Journal of
Online and Distance Learning
(JODL)

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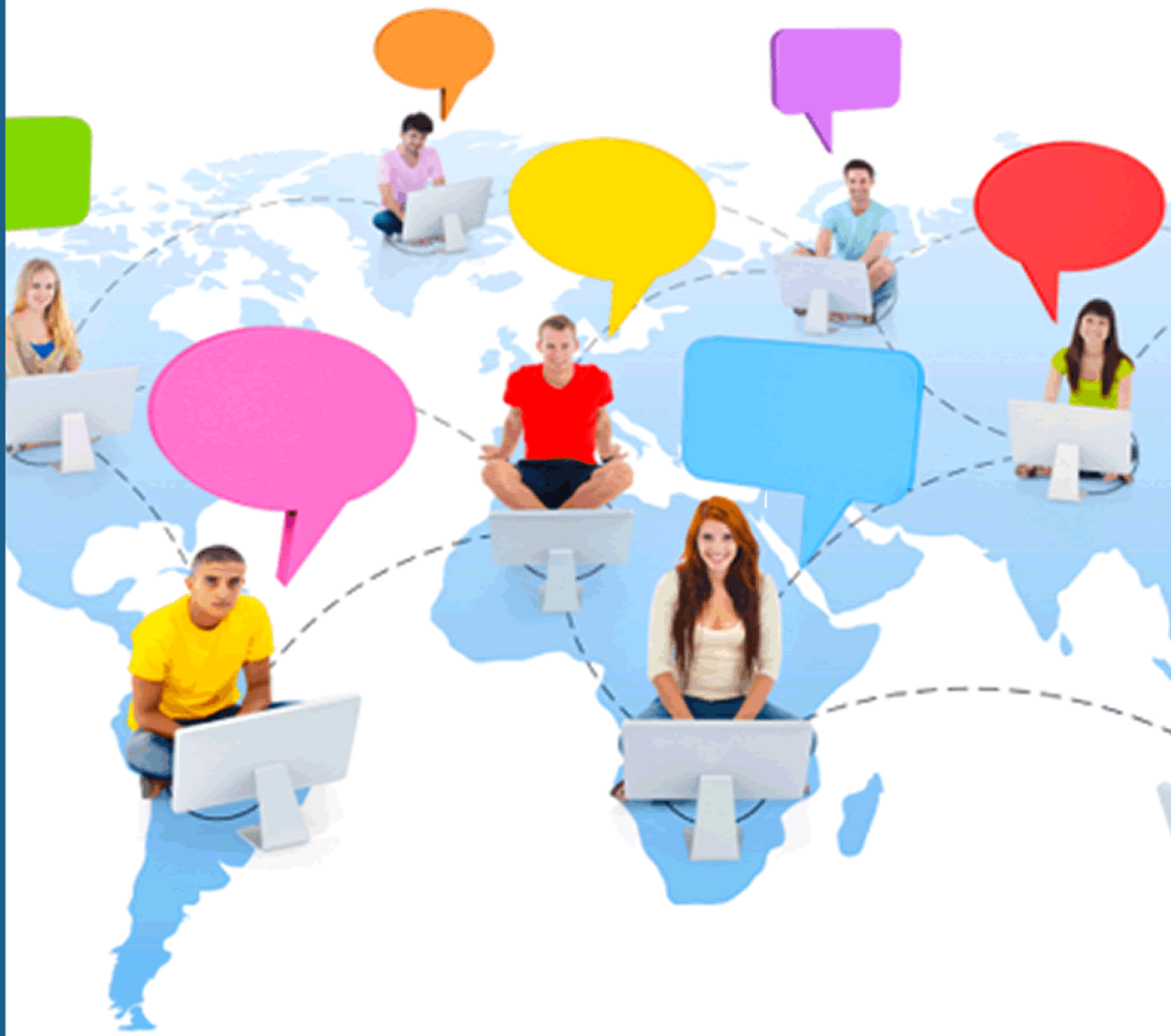

CARI Journals

Journal of Online and Distance Learning
ISSN: 2789-3049 (Online)
Vol.5, Issue No.1, pp 36 - 54, 2025
www.carijournals.org

Enabling or Suffocating the Talent the World needs? A Verdict of Africa's Educational Systems and Policies

[1]Magunda Hilary, [2*]Asiimwe Specioza

[1]College of Economics and Management Studies, University of South Africa
[2]College of Education, Open, Distance and E-Learning, Kampala International University, Uganda

https://orcid.org/0009-0007-1672-5806

Accepted: 10th Apr, 2025, Received in Revised Form: 12th May, 2025, Published: 12th June, 2025

Abstract

Purpose: The purpose of the study was to establish whether the educational systems and policies in Africa were enabling or suffocating the development of the talent that the world expects. This was triggered by a notable unanimity in the extant literature that Africa could be a game changer in the global economic landscape for the next 100 years given its young age and the adoption of SDG-4 on education.

Methodology: The study utilised an integrative literature review design to collect and analyse the data. A sample of 12 records that met the inclusion criteria was reviewed. To ensure quality appraisal of the sources, an assessment of the methodological quality of each record using Critical Appraisal Skills Program (CASP) Qualitative Checklist was done.

Findings: The study explicitly notes facilitative efforts to talent development such as growth of the education sector, increased funding, increase in the quantity and quality of teachers, improved educational infrastructure and facilities, and increased learner enrolment, among others. In spite of these observed facilitative efforts, there are debilitating misses and barriers that appear to stifle talent development like inadequate funding, weak physical infrastructure and facilities, inadequate staffing, weak school curricula, high dropout rates, and low completion rates and learning outcomes. The education systems and policies in Africa continue to nurture inequitable access to educational opportunities, and most low quality and relevant education that does not appear to effectively meet the global labour market needs.

