**Breaking Barriers: Pioneering Inclusive TVET for Women and Youth Empowerment in Nigeria**

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**Abstract**

*In Breaking Barriers: Pioneering Inclusive TVET for Women and Youth Empowerment in Nigeria," the effects of gender inclusion, employment transition, future-ready skills, and entrepreneurial skills on long-term development were investigated. It specifically examined how these elements influenced Sustainable Development in Nigeria via the lenses of Social Integration, Inclusive Growth, and Eco-Literacy. A mixed-methods strategy was employed in Lagos and Ogun states, with quantitative and qualitative investigations combined. Participants were drawn from senatorial districts in these states using stratified sampling, yielding a sample size of 384 people per state, as estimated using Cochran's method. Data were collected using structured questionnaires, and analysis was carried out using AMOS Graphics 26's Structural Equation Modelling (SEM) tool. The research found numerous pathways, the most important of which was that Transition was a significant promoter of inclusive development (standardized estimate = 0.534) and considerably improved social integration (standardized estimate = 0.457). Entrepreneurial skills improved social integration significantly (standardized estimate = 0.795), whereas Eco literacy became simpler (standardized estimate = 0.387). While Social Integration had a minor direct effect (standardized estimate = 0.165), Inclusive Growth and Eco-Literacy both highly predicted Sustainable Development (standardized estimate = 0.504). The study's findings underlined the critical role that specifically planned TVET courses play in creating significant social and economic advantages, particularly in terms of employability and sustainable practices. It is recommended that comprehensive modules on entrepreneurship and future-ready skills be included in TVET curricula, and that these courses be updated on a regular basis in collaboration with industry partners to ensure their relevance and efficacy.*

**Key words**: *Entrepreneurial Skill, Future-Ready Skill, Employment Transition, Gender Inclusion, Sustainable Development.*

**Introduction**

Technical and Vocational Education and Training (TVET) plays an important role in enabling Nigerian women and youth to participate successfully in the economy by providing them the required skills. Empirical evidence highlights the benefits of providing young women with information about reproductive health and economic resources, such as microloans and business training, in order to boost their self-determination and enable them to contribute to long-term development (Odutolu et al. 2003). However, cultural attitudes and institutional weaknesses usually undermine the effectiveness of TVET initiatives. There is substantial evidence that cultural stereotypes contribute to poor female enrolment in TVET, and advocacy and increased funding are proposed as measures to increase female participation (Oluniyi et al., 2015). Furthermore, to appeal to and benefit young people, TVET must be in line with industry expectations and continue to provide flexible, adaptive training (Ogbuanya & Michael, 2015)

In Nigeria, Technical and Vocational Education and Training (TVET) is critical for empowering women and youth, reducing socioeconomic obstacles, and promoting inclusive growth. TVET improves employability and fosters economic independence by providing practical skills for job and entrepreneurship. According to research, giving young women with information on reproductive health and economic resources significantly boosts their sense of empowerment (Odutolu et al., 2003). Furthermore, realizing TVET's potential as a transformative tool for women and youth in Nigeria necessitates eliminating the gap between policy development and actual implementation (Akanbi, 2017).

Incorporating women and young people into Technical and Vocational Education and Training (TVET) not only improves gender equality and reduces youth unemployment, but it also boosts the national economy. Major reforms are required to make TVET more relevant, inclusive, and in accordance with industry objectives, hence appealing to everybody, regardless of gender or socioeconomic position (Ogbuanya & Michael, 2015).
Women and young people face significant impediments to full participation in Nigeria's technical and vocational education and training (TVET) system, limiting their potential to contribute to society and attain economic emancipation. TVET is vital for building skills, but there are ongoing difficulties such as gender disparities in enrolment—women are disproportionately underrepresented due of cultural preconceptions and insufficient recruitment efforts—hinder its effectiveness. Furthermore, there is a skills mismatch and high youth unemployment as a result of outdated training practices and a curriculum that is not well aligned with industry objectives, making the transition from education to work challenging. Furthermore, TVET courses usually provide insufficient teaching in critical thinking, entrepreneurship, and digital literacy—all of which are crucial skills for the future. TVET's quality and appeal are further harmed by structural issues such as insufficient financing, poor facility maintenance, and a shortage of qualified teachers, which hinder the program's potential to achieve development goals and empower individuals.

