20 Years On: The Legacy and Future of Distance Education at Kwame Nkrumah University of Science and Technology (KNUST)

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ABSTRACT

Background: The study explored the two-decade legacy and prospects of IDL-KNUST, Ghana. Using the Event System Theory (EST) as its theoretical framework, the paper examined how IDL-KNUST has evolved in response to increasing demand for science and technology higher education.

Methods: Adopting a qualitative approach by interviewing purposely selected key informants and reviewing relevant institutional documents, the data gathered was thematically analysed.

Findings The study highlights IDL's impact in expanding access to science and technology tertiary education through policy innovations, technological integration and flexible learning models. It also documents the Institute's contributions to infrastructure development, economic empowerment and academic collaborations. Despite its successes, the study identifies key areas for innovation, including the adoption of emerging technologies, the development of personalised learning pathways, and expanding into underserved regions of Ghana. The findings underscore IDL-KNUST's strategic role in promoting inclusive and equitable science and technology education, aligned with Sustainable Development Goal 4.

Conclusion: The paper concludes by recommending that IDL-KNUST embrace emerging technologies, offer personalised learning pathways, and integrate professional development opportunities. It must also diversify its programmes, expand into underserved regions and explore international collaborations to strengthen its responsiveness to global educational and labour market demands.

Keywords: Distance Education, IDL-KNUST, SDG 4, Higher Education, Blended Learning

INTRODUCTION

In the world's knowledge-based economies, higher education institutions (HEIs) have and continue to act as breeding grounds for intellectual development, producing graduates with state-of-the-art expertise to promote personal and socio-economic growth (Salmi, 2021). In this respect, HEIs serve as socio-economic development catalysts by producing skilled workforce and fostering innovation and development through high-impact research, development and uptake to help address developmental challenges. Consequently, countries with better HEIs experience higher employment rates, higher earnings, better living standards and a more favourable development climate due to the availability of well-trained workforce (UNESCO, 2022).

The story is not different in Ghana as HEIs have significantly contributed to the development of key sectors of the national economy including health, energy supply, mining, education, food and agriculture and technology in the supply of professionals (Boateng & Asare, 2020). In addition, HEIs have also been instrumental in the nation's social progress and political stability through their role in civic engagement, policy formulation and leadership development, equipping graduates with the required analytical skills needed to address societal

challenges (Ghana Tertiary Education Commission [GTEC], 2022). This has significantly helped to break poverty cycles and empowered marginalised individuals and communities (Owusu-Fordjour et al., 2020).

Given the above, Ghana's demand for higher education has grown significantly over the past 20 years, driven in part by population growth, economic transformation and the need for a workforce with greater skills (Nkansah & Oldac, 2024; GTEC, 2022). However, access to higher education remains a challenge due to factors such as geographical constraints, financial limitations and limited physical infrastructure in traditional HEIs (GTEC, 2022). As a result, many prospective students, especially those in rural and underserved areas are unable to enrol (Boateng & Asare, 2020). In the estimation of GTEC (2022), only about 40% of qualified students gain admission to HEIs due to infrastructure and other constraints.

Consequently, some state-funded HEIs often struggle with overcrowded classrooms, limited faculty capacity, and high operational costs, making it difficult to accommodate all qualified students (GTEC, 2022). These limitations have necessitated the expansion of distance learning institutions, which offer flexible and scalable alternatives for delivering quality education to a wider audience. Distance learning provides an alternative by allowing students to study from remote locations, thereby increasing enrolment rates and bridging the accessibility gap (Boateng & Asare, 2020) by using Information and Communication Technology (ICT) and digital learning platforms such as learning management systems, virtual classrooms, and blended education models. These platforms allow students to study programmes without physical attendance at university campuses; thereby, helping to bridge the accessibility gap (Mensah & Agyemang, 2022).
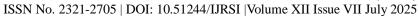
Ghana's need for strong distance education systems was accelerated by the COVID-19 pandemic, which also revealed certain weaknesses in the nation's reliance on conventional face-to-face learning methods (Owusu-Fordjour et al., 2020). Accordingly, distance learning has become the preferred option for higher education through ICT and digital learning platform models since conflicts in some regions of the nation have made it difficult for some students to attend in-person lectures. Furthermore, the Ghanaian government has implemented policies and programmes to increase access because it recognises the critical role that tertiary education plays in the country's development. Among other things, this is to guarantee that a larger portion of the populace takes advantage of opportunities for research, skill development, and knowledge acquisition. Thus, the adoption of flexible and distance learning modes has been one of the many factors that have been the focus of Ghana's higher education expansion policies (GTEC, 2022).