Unique Contribution to Theory, Policy, and Practice: At the theoretical and conceptual level, the study locates the debate in the theories of talent development to attract educational scholars and policy makers to view education as an imperative to talent development. It recommends that governments and educational sector stakeholders in Africa allocate adequate funds to meet the planned educational requirements and promote more effective policy implementation to ensure successful talent development that meets the global labour market needs. This study makes a significant contribution to the scholarship and practice of education as an imperative to talent development that Africa will need to leverage its population dividend and become a respectable global partner.

Key words: *Talent, Talent Development Theories, Educational Systems. Education Policies, Integrative Literature Review, SDG-4, African Continent*

Introduction

There is a growing consensus that the 21st century could be the African century. The continent is seen to have a billion opportunities at its disposal (Grinin & Korotayev, 2023). Africa possesses a wealth of diverse young harnessable talent including unique culture, art, sciences, technology, sports, and entrepreneurship, among others. Global statistics indicate that Africa has the youngest population in the world, median age = 19.2 years against the world average of 30.2 years as of 2024. The continent has 40 percent of the global agricultural land, with favourable weather and ecosystem for efficient food production. Moreover, it is mineral rich and a host to several mineral deposits in high demand to power global growth. In addition, while the rest of the world is projected to face significant population decline in the next fifty years, Africa's population is expected to reach 2.5 billion people by 2050 (United Nations Economic Commission for Africa, 2024). This sets Africa as the labour reserve with surplus labour to close the human resource gaps in countries with declining populations. The surplus labour supplemented by material wealth is the silver lining behind Africa's hoped prosperity. Africa's growth is expected to drive global change politically, economically, socially, culturally, and technologically. Considering the obtaining conditions, theoretically, it is reasonable to suggest that the realisation of the population dividend and its associated benefits in Africa is feasible.

However, getting the dividend requires more systematic preparation, time, effort, and material investment, especially, in developing the capacity of its vast human resource. Whether Africa is ready for this global challenge remains debatable. Nonetheless, with the youngest population, education is the key to unlock Africa's vast resource potential and turn it into a globally competitive partner. In a pragmatic way, the African Union (AU) in 2016 approved a Continental Education Strategy for Africa (CESA 16-25) as a scaffold for transfiguring education systems and policies to meet her talent development needs (African Union Commission/OECD, 2024). Moreover, in appreciation of the outlook of things in favour of Africa, the AU marked 2024 as the first year of education. This declaration, mainstreams education as the lynchpin to unlock the continent's potential. In addition, the pronouncement accentuates the focus on achievement of the Sustainable Development Goals (SDGs) in general and SDG-4 on education in particular. Even though education has arguably driven the continent's progress since independence days, 60 decades ago, Africa remains struggling with talent development to match the global standards and requirements.

While Africa in a futuristic perspective looks poised to become a game changer in global development (African Union Commission & OECD, 2018), it remains a continent with a higher ratio of raw talent compared to other continents. For example, South Africa reports that 76 percent of employers echo challenges securing the talent they want (ManpowerGroup, 2022). Similarly, other African countries appear to face talent gaps. Indeed, several studies suggest that a population with poorly trained workforce does not present a great value adding potential for the modern economies (ManpowerGroup, 2022; Grinin & Korotayev, 2023). Above all, unskilled or low skilled labour force is a raw talent that cannot handle cutting-edge technologies that drive global economies or the innovations needed in the current and the centuries to come. As the 'war for talent' rages on, and talent continues to be the differentiating

factor between successful and unsuccessful work forces (Barkun, Rollnik-Sadowske & Glinska, 2020), populations with highly trained labour force stand higher chances of leveraging population dividends than those without. Worryingly, populations with poorly trained youth do not represent opportunities to close the anticipated labour shortages especially, in the high income countries that are threatened by labour deficits due to declining populations. Labour force to become a powerful resource – talent should have received quality and relevant education in the first place. This is what turns it into a talent.

Grinin and Korotayev (2020) assert that exposure to education systems that offer both quality and relevant education produces superior talent that supports economic growth and development. A recent study Partech (2022) asserts that some African countries with trained young people in information technology and science, technology, engineering, and mathematics (STEM) fields are attracting business outsourcing opportunities. Moreover, African experts who have received their training in European, American, and Asian educational systems are highly regarded specialists that support economies wherever they are employed. Evidence suggests that it is possible for Africa to bridge the labour gaps projected in the high income countries over the next century with effective talent development initiatives. It also underscores the importance of education in developing the talent that such economies need.

Whereas education remains central to talent development and the likely missing link that must place Africa in its projected position of being a continent of the 21st century, concerns remain about the type of education the population receives. The education systems and policies adopted by Africa in order to ensure effective talent development to meet global standards should ensure education is accessible, equitable, of quality, and relevant to the talent needs of the global economies. However, evidence demonstrates that gender, regional, and class inequalities in access to education perpetuate imbalanced talent development (Khethiwe, 2023). In addition, barriers in the upstream educational processes related to educational infrastructure, teaching and learning facilities, investment in education, level of adoption of STEM programmes, emphasis on academic other than skills development, limited skilling centres and internship opportunities, and low integration of information and communications technology in teaching and learning appear to be recurrent and to limit the quality and relevance of education (UNESCO, 2021; Partech, 2022).

