# Unpacking the Role of Higher Education Institutions in Accelerating Women's Progressive Education in Kenya
## (A Case Study of Kiriri Women's University of Science and Technology)

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**Abstract:** Due to unprecedented global challenges, labour market dynamics, and uncertainties, higher education institutions have no options but to adopt new approaches to enhance adaptability. In Kenya, despite many efforts made to accelerate women's empowerment, only 29 percent of women between the ages of 15 and 49 are empowered. The universities have a unique capacity and potential to develop skills, foster knowledge, and mobilize educational resources. Hence, accelerating an inclusive socio-economic recovery starts with a solid foundation of human capital which entails: health, education, skills, jobs, and growth to boost progressive education. The significance of the study is to: expand access to progressive quality education for girls and women; inform policies; enhance capacity to upscale women's holistic learning and most importantly promote resilience and innovativeness among higher education institutions to emerge stronger. The main objective of the study was to analyse the role of higher education institutions in accelerating women's progressive education in Kenya. The study was anchored on John Dewey's theory and women's empowerment framework, which cuts across and support both dependent and independent variable. The study adopted a mixed-method research design and, a pragmatic and constructive research philosophy. The researcher adopted a triangulation approach in sampling techniques where stratified, purposive, and random sampling techniques were applied. The study sample size comprised 129 - degree students and 26 lecturers. Questionnaires were adopted as the data collection tool. Based on the regression results, the study findings reveal that the R-squared is 0.62, the Adjusted R-squared is 0.61, the F-statistic of 31.94, and a p-value of 0.0000. This implies that the model explains 61% of changes in women's progressive education. The study concludes that the public-private nexus, blended learning, digitalization, and student retention explain a 61% percent change in women's progressive education. The study recommends: First, strengthening of public-private nexus through institutional industry linkages, upscaling support through adequate funding of women's education, and considering Students as Partners in their learning. Second, embracing a blended learning approach to reduce the dropout rate of female students and upscale women empowerment through the integration of ICT skills training. Third, institutions should commit adequate resources to promote effective digitalization and improvement in ICT infrastructure that facilitates learning and is user-friendly to lecturers, learners, and administrators. Lastly, promoting students' retention through mentorship, semester check-ins, workshops, and effective lecturers, to enhance student enrollment and acceleration which increases completion rate and school-to-work transition, and embracing transformative and sustainable leadership.

**Keywords:** Progressive-Higher-education; student-retention, blended-learning, public-private-nexus; digitalization; human-capital.

## 1.0 BACKGROUND OF THE STUDY

Due to unprecedented global challenges, labour market dynamics, and uncertainties, higher education institutions have no options but to adopt new approaches to enhance adaptability. Definitely, the universities have a unique capacity and potential to develop skills, foster knowledge, and mobilize educational resources. Hence, accelerating an inclusive socio-economic recovery starts with a solid foundation of human capital which entails: health, education, skills, jobs, and growth to boost progressive education. In addition, universities are the key to healthier, greener, fairer, and more inclusive societies to provide progressive and quality education for all. Gender inequality remains deeply entrenched in our societies, locally and globally, hence affecting learners' progression. Women lack access to decent work, inadequate access to higher education and health care services.

Globally, inclusive socio-economic recovery starts with education, skills, jobs, and growth (Cathasaigh and Markovitz, 2021). This is the reason why every country's investment in human capital is anchored on quality and progressive education offered in higher education institutions so that everyone can take on the jobs of today and create future jobs. Notably, one success factor in women's education is that the world is closer to gender parity. This is evident with the gender gap estimated to be lower than one percent in three levels of education (United Nations, 2023). The reality is that the road to achieving gender equality through education has been successful since the proportion of women accelerating to leadership and decision-making positions has increased.

Despite this solid legal framework and major efforts towards bridging the gender gap in higher education, women still face numerous challenges that hamper their progression and growth. For instance, women's progression to higher education institutions has been hampered by low enrollment from primary to secondary as compared to men. According to global statistics, 39 percent of rural girls attend secondary school. This is far fewer than rural boys (45 percent), urban girls (59 percent and urban boys (60 percent), thus the data reflects a possible low enrolment in higher education institutions. In addition, despite existing interventions in upscaling women's education, women make up more than two-thirds of the world's 796 million illiterate people (United Nations Women, 2021).

According to the United Nations (2023), expanding access to tertiary education and increasing government participation is vital, and that the priority shifts include accelerating secondary enrollment and completion to boost enrollment and entry behavior in higher education institutions. Accelerating women's progressive education is a sure way of enhancing women's empowerment and enabling women to confidently take up leadership positions. The existing literature reveals that progressive education is believed to have found its expression through various separate societies such as labor unions and women's global movements advocating for women's rights. In the 19th Century, a series of reform movements of progressivism gained and made an impact on education, politics, culture, journalism, and social services in the United States (Miquon, 2021). Towards supporting Dewey's idea, the labor unions raised concerns that progressivism was to address the quality of life. Indeed, education improves the quality of life, and that various states use different approaches to help accelerate learning.

Davis (2023), indicated that policymakers should adopt approaches that can make it easier for educators to find and use innovative, evidence-based approaches to help accelerate learning, especially in the current post-pandemic environment. A good example is existing legislation called Every Student Succeeds Act in the United States which reflects on the school improvement cycle in Figure 1.1. Regional Educational Laboratory at the American Institute of Research emphasizes on identification of the local needs of the learners, selecting relevant evidence-based interventions, plan for improvements, implement, examine and reflect the impact.
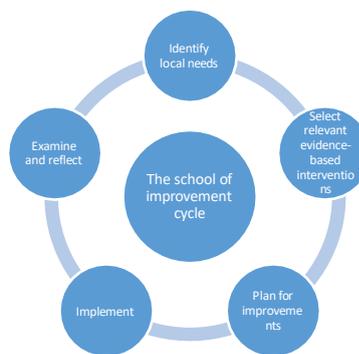
**Figure 1.1: The School Improvement Cycle.**

Hopkins (2017) also described progressive education using Dewey's views, that students are more likely to develop a love of education and become lifelong learners if their needs are addressed. Dewey further stated that students can apply critical thinking skills outside the classroom as they evaluate and re-evaluate their perspectives on real-world topics and issues, and also think out of the box. Obanya (2019) stated that pushing for progressive education in Africa entails a description of key concepts of progressive education as learning by doing – the need for a paradigm shifts from teaching as a mere telling to teaching as guiding, promotion of critical thinking, and collaboration.

In addition, progressive education has been described by Miquon (2021) as a *learner-centered and inquiry-led education* as opposed to a factory model based on efficient transmission of information. Theuri, Waitherero, and Nyabul (2020) described progressive education as an instrument of a human's life as demonstrated in his/her ethical, social, and political aspects. The main objective of university education is to promote advancement of the knowledge through teaching, scholarly research scientific investigation, and promotion of gender balance and equality of opportunity among students and employees (Laws of Kenya, 2012).

