attribute MEB shares with the fifth ontological and epistemological educational approach adopted in Zimbabwe in the year 2020. It is based on indigenous knowledge system (IKS) or local heritage with a desire to produce products using resources that are available in the country [36].

On the contrary, several programmes and technologies have been included in the redesigning of university curriculum in Malaysia. Business communities both local and international were invited to webinars, seminars and workshops that discussed how the country should go technologically and industrially [20]. Malaysia held fruitful stakeholder consultations before the adaptation of the fourth education reforms. That means the reforms blueprint was clear and professionally guided by competent process leaders and curriculum review committees. To that end, in Malaysia, Education 4.0 has been argued as the future for creative education, that responds to the needs and expectations of industry and commerce were people and equipment align to allow new potential. Similarly as early as 1980, Zimbabwe’s first education and culture minister, Dzingai Mutumbuka argued that the post-independence’s government dependence syndrome on theory-based education policy inherited from the Rhodesian government was a time bomb and that there was an urgent need to do away with it. The minister left the post, but his legacy dragged into the 1990s. The Chetsanga Report of 1995 and the Presidential Commission into Education and Training (CIET) also as known as the Nziramasanga Commission (NC) of 1999 were sanctioned by government. The two considerations became keynote efforts meant to revolutionarise the country’s post-independence Western-based education system. By then or at that time, both explorations submitted that the Zimbabwean education should be driven towards production of goods and services. Some of Zimbabwe’s neighbouring countries, for example Zambia and Malawi among other selected few Southern African nations have already adopted the NC recommendations and have proved to be fruitful there. However, Zimbabwe as the think tank of the noble high-end higher education skills has up until now not subscribed to the recommendations of NC. This anomaly has seen the country’s economy fall with a thud. The effects forced government in the year 2020 to fast
track the tertiary and higher education sector teaching/training and learning from Education 3.0 to Education 5.0. However, the development coincided with the need to limit or abolish face-to-face teaching and learning and replace it online means and ways – synchronous or asynchronous. Thus, this study sought to establish the relevancy of the Education 5.0 policy in Zimbabwe. It also investigated how VLEs matter in teaching and learning hands-on based higher education graduate programmes.

3. Methods

A qualitative research method was adopted in this study in an attempt to understand the relevancy of new higher education approaches in Zimbabwean HEIs. This kind of research enabled the research to avoid making preconceived judgements as why certain arguments were raised during data collection [37]. The chosen methodology offered depth and facets as it went after bottomless views through interviews than simply dealing with the rank-and-file of recorded approaches, feelings, and actions of study partners. Importantly, research quality relied on researchers abilities and own foibles. The target population was lecturers’ from all HEIs.

The entire sample was drawn from CUT and was assumed to be a “representative” of HEIs teaching staff. Their professional practices, morals, skills, and socio-political inclinations of teaching profession were the torchlight for the selection, exclusion and inclusion of samples in the research. Individual research participants’ understanding and experience in higher education teaching and learning guided data collection and data analysis. Thematic analysis was utilised to present data and discuss generic views from interviewees. Thematic analysis became possible through coding and indexing of transcriptions. Purposive sampling techniques were used to identify and choose sampling elements. As noted by [38, 39] investigator’s view on the attributes of a representative sample played a central role in probing the samples by focusing on lecturers’ experiences, qualifications and known incidents of exposure to curriculum reform and adaptation to new forms of higher education techniques over the years. Notably, they were found at CUT.

Within a study, there is a need to spell out the sample size to ensure validity and reliability of findings. The DCAD has 12 lecturers. Five (5) of them with varied higher education teaching and learning experience in the DCAD were interviewed. The experience was used to solidify the results of the study. The findings became generic after the fourth interviewee. The fifth was done only to be sure of the saturation of data gathered. Using face-to-face interviews, the researcher solicited for answers to the research questions. However, it was not unqualified or downright which is a prominent weakness of the data collection method.

4. Value of Education 5.0 in Zimbabwe

Generally, all interviewees argued that Education 5.0 and VLEs are a move in the right direction for the tertiary and higher education sector in Zimbabwe. This came as a result of a growing need to provide solutions to mounting economic problems that have lowered standards of living of the ordinary people not only in Zimbabwe, but the world over. Education 5.0 is perceived as a solution to economies waning fortunes. However, lecturers in the DCAD at CUT do not view Education 5.0 policy as novel.