The adoption of the SDG-4 on education a decade ago by the African states symbolised a new commitment to develop youthful talent and was seen as a beacon of hope to position Africa at the heart of global labour market. However, it seems the glitter in the promises regarding implementation of SDG-4 policies in Africa is not golden. Yet, it is education that will set Africa on the stage it is hoped to be in the 21st century and beyond. Therefore, with such mixed observations about talent development in Africa, and the simmering pitfalls in education, it is prudent that an examination of educational systems and policies vis-à-vis talent development in Africa proceeds. This study has a strong epistemic contribution regarding talent development in Africa as a continent of the 21st century. It draws from perspectives across Africa to highlight the status of educational systems and policies on the continent in relation to talent development and suggests plausible mechanisms to fast-track this process. Besides updating and enriching the existing literature on education and talent development, the paper critiques the existing

educational systems and policies to demonstrate their contribution to harnessing talent that will meet the dynamic global labour market needs. This is expected to enable policy makers and implementers pick evidence based cue on what steps to take moving forward on making Africa more ready to secure its position in the unfolding world economic order. This study sought to answer one research question to satisfy the research interest; "could the educational systems and policies in Africa be enabling or suffocating the talent that the world needs?"

Conceptual and Theoretical Perspectives

Educational systems globally vary in scale, purpose, modes of operation, and resource endowments. These four elements are influenced by the government the educational system serves. At the heart of these elements, is the purpose the education system aims to achieve (Tarasova, 2008). For example, those systems that are intended to provide high quality human resources for the nation are clear in purpose, scope, operational methods, and resources to support their effective implementation. Therefore, a distinction can be drawn between effective and ineffective educational systems by examining their presence, functionality, and effectiveness – success against realising the core objectives of their existence. Literature on education is rich with definitions of what an educational system is and what it is not. For this review, two definitions appear to provide a gist of what an educational system that is philosophically, conceptually, and contextually relevant are: (i) Educational systems are the structures created by the government to educate its citizens (McGettrick, 2008). How these structures are organised, operated, and supported by the government depends on educational policies of the country. In the post-modern era, education is a shared responsibility between the government, the private sector, and the non-state actors such as the Non-Government Organisations (NGOs) under government regulation. (ii) Educational systems are the forms of configuration of education service provision usually, determined at country level and mostly focus on extending education services to the country's population and regulation of formal education within that jurisdiction (Hatos, 2014). Under both circumstances, education systems are organised into sectors according to the age the young population enters the system and perhaps the purpose a sector serves including the early childhood education (ECE), primary education, secondary education, and tertiary/higher education. Additionally, international and transnational educational systems by agencies such as UNESCO, African Union (AU), and others may have an influence on the configuration and operation of educational systems.

Meanwhile, the term educational policies refers to a systematic intervention by authorities to improve education service provision at all levels (Papanikos, 2010). In addition, educational policies specify how the resources are to be shared and used to achieve educational objectives, and are guided by the country's specific vision, mission, values, ethics, and common good ideology as perceived by the society it serves. Both educational systems and policies attempt to ensure that there is a right curriculum, right quality and quantity of trained teachers, scholastic materials, educational infrastructure and facilities, safe learning environment, and effective monitoring of the sector for education to meet its purpose. These perspectives provide a perceivable picture of what educational systems and policies are for scientific interrogation.

Several studies demonstrate that much of the conceptualisation of the term "talent" and its characterisation occurs in organisational management with emphasis on skills and competences needed by the employees to achieve higher results (Dries, Peperman & Carlier, 2008; Garavan, Carbery & Rock, 2012; Mahdiabadi & Li, 2016). The focus seems to be on an already educated individual with formal academic and technical qualifications who requires top up training in knowledge areas, skills, and behavioural aspects that are considered to enhance achievement standards in the current work setting. The conceptualisation does not seem to delve into foundational and tertiary level knowledge, skills, and behaviours that the workers bring to the organisation on which, their definition of talent development builds. Similarly, limited applications are also noted in sports and performing arts relating to the giftedness of individuals to perform certain activities – which can also be streamlined through education. Meanwhile, in the traditional education, talent is applied to describe exceptional individual abilities of the learner or the knowledge and skills acquired by learners to accomplish certain tasks effectively (Garavan, Carbery & Rock, 2012; Jöstl, Hinterplattner & Silke, 2023; Nijs, Meyers & Woerkom, 2024). Evidence suggests that while talent is key to enhancing performance, it should be seen holistically from foundational skills to work based skills that involve institutional learning, self-directed learning, non-formal, vocational, and higher education which are imperatives of talent development.

For this study, we view talent to encompass inherent abilities, and the work related skills, knowledge, and behaviours systematically acquired to make individuals excel in their current or future work settings. Further, we interpret it in terms of lifelong learning, starting with development of foundational knowledge and abilities in the basic literacy, numeracy, and the general cognitive, affective, and psychomotor functions of a learner from the early childhood education to elementary and secondary education that further prepares and improves the foundational knowledge needed for tertiary and university education; which itself aims to develop the concrete knowledge, skills, and behaviours – talent, that the labour market demands. Our argument is that education, should be holistic in order to develop talents; noting that education is systemic and interdependent and inefficiencies at a lower level are passed on to higher levels affecting the overall abilities of the graduates of such an educational system to meet labour market demands. In this line of reasoning, we hold a world view that an effective educational system based on supportive policies leads to better educational outcomes especially, development of talents that meet labour market expectations. At the global level, educational goals to build the talent that meets international labour standards have been articulated in SDG-4 to which the African continent is a participant. This observation qualifies the focus on the SDG-4 goals and targets as relevant outcomes to contributing to the development of the talent the world needs.

Education is considered fundamental to developing talents and unlocking opportunities (Hassan, Groot & Volante, 2022). Several theories such as talent development theory, multiple intelligences theory, deliberate practice theory, socio-cultural theory, self-determination theory, and growth mind-set model underscore the centrality of education in talent development. Relatedly, the educational systems and policies obtaining in a given jurisdiction are considered to either enable or hinder the effective talent development within the population.