**Objectives of the study**

The study aimed to:

* Investigate gender inclusion influences with social integration as a moderator on sustainable development.
* Examine transition, as mediated by Inclusive Growth and Social Integration impact on Sustainable Development.
* Determine the relationship between Future-Ready Skills and Sustainable Development, with Social Integration, Inclusive Growth, and Eco-Literacy serving as mediating elements.
* Establish the influence of entrepreneurial skills on sustainable development, while taking into consideration the mediating roles of social integration, inclusive growth, and eco-literacy.

It will require a significant amount of effort to empower women and adolescents in Nigeria through TVET. These issues include policy implementation gaps, inadequate funding, and intercultural perspectives. These challenges must be solved before TVET may be used as a vehicle for long-term development and economic empowerment.
A study of the role of Technical and Vocational Education and Training (TVET) in empowering women and youth in Nigeria emphasizes the importance of Gender Inclusion (GI), Employment Transition (TR), Future-Ready Skills (FR), and Entrepreneurship Skills (EN) as major drivers of sustainable development. These factors are critical for promoting social integration, inclusive growth, and ecologically responsible conduct that is consistent with the People, Profit, and Planet overarching goals. It is critical that TVET be thoroughly reviewed with an emphasis on gender inclusion, job transfer, skill acquisition, and sustainable practices in order to break down obstacles and improve inclusivity.

Gender inclusion in TVET is critical for providing equal opportunity for job seekers to gain skills. Despite the potential for higher economic productivity and empowerment, cultural barriers and biases prohibit women from entering the workforce, leaving them underrepresented. Gender-sensitive TVET laws and cultural reforms to challenge traditional gender roles are two measures for increasing female participation (Oluniyi et al., 2015).

The ease with which TVET graduates can transition into the workforce is a typical statistic used to evaluate the program's effectiveness. A skills mismatch, or training that falls short of local and global economic expectations, frequently stymies this process. To promote graduate employability and integration into the workforce, TVET curricula must align with industry demands (Ogbuanya & Michael, 2015).

In order to meet the changing needs of the labour market, TVET must combine future-ready skills such as problem-solving, adaptability, and digital literacy. This change ensures that students are prepared for current and future labour market challenges (Usman & Tasmin, 2015).
To promote economic growth and innovation, TVET courses should include entrepreneurship education. This strategy fosters economic growth by encouraging students to establish their own career opportunities, particularly in Nigeria, where formal jobs are scarce (Akanbi, 2017).
Offering equitable access to training, TVET helps to long-term development by reducing inequality, promoting social inclusion, and ensuring environmental sustainability. TVET courses that use eco-friendly approaches help improve the health of the earth and equip students for careers in green economies (Osidipe, 2017).

To successfully empower women and youth, TVET in Nigeria must address educational content and delivery, as well as wider cultural reforms that promote economic inclusion, gender equality, and sustainable development. By doing so, TVET promotes a balanced approach to economic growth that considers social equity and environmental sustainability, as well as training individuals for employment. The theoretical underpinnings for inclusive TVET in Nigeria lead the development of effective strategies for removing barriers and advancing gender and youth inclusion in TVET. To promote inclusivity in TVET and empower women and youth in Nigeria, fundamental principles about gender dynamics and educational institutions must be understood.
The Social Cognitive Theory of Careers (SCCT), first proposed by Lent, Brown, and Hackett in 1994, analyses professional development through the use of self-efficacy beliefs, individual desires, and outcome expectancies. It highlights how education impacts professional paths and indicates that gender norms in society influence job selections. Strategies targeted at improving self-efficacy and outcome expectations are critical for increasing the number of women and young people engaging in TVET (Lent et al., 1994).
Theory of Expectation-Value Eccles et al. established this theory in the 1980s, which examines how expectations of success and the value placed on succeeding impact decisions regarding education and professional paths. TVET can benefit significantly from addressing motivational issues and understanding how societal norms inhibit women and young people from following certain professional pathways. This implies that educational standards and expectations should be altered (Eccles et al., 1983).