Interviewee 2, noted “I think it’s not new... It has been always been important for graduate students to be impacted with practical skills in addition to theory”.
Interviewees noted “It’s what we have been doing in the School of Art and Design (SAD) … The nomenclature speaks for itself. We were ahead of the announcement by the government. We are not even surprised or cracking our minds on what to do. We know what to do. We have been doing it”. Interviewee 3 stated “I do not see anything new about Education 5.0 to our School and CUT. It has been the order of the day before all this hype about Education 5.0. It has been the culture at the university”. Interviewee 4 observed “Maybe it’s only the title that has been improved to be specific. In our department we have always been speaking about design, creativity, innovation and commercialization. Again, it’s the university’s motto – technology, innovation and wealth”. Interviewee 5 averred “I can’t distinguish the difference between what we have been doing (Education 3.0) since the School was founded and the new tertiary and higher education teaching and learning crazy or discourse (Education 5.0). Our students have been producing goods. We are an innovation and technology institution”.

On a positive note, all interviewees (100%) agreed and valued the worthy of the dogma of Education 5.0. However, from all viva voce surveys, interviewees also held a general feeling that the MTHESTD imposed the curriculum review. This means that higher education institutions were stripped of their autonomy when it comes to design of degree or diploma programmes according to their understanding of graduate needs and wants.

In Zimbabwe, Education 5.0 builds on the new dispensation’s (Second Republic) political ambitions directed towards the control of all critical sectors of the country’s economy and the need prove difference to the ex-president’s the late Mugabe’s era. Because of this, among other reasons, lecturers’ in tertiary institutions could not receive the new education policy with honour.

The subsequent views from the research participants reflect on the need to produce graduates with high-end skills that are required for Zimbabwe to trigger sound teaching, research, community service, innovation and industrialisation. In a survey interview, interviewee 1 noted that Education 5.0:

…is an area that focus on the acquisition of both theory and skills with a thrust enabling students to develop creativity and innovation skills. Besides, being creative they need to have the ability to produce, to come up with artefacts, to come with products that will have an impact on technology or technological development. It’s more of experiential learning. You don’t want your student to just master your theory or content, but they must be able to apply that content to make a difference in the area of industrial development.

Interviewee 2, asserted that

So, the issue of innovation is about problem solving when you innovate you are solving problems. Problems are solved by people who create new ideas and these ideas are turned into products and services. They may eventually they are massed produced, hence they save the communities. They solve problems that are faced by the communities … so as the five pillars - teaching, research, community service, innovation and industrialisation.

The sentiments above present the interest of the dogma of Education 5.0 as a panacea to the practical deficit that has been inherent in most universities in Zimbabwe since colonial times. It is with profound scrupulousness that innovation and industrialisation are as argued as ideal missions that can facilitate teaching and learning in HEIs. Beyond the two comments above, generally Education 5.0 is glorified by HEIs educators as it allows the application of theoretical content to produce tangibles and services. The teachers that were interviewed feel that teaching and
learning should not end in the articulation of bookish text as that translates to waste of time in the process. However, book learning should be transformed into real products that can be put on the market for sell to quench a need or want of any other person. Production of new goods and services through the facilitation of creativity, innovation and industrialisation in the higher education and training sector may possibly bail out emerging economies like Zimbabwe’s from local and international debt. This in a way is in agreement with [3]’s view that postmodern curriculum reforms have had a significant influence on the development of higher education and training. Hence, [3, 14] have observed that the up-to-date curriculum is ‘a curriculum-in-action’ as it mutates always.