Consequently, this influences the ability of the labour to meet market expectations. Talent Development Mega-Model propounded by Francis Gagne in 2004 provides a prognostic approach to identifying, understanding, and developing talent through the educational process (Olszewski-Kubilius et al., 2021; Subotnik, Olszewski-Kubilius & Worrell, 2021). It describes talent related salient modules in the development process from the formative stages of development of a child through to adulthood. This theory seems to suggest that educational systems and policies are instrumental in enabling talent development. It provides a case for curriculum design that focuses on early talent identification and provision of mechanisms for crafting the talent by way of teaching and learning. However, despite its wide application in talent development, the model is criticised for its reductionist approach but its potential to guide educational processes for talent development remains plausible.

From another angle, Howard Gardner in 1983 asserts the existence of multiple intelligences, which educational systems and policies should mainstream and develop. These intelligences that underlie individual talents include visual-spatial, verbal-linguistic, musical-rhythmic, logical-mathematical, interpersonal, intrapersonal, naturalistic, and bodily-kinesthetic (Northern Illinois University Centre for Innovative Teaching and Learning, 2020). The existence of these intelligences and the need to craft them in the educational systems and policies requires adoption of multiple approaches to teaching and learning. Adoption of multiple teaching and learning theories such as constructivism, cognitivism, and behaviourism, among others, (Asiimwe & Magunda, 2023) would enable teachers relate effectively with the variety of intelligences being developed for a holistic talent. The theory of multiple intelligences provides policymakers and educationists an opportunity to design and implement curricula that are adaptive to variations in learners' intelligences and to develop talents that could meet various labour market needs. Though the theory is criticised for lack of empirical evidence, oversimplification, and cultural biases, it provides a feasible framework for curriculum design and implementation for talent development.

In Deliberate Practice Theory, Ericsson (1993) makes an attempt to explain how expert performance can be acquired. The theory provides a guide on how an individual's talent could be developed through focused, structured, and deliberate practice. Ericsson (2007, 2020) claims that training for talent development in particular tasks should focus on what is to be done by the trainee. This seems to depart from the traditional approaches to education that focus on developing several areas that may have no immediate relevance to task needs. In talent development processes, curriculum designers and implementers should find the theory impactful when developing curricula for vocational training and in learner centred, practical, project based, and internship related learning environments. Implementing such theoretical postulations for effective talent development requires resources that educational systems and policies must guarantee.

Vygotsky Lev's Socio-cultural Theory developed in 1934 adds more insight on talent development. The theory underscores the role of social and cultural contexts in shaping talent development. The central concern for educational policy is ensuring mechanisms that build students' ability to collaborate, communicate, and think critically. In the foundational years of the students, social interaction provides opportunities for talent development in areas like

speech and relational skills as well as critical thinking which are central to effective performance. Students' interactions with others facilitated by cultural artefacts such as materials, language, and symbols (Jeong et al., 2022) create learning spaces for talent development. For example, issues of monolingual versus translanguage pedagogy underlie the sociocultural contexts of learners that educational planners can take into consideration when developing educational systems and policies. In addition, in adult education, the theoretical prescriptions become handy in high level skills development through mentorship and other professional development approaches including lifelong learning. Educational systems and policies by creating spaces for interaction and skill acquisition in the curriculum enhance talent development. This line of theoretical argumentation is key to designing curricula and allocation of resources and facilities that focus on effective talent development.

Self-determination theory provides further nuanced discernments of talent development. Developed in 1985 by Deci and Ryan, the theory asserts the importance of autonomy, competence, and relatedness in talent development. The authors' view that intrinsic motivation, self-determination, and competence can be honed in an educational environment is instructive. Educational systems and policies need to focus on students' autonomy, creativity, and love of learning to develop talents. Chui et al. (2021) find this theory fundamental to development of teachers' talents through professional development programmes. The key claim seems to be the theory's ability to guide in the development of autonomy, creativity, and intrinsic motivation which are essential abilities among high performance workers. Empirical evidence from Chui et al. study is that the theory can be of impact in designing and implementing STEM based curriculum which appears to be the source of talent that drives the technological revolution and global economies.

Relatedly, Growth Mind-set Model developed by Dweck in 1999 provides a powerful framework to help educators grow the talents of learners. The theory postulates that students' beliefs about their abilities which may either be fixed or growth oriented influence their motivation, academic achievement, and talent development. The growth mind-set accentuates the efforts to build intelligence, abilities, and talents through exerting more effort, ensuring perseverance, and implementing effective growth strategies (Suman, 2023). The learning environment for talent growth should ensure provision of constructive feedback, with emphasis on effort and process, inculcating metacognitive skills, providing a supportive classroom environment, and including growth mind-set mechanisms into the curriculum. With some work contexts requiring high achievers in their specific fields, application of the mind-set theoretical prescriptions in the curriculum design and implementation is fundamental to producing the talent needed.

These theoretical perspectives seem to support the view that education is the key to talent development. The issues centre around the educational systems and policies at all levels of education, through curriculum development, implementation, and provision of the necessary facilities, infrastructure, and supportive educational ecosystem to enhance talent development. The theories can be used to anchor arguments related to curriculum planning, development, course selection, assessment strategies, and allocation of educational resources for talent development (Setyawan et al., 2024). They can also be helpful in selecting appropriate

pedagogical approaches (Asiimwe & Magunda, 2023) like teacher centred versus learner centred approaches, type of assessment, differentiated instruction, technology integration in teaching and learning, classroom management, curriculum relevance and alignment to market needs, and interdisciplinary connections to ensure both quality and relevance, while promoting effective teaching and learning. From the educational systems and policies perspective, curriculum development and implementation processes to develop the much needed talent require adequate investment and effective governance that focus on the goals that the educational systems and policies seek to achieve and the processes and procedures to achieve them.