Feminist Theory in Education: This approach advocates inclusive policies and educational equality while combating gender biases that disadvantage women in educational institutions. It supports gender-sensitive TVET practices that challenge traditional gender norms and encourage female participation (Bank et al., 2007).
The inclusion hypothesis, which was originally connected with special education, has far-reaching implications for ensuring that all students, regardless of gender, race, or socioeconomic status, have access to educational institutions. In the context of Technical and Vocational Education and Training (TVET), this theory emphasizes the need of providing inclusive, accessible learning environments for a diverse variety of young women and men (Tinklin et al., 2003).

A careful review and consultation of the relevant empirical publications was carried out. These studies provided valuable information on the many aspects of TVET for youth and women's empowerment in Nigeria, highlighting the relevance of policy, public opinion, and practical strategies in increasing the efficacy of TVET efforts. Oluniyi et al. (2015) utilized a survey research technique to investigate how to enhance female participation in Technical and Vocational Education and Training (TVET) in Nigeria. The study looked at measures for increasing female participation in TVET and the study's sample comprised 153 female technical teachers and administrators, proposed lobbying and financial help to increase female involvement in these courses. According to their findings, stakeholders should advocate for and financially support programmes to increase female participation in TVET. Okwelle and Ayonmike (2014) explored how young Nigerians evaluated technical vocational education and training (TVET) in connection to youth value reorientation towards TVET's role in sustainable development in Rivers State, Nigeria, surveys were used to collect data, and it was revealed that young people's negative attitudes about TVET diminish its effectiveness and suggested steps to improve the sector's reputation and legislative support.

In another study by Ogbuanya and Michael (2015), achieving Youth Employment and National Security in Nigeria: TVET Imperatives. The study made use of descriptive analytic method to analyze the role of TVET in reducing youth unemployment. The report recommended increasing the public's knowledge of TVET and better aligning it with corporate needs. The research urged for more public awareness and alignment of TVET with industry priorities, as well as an examination of TVET's role in addressing youth unemployment and national security. Musa et al. (2012) investigated the efficacy of TVET as a tool for manpower development in achieving Vision 2020 in the Nigerian construction industry. Using a questionnaire survey administered across six geopolitical zones in Nigeria, the study findings revealed that TVET-based skill acquisition fell short of what was required standard to achieve Nigeria's Vision 2020, indicating need for improvement. Amadi (2013) conducted an evaluation of work-based learning experiences in technical and vocational (teacher) education and training (TVTET) courses in Nigeria. A structured questionnaire was used to collect data from 200 TVET instructors. The research advocated for greater collaboration between TVET universities and industry, while also highlighting deficiencies in work-based learning experiences. In order to enhance learning outcomes, the study evaluated work-based learning in TVET courses, identified gaps, and proposed tighter collaboration between TVET institutions and businesses. Chinedu and Oladiran (2015) studied the prospect of empowering Nigerian youth via technical vocational education and training to improve national security. The empowerment skill inventory checklist was combined with a descriptive survey approach. According to the research, vocational skills in industries like engineering and agriculture are critical for youth empowerment and national security.

Akpan and Amran (2014) investigated the impact of gender diversity on corporate performance in their paper Board Qualities and Firm Performance: Evidence from Nigeria. The study underscored the need for more women in leadership roles by discovering a positive relationship between board gender diversity and business profitability. Focus groups and in-depth interviews were employed in a qualitative study on the impediments to women's autonomy in research participation among Yoruba women in Western Nigeria. The study investigated the factors that influence women's autonomous decision-making in research involvement. The researchers' investigation of how gender diversity affects the performance of Nigerian organizations demonstrated the benefits of having more women in leadership roles. According to Princewill et al. (2017), the research proposed altering the legislation and proposed legislative approaches to attain gender parity, focusing on the factors that influence Yoruba women's autonomy in engaging in research. Antai (2012) utilized multilevel logistic regression to investigate gender inequalities, relationship power, and children vaccination uptake in Nigeria, utilizing data from the country's demographic and health surveys. The researchers identified a link between higher childhood immunization rates and women's decision-making autonomy and empowerment. He linked increased child immunization rates in Nigeria to women's empowerment and autonomy in decision-making. Apuke and Dogari (2017) investigated the influence of western television shows on the cultural values of students at Taraba State University in Jalingo, Nigeria. Using a cross-sectional survey approach, the study discovered that Western television shows had a major impact on young Nigerians' cultural values. It thus suggests integrating cultural elements into instructional programming. Together, these studies demonstrate the importance of social perception, policy, and doable tactics for improving TVET programmes' efficacy in empowering women and youth in Nigeria. These studies highlight the necessity of focused TVET changes in order to improve the program's influence on social advancement and economic empowerment in Nigeria.