## 1.1 Overview of Women's Universities, globally regionally and locally.

Until 19th Century, women were effectively barred from higher education, and for over 300 years Harvard admitted only men. Slowly the U.S experienced rise in women's colleges Carlton, 2023). Elena Lucrezia Cornaro Piscopia was the first woman to receive her doctorate degree in philosophy and in 1672, she was enrolled at the University of Padua to study theology. By 2023, nearly all colleges and universities enroll women. In the modern world, the narrative has changed. Women are re-writing and sharing their success stories in higher education.

Rinaldi, Sciarelli, and Capuano (2018), in their study, found that in Italy women access universities more than males (55% to 45%) and also graduate more than males (59% to 41%).

By 2020, England had the highest number of women's universities -19, followed by Pakistan 17 and South Korea 14, India 13 Universities, of which some are in coeducational settings. In Saudi Arabia, all universities have a separate campus for women. Only one University in Saudi Arabia, Princess Nora Bint Adul Rahman University, is women's only university. In East Asia, several women's institutions are thriving with no sign of decline, unlike in Africa where just a handful of women's Universities exist. These include Kiriri Women's University of Science and Technology in Nairobi, Kenya, Women's University in Africa, Zimbabwe, and African Rural University for Women in Kagadi, Uganda.

This is an indication that higher education is undergoing radical transformation**,** and one approach is through investment in women's progressive education since the approach puts more emphasis on the concept of engagement in social responsibility, application of practical relevance experience, and lecturers as facilitators and how these concepts can be seen through the University or college curriculum as trends towards specialization. Indeed, the concept of progressive education continues to influence today's higher education system (Hopkin, 2017).

Existing reports also show that despite improved access to higher education, proportionally fewer women move up the education ladder. Problems remain in pay equality and stereotypes (Carlton, 2023). A study conducted in Asia presents the gender composition of enrolment at different stages of higher education in 26 Asian countries. The study result revealed that on average, women account for 47 percent of students in bachelor's programs and that the share of women declines to 37 percent in doctoral programs (UNESC0-UIS, 2014).

Regarding digitalization in higher education, countries such as Denmark adopted contractualization as a key element in governance arrangement between the state and the individual higher education institution. Denmark implemented the development contracts in 2003 as a central governing instrument, which set out the performance goal for each institution in three years (Catherine, Trine, Per, and Lise, 2019).

Progression, underrepresentation, challenges with funding and digital gaps remains major challenge to many women pursuing higher education. For instance, women are disproportionately underrepresented in higher education and the fast-moving digital economy. According to the Association of African Universities, among 700 Universities operating in sub-Saharan Africa, very few were well-prepared and sufficiently equipped to deliver their programs online (Bassett, 2021). To date, digital infrastructure in Sub-Saharan Africa reaches about 34 percent of the global population. Basset (2021) further stated that reliability, speed, and affordability is key.

In Africa, most of the Universities are coeducational unlike the Women's University of Africa which is coeducational, however, their policy is that 80 percent of students admitted to the University are women and 20 percent are men. In East Africa, KWUST has focused on women and has cut a strategic niche to be the most successful women-only university. In Kenya, bridging the gender gap in education and employment is a key priority area in the National development plans and remains the university's key objective locally and globally.

In 2015, countries including Kenya adopted the 2030 Agenda for Sustainable Development, a global universal blueprint to make Education for All a reality, while leaving no one behind. The question is: what can universities do within the remaining 7 years? Educating women and girls not only benefit them but also the communities, societies, and the nation. Indeed, every woman in the world should access quality and progressive education without discrimination and can do so as men either fully in a coeducational setting or in a gender-segregated campus that enrolls women only (Renn, 2015).

This study sought to establish the role of higher education institutions in accelerating women's progressive education. The study's independent variables include the public-private nexus, blended learning, digitalization, and retention mechanisms. The choice of the study variables has been informed by previous studies conducted by Renn, (2015) who studied Colleges and Universities on their own: Women's Higher Education Worldwide, and Hopkins (2017) who carried out a study on John Dewey and Progressive Education and the American Institute of Research (2023) report on mapping the opportunities. In their studies, the researchers identified public-private partnerships, retention mechanisms, digital gaps and blended learning, and integrated and holistic learning approaches as some of the issues to be addressed in accelerating women's education.

## 1.2 Statement of the Problem

Due to unprecedented global challenges, labor market dynamics, and uncertainties, higher education institutions have no options but to adopt new approaches to enhance adaptability and women's progressive education. Universities are the key institutions with the mandate to offer fairer and more inclusive societies to provide quality education for all. It is evident that increasing access to institutions of higher education heavily depends on access at lower levels (primary and secondary education).

Based on existing literature and reports women have been adversely affected by the negative effects of COVID-19 since March 2020 and beyond. The Global Sustainable Development Report of 2023

also indicated that employment of women fell by 4.2 percent as compared with 3 percent for men. An analysis of the firm-level data from the World Bank enterprise surveys revealed that 42 percent of women stopped working either temporarily or permanently compared to 31 percent of men. An indication that women were disproportionately affected by income and employment losses (The World Bank, 2022). This has led to numerous challenges. The ripple effects are deeply felt by institutions of higher learning such as low enrollment in institutions, higher rate of early pregnancies, and job losses among the working population.

Low enrollment of Government Sponsored-Students experienced in higher education institutions is attributed to hard economic times and inadequate funding. For instance, at Kiriri Women's University of Science and Technology, the number of GSSs enrollment trend reduced by 8 percent between the 2019/20 and 2020/21 academic years. During the 2018/19 and 2019/20 academic years, GSSs were reduced by 26 percent, this was attributed to the negative ripple effects of the COVID-19 pandemic and other economic challenges such as poverty (KNBS, 2021). The pandemic also revealed the harmful impact of inequalities, challenging efforts for women's empowerment and efforts to keep women and girls in school. For instance, despite many efforts made to accelerate women's empowerment in Kenya, only 29 percent of women between the ages of 15 and 49 are empowered (KNBS, UNICEF, and UN Women, 2020).

In addition, teenage pregnancy rates grow every year at alarming rates affecting women's and girls' education. The girls affected are aged between 10 – 19 years (Ministry of Health, 2022). The trends are likely to leave out a bigger cohort of talented women and girls from the tertiary education pipeline. In an ideal situation, women of this age category should be in school. Keeping women and girls in school, and monitoring their progress and acceleration is the only way of ensuring their success in education and improving their livelihoods. Early and unplanned pregnancy is a reflection of a possible delay in the completion of the women's university education. Nawe (undated) reported that gender sensitization of university senior officials and policymakers, promotes affirmative action, enrollment participation, and performance of women by 80 percent.

In addition, a report by the United Nations Educational, Scientific and Cultural Organization (UNESCO) shows that women actively pursue Bachelor's and Master's degrees, where they outnumber men at these levels – where women represent 53 percent of graduates, but their numbers drop drastically at the level of Doctor of Philosophy degree. According to the Africa Academy of Sciences (2020), women remain underrepresented in science and this is attributed to prevailing social and environmental factors, bias and discrimination, girl's low self-assessment, and negative attitudes toward Science Technology Engineering, and Mathematics, and research (AAS, 2020).