It was found out that students need to be given hands on education that sustains their life in the long run. In addition, failure to nurture higher education students in ways that equip them with practical skills will intensify global economic problems. This explicates the need to modernise our societies via collaboration, all round curriculum reform with an intention to identify problems and provide solutions. That means new ideas are brought up in the process of teaching and learning which has a propensity to lead and oil economic development. This is unlike the third generation of education that did not include creativity, innovation and industrialisation as key in higher education and training. That show how the Zimbabwean higher education curriculum was contrary to Bloom Taxonomies. It short changed the learners. The (revised) Bloom’s Taxonomy states that the purpose of higher education and training is to gain cognitive abilities, affective and psychomotor skills which was not the case with Education 5.0 precursor. Within the context of three tier education philosophy, Zimbabwean higher education learners’ suffer limited post graduate practical skills, which have become the cornerstone of the modem day industry. This identifies with [3, 5, 18] view that the 21st century curriculum reforms tries to promote creativity, innovation and commercialisation through higher education experience.

Lecturers in the DCAD crave to produce graduates that work to solve problems around their communities. Interviewee 4, whose is also a senior lecturer in the DCAD retorted:

As an academic, what it means is that whatever we teach our students, they have to have the skills to apply ... the knowledge in doing things especially when they start to work in the industry. We have students that are going to be designers. Either way they are going to be industrial designers or multimedia designers. So, we expect our students to have an impact wherever they go by bringing in something new, wherever they will be. Whether one is a product designer we expect them to be innovative in coming up with new ideas. We expect them to be creative. For industrial designers particularly we expect them to come up with new products that can meet a need in society.

However, the interviewees also stated that particularly at CUT, in the DCAD, Education 5.0 was not at all new. The interviewee 4 also notes that “Speaking as a designer, Education 5.0 is almost right in the middle of what I do. We design and come up with new innovations whether its multimedia design or industrial design”. With an undertone of protest, the interviewee insinuated the non-existence of a clear education policy in Zimbabwe from independence. Creativity, innovation and industrialisation are believed to have been embedded in the Education 3.0 philosophy though they were not distinctively mentioned as missions of the doctrine. The interviewee further avers that:

As a concerned citizen of Zimbabwe, I would say that we have been talking about Education 5.0 from different points of view. Every minister that has come up on
the scene has come up with their own version of innovation and industrialisation.
So, it's not new to us. We have been practicing this.

This view attempts to highlight pang of guilt on the lack of a national education policy in Zimbabwe. The interviewee further laments wholesale curriculum reforms that are influenced by the need to score political goals by different political players that come and go into power in Zimbabwe, or out of the need to be different from one's predecessor(s) as noted earlier on. Political scores are mentioned by the Interviewee 4 as prime in the manner in which the Second Republic has been trying to govern and control the flow of higher education systems. The current regime came into power following a coup d'état in November 2017 [40, 41]. But, what is noble is whatever the thrust of policy, it should be seen to contributing towards solving national problems. The interviewee also confirms to the view that policy alterations are done with impunity and willy-nilly in Zimbabwe.

For example, in our department students, we train our students to be innovative whether we are talking of Education 5.0 or or even if it were in reminiscent of the now defunct Science, Technology, Engineering and Mathematics (STEM) policy of Mugabe's era. The policies expected students to contribute to the nation through the work they do. In other words, how they can make an impact when they leave university. Can they be seen to be coming up with new ideas, new products, thinking outside the box for the purpose of commercialising their ideas.

The death of STEM came after the coup which dethroned the former and late president Mugabe and being replaced by Education 5.0. However, the argument is an indirect attack on the government for failing to acknowledge publicly that some higher and tertiary institutions were the founders of Education 5.0 opting to claim parenthood of the doctrine without pity. This imply lack of collaboration between the government and the education sector in Zimbabwe. It existed well before STEM came into force in the post-Government of National Unity of 2009 in 2013. However, the interviewee bemoans the lack of a specific higher education policy in Zimbabwe that glorifies the five missions of higher education and training at once. This equally identifies with Burgess [42] who stated that curriculum reviewers should desist from the practice of calibration of teaching and learning to satisfy control mechanism of the day.

From all the interviews done, it was also found out that as a matter of fact, innovation and industrialisation are paramount in cultivating a higher education student to become an asset in society. In simple terms, Education 5.0 is progressive. Interviewee 4 observed that sharing the skills of creativity and industrialisation with learners is essential to the success of the world as a whole and encouraged innovations to be cross-pollinated. This confirms to sentiments by [7], who unveiled that innovation and entrepreneurship in higher education are the centre pin of a holistic graduate in any given community. That takes communities to greater heights when it comes to the depth, breathe and width of creativity, production and commercialisation of ideas that start as academic.