**Methodology**

The benefits of inclusive TVET for women and youth empowerment on sustainable development in Nigeria were investigated using a mixed methods technique that included quantitative and qualitative investigations. The study focused mostly on the states of Ogun and Lagos. Senatorial districts in each state were divided into three categories: west, east, and central. In each stratum, one local government was expressly chosen, and that local government was assigned a quota of 128 participants. Goggled structured questionnaires were used to collect data from students, formal students, instructors, administrators, and future-ready and entrepreneurial skills at specific former TVET institutions, as well as policymakers, business leaders, and non-governmental organization representatives. The surveys evaluated demographics, gender inclusion, employment transition, and sustainable development. Due to the population's limitlessness, Cochran's approach was used to generate a sample size of 384 persons for each of the two (2) states. Structural Equation Modelling (SEM) was employed in AMOS Graphics 26 to provide light on the connections between variables and underlying constructs.

**Results and Discussions**



**Table 1:** Factor Loadings of Latent Variable and its Constructs

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | GR | TR | FR | EN | SI | IG | EL | SD |
| GI1 | .47 |  |  |  |  |  |  |  |
| GI2 | .87 |  |  |  |  |  |  |  |
| GI3 | .32 |  |  |  |  |  |  |  |
| TR1 |  | .71 |  |  |  |  |  |  |
| TR2 |  | .54 |  |  |  |  |  |  |
| TR3 |  | .55 |  |  |  |  |  |  |
| FR1 |  |  | .54 |  |  |  |  |  |
| FR2 |  |  | .64 |  |  |  |  |  |
| FR3 |  |  | .35 |  |  |  |  |  |
| EN1 |  |  |  | .48 |  |  |  |  |
| EN2 |  |  |  | .71 |  |  |  |  |
| EN3 |  |  |  | .71 |  |  |  |  |
| SI1 |  |  |  |  | .46 |  |  |  |
| SI2 |  |  |  |  | .62 |  |  |  |
| SI3 |  |  |  |  | .51 |  |  |  |
| IG1 |  |  |  |  |  | .48 |  |  |
| IG2 |  |  |  |  |  | .46 |  |  |
| IG3 |  |  |  |  |  | .60 |  |  |
| EL1 |  |  |  |  |  |  | .75 |  |
| EL2 |  |  |  |  |  |  | .64 |  |
| EL3 |  |  |  |  |  |  | .65 |  |
| SD1 |  |  |  |  |  |  |  | .63 |
| SD2 |  |  |  |  |  |  |  | .62 |
| SD3 |  |  |  |  |  |  |  | .50 |

*Source: Researchers Computation from AMOS V26 Graphical Presentation*

In a structural equation modelling framework, the factor loadings in Table 1 correspond to a variety of latent variables and their observed indicators, measuring constructs such as Gender Inclusion, Transition, Future-Ready Skills, Entrepreneurship Skills, Social Integration, Inclusive Growth, Eco-Literacy, and Sustainable Development. The indicators GI1 (0.47), GI2 (0.87), and GI3 (0.32) for Gender Inclusion exhibit moderate to significant relationships. GI2 is very high, indicating a solid measure of the construct, but GI3 is rather weak, implying possible heterogeneity in how well it reflects the Gender Inclusion construct. Transition is represented by TR1 (0.71), TR2 (0.54), and TR3 (0.55), which all have low loadings and give a reasonable level of consistency in assessing the transition construct. The Future-Ready Skills indicators FR1 (0.54), FR2 (0.64), and FR3 (0.35) also range from moderate to weak, with FR3 representing a weaker relationship. Entrepreneurial abilities are assessed using three measures: EN1 (0.48), EN2 (0.71), and EN3 (0.71). The last two show strong correlations, suggesting good idea representation. SI1 (0.46), SI2 (0.62), and SI3 (0.51), which measure social integration, all exhibit minor correlations. Indicators IG1 (0.48), IG2 (0.46), and IG3 (0.60) exhibit similar minor stability in inclusive growth. The Eco-Literacy construct is well-measured, as seen by the relatively significant loadings of Eco-Literacy for EL1 (0.75), EL2 (0.64), and EL3 (0.65).