Since 2015, African states, among others, adopted the implementation of the SDG framework and the focus on education, which is the bedrock for talent development is SDG-4 (UNDP, 2022). Under the SDG -4 targets, the continent like its global counterparts aims to promote and ensure equitable, accessible, quality, and relevant education, and lifelong learning for all. Ideally, a presence of an educational ecosystem that enhances achievement of the aforesaid aims would be presumed to produce the type of talent that the world labour market expects. A realisation of this expectation would not leave Africa waiting on the margins, but would see it actively preparing to take its position as the globe's continent of the future. Its readiness to close the labour gaps in the high income economies that are faced with declining populations would be evident in the effectiveness of the educational systems and policies, and their outcomes. However, UNDP (2022) Africa Sustainable Development Report 2022 presents evidence that there is slow progress on education in Africa, which news, seems to dispel the hope that Africa will be the next reliable source of talent to drive global economies. The enigma of this reality that Africa is lagging behind on its SDG-4 targets 5 years to expiry of the SDGs' regime in 2030 inspired this investigation 'to establish whether Africa's educational systems and policies which are meant to promote achievement of SDG-4, and specifically, result in building the skilled workforce for work and entrepreneurship, are enabling not suffocating the African talent that they intend to produce.

Materials and Methods

This study utilised a qualitative secondary research design referred to as integrative literature review. This includes a review of the relevant extant literature about the research phenomenon (Snyder, 2019). Using this approach, the researchers were able to evaluate the available evidence about whether the educational systems and policies in Africa were promoting and not suffocating the talent the world needs. Based on the SDG-4 outcomes of equitable, accessible, quality, relevant education, and lifelong learning as foci for producing the talent, the researchers assumed that these are the contemporary outcomes of any education system and policy that produces the kind of labour force the world requires (UNESCO, 2016). The issues can reveal the extent of progress on meeting the targets and if not, can suggest why not. In addition, it provided an appropriate mechanism to draw conclusions and derive recommendations with a plausible framework for improving the educational ecosystem in Africa to position it to close the anticipated global manpower gaps. The entire process included six key steps namely: (i) planning the review, (ii) searching for the literature; (iii) analysing the

results; (iv) synthesising the findings from included sources; (v) writing the review; and (vi) organising the findings in a logically flowing manuscript (Brodersen, 2017).

The data were obtained from various online secondary resources (Toronto & Remington, 2020) including journal articles, research and official reports, and other published texts, hereafter, referred to as records. Keywords such as education and talent development, promoting equitable access to quality and relevant education, promoting lifelong learning for all were used. The researchers used numerous internet search engines to access quality sources such as Google Scholar, Semantic Scholar, Research Gate, and Quest. The researchers to focus on more relevant sources applied the Boolean Operators "AND" "OR" and "NOT". This eliminated distant results. The relevant search with a combination of educational systems and policies and talent development with search limiters to African educational sectors gave 230,000 hits. Additional limiters such as peer reviewed journal article, official reports, English as the publication language, and 2020 as cut off year of publication were used, 640 relevant hits were noted and retrieved for screening for duplicates. After records were screened for duplicates, 580 records were removed leaving 60 records to be considered for the next step. Next was screening abstracts for relevancy and other quality parameters, which excluded 20 records while out of scope removed 28 records out of 40 leaving 12 as the sample record to review.

Data abstraction from the literature was done using a predefined Excel tool adapted by the authors. The 12 records selected were examined and information from each of them was organised by the first author. The extracted data were then cross checked by the second author for quality assurance. The quality appraisal of the sources included assessment of the methodological quality of each record by the authors using the Critical Appraisal Skills Program (CASP) Qualitative Checklist. This assessment was used to present the quality of evidence available in the selected records on the research phenomenon, for discussion. This supplemented the relevance, authority, objectivity and bias, currency and timeliness, validity, clarity and coherence, depth and insight, and relevance to practice that were embedded in the screening process by the researchers during literature search. Therefore, the researchers guaranteed that the literature sources used were appropriate, reliable, and valid. The synthesis of findings was based on the purpose of the study. It covered a range of findings from studies with varied aims, research methodologies, and study settings. Thematic data analysis (Creswell & Creswell, 2022) was used which included: (i) familiarizing with the data collected; (ii) creating the initial codes; (iii) collating codes with supporting data; (iv) grouping codes into themes; (v) reviewing and revising themes; and (vi) writing the narrative.

Findings

This study proceeded to establish whether the educational systems and policies in Africa were enabling or suffocating the talent that the world needs. The thematic areas aimed at examine the hits, barriers and misses in the education sector which are associated with educational systems and policies. The salient data characteristics extracted from the records include first author name and year of publication, research setting, research purpose, participants involved, materials and methods, sample size, and a synopsis of the key findings in the thematic area as highlighted in Table 1.