The interviewee 3 observed Education 5.0 is progressive in that:

Innovation comes first then industrialisation latter. ...The thinking of Education 5.0 then says, in addition to the learning experience that produces academic knowledge let the learning experience be able to promote innovation. In other words, let the student or the learner be encouraged, or be groomed to be able to create new things. ...suppose it's a module that is being taught let it be able to usher the student into exploring ideas that are new. We are looking at possibilities of
students breaking into new ground introducing products that are new. That's the dimension of innovation, products that may answer to the needs of the community. So having produced those new products, those ground breaking inventions or ideas then ...will be industrialised.

This research participant went further:

With industrialisation, other than training students to come up with researched knowledge presented in written documents and other platforms that would make it generally academic. ... Education 5.0 brings in industrialisation were the learning experience result in the production of products and goods... Let them be goods that are usable that will attract the market so that's the industrialisation aspect being emphasised through the (new) learning experience. That may result in, suppose there is a company that will be interested in adopting that idea, technology or whatever is produced, the company can actually be able to adopt that and produce the goods continuously.

From the arguments above, it can be noted that lecturers in the DCAD are prepared to intensify teaching and learning that is bound to produce goods and services that can be used in peoples' everyday lives. The views suggest that the process of creativity, innovation and industrialisation at HEIs should be continuous if the gains of Education 5.0 are to be realised in Zimbabwe. Once a product, or good, or idea is developed through higher education and training it should be patented. Thereafter, its production should not seize but needs to be constantly improved or sustained with the input of the learning institution, student and the company that would have adopted it. On the contrary, when learners graduate they may set up their companies or industries that produce and avail the goods on the market – breaking new ground. It is against this backdrop that higher education and training should work illustriously to provide new and competitive goods and services with a view to boost niche or existing business lines. That again extends to the view that universities should closely work with the industry in its bid to sustain high order cognitive, affective and psychomotor skills as provided by Bloom in 1956 among graduates. The feeling agrees to [24, 43–47] as the way to go towards inculcating hands-on skills among tertiary institutes graduates.

Furthermore, it was discovered from one of the interviewees that ancient or historical development education systems share similarities with Education 5.0. Then, individuals created products such as hoes, bow and arrows without having gone to a formal higher education setting to be imparted with the skills. Those were the few methods of teaching, research, community service, innovation and industrialisation that were apparent during the times. This means that Education 5.0 is an undisputable extension of indigenous knowledge system (IKS) in Zimbabwe. IKSs refers to locally based forms of knowledge production using available resources. However, the bond that exist between Education 5.0 and IKS was raised by a single interviewee during the research. Interviewee 1 explained.

I think it's a need for any country or institution. Innovation is not new as people have been innovating from the time they were put on earth. That's why we have developed countries and developing countries and some that are in between developed and developing because people need to grow with technology to make life easy. So we need to innovate.

This finding suggests that countries and their education systems evolve at different times. Some countries have already introduced Education 5.0 and developed
while some are midway to realise the fortunes of the doctrine. The belief mimic, [9]’s view that innovation and technology policy pay attention to the kind of benefits that will inevitably be earned after the production of a commodity that genuinely solves an issue to enrich the lives of the ordinary citizens. The interviewee further pointed out that:

I will take an example, go back to the Industrial Revolution people produced products. Had they gone through an undergraduate programme they haven’t, but because it was within themselves. That’s what we are simply doing in universities to nature and support, so that we can see results. But, if they don’t produce that’s fine, they would have at least produced something. It may not be patented but we will see a product, we will have engaged our students to focus on the importance of production.