The Kwame Nkrumah University of Science and Technology (KNUST) took on the challenge of establishing the Institute of Distance Learning (IDL) in 2005 in response to the Ghanaian government's policy of expanding access to postsecondary education. It was established to advance the university's development agenda by utilising cutting-edge methods for distance learning. It was established to support the university's overall development agenda by utilising innovative approaches to higher education delivery through distance learning. Along with increasing access to higher education in Ghana and the Sub-Region with an international dimension and relevance, it was also intended to allow KNUST to continue to hold its position as a leader.

For the past 20 years, IDL-KNUST has carried out its mandate to provide new and continuing education programmes from the KNUST Colleges via distance learning. Therefore, to document successes, review failures, and make predictions for the future of distance education in the context of KNUST, this paper critically examines what IDL-KNUST has accomplished over its 20 years of operation. The paper proceeds with the theoretical stance, the context of the study, methods adopted for the study, discussion of findings and conclusion.

Theoretical Framework: The Event System Theory (EST)

To provide a deeper understanding of the evolution and transformation of distance education at KNUST, the Event System Theory (EST) propounded by Morgeson, Mitchell and Liu (2015) was adopted as the theoretical framework underpinning the study. The EST provides a useful lens for understanding how significant, novel and disruptive events influence organisational change over a period. EST identifies three key attributes of impactful events of novelty, disruptiveness and criticality. An event is considered *novel* when it deviates from prior experiences or established norms. It becomes *disruptive* when the event interferes with ongoing processes

and known systems, while it becomes *critical* when it requires urgent attention due to its potential effects (Morgeson et al., 2015). EST, therefore, helps to explain how institutions such as KNUST respond to external forces such as the growing demand for higher education and the need to expand access by modifying their systems and adopting flexible and distance learning modes of delivery (GTEC, 2022).

In addition to the above, the COVID-19 Pandemic, which is viewed as an event that exemplifies each of the three traits listed in EST, had an impact on education delivery worldwide, including at IDL-KNUST. It was disruptive because it abruptly stopped traditional face-to-face teaching and learning models; novel because it brought previously unheard-of challenges to the global education sector; and critical because institutions that did not adapt ran the risk of jeopardising their academic calendars, student progress, and overall institutional credibility (Owusu-Fordjour et al., 2020). At KNUST, for example, the pandemic sped up the use of digital platforms for student instruction, learning and assessments. Also, it greatly increased IDL's strategic significance as the main hub for maintaining KNUST's academic operations throughout the crisis.

Therefore, EST offers a useful perspective for comprehending how IDL-KNUST has changed in response to the COVID-19 Pandemic's impact, the need to increase access, and the growing demand for higher education. This aligns with the principles of Sustainable Development Goal 4 (SDG 4), which seeks to guarantee inclusive, equitable, high-quality education and encourage opportunities for lifelong learning for everyone (United Nations, 2015). Innovative strategies like distance and blended learning are crucial for removing obstacles relating to cost, location, and infrastructure as demand for postsecondary education rises and in response to the Ghanaian government's policy of expanding access to postsecondary education (GTEC, 2022). As a result, IDL-KNUST helps achieve SDG 4 by establishing flexible pathways that allow underprivileged groups, particularly the working class, to have access to science and technology education. IDL-KNUST is a major force behind the SDGs since it is fostering equity and academic excellence by fusing its digital technology with increased access (Salmi, 2021).