The discrepancy widens at the researcher level with men representing 72 percent globally and women 28 percent globally (UNESCO-UIS (2015) cited by (Odhong, 2018). In the Philippines, the share of female researchers was slightly above 45 percent to 55 percent in 2011(UNESCO-UIS, 2014). Some of the barriers identified include inadequate funding, lack of mentors, and male researchers unwilling to act as mentors for upcoming women researchers. Other challenges are sexual harassment, and gender role related - balancing family and career (AAS, 2020). Access to quality education and gender equality is not only a human right, but a key pillar in achieving Sustainable Development Goals 4 and 5 by 2030. What can the higher education institutions do in the remaining seven years?

## 1.3 General Research Objective

The main objective of the study was to analyse the role of higher education institutions in accelerating women's progressive education in Kenya.

### 1.3.1 Specific objectives

1. To establish the role of public-private nexus in accelerating women's progressive education at KWUST

2.  To establish the role of blended learning in accelerating women's progressive education at KWUST

3.  To examine the role of digitalization in accelerating women's progressive education at KWUST

4.  To determine the role of student retention in accelerating women's progressive education at KWUST

## 1.4 Research Questions

1.  How does public private nexus accelerate women's progressive education at KWUST?

2.  How does blended learning accelerate women's progressive education at KWUST?

3.  In which way does digitalization accelerate women's progressive education at KWUST?

4.  To what extent does student retention accelerate women's progressive education at KWUST?

## 1.5 Scope of the Study

The study unit of analysis was Kiriri Women's University of Science and Technology (KWUST). The university is situated in Nairobi City, the capital city of Kenya. It is approximately 25 kilometers from the CBD. The study unit of observation were the 408-degree students, enrolled during September – December, 2021 and May–August 2022. Students were identified as the main unit of observation since the study adopted the client-oriented approach since they can easily share their views in regard to diversity of needs in their education, achieving the objectives and expectations of study formats as well as various forms of flexibility that address the needs of the women. The academic staff(s) participated since they are the internal clients whose services addresses the needs of these students. This justifies why the students and academic staff at KWUST were the only study unit of observation. This concurs with the views of Healey, Abbi and Harrington (2014) who stated that engaging students and staff effectively as partners in learning and teaching is arguably one of the most important issues facing higher education in the 21st century.

## 2.0 LITERATURE REVIEW

## 2.1 Theoretical Review

Theory is an already refined constructs that provides a deeper understanding of concepts and describes the phenomenon. In this study, the underpinning theories that supports progressive education includes:

## 2.1.1 John Dewey Theory of learning

According to Lee and Oh (2019), Dewey in 1916 argued that there is a need for education to be more pragmatic and democratic. By 1956, the curriculum harnessed by Dewey consisted of three elements which included: knowledge, intellect, and recreation. In formal education, Dewey's philosophy of progressive education has the potential to extend to cultural and art education. In this context, the researchers, Theuri *et al.,* (2020), simply defined, progressive education as a school of thought that emphasizes the need to learn by doing (hands-on learning).

Dewey felt that "hands-on" learning, which involved offering direct practical experience in the operation or functioning of anything, helped learners learn much better. Dewey in 1916, formulated the theory of progressive education due to the challenges that arose from dissatisfaction with traditional education, which imposed adult norms, subject matter, and methodology only. Dewey assumed that all parties are equal and share the main aim of creating a social consciousness among learners Lee and Oh (2019). Using Dewey's approach, we see the need to re-model our education systems as described in Dewey's framework This is a key aspect that drives the study's dependent variable is the pragmatic philosophy, therefore, the study adopts John Dewey's Theory of Learning to support the dependent variable.

### 2.1.2 The Women's Empowerment Framework

The women's empowerment framework was developed by Sara Longwe, a gender expert from Lusaka, Zambia. Longwe argued that women's poverty is the consequence of oppression and exploitation rather than a lack of productivity and that to reduce poverty women must be empowered. The framework postulates five progressively greater levels of equality in an ideal situation (Leder, 2016).

First is control which implies equal control over decision-making over factors of production. Second is participation which implies equal participation in decision-making processes related to policymaking, planning, and administration. Third is conscientization which emphasizes attaining an equal understanding of gender roles and a gender division of labor that is fair and agreeable. Fourth is access which focuses on equal access to factors of production by removing discriminatory provisions in the laws, and fifth is welfare which puts more emphasis on having equal access to material welfare (food, income, medical care). Leder (2016) argued that empowerment is a term widely used by academicians, policymakers, and development workers, which has resulted in a vague and contested nature of the terms' conceptualization and methodology.

### 2.2 Empirical Review

### 2.2.1 Public-Private Nexus

Healey *et al.,* (2014) explained that students as partners are a concept that interweaves through many discussions, including assessment and feedback, employability, inclusivity, flexible pedagogies, internationalization, linking teaching and research, and retention and success. The researchers further explained that partnership requires collaboration and meaningful engagements. American Institute of Research (2023), in their survey, found that the majority (86%) of the survey respondents representing their industry-led public-private partnerships with post-secondary initiatives reported that an intermediary organization facilitated the partnership.

Khayyan and Edling (2016) conducted a study on the public-private nexus for the educational development of the Central-Tribal Region of Pakistan. The article focused on policy strategies over the years, from the national education institutions facilitated by the not-for-profit sector to increase net enrolment rate, gross enrolment ratio, and reduction in gender parity through a package of developed infrastructure. The study adopted quantitative and qualitative approaches in analysis and cluster sampling techniques in conducting the interviews. The study recommended sequential educational policies strategies, and investments in financial resources.

Mathews, Cook-Sather, and Acai *(*2019), defined partnership as a collaborative, reciprocal process through which all participants have the opportunity to contribute equally, although not necessarily in the same way in the curricular or pedagogical conceptualization, and in decision-making, the debate and studies have been conducted emphasizing Students as Partners (SaPs) in higher education institutions. Many institutions have implemented the SAPs by including student leaders in management meetings. Mathews *et al.,* (2019) in their study argue that educators differ in how they see relationships between saps. The researchers identified three analytical approaches which include: building on concepts, drawing on constructs, and imaging through metaphors.

### 2.2.2 Blended Learning

Hassan and Shukri (2020) conducted a study to establish the effect of blended learning in enhancing female student's satisfaction in the Saudi Context. The study intended to investigate the effect of utilizing Learning Management System (LMSs), blackboard on enhancing English as a Foreign Language (EFL) female students' satisfaction the Saudi context. The study found that effectiveness of utilizing the supplementary materials on blackboard in leading up EFL student's satisfaction. The study concluded that blended learning stimulates, a classroom setting with activities that are carried out under flexible engagement manner.

Zhang, Y., Chen, T and Wang, C. (2020) conducted a study to determine the factors influencing students' willingness to choose blended learning in higher education. The study adopted survey research design, where questionnaires were administered and a total of 1903 valid responses were collected. The study findings indicated that blended learning have not been widely offered in Chinese Universities due to limited students' participation and understanding of blended learning. Most students have positive attitude to blended learning and are willing to choose it in future. The study concluded that factors such as demographic design, learning demands, curriculum recognition are factors contributing to the student's willingness to choose blended learning.