These arguments by the first interviewee also show that Education 5.0 should not be presented as the Second Republic’s creation or virgin education policy or rather niche idea as it has roots in the primordial society among other epochs of human development. This means that as an education approach, Education 5.0 is a back to basics teaching and learning system. The interviewee feels universities should not make noise about students’ failure to produce something patentable at every level of learning. It is not always that students will come up with new ideas and make products that can be put on the market but the very fact that during teaching and learning they would have produced something applied is commendable. What is important is to ground students with real life experience. This pinpoints to what was projected way back by one renowned education philosopher Dewey [27]. This means that creativity, innovation and industrialisation should not be overly underlined through curriculum reform. But, rather via the ability to develop graduates that have practical skills that can lead them to develop tangibles in the real world. The interviewee also suggested that higher education and training should not put students under pressure to produce patentable products. The same interviewee pointed out that “without the industry you cannot process anything”. From this view, it is evident that students should not just create new things for the sake of display of abilities, but for the purpose of making a living out of it. This research outcome proves to be consistent with [20, 31] who proposed that the predecessor of Education 50, Education 3.0 pacifies higher education learners’ as their learning capabilities do not go beyond documented research which does not at all avail solutions to people’s problems.

Education 5.0 also helps people to appreciate the values related to hands-on education in the 21st century. The fifth interviewee noted

People should know about industry in as much they are taught on tourism or geography that there is Great Zimbabwe, Victoria Falls. People know there exist a company that produces specific and unique goods or service wherever they are and that information is not there in our curriculum. People just know sweets, milk but they don’t know where they are produced. They also know the Great Zimbabwe, Mosi-a-Tunya only theoretically. Also they know geographical sites, the heritage, natural sites of the country that is what has been all this time emphasised more in our curriculum, but there has been nothing telling us about innovation and industrialisation.

This interviewee also laments that Education 5.0 skipped the grassroots to focus solely on higher and tertiary education. The arguments compliment Ministry of Higher and Tertiary Education, Science and Technology
Development (MHTESTD) strategic plan pronouncements [37] in the year 2019. It is in the finding of this study that there was need to ensure that it should start from the kindergarten level. This would see students develop with strong values that support innovation and entrepreneurship in their teaching and learning up the ladder. This study also picks from this interview that interaction with creativity, innovation and industrialisation need to be continuous in the teaching and learning cycle. The components should be designed to begin from Early Childhood Development (ECD) to university. At the same time, concern should not be limited to the appreciation of access to finished goods or use of already set up services. Generally, all forms of education should not narrow students’ knowledge acquisition abilities to the existence of finished products such as milk, bread, goods as well as services. Knowing service places like Mosi-oa-Tunya for example do not at all expose students to processes that trigger and led to production. These places have already been captured by investors who are also grappling to survive under the current global problems. The income being realised by these businesses, for instance has not been felt to provide solutions to the country’s evolving economic problems. But through higher education innovation and industrialisation the nation’s economic status can realised. This finding is in agreement with sentiments led by [20] who observed the Malaysian Government came up with education reforms that were not exclusionary of the paediatric teaching and learning.

5. Virtual Learning Environments (VLEs)

Among other things, Education 5.0 has been rocked by the need to romp in the unstoppable interaction with and use of technology. All over the world, the insur- gence of COVID 19 has made it even more and more possible. The development can be argued as a paradigm shift in the world education order. Resultant lockdowns experienced everywhere, have overhauled the education delivery systems into a mess within a short space of time. Worthy of note, all learning institutions and most industries were temporarily placed under lock and key. The disease made all physical forms of work that did not respect social distancing undesirable including, the education system. Traditional face to face teaching and learning suddenly became immaterial and invalid. While COVID 19 period old school forms of teaching and learning went on pause, predominantly, in Zimbabwe as elsewhere. In no time, midway first semester in the year 2020 all teaching and learning went online. First-years were yet to come in later in August of the same year.

This development prompted all the interviewees to acknowledge that Education 5.0 came with higher order demands. It was observed that initially the curriculum review had started with a focus on face-to-face teaching and learning; nothing more, nothing less. Fate has since taken its toll. At once, the local Education 5.0 decree was caught unaware by the need to embrace the internet of things - online teaching and learning. When asked to clarify how Education 5.0 had responded to the emergence of COVID 19 in teaching and learning, interviewees stated it was problematic.