STUDY SETTING AND METHODOLOGY

Study Setting

The legacy and prospects of distance learning at KNUST is the main thrust of the study. KNUST, is a public university in Ghana's Ashanti Regional capital of Kumasi. The 80th Act of the Ghanaian Parliament granted KNUST university status in 1961 after it had been founded in 1951 as the Kumasi College of Technology. After the 1966 revolution, the university was briefly renamed the University of Science and Technology, but Act 559 in 1998 gave it back its original name. It operates the collegiate system with six colleges in addition to other institutions such as the School of Graduate Studies and IDL. In addition to offering a broad range of undergraduate, graduate, and diploma programmes, KNUST is a leader in science, technology, engineering, and the humanities (KNUST, 2025). KNUST remains a leading centre for higher education, research, and innovation in the West African subregion, with 86,449 students and 5,966 employees (QAPO, 2025).

To enhance accessibility to science and technology education, IDL was established to leverage technology and provide a viable alternative to conventional on-campus education. It is envisaged to be a leading institute in providing access to quality continuing, tertiary education and training through distance learning in Africa, using innovative range of distance learning technologies. It does this by offering diverse student population access to quality instruction and providing support services in demand-driven, continuing, and tertiary education programmes through a combination of online educational materials and face-to-face teaching (blended learning delivery) (IDL, 2025).

Study Methodology

In exploring the legacy and future of distance education at KNUST, the study focused on the perspectives and opinions of key actors as far as the Institute is concerned. The qualitative approach was, thus, employed by interviewing with the aid of an interview guide, purposely selected key informants, including one former Director of the Institute, one former Deputy Director, three current IDL management members and two heads of department who host their programmes on the IDL platform. The interviews lasted an average of 10 to 15

minutes each. These persons are in charge of the administration and management of all academic programmes of the Institute (programme development, study material development, accreditation, marketing, running, quality assurance, facilitators' appointment and compensation). They were, thus, better positioned to provide valid insights into the workings of the Institute.

As major stakeholders, three current students (one diploma, one undergraduate and one postgraduate) and two past students (one postgraduate and one undergraduate) were also interviewed for their perspectives. The unique perspectives of current and former students of IDL-KNUST helped to identify areas for improvement, inform policy decisions, and contribute to the development of more inclusive and accessible educational models. In addition, secondary data from institutional documents, and policies including the IDL Guidance Policy (2018), the KNUST E-Learning Policy (2020) and institutional reports assisted in gathering data on the conduct of distance education at KNUST. To ensure the confidentiality and anonymity of informants, pseudonyms of *"SI"* and *"MI"* were used for student and staff informants respectively as recommended by Cresswell and Cresswell (2017). The data gathered were subjected to thematic analysis that yielded two broad themes on the legacy and prospects of distance education at KNUST. The two major themes and their corresponding sub-themes influenced the results and discussion section of the paper.

RESULTS AND DISCUSSIONS

The study's findings on the legacy or impact of IDL-KNUST and stakeholder expectations of distance education at KNUST were derived from key informant interviews and an analysis of pertinent documents for the past two decades. The study's adoption of the EST theoretical framework also made it possible to evaluate the themes holistically. The following section discusses the particular impact areas under the two predominant themes.
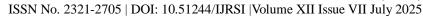
The Impact/Legacy

The study found several important themes about the legacy and impact of IDL-KNUST over the last 20 years of its existence. These include implementing policy changes, increasing educational opportunities, expanding access to higher education, and incorporating technology into the delivery of higher education. Other themes emphasise its academic involvement, infrastructure development, economic contributions, and collaborative opportunities. The subsequent section further examines these.

After IDL-KNUST and its online learning platform were introduced, the new, untested order and evolving paradigm required regulation with suitable policies to give the proper framework for accountability, decision-making, and general management (Andrews & Glendinning, 2024).