According to Bassett (2021) stated that transition to online delivery of teaching and learning has exacerbated existing equity concerns. For instance, as the Universities adopts blended approach, the students who did not have access to adequate resources were confronted by digital divide, which worsened the existing inequality than before. Some students could not sit for their exams and this automatically led to delay in completion. To date digital infrastructure in Sub-Saharan African reaches only 34 percent of the global population. Basset (2021) further stated that reliability, speed and affordability is a critical factor for a virtual academic experience. In ensuring digital inclusion, institutions should combine online and offline channels, make use of Hand Talk App and make training more accessible.

### 2.2.3 Digitalization

Sorgner, Bode and Christine (2017) conducted a study to establish the effects of digitalization on the gender equality in the G20 economies. The study investigates deeply how the digital revolution which is characterized by artificial intelligence, big data, cloud computing and mobile robotics will affect gender in G20 countries. The study adopted case study approach and extensive analysis of existing gender gaps and policies using secondary data. The study recommends that G20countries should provide universal affordable, secure and open broadband internet access, foster women's digital literacy encourage more women to go into tertiary education and STEM occupations, facilitate web-based female entrepreneurship and empower women financially through innovative digital financing tools and e-government.

Cathrine *et al.,* (2019) studied digitalization in higher education: mapping institutional approaches for teaching and learning. The paper explored the digitalization of teaching and learning, internal and external processes, influence by government, international trends and processes in Norway and Denmark. Descriptive research design, primary and secondary data was used. In Norway, the target group consisted of 1010 people of whom 551(54.6% responded while in Denmark, 596 questionnaires were distributed, and a total of 220(46.6%) responded. The study covered practice performed between 2014 and 2017. The study adopted both qualitative and quantitate techniques of data analysis. The study concluded that contractualization, use of integrated ICT tools in teaching and learning, systematic strengthening of staff development programs and flexibility enhances quality of higher education.

Dhanamalar, Preethi and Yuvashree (2020) conducted a study to establish the impact of digitalization on women's empowerment: a study of rural and urban regions in India. The following attributes were studied online transactions – shopping bills; entertainment- movie tickets; online communication; social networking; and online service. The random data collection was conducted on study sample size of 200. Both qualitative and quantitative techniques of data analysis were conducted. The study found that technology-oriented program in India have not been successful due to lack of equipment's. Study recommends that more online and offline jobs should be provided to women so that they can grow economically. Upscale digitalization since it makes women stronger and stable economically.

### 2.2.4 Student Retention

Leeds, Campbell, Baker, and Ali (2015) carried out a study to investigate the impact of student retention strategies on retention rates in an online information systems course. A treatment group

exposed to retention strategies related to student engagement, learning communities, student services and learner centered environments was compared with a control group. The results showed that retention strategies may not impact retention rates.

Allaf (2020) carried out a study to determine women's perspectives on retention in higher education in Jordan: commute and choice. The study explored the experience of 18 women from 2008 to 2009 in their final year of study, 10 women newly enrolled students. The participants were drawn from 7 public universities and 6 private universities. Interviews were concluded and qualitative research approaches were adopted to obtain holistic results. The study found that retention is influenced by individual level characteristics rather than institutional level. The study concluded that more attention should be paid to the role of commute and the inflexibility of higher education admissions process.

Katy, Stephanie, Albert and Jokina (2021) conducted a study to examine online retention research in higher education over a 5-year span (January 2015 – March 2019 to further advance research in higher education retention. The study adopted a desk review approach, which secondary data was reviewed. The data reviewed suggest the most common retention issues or strategies involved student factors/motivation as well as faculty and student interactions. The study concluded that common retention strategies most often includes enhancing faculty training and/or support and adding student services positions and/or support.

### 2.2.5 Women's Progressive Education

Julia (undated) conducted a study to analyze the factors that mitigate against women's participation in institutions of higher learning in Tanzania. The study adopted both primary and secondary data. Quantitative and qualitative techniques of data analysis was adopted. The study found that women face challenges in career development, lack of confidence and low enrollment rates. The study recommends, gender sensitization to management and senior officials, counselling for confidence building, remedial courses to raise current female enrollment and outreach programmes to upscale motivational programmes, confidence building and role modeling. Within the organizations, the researcher recommended, gender sensitive appraisal systems and friendly work environment.

Renn (2015) conducted a study to determine the roles of women's higher education institutions in international context. The study examined the contribution of these institutions to their national systems of education and society. The study adopted a qualitative comparative, multiple case study approach to understand ad 14 diverse women's colleges and universities in nine nations on five continents. The study recommends four key roles, which includes: gender empowerment, leadership development and cultural paradox.

### 2.3 Conceptual Framework

Conceptual framework is a pictorial representation of the study independent variables and dependent variables. The conceptual framework shows the cause-effect relationship**.**
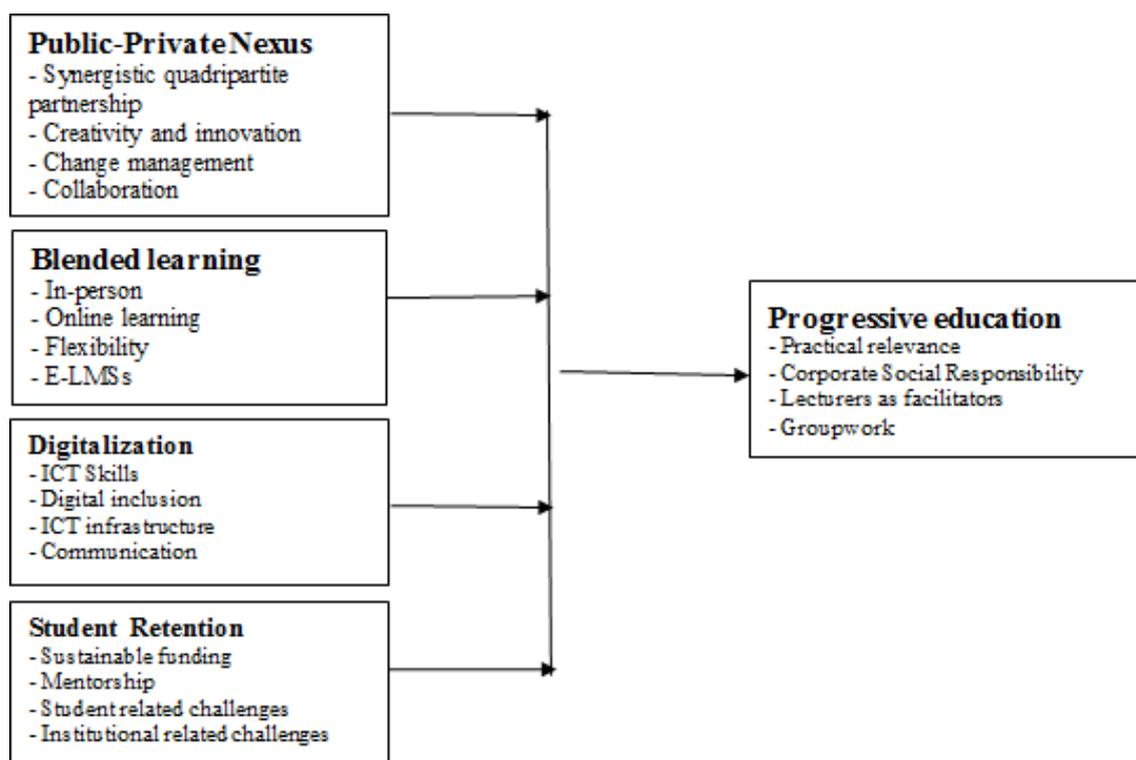
**Public-Private Nexus**
- Synergistic quadripartite partnership
- Creativity and innovation
- Change management
- Collaboration