Table 1*Salient data characteristics*

No	Author	Setting	Purpose	Sources	Method	Sample studied	Summary of key findings relevant to the thematic area
1	Krzykawska & Zur, 2020	Sub Saharan Africa	Identifying barriers in African educational system	Secondary sources	A review of literature: commentary based on synthesis and evaluation of relevant extant literature	22 reports	Positive aspects: Focused systems and policies on core educational targets; increased enrolment; increased funding to the education; and expansion of the educational sector Barriers and misses include: Education costs and household expenditure; learning conditions; lower competition rates and dropouts; limited access to good quality higher education; poor teaching quality
2	African Union Commission/OECD, 2024	Africa	A review of Africa's development dynamics focusing on skills, jobs, and productivity	Secondary sources	Both primary and secondary data using a qualitative inquiry	20 TVET evaluation reports and 3 semi-structured interviews with multiple TVET practitioners	Positive aspects: Educational systems and policies aligned to the core educational objectives; increased enrolment; increased teaching and learning facilities; increased funding to education; increased completion rates; and focused educational policies Barriers and misses include: Most TVET trainers have no current practical skills; education is inadequately funded at 3.7% instead of 4% of GDP; diversion of funds; inappropriate school curriculum; low school completion rates; very low digital skills; very low levels of STEM graduates; disparities in access to education; crumbling infrastructure; overcrowded classrooms; weak educational outcomes; and corruption eating away resources.
3	Wehye & Asiimwe, 2024	Liberia	Assessing the access, quality, and relevance gaps in Liberia's educational policy environment	Secondary sources	A review of literature: commentary based on synthesis and evaluation of relevant extant literature	25 policy documents	Positive aspects: Increased enrolment; focused educational systems and policies on core educational goals; intentional educational reforms; and a structure educational sector Barriers and misses include: Limited infrastructure, weak policy enforcement, low technology integration, low funding, inadequate qualified staff, curricula that do not prioritise skills, low apprenticeship opportunities, low capacity on STEM.
4	Evans & Acosta, 2020	Africa	Understanding the direction and scope of recent research in education	Secondary sources	A review of literature: commentary based on synthesis and evaluation of relevant extant literature	145 studies	Positive aspects: Educational systems and policies that focus on enhancing educational goals; increased support to educational sector; increased enrolment; improvement in learning outcomes; increased completion rates Barriers and misses include: limited funding; lowest completion rates educational sectors globally; quality of learning outcomes not improving significantly; and weak pedagogical interventions that do not tailor teaching to learning needs; inadequate teaching staff; inadequate teaching and learning facilities; inappropriate learning assessment; low level of technology integration; weak educational infrastructure due to low investment in education; and weak teacher policies on training, remuneration, motivation, and teacher professional development
5	Zickafoose et al., 2024	Sub Saharan Africa	Barriers and challenges affecting quality education (Sustainable Development Goals #4) in Sub Saharan Africa by 2030	Secondary sources	A review of literature: commentary based on synthesis and evaluation of relevant extant literature	54 articles	Positive aspects: Educational systems and policies focused on quality, access, relevant education, and lifelong learning; increased enrolment and completion rates; increased funding on the education sector; support to development of the educational sector infrastructure and facilities Barriers and misses include: quality education out of reach; funding constraints with the continent suffering a funding gap of US$70 billion; access and inclusion constraints due to socioeconomic barriers and physical barriers; teacher education constraints like monolingual pedagogy, unfriendly assessment, weak ICT

							and digital integration, and low quality and quantity of teachers
6	Hassan et al., 2022	Sub Saharan Africa	Educational funding and learning outcomes in Sub Saharan Africa	Secondary sources	A review of reviews (literature): commentary based on synthesis and evaluation of relevant extant literature	14 articles	Positive aspects: Reformed educational systems and policies focusing on achieving SDG-4; increased funding to education; increased enrolment; improved educational facilities and infrastructure in some countries; improved learning outcomes Barriers and misses include: weaker learning outcomes; scarce resources to meet the educational standards required; weak educational infrastructure and facilities; low teacher capacity; inappropriate teaching and learning materials; weak curricula; poor education quality
7	Adediran et al., 2023	Sub Saharan Africa	Examined Ed-Tech landscape and challenges in Sub Saharan Africa	Primary and secondary sources	Face to face interviews and literature review	1,200-2,400 adults per country from 10 countries	Positive aspects: Existence of focused educational systems and policies on Ed-Tech; noticeable increase in funding; considerable improvements in primary and secondary school enrolment; adoption of technology in some schools Barriers and misses include: insufficient budgetary allocation; lack of supportive infrastructure; inadequate teacher training; low technology in education all resulting in learning poverty and deprivation and in 2022, majority of school aged children lacked minimum proficiency in literacy.
8	Falade, 2022	Nigeria	Analysed engineering education with a focus on challenges and mitigation measures	Secondary sources	Literature review	9 articles	Positive aspects: A presence of policies focused on training engineers a core area for engineering talent development; increased enrolment of students in higher education institutions; noticeable increase in funding Barriers and misses include: Inadequate funding and engineering related training facilities; low teaching capacity; weak university-industry partnerships; defective curriculum for skilling engineers; inadequate professional standards; inadequate ICT infrastructure and training
9	Chomunorwa & Mugobo, 2023	Republic of South Africa	Challenges of e-learning adoption in South African public schools	Primary and secondary sources	Sequential mixed methods design	101 students	Positive aspects: Educational systems and policies and e-learning adoption; increase in distribution of ICT facilities in some schools; increased funding allocation to development of ICT infrastructure in schools Barriers and misses include: Inadequate access to ICT facilities by rural schools; high cost of internet access; low teacher motivation; limited physical ICT infrastructure; weak curriculum; low quality of ICT literacy
10	IIEP-UNESCO Dakar, 2022	Africa	Priorities of education in Africa	Secondary sources	A review of reviews (literature): commentary based on synthesis and evaluation of relevant extant literature	50 education sector analyses across Africa	Positive aspects: increasing school enrolment at all levels – high participation rate; increase in funding to the sector; growth in quantity and quality of teachers; improvement in school infrastructure and facilities Barriers and misses include: inadequate and ineffective finding; more children put of school and low completion rates; low teacher to student ratios; inadequate infrastructure and facilities; physical and social barriers; ineffective curriculum; low quality education; weak pedagogy; low adoption of ICT; inadequate and ineffective TVET education for skilling the youth
11	Mastercard Foundation, 2020	Africa	Preparing African youth for the future of work with a focus on secondary education	Primary and secondary sources	Qualitative inquiry using interviews and document review	Hundreds of secondary school students and youth and an assortment of literature sources	Positive aspects: increasing enrolment at primary and secondary education levels; increased funding to the education sector; expanding educational systems Barriers and misses include: inadequate and inequitable funding; low completion rates; weak relevance of school curricula; low learning achievement; low adoption of ICT and digital literacy; weak focus on extracurricular and co-curricular activities; inadequate teaching staff; large out of school population; few

							pathways between TVET and general education; limited alternative education that is aligned to mainstream curricula
12	Mokhosi & Asiimwe, 2025	Republic of South Africa	Exploring the direction South African Education is taking regarding ensuring equitable access to quality and relevant education comparing philanthropic and quintile one primary schools	Principals, sub-principals, and heads of department and grade 1-6 teachers	Qualitative inquiry using interviews and document review	27 participants	Positive aspects: institutional mechanisms in terms of policies, laws, agencies, and systems; increased enrolment; increased qualified; teaching staff; increased funding Barriers and misses include: limited physical infrastructure; inadequate funding; inadequate qualified teaching staff; inappropriate curriculum; ineffective school leadership; physical, economic, and social barriers; high student to teacher ratio; crowded classroom; inadequate and inappropriate teaching and learning materials; low quality of education