Because they offer a framework for decision-making, accountability, and general management, policies are essential to university governance (Andrews & Glendinning, 2024). In this respect, it came out that KNUST has implemented an e-learning policy and manual as well as an online examination and assessment policy. KNUST had a teaching and learning policy before IDL's establishment, but the introduction of IDL increased the university's use of e-learning tools for instruction, learning, and evaluation. Therefore, a policy to direct the university in this new era had to be established (MI 1, MI 2, MI 4, and MI 7). The policies are the result of KNUST's efforts to adjust and realign its procedures to meet the needs of contemporary requirements and realities imposed by the introduction of IDL-KNUST within the principles of EST (Morgeson et al., 2015).

Another legacy of KNUST's distance education is its contribution to expanding access to science and technology education delivered at the doorsteps of patrons (MI 2 and MI 3). In the views of MI 6,

"by leveraging technology and innovative pedagogical approaches, IDL-KNUST has been able to reach students who were unable to attend traditional on-campus programmes due to work-related and other constraints. This has enabled a diverse range of students, especially the working professionals, to earn degrees while balancing their professional and personal commitments. An opportunity that did not exist before the establishment of IDL-KNUST".

This is corroborated by Asunka (2018) that distance education programmes serve non-traditional students, including working professionals, parents who are engaged in full-time caregiving at home and other persons in remote areas who may lack the resources or ability to relocate for traditional in-person education. By leveraging its digital technology, IDL-KNUST has enabled students to access higher education irrespective of their working schedules or physical location; thus, promoting educational inclusivity (Mensah & Agyemang, 2022). According to *MI 2,*

"as a leading science and technology institution in Ghana, KNUST recognised the urgent need to bridge the accessibility gap in higher education by leveraging distance learning as a viable alternative to conventional on-campus education".

IDL-KNUST has, therefore, supported KNUST in achieving SDG 4 by promoting lifelong learning opportunities, inclusivity and equitable quality science and technology education (United Nations, 2015). In addition, KNUST, through its IDL has responded to the rising demand and the need to expand access to higher education, as Morgeson, Mitchell and Liu (2015) put in their EST. *ST 2* on his part added that

"by offering a flexible and technology-driven learning platform, IDL has democratised higher education. This is because someone like me who has an HND from a Technical University has had the benefit of KNUST education without being physically present on the campus in Kumasi".

Another legacy of IDL-KNUST that was gleaned from the key informant interviews and document analysis was in the area of offering unique and tailor-made programmes that are not common in the Ghanaian higher education landscape. According to *MI 2, MI 3, MI 5* and *MI 7* IDL-KNUST offers a range of unique, demand-driven and career-oriented programmes designed to meet the needs of non-traditional students and professionals. Some of the programmes mentioned in this respect included Commonwealth Executive MBA and MPA which are offered in collaboration with the Commonwealth of Learning (CoL) that target professionals seeking leadership roles in business and public administration, MSc. Industrial Finance and Investment that focuses on bridging theory and practice in financial analysis, investment, and risk management and BSc Quantity Surveying and Construction Economics, tailored for students interested in the construction industry, particularly cost estimation and project management. *ST 4* added that,

"*It is only IDL-KNUST that offers a master's degree programme in project management that is designed to equip professionals of varying backgrounds and expertise needed to professionally manage projects across various industries. The programme also offers unique and flexible learning structure by combining online activities with periodic face-to-face classes*".

The study also revealed that IDL-KNUST has assisted KNUST in incorporating cutting-edge technology into the delivery of higher education. As of now, the Institute has established an E-Learning Centre with over 20 e-learning studios for creating digital learning resources, recording and streaming lectures, and enabling faculty and students to virtually interact real-time (*MI 3, MI 6* and *MI 7*). Through its in-house Virtual Classroom (VClass) Moodle platform, IDL-KNUST can provide online teaching and learning in both synchronous and asynchronous modes. It has also acquired premium Zoom accounts and Microsoft 365 accounts to facilitate seamless online classes. These have enabled high-quality video conferencing, improved class management features and better overall communication during online sessions in the views of *MI 2, MI 4, MI 6* and *MI 7*.