**Blended learning**
- In-person
- Online learning
- Flexibility
- E-LMSs

**Digitalization**
- ICT Skills
- Digital inclusion
- ICT infrastructure
- Communication

**Student Retention**
- Sustainable funding
- Mentorship
- Student related challenges
- Institutional related challenges

**Progressive education**
- Practical relevance
- Corporate Social Responsibility
- Lecturers as facilitators
- Groupwork

**Figure 2.1 Conceptual Framework**

### 2.4 Critique of the literature.

The study conducted by Theuri *et al.,* (2020) sought to analyze the relationship between education and ethics, using Dewey's philosophy. The researchers conducted a desk review, which could limit the analysis and understanding of the study. Hence, there is minimal foundation for generalization and conclusion. In addition, the study did not identify a specific segment to study and draw appropriate conclusions that address the education needs of the learners. Notably, John Dewey's theories observed that, in progressive education, many institutions were only interested in creating obedient and subservient workers who could contribute to the economy.

Progressive education emphasized more hands-on learning experiences at the expense of inherited education such as the truths about human nature and fulfillment in education. It can be argued that new societal needs surface which dictate new strategies, approaches, and inquiries that progressive education filled. In addition, the perceived outlook of Dewey leads to moral and intellectual standards decline, and education based solely on utilitarian principles does not allow for a broadly educated class with wisdom to handle uncertainty. Progressive education doesn't take into account the less privileged classes which limits the ability to support social transformation and power (Hopkins, 2017).

### 2.5 Research Gap

This study identified methodological gap in which the study conducted by Theuri *et al.,* (2020) who sought to analyse the relationship between the education and ethics, using Dewey's philosophy. The researchers conducted a desk review, which could limit analysis and understanding of the relationship between education and ethics, using Dewey's philosophy, theory and concepts. Miles (2017) proposed a new model built on previous models that consist of seven core research gaps which includes: evidence gap; knowledge gap; practical-knowledge gap; methodological gap; empirical gap; theoretical gap and population gap. This implies that the gap identified is consistent with the findings of Miles (2017). This study, therefore, sought to address the gap by identifying the role of higher education institutions in accelerating women's progressive education anchored on Dewey's theory and model of progressive education.

## 3.0 METHODOLOGY

The study adopted a mixed-method research design strengthened with pragmatism and constructivism as the appropriate research paradigm. Pragmatism as a research paradigm is an approach in research that can bridge the gap between the scientific methods and structural orientation of older approaches and the naturalistic method and freewheeling orientation of newer approaches (Kaushik and Walsh 2019; Creswell and Creswell, 2020). The mixed method research design has been adopted since it is a holistic approach that involves the discovery of issues through qualitative and quantitative data. The study focused on students as the key unit of observation, and lecturers since the researcher adopted a client and learner-centered approach using cross-sectional data.

The study unit of analysis is KWUST. The study target population comprised 408 continuing degree students in their final year, during the September – December 2021, Jan-April 2022, and May–August 2022. This produced a study sample size of 129 students. The study also targeted 60 lecturers who were teaching during the same period. This produced a study sample size of 24 lecturers. The choice of study unit of observation is consistent with that of Hamdan and Amorri (2020), whose survey focused on 101 GEIL Students at the end of the first semester, Spring 2019/Fall 2020. A pilot test of 12(10%) of the sample size, was conducted and the validity of the data collection instruments was established through the researcher's expert opinion. The reliability results were all above 0.7. This implies that all the indicators correlate highly among themselves.

The study adopted both descriptive statistics and statistical inference, to be able to draw objective conclusions and make generalizations based on the study results. In descriptive statistics, the researcher reported percentages and frequencies, while in establishing statistical inferences, the researcher conducted multiple regression analysis. The study results were presented using tables, graphs, charts and diagrams where applicable. The equation 3.1 represents the multiple regression model.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.3.1$$

Where $Y_s =$

$\beta_0 =$ Constant

$X_1 =$ Public-private nexus

$X_2 =$ Blended learning

$X_3 =$ Digitalization

$X_4 =$ Student retention

$\varepsilon =$ error term

## 4.0 FINDINGS, ANALYSIS AND DISCUSSIONS

The study attained response rate of 81(63%) among students and 24(92%) among the lecturers interviewed. The study response rate attained is adequate. The study findings are consistent with that of Hamdan and Amorri (2020), who had a target group of 101 students and only 87 respondents. This translates to 87% response rate. The study adopted appropriate measures to obtain a significant response rate, by ensuring familiarity with the organization and target population before the data collection. The researcher also considered to extend the data collection period to provide the researcher with sufficient time.

### 4.1 Demographic Statistics

### 4.1.1 Age bracket

The study results shows that 69(88.46%) of the students are aged between 18 – 24 years, 8(10.26%) of the students aged between 25 – 31 years and only one (1%), is aged between 32 – 44 years.

Mugenyi *et al.,* (2017) in their study found that 67% of the students were aged 31-39, while 62% were aged between 20 – 30. The above data implies that KWUST attract young female students who have accelerated fairly well from primary to secondary school to university level. Figure 4.1 shows the age of the students. The age set presented reveals that the students can easily adopt technology.