The study findings focused on whether in practice, the African educational systems and policies are in position to produce the talent the world needs to meet labour market requirements or not; and if not, why not? The review brought to fore the hits, barriers, and misses of the educational systems and policies in African countries documented over the years. In addition, the issues related to the presence, functionality, and effectiveness of African educational systems and policies in line with meeting the expected goals are highlighted. Based on the 12 records analysed in Table 1, education for talent development is an undeniable aspect of the United Nations' Sustainable Development Goals, and the core of SDG-4. The emphasis of the SDG-4 is free primary and secondary education, equal access to quality education, vocational training and skills development, lifelong learning, education for sustainable development, global citizenship education, and education for sustainable development and global citizenship. The review further notes that across the countries of Africa, the 10 targets of SDG-4 are reflected in their policy programming and educational systems including Target 4.4 on youth and adults acquiring relevant skills, including TVET skills for decent employment and entrepreneurship; and Target 4.7 on relevant knowledge and skills to promote sustainable development besides those that aim at promoting equitable access to education and inclusivity of the learning environments. At African regional level, there is a Continental Education Strategy for Africa (CESA 16-25) that aims at transfiguring education systems and policies to meet talent development needs in line with SDG-4. At country level, national educational development strategies and policies exist that reflect country specific educational agenda that is aligned to the African and global objectives.

On a positive note, the findings confirm that there are several areas where the educational systems and policies in Africa are making attempts to ensure that there is talent development. In the first place, theoretically and conceptually, the educational systems and policies are aligned to the global core educational goals and targets. Secondly, there are documented evidences of increased funding to the education sector; increased enrolment; expansion of the educational sector; increased teaching and learning facilities; intentional educational reforms; and clear institutional structures to move the sector forward. Thirdly, there is reported increase in e-learning adoption and increased distribution of ICT facilities; high participation rate; growth in quantity and quality of teachers; improvement in school infrastructure and facilities; improvement in learning outcomes; and increased completion rates. These are deliberate hits

that the educational systems and policies in Africa are reported to have registered under the SDG-4 as indicated in Table 1, which are inclined to lead to better talent development.

On the flipside, the findings reveal that there are several misses that can significantly deny Africa the opportunity to produce the talent expected. As noted in Table 1, beyond establishment of the institutional framework, expansion of teaching and learning, growth in enrolment, and increased funding, the adequacy, and thus, effectiveness of the educational systems and policies in Africa to produce the required talent remain with serious challenges. The findings demonstrate that the principal challenge to the education sector remains under funding as many countries spend less than the agreed 4 percent of the national budgets on education while the funding gap on the continent is as high as US$70 billion, while some of these limited resources are diverted to other priorities or embezzled. The consequences of this scenario are holistic on the education sector and include a plethora of challenges that seem to cripple it. In most African countries, there is weak policy enforcement; inadequate physical infrastructure to support the increased enrolment resulting in overcrowded classrooms; and inappropriate school curriculum which does not prioritise skills development; and low capacity on STEM and TVET pathways leading to fewer TVET graduates. Further, most TVET trainers have no current practical skills producing graduates with low TVET skills. Though digital skills are in high demand, most African education sectors report weak ICT and digital integration not enough to produce globally competitive graduates. Moreover, the state of the education sectors on the continent is characterised by inadequate qualified teachers, weak pedagogical interventions, inappropriate learning assessment that prioritises rote learning focused on passing exams not skills development, disparities in access to education, lower competition rates and high dropouts, and overall weak educational outcomes. Other salient barriers to talent development noted include weak teacher policies on training, low remuneration, poor motivation, and low teacher professional development quality, weak school leadership, and low apprenticeship opportunities for skills development.

Discussion

The global population dynamics show a likely shift in labour market dynamics. As aging populations in high income countries face decline that is projected to trigger a manpower crisis, Africa, a continent with the youngest population comes out as the probable contender to close the labour gaps. These markets and the African continent itself need high quality talent to power the economies shaped by global developments such as digitisation and knowledge driven processes (Barkun et al., 2020; UNDP, 2022). In Africa, the Continental Education Strategy (CESA 16-25) aims at revolutionising the continent's education systems and policies to produce the talent that global labour markets presently need and will need in the near future (African Union Commission/OECD, 2024). These strategic efforts are aligned to the SDG-4 on education which points at providing everyone with quality education. The essence of education in this regard is to equip the learners with knowledge, skills, and behaviours that suit the labour market needs including technical skills and entrepreneurship (Grinin & Korotayev, 2023; Setyawan et al., 2024). This education is expected to be characterised by access to quality and relevant educational opportunities by all regardless of their socio-cultural background. The Africa continent by adopting SDG-4 on education and integrating it into continental and

national educational strategies, systems and policies demonstrates its cognizance of the centrality of the African talent in the global labour equation. Consistent with the aforementioned realisation, African nations have developed educational systems and policies with demonstrable attempts to promote talent development including STEM and TVET interventions.