Last but not least, SD1 (0.63), SD2 (0.62), and SD3 (0.50) all demonstrate the relevance and usefulness of these indicators in assessing their respective constructs within the model by providing moderate to strong indications of the strength of connection with the Sustainable Development construct. The fact that the component loadings often exhibit significant correlations confirms that the model's constructs effectively reflect the desired elements of sustainable development.

**Table 2:** Regression Weights: (Group number 1 - Default model)

| Path | Unstandardized Estimate | Standardized Estimate | S.E. | C.R. | P | Decision |
| --- | --- | --- | --- | --- | --- | --- |
| SI 🡨 GR | .193 | .135 | .116 | 1.660 | .097 | Insignificant |
| SI 🡨 TR | .340 | .457 | .079 | 4.296 | \*\*\* | Significant |
| SI 🡨 FR | -.019 | -.015 | .106 | -.179 | .858 | Insignificant |
| IG 🡨 TR | .503 | .534 | .102 | 4.929 | \*\*\* | Significant |
| IG 🡨 FR | .651 | .399 | .205 | 3.179 | .001 | Significant |
| IG 🡨 EN | .310 | .418 | .067 | 4.647 | \*\*\* | Significant |
| EL 🡨 FR | .777 | .421 | .229 | 3.387 | \*\*\* | Significant |
| EL 🡨 EN | .324 | .387 | .069 | 4.701 | \*\*\* | Significant |
| SI 🡨 EN | .466 | .795 | .078 | 5.993 | \*\*\* | Significant |
| SD 🡨 SI | .221 | .165 | .141 | 1.563 | .118 | Insignificant |
| SD 🡨 IG | .536 | .507 | .136 | 3.929 | \*\*\* | Significant |
| SD 🡨 EL | .471 | .504 | .086 | 5.479 | \*\*\* |  Significant |

*Source: Extracted from AMOS V26 Output*

Table 2 examines the impact of Gender Inclusion, Transition, Future-Ready Skills, and Entrepreneurship Skills on Social Integration, Inclusive Growth, Eco-Literacy, and Sustainable Development using regression weights from multiple paths inside a default model. While unstandardized estimates indicate the amount of change predicted per unit change in the predictor, standardized estimates reveal the relative importance of each predictor. The statistical significance of each path is determined using critical ratios (C.R.) and p-values (P), which indicate the reliability of the observed relationships.

The routes that lead to social integration through gender inclusion, transition, and entrepreneurial skills have varying degrees of effectiveness. With a standardized estimate of 0.457, transition has a significant positive influence on social integration, implying that it is an effective enhancer of social cohesion and integration in this model. Gender inclusion, on the other hand, has a positive connection with a standardized estimate of 0.135 but does not significantly predict social integration. This implies that other attributes may be more significant in this scenario. With a standardized estimate of 0.795, entrepreneurship skills have a significant beneficial impact on social integration, indicating how entrepreneurial pursuits actively enhance social interactions and integration.

Entrepreneurship, transition, and future-ready skills are all major predictors of inclusive growth. All of them provide a positive contribution, but Transition has the greatest influence (standardized estimate: 0.534), implying that environmental or regulatory changes or adjustments greatly encourage inclusive economic growth. With a standardized estimate of 0.399, Future-Ready Skills also contribute significantly, albeit at a lower potency than Transition, implying a moderate but insignificant influence. Entrepreneurial abilities, with a standardized value of 0.418, also support inclusive growth, emphasizing the importance of entrepreneurial activities in advancing broad-based economic development.