Age is a key factor when considering technology adoption as explained and supported by the Unified Theory of Acceptance and Use of Technology. According to the theory, older persons tend to be slower than younger adults to adopt new technologies. Therefore, understanding age-related differences can provide guidance for the deployment of new technologies that may be beneficial to students and lecturers in terms of learning, social interaction and cognitive engagement (Rogers, Mitzner, Boot, Charness, Czaja and Sharit, 2017).
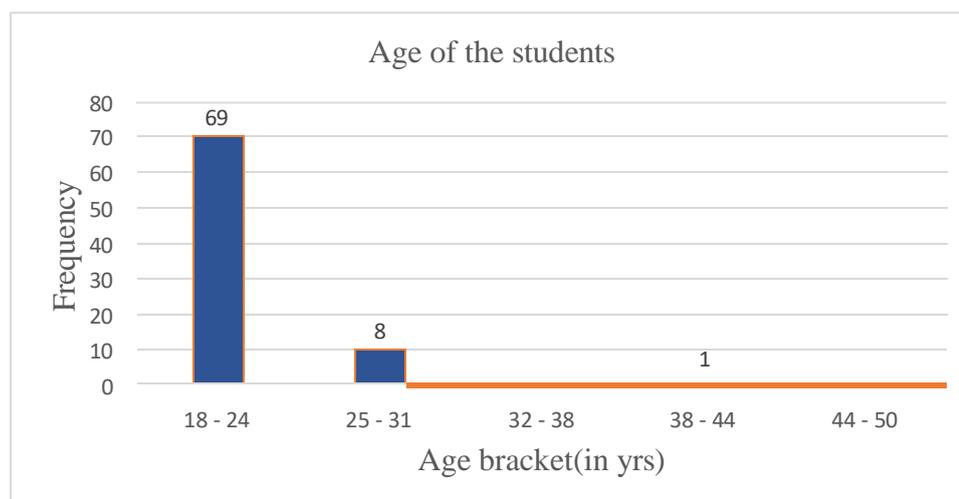


**Figure 4.1 Age of the respondents**

### 4.1.2  Level of education and progress

Study findings reveal that only 5 students out of 81 observations, accelerated from certificate course to the degree program. This translates to **5(6%)** of the students interviewed. This implies that minimal number of students who were enrolled during the period had accelerated from certificate level courses to diploma and further to degree level course. These students cited challenges in career identification being a major challenge at the certificate level. Hence, this affects their progression to diploma level. In addition, the study findings revealed that **54(66.7%)** an impressive enrolment and acceleration of students from diploma programmes to degree programmes. This implies that most diploma students join degree programme at KWUST.

### 4.2 Descriptive Statistics

### 4.2.1 Public-Private Nexus and Women's Progressive Education

The study sought to establish the role of public-private nexus in accelerating women's progressive education at KWUST. In this section, the respondent was expected to state how public-private nexus accelerate women's progressive education. Out of 81 students, 43 responded and gave their views regarding the above research question. The study findings reveal that 29(67.44%) public-private partnerships provide access and avenues for women's progressive education, hence promoting gender equality by enhancing skills, building lifelong learning and the learners confidence. The study findings concur with UNESCO (2023) report which indicated 61% of higher education institutions strongly agree that gender equality is one of the principal goals of their lifelong learning efforts

The study results are also in line with the findings of American Institute of Research (2023) in their report on mapping the opportunities. The report revealed that 39% of the study respondents referenced educating individuals as primary goal of their initiative through public-private

partnership, 26% of the respondents also indicated that PPPs helps in targeting the skills gap through education, training and upskilling and 22% described their work as focused on addressing workforce growth.

The study findings also revealed that 9(29.93%) of the respondents also indicated that PPNs improve women's living standards and enhances women's contribution to the society. The study finding is consistent with UNESCO (2023) report which shows that 74% of the higher education institutions see community engagement and social responsibility as main driver for their involvement in lifelong learning. A few of the respondents, 3(2.33%) stated that public-private partnership enables participation and interaction with partners. The above findings are consistent with the findings of the American institute of research which indicated that institutions that are open to collaborate can receive 70% state funding, and 57% funding from private sector through research.

**Table 4.1 Public-Private Nexus and Women's Progressive Education**

| Statements on public-private nexus and women's progressive education | Frequency | Percentage |
|---|---|---|
| 1. Gender equality: Provides access and avenues for women's progressive education by enhancing skills, building lifelong learning and confidence | 29 | 67.44 |
| 2. Enhancing social responsibility: Improves women's living standards and enhances women's contribution to the society | 9 | 29.93 |
| 3. Enables participation and interaction with partners | 3 | 6.98 |
| 4. Enables education partnership | 1 | 2.33 |
| 5. Creating room for innovation | 1 | 2.33 |
| **Total** | **43** | **100** |

The study respondents were also required to suggest some of the approaches in enhancing public-private nexus to accelerate women's progressive education. Out of 81 respondents, only 38 students responded to this question. The study findings reveal that 12(31.58%) of the respondents suggested that stakeholder engagement - engaging students from public and private institutions in common forums will be helpful.

The study finding also reveal that 11(28.95%) of the study respondents suggested that institutions of higher learning should create and make available opportunities for exchange programs – provide platforms forums for knowledge sharing and acceleration of ideas through academic conferences. About 8(21.05%) of the study respondents suggested that public-private partnership with a focus on strengthening industry linkages will create room for sustainable scholarship and funding.

**Table 4.2: Suggestions for Improving Public-Private Nexus**

| Statements on suggestions for improving public-private nexus and women's progressive education | Frequency | Percentage |
|---|---|---|
| 1. Stakeholder engagement – engaging students both from public and private institutions | 12 | 31.58 |
| 2. Provide sustainable scholarship and funding | 8 | 21.05 |
| 3. Collaboration and teamwork | 4 | 10.53 |
| 4. Providing mentorship opportunities | 2 | 5.26 |
| 5. Available opportunities for exchange programs – provide platforms forums for knowledge sharing and acceleration of ideas | 11 | 28.95 |
| 6. Facilitates research and universal basic education | 1 | 2.63 |
| **Total** | **38** | **100** |

**Student enrolment in private universities data 2013/14 to 2021/22**

The study also sought to know the student's enrolment trend in Kenya's private universities in explaining the effort made through public-private nexus. The study shows the **nine years** trend and the number of GSS students at KWUST from 2013 to 2022 since it is the study unit of analysis. Student placement in private universities is a symbol of partnership to promote education. Table 4.3 shows that during 2018/2019 and 2019/2020 academic year, there were a good number of governments sponsored students. The data presented shows that the numbers dropped drastically during 2020/2021. However, in 2021/2022 academic year the number increased to 2737 from 1906, representing 44 per cent increase in enrolment (KNBS, 2021). Figure 4.2 shows the trends in KWUST GSSs enrollment.
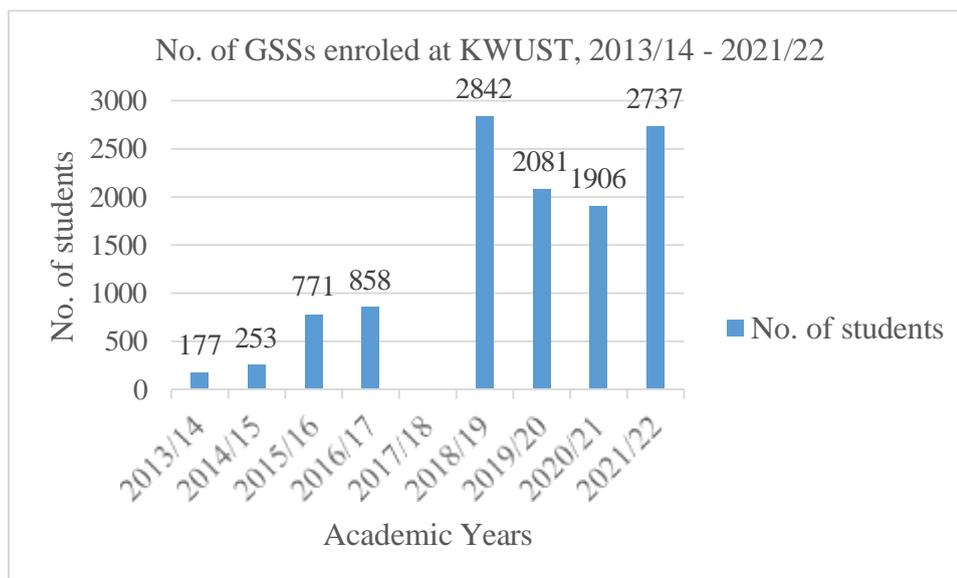