Interviewee 3 argued that;

…it’s a situation which will require the demonstrator to spot were the student is failing... there is need for repetition and there is need for stretch of time to allow the skill to actually get into the student’s system. This can only be perfected by regular intervention of the demonstrator and in the case of the virtual learning there is a total absence of that.
Similarly, the first interviewee highlighted that:

*We reviewed the curriculum before the pandemic... We were focusing on emphasising Education 5.0 in the classroom... We had not focused moving into a mode were they are not in the classroom. We were only complimenting the classroom teaching when we reviewed our curriculum to emphasise Education 5.0.*

The sentiments above, are a direct confirmation that online assisted Education 5.0 in higher education is a long way to go in Zimbabwe. Yet, the need to produce an industrialist through higher education training remains cast in stone. This complements [3] views that the 21st century curriculum reform are mindful of the value of didactic aims and instructional methods that prepare learners’ for real industry experience. That led the MHTESTD to adapt to Education 5.0. Yet, Interviewee 1 further noted that in Zimbabwe, help services for VLEs are low. One scholar, projection that for globalisation and industrialisation to take place, ICTs should be part of everyday teaching and learning [26].

The third interviewee’s view was also inconsistent with [17] and [15] who argued that inclusion of advanced ICTs were prerequisite in higher education and training for innovation and industrialisation to be realised. It was noted that most students do not afford to go online for teaching and learning drives. Among other things, access to the however, use VLEs have proved tricky as an oil of practical requirements of Education 5.0. Both lecturers and students are financially handicapped to ordinarily use VLEs for the purpose of teaching and learning. Network and power outages in Zimbabwe are serious issues that hamper full, efficient and effective use of VLEs even to those few students and lecturers who can afford. Past the reach of many are the technological gadgets they need to help them oil the effectiveness of online teaching and learning such as the computers, and smart phones. Interviewee 1 noted

*Accessing resources from a student perspective is a problem. I’m a parent. I’m a lecturer. I look at the cost involved in this whole idea of VLEs. How many Zimbabweans can afford to do that, get the equipment, get a laptop for a student, smartphone then buy the Wifi, the same student needs fees, food accommodation and s/he is not the only child in the family. Look at the incomes of the majority of people in Zimbabwe. My challenge is how to meet half way with the student and the issue of resource availability verses income levels of our population.*

The interviewee added

*I want them to read my notes on the portal they need to buy data bundles to access the Internet. How much is the mobile data and per day? Can a student have money to spend on data? Can we afford that? As a university or country we are challenged. What are we doing to help the situation? We have heard about provincial resource centres to alleviate or meet half way the challenges we are meeting on VLEs. There is nothing. I think there is lack of support in the area of VLEs. For our population it is missing and it is very difficult for us to help our students. For instance ... no matter the size of the class one has, you will find out that only a quarter can do the assignment online, the rest prefer to submit hardcopy ones or wait until such a time they come back at campus were they have access to Internet or Wifi to do the assignment(s). That makes it very difficult for me to mark assignments on time and prepare for exams at the same time. So, the reality of what we think we can achieve with VLEs is different from what is on the ground. The*
relevancy is that most of our students cannot access learning materials on their online portals due to the cost implications that characterise online teaching and learning.

The relevancy of VLEs is also hampered by lack of financial support from the government in the form of students’ grants and sponsorship in HEIs for them to learn online makes the adoption of VLEs a toll order. This further points to the fact that Education 5.0 under the COVID 19 circumstances remains largely unattainable. The feeling agrees to [17] projection that African governments still find it difficult to commit resources towards the evolving models of education. Interviewee 1, also admitted all this disaster is being experienced because the government of Zimbabwe imposed upon educational institutions VLEs. However, it was not like CUT was totally taking a new route.

I would want to say, yes it was prescribe, but it does not mean that the school or the department was looking totally at a different direction from that. As a school or department we were also looking at using the VLEs for teaching. In fact, we have been using VLEs in the past. But, where we are now speaking of these things being prescribed to us is when we were now asked to speed up the use of VLEs. Before the coming in of COVID 19 and Education 5.0 we were using VLEs. We were not doing it like the 80 to 90 percent proportion that is being done now. In the past, we would use VLEs to distribute the notes and assignments and some of the general discussions with students. But, when it comes to the demonstration and serious lectures we left those for face to face experiences. When VLEs came, we found ourselves in a situation where we are told to do most of the things or everything through VLEs. That’s where we end up talking of this thing being prescribe to us.