Africa's commitment for talent development to meet the global labour market requirements is underscored by the adoption of relevant educational strategies, systems, and policies in line with SDG-4, which emphasises access to equitable, quality, and relevant education, and lifelong learning as recommended by the UN (UNDP, 2022). In addition, Africa's realisation that education develops talent is underpinned by its demonstrated interest in education by developing a continent wide strategy on education (African Union Commission & OECD, 2018). The scale, purpose, modes of operation, and resource endowments to education in a few African countries appear to buttress the specified SDG-4 vision, mission, and specific targets. Tarasova (2008) considers such gestures to promote the necessary talent development in a society. The expansion of the education sectors across Africa, the noted increase in funding, the growth in physical infrastructure and facilities, the burgeoning school enrolment at primary school level, the focus on STEM and TVET programmes, and the adoption of ICT and digital skilling are clear indicators of Africa's desire to harness her immense talent.

Moreover, efforts in teacher training, curriculum reforms, increase in teaching and learning facilities, intentional educational reforms, and clear structures accentuate the focus on talent development (Chui et al., 2021; UNESCO, 2021; Hassan et al., 2022; Partech, 2022; Khethiwe, 2023; Setyawan et al., 2024). These initiatives are credited for generating positive results including increased completion rates, improved learning outcomes, a growing pool of technical skills in STEM, TVET, and the digital areas in some countries. The findings point to a social reality that creating an enabling educational ecosystem is fundamental to sustainable harnessing of a society's talent. This is epitomised in some few African countries such as Ghana, Kenya, and Rwanda, where patchy digital skills seem to have attracted business outsourcing opportunities (Adeniran et al., 2023; African Union Commission/OECD, 2024). In concert with the African Union Commission/OECD (2024) claims, the noted educational systems and policies in Africa, in some cases, combine inclusive education and training with desirable technical skills to mould a workforce that can fit in the most productive sectors of global economies.

While some evidence exists that African educational systems and policies are designed to promote access to equitable, quality, and relevant education, and lifelong learning, which are essential for talent development (African Union Commission, 2018; Chui et al., 2021; Hassan et al., 2022; Setyawan et al., 2024), the reality on the ground is sufficient to sustain a claim that they largely suffocate the talent the world needs. Africa runs the world's most underfunded educational systems and policies (Hassan et al., 2022; Zickafoose et al., 2023). Yet, it has the highest ratio of the population- youth below 30 years in need of quality education and lifelong learning. As established by the African Union Commission/OECD (2024), the continent's public spending on education averages 3.7 percent, which is less than UNESCO recommendation of 4 percent of the GDP. Countries such as Mauritania, Central African

Republic, Chad, Liberia, Niger, Uganda, and Guinea Bissau spend less than 3 percent of their GDP on education. Consequently, the continental funding gap on education as of 2022 stood at US$ 70 billion annually and worse still, some of the funds allocated to education are diverted or embezzled by public officials (African Union Commission/UNESCO, 2024; Zickafoose et al., 2024) which exacerbates the resource inadequacy in the education sector. Availability of adequate funds is central to attaining the SDG-4 goals, and underlines talent development in any society (Khethiwe, 2023).

Investment in education as stressed by Wehye and Asiimwe (2024) and Mokhosi and Asiimwe (2025) is core to successful promotion of equitable access to quality and relevant education and lifelong learning in Africa. However, due to low levels of investment in education, the African educational landscape is prominently characterised by weak policy enforcement, inadequate physical infrastructure, overcrowded classrooms, inappropriate school curriculum, low capacity on STEM, TVET, and digital facilities for skills development, inadequate qualified teachers with modern pedagogical competences to harness the skills required, and inappropriate learning assessment that prioritises rote learning and passing of exams over skills. Further, other debilitating gaps to talent development such as disparities in access to education, lower competition rates, low teacher remuneration, low quality teacher professional development, weak school leadership, and low apprenticeship opportunities for skills development were noted. These gaps in the educational systems and policies on the African continent result into overall weak educational outcomes epitomised by truncated access to inclusive, quality, and relevant education, and lifelong learning. This perhaps explains why despite the decades of investment in education and the focusing of the efforts on making African labour competitive, Africa's educational systems still produce uncompetitive graduates both locally and internationally (ManpowerGroup, 2022; Grinin & Korotayev, 2023). As claimed by African Union Commission/UNESCO (2024), Africa's GDP could increase by around US$ 154 trillion before the turn of this century in case, all African children attain foundational knowledge, skills, and behaviours that world economies need both within the continent of Africa and beyond. This, under the obtaining circumstances, remains a dream as the educational systems and policies are not ready to meet both quantitative and qualitative educational needs and, hence, will continue to suffocate talent development instead of promoting it.

Conclusions

There are strong hopes that the African continent, given her projected population growth will be the main source of talent globally. It is evident that efforts have been made to put in place enabling institutional frameworks, systems, and policies appear to be in place. Consequently, the education sector, educational infrastructure and facilities, students' enrolment, funding to education, and improved completion rates and educational outcomes, among others, have improved. However, the improvements do not match the needs of the education sector to produce the talent the world needs. Therefore, given a plethora of challenges in the education sector, it is deduced that the educational systems and policies in Africa are more stifling than facilitating the development of the talent that the world needs.

Recommendations

To develop the right quality talent for the global markets, it is pertinent that African governments and education sector stakeholders should: allocate adequate funds to the education sectors to facilitate activities that promote talent development. Revise the school curricula to match the labour market requirements including an emphasis on digital skills, entrepreneurship, and right attitudes. Prioritise teacher training to develop their pedagogical competences that are aligned to labour market skills development needs. Ensure a presence of efficient and effective educational policy implementation including allocation of adequate funds, deployment of the right quality and quantity of teachers, and availability of appropriate teaching and learning facilities. Eradicate diversion of funds and end endemic corruption in the education sector. Ensure a presence of proper school leadership, and high teacher motivation. Guarantee that all children of school going age attend school and complete basic education while promoting lifelong learning. Implementing these strategies would improve the quality and quantity of talent that Africa produces for the global labour market.

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