**Figure 4.2: No of GSS students at KWUST, 2013 to 2021**

**4.2.2 Blended learning and women's progressive education**

The study sought to establish how blended learning accelerate women's progressive education at KWUST. The researcher sought the respondents' views on how blended learning accelerate women's progressive education at KWUST. A total of 49 students out of 81 responded. The study result reveals that majority, 25(51.02%) stated that blended learning enhances flexibility and convenience, since they are able to access learning materials from where they are. This reduces the cost of education in the long run. The findings concur with the views of Glaria (2022), who emphasized that blended learning offers flexibility in terms of availability, since it enables the student to access the materials from anywhere at any time while enjoying the benefits of face-to-face learning support and instruction.

The study also reveals that 13(26.53%), stated that blended learning improves access to quality education and makes it more sustainable and inclusive. In addition, the study result revealed that 11(12.44%) of the respondents indicated that blended learning enhances the acquisition of knowledge. This study results are consistent with the views of Marhabo (2020) who conducted a study to establish the significance of blended learning in education system. The study found that that blended learning boost effectiveness of learning and helps in achieving greater efficiency with group sizes.

**Table 1: How blended learning accelerates women's progressive education**

| Statements on blended learning | Frequency | Percentage |
|---|---|---|
| 1. Enhances flexibility and convenience. The learners are able to access learning materials from where they are. This reduces the cost of education. | 25 | 51.02 |
| 2. Helps in improving access to quality education and sustainability and inclusive. | 13 | 26.53 |
| 3. Enhances acquisition of knowledge and increases women's participation and progression in research. | 11 | 22.45 |
| **Total** | **49** | **100** |

### 4.2.3 Digitalization and Women's Progressive Education

The study sought to examine the role of digitalization in accelerating women's progressive education at KWUST. Study results reveals that 16(39.02%) of the respondents revealed that digitization of institutional systems enhances flexibility and accessibility of learning materials hence this increases access to information and knowledge. The respondents also indicated that enhancing ICT skills is an important factor towards implementation digitization of institutional systems and learning processes. Table 4.2 presents the respondents views.

**Table 4.2: How digitalization accelerates women's progressive education.**

| Statements on digitalization | Frequency | Percentage |
|---|---|---|
| 1. Enhance flexibility and accessibility of learning materials. This will increase access to information and knowledge. | 16 | 39.02 |
| 2. Provision of resources: to enhance utilization of digital space. | 7 | 17.07 |
| 3. Enhance ICT Skills | 16 | 39.02 |
| 4. Develops ICT infrastructure | 1 | 2.44 |
| 5. Enhanced communication channels | 1 | 2.44 |
| **Total** | **41** | **100** |

The researcher also sought suggestions from the study respondents. A total of 41 students who participated in this study respondent to this question, where 16(39.02%) of the (students) respondents stated that learners should adopt e-learning culture from the point of student's registration to access of results through adoption of the latest technology. The respondents further stated that lecturers should be well conversant with the systems. The same number of respondents 16(39.02%) of the respondents also emphasized on ICT and computer studies should be made compulsory at the university level. This will eventually cultivate entrepreneurship skills, since most young learners find ease of entrance in digital entrepreneurship. The study also reveals that a few 7(17.07%) of the study respondents indicated that provision of resources and investment in infrastructure: provide affordable laptops, strong and stable universal internet connectivity within universities and investment in infrastructure.

**Table 4.3: Suggestions for improvement of digitalization in Higher Education Institutions**

| Suggestions on digitalization | Frequency | Percentage |
|---|---|---|
| 1) Adopt e-learning from students' registration to exam results through adoption of latest technology. The lecturers should be well conversant with the systems. | 16 | 39.02 |
| 2) Provision of resources and investment in infrastructure: provide affordable laptops, strong and stable universal internet connectivity within universities and investment in infrastructure. | 7 | 17.07 |

| | | |
|---|---|---|
| 3) ICT and computer studies should be made compulsory at university level.  This will eventually cultivate entrepreneurship skills – digital entrepreneurs | 16 | 39.02 |
| 4) Enhance continuous training, through hands on/practical learning to increase access and flexibility. | 2 | 4.88 |
| **Total** | **41** | **100** |

**4.2.4 : Student Retention and Women's Progressive Education**

The study sought to explore the role of student retention in accelerating women's progressive education at KWUST. In this section, the researcher sought to know the views of the respondents on how student retention accelerates women's progressive education. Majority, 21(43.8%) of the students stated that students career guidance and counseling, strengthened with mentorship is key in accelerating women's progressive education. This was supported by 4(25%) of the lecturers interviewed, who indicated that students career guidance and counselling is key in enhancing student retention. The lecturers further explained that this will help in addressing students related challenges.

The study findings revealed that 14(29.17%) indicated that student retentions enhance students' enrolment and boost their morale to continue from certificate to degree level. This was supported by majority 6(37.5%) of the lecturers who gave their views on this question, stated that increase in completion rates enhances students' retention rates. In their view, this eventually enable them become highly empowered women in the society. The study findings also reveal that 8(16.67%), indicated that student retention increases completion rate. In addition, 5(10.42%) indicated that students retention enhances skills development. This concurs with views of 4(25%) of the lecturers who responded to the study indicated that student retention enhances student enrolment and skills development.

**Student retention strategies that can be adopted to accelerate women's progressive education at KWUST.**

Study findings shows that 54 students out of 81 observations gave their views. Where, majority 28(45.46%) suggested that students career guidance and counseling, strengthened with mentorship as well as job placement support, highly accelerate students' retention. Data also revealed that 17(31.48%) indicated that affordable fees and scholarship as well as sustainable funding accelerates students' retention. While 6(11.1%), indicated that student retention enhances quality education hence maintaining quality standards. Only 3(5.55%) indicated that students' progress monitoring through semester check-ins and sensitization workshops for students plays a key role in enhancing students' retention. Additional findings are presented in

**Table 4.1: Students' Retention Strategies to accelerate women's progressive education**

| Suggestions by the study respondents | Frequency | Percentage |
|---|---|---|
| 1. Career guidance and counselling, strengthened with mentorship as well as job placement can accelerate student retention | 28 | 51.85 |
| 2. Affordable fee and scholarship as well as sustainable funding | 17 | 31.48% |
| 3. Student progress monitoring through semester check-ins and professional programs as well as sensitization workshops for students. | 3 | 5.55% |
| 4. Quality education and maintaining quality standards | 6 | 11.1% |
| **Total** | **54** | **99.98%** |

### 4.3 INFERENTIAL STATISTICS

The study adopted multiple regression model in the analysis. In the study the women's progressive education was regressed against four variables: public-private partnership, blended learning, digitalization and students' retention. The study results revealed existing relationship and statistical significance with varied p-values as shown in Appendix 1 respectively.