IDL-KNUST has also had a significant economic impact on the university's overall financial position by serving as a strategic revenue-generating unit. In an era of dwindling government subventions and rising operational costs, IDL has become an essential part of KNUST's Internally Generated Funds (IGF) portfolio, according to *M1, MI 2, MI 5, MI 6* and *MI 7*. The Institute's ability to attract thousands of students across the country who pay full tuition (unlike regular students of KNUST) provides a steady stream of income to support KNUST. Beyond the institutional financial support, IDL has created economic benefits for faculty members who serve as programme developers, course facilitators, programme examination officers, heads of department, centre/zonal co-ordinators, assessors and invigilators during examinations. These engagements come with additional remuneration in the form of facilitation fees, script marking, and travelling/transport allowances.

IDL's decentralised operational model has also created direct and indirect employment opportunities across the country. According to *MI 1, MI 2, MI 4* and *MI 7*, IDL-KNUST employs 41 casual/contract staff who are paid from the coffers of IDL. These are Zonal and Centre Co-ordinators, IT technicians, electricians, security staff and cleaners. According to *MI 2*, this excludes 44 permanent staff engaged at its 11 learning centres across Ghana. Furthermore, the involvement of the private sector by IDL and subsequent payments to local vendors, suppliers and the multitude of other service providers enhances local economic development at the various learning centres.

In the views of *M3*

"You see, the Institute's operations also have secondary economic benefits, such as increased patronage of local transport services, hotel/guest house and hostel accommodation, and food and stationery services during face-to-face sessions or examinations. In these ways, IDL has not only expanded access to quality science and technology education, but we have also played key roles in economic empowerment".

Another legacy that came out during the study was the Institute's contribution to the physical expansion and infrastructure development of KNUST beyond its main campus in Kumasi in the Ashanti Region. In response to increasing student enrolment and the strategic need to decentralise academic delivery, IDL-KNUST has established permanent learning centres across some regions of Ghana. These include state-of-the-art facilities in Kwabenya, McCarthy Hill, and Adenta in Accra; Moree near Cape Coast; Kansaworado in Sekondi-Takoradi; and Kalpohine in Tamale. These centres serve as regional academic hubs equipped with lecture halls, administrative offices, IT labs, and student support offices. The establishment of these structures has enhanced access for students in other regions, reducing the cost and burden of travelling to Kumasi. It has also proven essential in ensuring learning continuity during disruptions such as the COVID-19 Pandemic, where remote learning became the norm.

Furthermore, the Institute has constructed a dedicated conference centre which serves both academic and administrative functions. This facility also supports IDL's ability to support lifelong learning, professional training, and academic collaboration according to *MI 7*. He further added that

"These facilities have not only strengthened the logistical backbone of distance education delivery at KNUST, but have also enhanced the university's reputation and marketability to students. They have also contributed to transforming distance education here at KNUST from a supplementary mode of learning to a strategically embedded pillar of KNUST's educational ecosystem".

Beyond its infrastructure contributions, IDL-KNUST has also evolved into a vibrant hub for consultation, policy engagement, and strategic dialogue on the future of distance education in Ghana. As the university expands its reach across Ghana, IDL-KNUST has become a central point for co-ordinating distance education and stakeholder feedback mechanisms through the hosting of its biennial international E-Learning Conference (*MI 1* and *MI 4*). This brings together faculty, students, staff, regulators, industry partners and policymakers in the distance learning space for critical reflection on the effectiveness of distance learning systems and the alignment of programme delivery with national development goals.

