

Inclusive Education Practices in the 5IR as a Correlate of Sustainable Development Goal 4 in Public Junior Secondary Schools in Rivers State

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Abstract

This study investigated inclusive education practices in the 5IR as a correlate of Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State. The study was guided by three objectives with corresponding research questions and hypotheses. The study adopted a correlation research design. The population of the study comprised of 7,492 teachers of all the 354 public junior secondary schools in Rivers State. A sample size of 749 respondents representing 10% of the total population was drawn through stratified sampling technique. The instrument for the study was a questionnaire of two sets titled: Inclusive Education Practices in the 5IR Assessment Scale (IEP5IRAS) and the Sustainable Development Goal 4 Assessment Scale (SDG4AS). The instrument was validated and the Cronbach Alpha method was used to determine its reliability, which yielded coefficients of 0.85 and 0.83 for IEP5IRAS and SDG4AS, respectively. Research questions were answered using Pearson Product Moment Correlation (PPMC) statistics, while the hypotheses were tested with the same statistics at a 0.05 level of significance. The findings revealed that there is a very low and insignificant relationship between assistive technology, inclusive curriculum content, accessible learning environments as inclusive education practices in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State. Based on the findings, it was concluded that a very low and insignificant relationship exist between assistive technology, inclusive curriculum content, accessible learning environments as inclusive education practices in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State, and this suggests a significant gap between policy intentions and practical implementation of inclusive education practices. Consequently, it was recommended among others that the government via the Ministry of Education should make deliberate efforts to integrate assistive technology into teaching and learning processes through adequate funding, training, and policy support to advance the achievement of SDG4 in the 5IR context.

Keywords: Inclusive Education Practices, 5th Industrial Revolution (5IR), Sustainable Development Goal 4 (SDG4)

Introduction

Education has long been recognised as a fundamental human right and a key driver of social, economic, and political development. In the 21st century, the emergence of the 5th Industrial Revolution (5IR) is reshaping global educational paradigms, demanding a shift from traditional methods to more adaptive, ethical, and inclusive approaches. The 5IR, often defined by the harmonious integration of advanced technologies such as artificial intelligence (AI), robotics, and biotechnology with human values like empathy, equity, and collaboration, offers an unprecedented opportunity to redefine how education is delivered and accessed (Marwala, 2022; Schwab & Zahidi, 2023).

One of the most pressing challenges in education today is achieving inclusion, ensuring that all learners, regardless of ability, socio-economic background, gender, ethnicity, or language, have equal access to quality learning opportunities. Inclusive education is defined as a process of addressing and responding to the diverse needs of all learners through increased participation in learning, cultures, and communities. It is a teaching approach that ensures all learners, regardless of their abilities, backgrounds, or differences, have equal opportunities to succeed. It embraces diversity, creating a supportive environment where every student feels valued and included. By adapting teaching methods and resources, teachers cater to the unique needs of each learner. Collaboration between teachers, students, and communities strengthens the effectiveness of inclusive education. Ultimately, it fosters understanding, empathy, and a sense of belonging for all through its practices (UNESCO, 2020).

Inclusive education practices involve teaching methods that support the learning of all students, regardless of their abilities or backgrounds. These practices emphasise flexible instruction, personalised support, and accessible learning environments. Collaboration among teachers, students, and families helps create an inclusive and supportive classroom. These practices, according to UNESCO (2020), include differentiated instruction, universal design for learning, use of assistive technology, collaborative teaching, peer support and cooperative learning, inclusive curriculum content, individualised education plans, accessible learning environments, positive behaviour support, and culturally responsive pedagogy. These practices, when amplified by 5IR technologies, hold the promise of improving learner engagement, participation, and achievement

across various learner groups. However, in this study, we will look at the use of assistive technology, inclusive curriculum content, and accessible learning environments.

Assistive technology refers to devices, tools, or software designed to support individuals with disabilities, helping them perform tasks that might otherwise be challenging. These technologies range from low-tech solutions like magnifiers and hearing aids to high-tech innovations such as speech-to-text software and AI-powered accessibility tools. Assistive technology enhances mobility, communication, learning, and daily activities, fostering independence and inclusion (WHO, 2024). It plays a crucial role in fostering inclusive education within the framework of the Fifth Industrial Revolution (5IR), where human-centered technological advancements drive equitable learning opportunities. The integration of assistive technology aligns with Sustainable Development Goal 4 (SDG4), which aims to provide inclusive and equitable quality education for all. By leveraging digital innovations, teachers can personalise learning experiences, enhance accessibility, and promote lifelong learning (Udeme et al., 2024).