In the teaching and learning processes, the feasibility of the government’s statement on the adoption of Education 5.0 was tantamount to the infiltration of VLEs. Further, Interviewee 3 laments the disgust that came after the outbreak of COVID 19 with the imposition of VLEs and Education 5.0. It is close with that of oil and water. It also emerged from interviewee 3 that both students’ and lectures’ lack ICT skills, therefore it is difficult to regularise VLEs at HEIs as fast as the speed of lightning and thunder.

The two exist, may be oil and water in the sense that if you want somebody to be practically sound in terms of skills. Then, the issue of online learning is not feasible, somebody has to be there simulating and that does not always work. Somebody has to be there face-to-face with learners’. Yes, there are aspects that we can say with VLEs can be possible but to some life is very difficult, it doesn’t work.

Zimbabwe still has problems when it comes to Internet access countrywide. Students come from different spaced remote areas to study at local HEIs. These areas have little or no internet access facilities installed neither do they have the electronic gadgets needed to oil VLEs. Distance education demand that colleges and universities be technologically rich. The inaccessibility of digital resources makes VLEs irrelevant in the education sector. However, to further guide the overhaul of virtual higher education teaching and learning, the issue emerged as one of the major challenges that impinging upon Education 5.0 after the outbreak of COVID 19.

6. VLEs support systems

The interviewees also lamented how VLEs can support the practical constituents of Education 5.0. All the study interviewees held that the government is not
concerned with issues of research on the viability of VLEs in Education 5.0 exercises in the country.

In different interviews sessions, Interviewees’ 1 and 2 were worried about the absence of proper research towards the inclusion of Education 5.0 and VLEs. The first interviewee observed;

> In terms of support, I don’t think we are serious as a country. We are not creating a conducive environment for us to use VLEs. What we are doing is pretending that things are moving when they are not. You need to do research so that you don’t produce substandard students at the end. From the ... VLEs lectures conducted so far learners’ grasped or learnt nothing at all. And we insist we want VLEs without having evaluated the VLE lecture experiences so far. We should have evaluated how students who participated in such online classes grasped both theoretical and practical taught virtually. Then we could see how effective it is and move.

Interviewee 1 added:

> So, we need to make concerted efforts were the institution, the ministry, the government look at things objectively. Yes, we are rushing to say they must cover all the learning virtually. But we are flogging a dead horse. With VLEs we are finding it foolhardy to make learning a continuous process. Learning must be continuous, but my experience with VLEs it’s a continuous academic coaching with little or no effective learning taking place. This is because we do not have adequate resources to support our VLEs. Look at the practical subjects.

> How are VLEs supporting the practical component? Yet, these are the courses that help us make the products that are going to emphasise innovation and industrialisation. What skills have we given them online? What have we done to impart the skills? Even if we go through our VLEs what is there to impart skills, to support skills acquisition? There is nothing. What you get is the theory or methodological component. We have skills deficiency and that deficiency will kill innovation and industrialisation.

From evidence gathered, the MHTESTD opted to go it alone in deciding again how Education 5.0 should be executed virtually in HEIs. Lecturers’ from different local HEIs should have been taken for exchange programmes on how Education 5.0 and VLEs can be attached. That has been pertinent in countries like Malaysia, Germany, or China. This would have gone a long way in equipping higher education and training educators with VLE skills needed to make them teach online effectively and efficiently, particularly for Education 5.0. Notably, the modernisation of the university curriculum in Malaysia has been characterised with inclusion of a variety of projects and technologies for it to be a success. Unlike, in Zimbabwe as stated by Interviewee 1, Malaysian local and international industry groups were invited to give webinars, seminars and workshops to academic practitioners so that they turn out to be technologically and industrially compliant [20].

The interviewee argued that research is key when it comes to the need to merge VLEs with teaching, research, community service, innovation and industrialisation.

> When it comes to VLEs there was supposed to be enough research in terms of the person who is going to deliver and the person who is going to receive via these platforms to be all equipped. At the same time, whatever we are going to use as the media for communication is it effective enough so that whatever we want to do succeed?. So, the issue of VLEs at a localised level may work especially to few well-resourced people. At the moment there are many hitches.
Interviewee 3 argued that;

I admit we still have challenges. Off course, as we prepare our module outlines, lecturers are encouraged to design them in such a way that will guide students on the activities that students need to build on their skills particularly hands on skills. But, the challenge is that the nature of some of the modules is such that as the student is taught new skills, given an instruction, a syntactic of how an operation is done. The gist of teaching when it comes to the practical skill is in allowing the student to do an operation while the lecturer or the demonstrator watches.