The relationship between entrepreneurship skills, future-ready skills, and eco-literacy: Both future-ready skills and entrepreneurship skills significantly increase eco-literacy. A standardized estimate of 0.421 demonstrates the strong positive impact of Future-Ready Skills on Eco-Literacy, emphasizing the importance of skills that prepare individuals for future concerns, such as environmental stewardship. With a standardized estimate of 0.387, the significant relationship between eco-awareness and entrepreneurial abilities suggests that eco-aware businesses can effectively promote ecological knowledge and sustainable practices.

The pathways to sustainable development show that, while social integration has no significant direct effect in this model (standardized estimate: 0.165), inclusive growth (standardized estimate: 0.507) and eco-literacy (standardized estimate: 0.504) predict sustainable development. The enormous benefits of eco-literacy and inclusive growth demonstrate the importance of these sectors in creating a sustainable future, as well as the role of ecological awareness and economic inclusion as accelerators for sustainable development. The absence of importance in the path from Social Integration shows that its function is more complex or influenced by elements not explicitly addressed in this model.

**Table 3:** Squared Multiple Correlations

| Model Specification | Estimate |
| --- | --- |
| IG ≈ TR + FR + EN | .620 |
| SI ≈ GR + TR + FR + EN | .860 |
| EL ≈ FR + EN | .327 |
| SD ≈ IG + SI + EL | .851 |

*Source: Extracted from AMOS V26 Output*

Table 3 shows the squared multiple correlations (SMC) for each dependent variable in the structural model, indicating the amount to which the specific predictors included account for the variation in each result. The SMC for inclusive growth (IG), as influenced by transition (TR), entrepreneurial skills (EN), and future-ready skills (FR), is 0.620. This shows that these factors have significant explanatory power, accounting for 62% of the variability in inclusive growth. However, it implies that there may be more relevant factors that are not included in the model. Gender Inclusion (GR), Transition (TR), Future-Ready Skills (FR), and Entrepreneurship Skills (EN) all predict Social Integration (SI), with an impressive SMC of 0.860. This startling number demonstrates that these factors explain 86% of the variation in Social Integration, indicating a robust model fit and an accurate depiction of the dynamics influencing Social Integration. The SMC of Eco-Literacy (EL) is 0.327, as determined by Future-Ready Skills (FR) and Entrepreneurship Skills (EN). This low figure indicates that the included factors account for just around 32.7% of the variation in Eco-Literacy. This demonstrates that the model has a lot of room for development, maybe through the addition of new elements influencing eco-literacy.

Finally, an SMC of 0.851 is reported for Sustainable Development (SD), which is influenced by Inclusive Growth (IG), Social Integration (SI), and Eco-Literacy (EL). This demonstrates that these variables account for 85.1% of the variance, demonstrating a highly robust model in which the selected predictors strongly explain changes in Sustainable Development. While the lower SMC value for EL suggests areas for further research and model refinement to better capture the elements influencing Eco-Literacy, the high SMC values for SI and SD highlight the model's use in these domains.

**Discussion of Findings**

The structural equation modelling results provide a full grasp of how diverse architectures affect social integration, inclusive growth, eco-literacy, and sustainable development. In terms of predicting, Social Integration (SI), Gender Inclusion (GR) shows an insignificant path coefficient but substantial factor loadings (GI1 =.47, GI2 =.87, and GI3 =.32). This demonstrates that, while gender inclusion metrics are valid, their impact on social integration may be indirect or impacted by other variables. Transition (TR) shows significant effects on both inclusive growth and social integration, with standardized estimates of.534 and.457 respectively, and moderate loadings (TR1 =.71, TR2 =.54, TR3 =.55). These findings show how essential Transition is in creating social cohesion and economic inclusion.