### 4.3.1 Overall Multiple Regression Results

Based on the regression results of the data obtained from 81 students, the study findings reveal that R-Squared is 0.62, the Adjusted R-squared is 0.61, F-statistic of 31.94 and a p-value of 0.0000. This implies that the model explains 61% of changes in women's progressive education. This means that public-private nexus, blended learning, digitalization and students retention explains 61% per cent change in women's progressive education. The study results also shows that there is statistically significant relationship between the study independent and dependent variables at 1% level of significance, with a p-value of 0.0000. Based on the results the model: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$ explains the goodness of fit with R-Squared = 62 per cent, the R-squared = 61 per cent, F-statistic = 31.94. and a p-value = 0.0000. Regression results are presented in Appendix 1. The overall results of the reveal that student retention is key at 58%, following with blended learning alongside public-private nexus each at 16%, and finally digitalization at 6%. The study results reveal the true situations in higher education institutions.

### 4.3.2 Public-Private Nexus and Women's Progressive Education.

The study sought to establish the role of public-private nexus in accelerating women's progressive education at KWUST. The regression results presented in Appendix 1 shows that there is a positive statistically significant relationship between public-private nexus and women's progressive education with a regression coefficient of 0.164, t-value of 1.62, and p-value of 0.110. The estimation results imply that the coefficient of public-private nexus is statistically significant at 10 per cent level of significance.

The magnitude of the coefficient of public-private nexus is 0.164. This implies that, *ceteris paribus*, one unit increase in the score of public-private nexus leads to 16% change in women's progressive education. The study finding is consisted with the study conducted by Mwiya, Bwalya, Siachinji, Sikombe, Chanda, & Chawala (2017), who studied higher education quality and student satisfaction nexus: evidence from Zambia. Their study findings revealed that R=0.141; R Square = 0.020; Adjusted R Square of 0.17 and F-Statistic of 6.303**.

### 4.3.3 Blended learning and women's progressive education

The study sought to establish the role of blended learning in accelerating women's progressive education at KWUST. The regression results presented in Appendix 1 shows that there is a positive statistically significant relationship between blended learning and women's progressive education with a regression coefficient of 0.164, t-value of 1.56, and p-value of 0.123. The estimation results imply that the coefficient of blended learning is statistically significant at 10 per cent level of significance. The magnitude of the coefficient of blended learning is 0.164. This implies that, *ceteris paribus*, one unit increase in the score of blended learning leads to 16% change in women's progressive education.

### 4.3.4 Digitalization and women's progressive education

The regression results presented in Appendix 1 shows that there is a positive and statistically significant relationship between digitalization and women's progressive education with a regression coefficient of 0.066, t-value of 0.88, and p-value of 0.381. The estimation results imply that the coefficient of digitalization is not statistically significant. The magnitude of the coefficient of digitalization is 0.066. This implies that, *ceteris paribus*, one unit increase in the score of digitalization leads to 6% change in women's progressive education.

### 4.3.5 Student Retention and Women's Progressive education

The study sought to explore the role of student retention in accelerating women's progressive education at KWUST. The regression results presented in Appendix 1 shows that there is a negative but statistically significant relationship between student retention and women's progressive education with a regression coefficient of 0.589, t-value of 7.06, and p-value of 0.000. The estimation results imply that the coefficient of student retention is statistically significant at 1 per cent level of significance. The magnitude of the coefficient of student retention is 0.589. This implies that, *ceteris paribus*, one unit increase in the score of student retention leads to 58% change in women's progressive education.

## 5.0 CONCLUSION AND RECOMMENDATIONS

The study concludes that higher education institutions should put more focus on student retention. Also, the universities should invest in blended learning, and embrace public-private nexus and digitalization. The study also concluded that student characteristics/backgrounds, student entry behaviors, and learning design features are significant predictors of student learning outcomes in blended learning. In addition, the study concluded that ICT skills, digital inclusion, development of ICT infrastructure within the universities, and efficient channels of communications enabled by technology are now important than ever.

The study recommended the following: First, student retention should be made a priority in higher education institutions to ensure progressive and successful completion of the course within the stipulated timeframe. The focus on student retention requires sustainable funding through internal resource mobilization through active participation in research and government funding and support. Notably, student development programmes such as mentorship should be embraced. Institutional-related challenges should be addressed through leadership efficiency while student-related challenges require meaningful student engagement and a support system. The academic retention program also serves as an umbrella for four programmatic components (technical and professional skills, workshops, mentorship, semester check-ins, and mental health awareness designed to support all students).

Second, the study recommends refining and reshaping blended learning as a priority for higher education institutions to promote women's progressive education. This requires a focus on in-person to promote student-lecturer interaction to create an enabling environment for knowledge transferability, well organized online learning, flexibility in operations, and effective E-learning management systems.

Third, the study recommends synergistic-quadripartite partnerships with industry partners to enhance the public-private nexus. This will inculcate a culture of creativity and innovation while embracing change and promoting collaboration with industry partners to enhance progressive education for all. The study points out a path that institutions should make research more attractive for women to enter as a career by unlocking their potential and identifying the women's untapped potential.

Fourth, regarding digitalization, the institutions of higher education now require an agile, diverse, and tech-savvy/tech-literate workforce than before. Therefore, the lecturers/instructors need to have a mindset to apply technology, and test ideas while adopting innovative approaches in lecture delivery and improving them systematically. The lecturers or instructors as well as administrators should be well conversant with the LMSs. The learners should adopt an e-learning culture from the point of student registration, and learning and to the point of accessing their results. To the learners, ICT and computer applications should be made compulsory while adopting hands-on learning at the university level. To achieve this, institutional commitment to provide resources and investment in infrastructure such as the provision of affordable laptops, and strong and stable universal internet connectivity within universities should be a priority.

Lastly, achieving the vision of SDG 4 requires a significant transformation of higher education institutions into lifelong learning institutions. Therefore, promoting a culture of progressive education demands a focus on practical relevance in course content and delivery of the course content, engagement in corporate social responsibility, and engaging in community service/outreach as a success factor. In addition, embracing progressive education implies that lecturers should facilitate learning while giving the learners the opportunity to reinvent their learning approaches while enhancing group work through discussions, peer-to-peer learning, and continuous consultation. Promoting progressive education involves enhancing diverse metacognitive approaches in students' evaluations and lecturers should be ready to transfer knowledge while using different approaches such as: focusing on the critical awareness of learners and preparing the learners to understand one's self as a thinker, innovators, a learner, and a potential job holder and a job creator, and not a job seeker consistently.

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