In the views of *MI 3, MI 4, MI 5* and *MI 6*, IDL-KNUST's operations have provided unintended but very valuable social and professional benefits for staff involved in its programmes. Faculty and administrative staff regularly travel together over long distances across Ghana to facilitate face-to-face classes or invigilate physical examinations. According to the key informants (*MI 3, MI 4, MI 5 and MI 6*), such journeys undertaken in university buses have created opportunities for collegial bonding, the building of interdisciplinary and staff relationships. On such trips, staff get to know each other personally, share experiences and exchange ideas, which often lay the foundation for research collaborations, academic partnerships, the formation of multidisciplinary research groups and even marriages (*MI 3 and MI 5*).

In spite of the above positive legacies of IDL-KNUST, there were many recommendations on the future of the Institute, discussed in the next section of the paper. These were gleaned from the key informant interviews and document analyses, especially from the Institute's Strategic Plan and Policy guidelines.

Future Prospects and Innovations

In keeping with its slogan of bringing science and technology education to the doorsteps of patrons, key informants suggested that IDL-KNUST should open more learning centres (*ST 2, ST 4, and ST 5; MI 1, MI 3, MI 4, and MI 7*). Establishing learning centres in Ghana's Western North, Oti and North Eastern regions was one of the specific recommendations. This was corroborated by M2 and M5 that IDL-KNUST was in the process of applying for GTEC accreditation to establish Learning Centres in the Oti and Western North regions.

In the views of *SI 1, SI 2* and *SI 5,* as well as *MI 3, MI 5, MI 6* and *MI 7*, to ensure the marketability of the Institute and increase its student numbers, there is a need to introduce more demand-driven programmes. This suggestion is corroborated by the policy guiding the Institute that

"…..i*n keeping with its mission of providing quality and demand-driven distance and continuing education and training, IDL, in collaboration with relevant Departments, shall continue to develop customised programmes of study for the advancement of science and technology in Ghana and Africa* (KNUST IDL Guidance Policy, 2018, p.24).

Suggestions proffered by informants in this respect included the introduction of programmes such as data science and artificial intelligence, health informatics and digital health management and fire and safety engineering (*SI 1, SI 2, SI 4* and *SI 5*; *MI 2, MI 3* and *MI 7*).
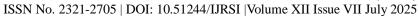
There was also the suggestion of amending the mode of delivery of some of the programmes from the current blended approach to fully online delivery modes by adopting emerging technologies such as artificial intelligence, virtual reality and augmented reality tools to enhance the learning experience and cater to diverse learning styles of students (*ST 2, ST 4* and *ST 5; MI 4, MI 5* and *MI* 7*)*. In this respect, there is the prospect for the Institute to move its physical examinations to an online or computer-based examination system from the current paper-based system with its attendant problems. The Institute may also consider the setting up and use of dry laboratories to teach practical components of courses to save cost and man-hours in the present system where students are bused to the Kumasi campus for practical lessons (*MI 1, MI 2, MI 5* and *7; SI 1, SI 3* and *SI 5)*.

Another innovative approach that came out during the study was for IDL-KNUST to explore global collaboration and partnerships with sister international universities (*MI 1, MI 3* and *MI 5*). This is to enable international students to enrol on IDL-KNUST programmes, facilitate access, knowledge exchange, joint research initiatives and the development of innovative educational programmes that meet global standards.

Because many of the students of IDL-KNUST are from the working class, the offer of personalised learning pathways was advocated by *SI 1, SI 2, SI 4* and *SI 5*. This is to enable these "special students" the opportunity to complete their studies at a pace that is suitable to their learning style and availability in furtherance of democratising science and technology education (Anane & Adusei, 2024). In this respect, suggestions were for the Institute to develop flexible study options that suit the individual needs and preferences of learners by adopting a flexible curriculum so students can use a minimum of two and a maximum of five years to complete their programmes. This way, a student may register for one or two courses only per semester according to their interest, strength and time availability (*SI 1, SI 2, and SI 4; MI 2, MI 4* and *MI 7)*.