Future-Ready Skills (FR) had moderate to weak loadings (FR1 =.54, FR2 =.64, and FR3 =.35), indicating a mixed influence. Their importance in preparing individuals for environmental and economic problems is demonstrated by their significant effect on Eco-Literacy (standardized estimate =.421) and Inclusive Growth (standardized estimate =.399). Skills for Entrepreneurship. These abilities predict social integration, inclusive growth and eco-literacy with high standardized estimates (.795, .418, .387), implying that entrepreneurial skills are required for developing social bonds, economic growth, and environmental awareness. They have a high correlation with entrepreneurial skills (EN1 =.48, EN2 =.71, EN3 =.71). Eco-literacy (EL) components significantly predict sustainable development (EL1 =.75, EL2 =.64, EL3 =.65), highlighting the importance of ecological knowledge in accomplishing sustainability goals.

The P-values and Critical Ratios (C.R.) demonstrate the reliability of the observed relationships. Significant p-values (<.05) indicate strong connections between Entrepreneurship Skills, Social Integration, and Eco-Literacy. Social Integration (SI ≈.860) and Sustainable Development (SD ≈.851) Squared Multiple Correlations (SMC) show a strong model fit, indicating that the predictors accurately represent the dynamics influencing these outcomes.

The study's findings highlighted the crucial roles that entrepreneurial and future-ready skills play in promoting equitable growth, social integration, and Eco literacy, all of which contribute to sustainable development. Transition's moderate to strong effect on these issues emphasizes the need of policies and activities that promote economic inclusion and social cohesion. Though its direct impact on Sustainable Development is less significant, Gender Inclusion's influence through Social Integration highlights the importance of gender-sensitive training and educational activities. Overall, our findings support integrated methods that empower women and adolescents by combining structural aid with skill development, resulting in a more sustainable and inclusive future.

**Conclusion**

The study "Breaking Barriers: Pioneering Inclusive TVET for Women and Youth Empowerment in Nigeria" has revealed important new information about the roles that gender inclusion, employment transition, future-ready skills, and entrepreneurial skills play in promoting sustainable development. Using a rigorous structural equation modelling analysis, this study highlighted the critical pathways by which these factors interact to enhance socioeconomic outcomes for Nigerian women and youth. Both entrepreneurial and future-ready skills had a strong mediation effect on social integration, inclusive growth, and eco-literacy, as well as a noticeable favourable impact on sustainable development.

These findings suggest that providing adolescents and women with future-oriented skills and entrepreneurial competencies can significantly improve their capacity to actively participate in and reap the benefits of sustainable economic opportunities. Furthermore, the importance of employment transition highlights the necessity for structured support networks and legislation that encourage smooth transitions from school to the workplace, particularly in terms of their power to influence inclusive growth and social integration. This transition is crucial for each individual's professional success, as well as these groups' growing economic integration and capacity to contribute to long-term growth.

Gender inclusion, while having a smaller direct impact on sustainable development than other factors, was nonetheless important. Its influence on social integration, however, suggests that gender-sensitive strategies in TVET courses are required to break down traditional barriers and create an inclusive environment in which all participants have an equal chance to prosper. As a consequence, this study indicates that empowering women and youth in Nigeria necessitates a multifaceted approach that encompasses gender inclusion, employment transition, future-ready skills, and entrepreneurial abilities. Nigeria may construct a more equitable and sustainable development trajectory by implementing TVET programmes that not only provide individuals with the skills they require, but also eliminate institutional barriers to participation. It will be critical to continue to improve these programmes in the future in order to maximize their impact and ensure that they adapt to changing participant and economic needs.

The study sought to promote sustainable development by investigating mediating elements such as social integration, inclusive growth, and eco-literacy. The study's results and aims supported the following suggestions, which aim to strengthen TVET (Technical and Vocational Education and Training) initiatives in Nigeria. Creating curriculum that includes both genders and implementing support structures to encourage equitable participation approaches to increase the efficacy of TVET courses in Nigeria. To properly prepare students for the shifting labour market, TVET courses should include detailed instruction on entrepreneurship and future-ready skills. Strong industry ties are required to facilitate internships and job placements and provide a smooth transition for graduates into the workforce.

Programmes including sustainability and ecoliteracy may encourage equitable growth. Consistent curriculum modifications, designed in collaboration with industry and community stakeholders, to keep the training relevant and adaptive to shifting market demands and technological improvements.

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