In the process lecturers will pick were the student is doing it right and were the student is doing it wrong and then they will re-demonstrate again and again. It is not something that can be done through a syntactic manual and you allow the students’ to perfect their skills without the regular intervention of the demonstrator. The situation which will require the demonstrator to spot were the student is failing. And also some of the skills that affect students are skills that require high mental involvement of the student. The use of the mind but at the same time some of the skills require psychomotor skills and they require a combination of the two faculties and with psychomotor obviously there is need for repetition.

The interviewee further noted that:

Of course, some lecturers have tried to demonstrate using films, sometimes borrowed films from YouTube, here and there. Some lecturers have tried to upload films that they have done. But, still that will not be able do it the way it will be done in face to face interactions of students’ and lecturers’.

From the finding above, it looks like online and offline assisted teaching and training is still a long way to go in Zimbabwe. The interviewee hails the need to virtually give students skills that will help them to innovate and industrialise in the future. The first interviewee highlighted that:

Our students were exposed to these (VLEs) before COVID 19 and we were interacting with them all this time on WhatsApp. To give them notes, to give them assignments and that’s part and parcel of the VLEs.

But, we had not focused moving into a mode were they are not in the classroom. We were only complimenting the classroom teaching when we reviewed our curriculum to emphasis Education 5.0. If you look at this new thing now were we are saying more than 75% of their time they are learning online. I think, we need to look into the challenges as universities. What are the challenges our students are facing. Are they really benefiting from VLEs? How many of them are benefiting? To what extent? This is because in the current situation we have seen so many challenges after online teaching and learning.

So, let me answer the how part of it. We have incorporated the VLEs at university. Besides, we use their personal emails. Why personal, individualised instructions? Some students may not be able to grasp what I have given via the university portal and s/he may want to interact with me on a different platform. We go ahead and do that. One other student may not be able to access his or her university portal but may his or her email. That can also complement our use of the social media. ...

Looking at our resource constrains as students and lecturers we all know at times we cannot get the Internet or Wifi. But, when you get it, then you can use any platform that is easier for you or accessible to you.
At the moment VLEs are not effective and efficient for the purpose of Education 5.0 teaching and learning at CUT. However, 20% of interviewees contended that there was no difference between face-to-face teaching and online teaching. “That you teach face to face or online makes no huge difference to the content that you teach. I teach the same content in both instances” argued Interviewee 1. This implies some lecturers’ have no problems when it comes to conducting both online practical or theoretical lectures. In this instance, VLEs are not wholly a threat at CUT in the DCAD.

7. Conclusions

The relevance of new higher education approaches in Zimbabwe has been proved to be unstable following the outbreak of COVID 19. Education 5.0 still demand a lot in terms of commitment on the part of the lecturers in HEIs, though they argue it is not a new development in their day to day’s work. It further emerged that Education 5.0 was adopted without taking cognisance of unplanned developments such as COVID 19. The disease changed the status of teaching and learning in no time. It called for the use of VLEs since all teaching and learning has become predominately virtual. The disease has made online teaching and learning mandatory in Zimbabwe. While the cost implications have been itching, a drop in an ocean of learners can afford it. Support digital equipment for the purpose of teaching and learning is expensive. The research concludes that a handful of graduate students may finish higher education and training with the requisite skills needed in the industry. It is therefore recommended that the Zimbabwean HEIs should revert back the previous Education 3.0 model until such a time the global economic cake evens out. This is so because with VLEs it is better achieved than Education 5.0.

Appendices and nomenclature

What is your professional understanding of Education 5.0 in higher education?
What aspects of Education 5.0 are emphasised in the curricula?
What are its importance?
What strategies did you use to make the Education 5.0 suitable for VLEs?
What are the relevancy of VLEs in higher education and training?
In what ways did your academic experience influence the selection and exclusion process of VLEs?
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