In furtherance of the above, *SI 1, SI 2* and *SI 5; MI 2, MI 3* and *MI 7* suggested that the Institute should consider introducing short/professional courses that are tailored towards the needs of students instead of running courses for a whole semester of four to six months in their current form. *SI 1,* for example, said that

"….*at my age and status, I only need a certificate for my next promotion to improve my pension earnings. Why do I have to spend a whole year on a master's programme whereas I could have gained a micro-credential in the same area from, say, Google? The stress alone is too much for some of us even though we want a KNUST certificate".*

Another student informant said that

"Why is IDL-KNUST not adopting the sandwich means to run its programmes during the long vacations? This way, a lot more students who are workers can negotiate with their HR managers, plan their annual leaves accordingly to take advantage and earn further education" (SI 3).

The above suggestions, coming mostly from patrons of the Institute's programmes suggest the urgent need for the Institute to offer more tailor-made and flexible study modes to suit its patrons. This is in tandem with the tenets of EST for IDL-KNUST to tailor its delivery mode to cater for a particular group of learners who are in the working class. This way, the Institute will not only be democratising higher education but will be promoting inclusivity and accessibility within the broad framework of SDG 4 (United Nations, 2015).

Another prospect for the Institute in its future was the need to strengthen its industrial collaboration and the running of mandatory professional add-on programmes as suggested by *MI 3, MI 5* and *MI 7*. This is to be organised in the form of mandatory seminars which will focus on specific themes relevant to the holistic development of students and complement their learning experiences. This suggestion is corroborated by the Institute's guiding policy that

"Professional add-on seminars would be a strategic value-added innovation service intended to prepare and transform the mindset of students in furtherance of their professional and career prospects with a series of interactive and inspiring presentations administered by seasoned professionals or industry experts to bring students' attention from the classroom to the workplace" (KNUST IDL Guidance Policy, 2018, p.54).

From the interaction with informants, this unique feature of the Institute's programmes has not been implemented. This denies students the opportunity to gain state-of-the-art practical insights into some of the common problems at their workplace by limiting their ability to connect academic knowledge with real-world challenges. Within the lens of EST, denying students these professional-ad-on programmes signals missed opportunities. Going forward, IDL-KNUST should modify and integrate such programmes into the academic calendar in tandem with the evolving needs of its students and workplace demands (Morgeson et al., 2015).

CONCLUSION

Over the past two decades, IDL-KNUST has evolved into a major means of facilitating KNUST's aim of expanding access to science and technology education, particularly for underserved and non-traditional student populations, including the working class. This paper, thus, reviewed what IDL-KNUST has achieved over the past two decades of existence to document its impact and made projections for the future of distance education at KNUST. It was realised that its establishment was a timely response to national and institutional demands in addressing constraints of limited accessibility within Ghana's traditional higher education ecosystem.

Through its flexible learning mode, blended delivery and decentralised learning centres, IDL-KNUST has democratised access to science and technology education and contributed significantly to human capital development and lifelong learning opportunities in Ghana. The Institute's impact extends beyond access; it has become a vital source of revenue for KNUST, creating economic opportunities for the University and staff. Infrastructure investments such as e-learning studios, the VClass, regional learning centres and a dedicated conference centre have enhanced KNUST's educational delivery capabilities while serving as an innovation hub for digital pedagogy.

Going forward, the future of distance education at KNUST will hinge on its ability to innovate and adapt to global trends in science and technology higher education. Embracing technologies such as artificial intelligence, and virtual reality and offering personalised learning pathways will be critical in shaping its next chapter. In addition, strengthening industrial partnerships and embedding professional add-ons into its academic calendar will ensure its offerings remain responsive to evolving labour market demands. There is also a need for the Institute to diversify its programmes, increase its presence in underserved regions and explore international collaborations. By addressing current limitations and building on its current strengths,

IDL-KNIUST will be well-positioned to sustain its relevance and continue driving KNUST's mission of delivering inclusive, technology-driven and globally competitive higher education.

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