Research highlights that assistive tools not only improve academic outcomes but also foster social inclusion, empowering students to engage meaningfully with their peers. As 5IR continues to evolve, the synergy between technology and inclusive education will be instrumental in achieving global educational equity (Adebayo & Lawal, 2022; WHO, 2024). These technologies which include software, hardware, and devices such as screen readers, voice recognition tools, and adaptive keyboards, which facilitate greater learning opportunities for students with diverse needs (Al-Azawei, Serenelli, & Lundqvist, 2016) in relation to the United Nations' Sustainable Development Goal 4 (SDG 4), aims to ensure inclusive, equitable, and quality education for all, the use of AT plays a critical role. It enhances access to education, particularly for learners with disabilities, by enabling them to overcome barriers and actively participate in the learning process. This alignment with SDG 4 fosters not only educational inclusion but also promotes lifelong learning opportunities for all students, irrespective of their abilities (United Nations, 2015). The incorporation of AT within the 5IR framework strengthens its potential to transform traditional educational settings into more adaptive and accessible environments, ensuring that no learner is left behind in the digital age (Burgstahler, 2020)

Furthermore, inclusive curriculum content refers to educational materials, teaching strategies, and learning experiences designed to accommodate diverse student needs, backgrounds, and abilities. It ensures that all learners, regardless of gender, disability, socioeconomic status, or cultural identity, can access and engage with the curriculum meaningfully. This approach integrates flexible learning methods, diverse perspectives, and accessible resources to foster equity and inclusion in education. An inclusive curriculum in the 5th Industrial Revolution (5IR) prioritises equitable access to education by integrating diverse learning materials, adaptive technologies, and personalised teaching strategies. This approach ensures that students of all backgrounds, abilities, and learning styles can fully participate in the educational process. The relationship between inclusive curriculum content and Sustainable Development Goal 4 (SDG4) is profound, as SDG4 aims to provide inclusive and equitable quality education while promoting lifelong learning opportunities (UNESCO, 2020). By leveraging 5IR innovations, such as AI-driven learning tools and digital accessibility solutions, teachers can create dynamic and responsive curricula that cater to individual needs. Research highlights that an inclusive curriculum fosters social cohesion, academic success, and economic empowerment, reinforcing the global commitment to educational equity (UNESCO, 2020; Ogunyemi, 2023; UNICEF, 2025).

In addition, an accessible learning environment in the context of inclusive education within the Fifth Industrial Revolution (5IR) refers to a learning space, both physical and digital, that is designed to accommodate the diverse needs of all learners, including those with disabilities, through the integration of intelligent technologies and human-centred innovations. This environment promotes equal participation by removing physical, cognitive, and technological barriers to learning through the use of adaptive tools, personalised content delivery, and inclusive pedagogical practices (World Bank, 2020). In alignment with Sustainable Development Goal 4 (SDG 4), which seeks to ensure inclusive and equitable quality education for all, accessible learning environments play a pivotal role in reducing disparities in education and fostering lifelong learning opportunities, especially for marginalised groups (UNESCO, 2020). The 5IR's emphasis on ethical technology deployment, human-machine collaboration, and personalisation enhances the creation of accessible learning settings that cater to varied learner needs, thereby supporting the global commitment to leave no one behind in education (Schwab & Zahidi, 2021; Yunus & Iqbal, 2024).

Given the above, inclusive education practices aim to dismantle systemic barriers and provide equitable support to all students. This is especially critical in public junior secondary schools, which serve a diverse and often underprivileged population. Sustainable Development Goal 4 (SDG 4), set by the United Nations, encapsulates this vision by calling for “inclusive and equitable quality education and lifelong learning opportunities for all” by 2030 (UNESCO, 2020). Sustainable Development Goal 4 (SDG 4) is one of the 17 global goals established by the United Nations as part of the 2030 Agenda for Sustainable Development. It aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (United Nations, 2015). This goal recognises education as a fundamental human right and a key driver of sustainable development, economic growth, and social inclusion. SDG 4 encompasses a broad range of targets, including universal access to quality early childhood education, free primary and secondary education, equal access to affordable vocational training and higher education, and the elimination of gender disparities and barriers faced by vulnerable groups such as persons with disabilities and indigenous peoples (UNESCO, 2022).

However, for many developing countries, including Nigeria, realising SDG 4 remains a formidable task. Public junior secondary schools frequently face constraints such as inadequate funding, poor infrastructure, teacher shortages, and limited access to digital tools. Also, learners with disabilities, those from rural communities, and children in marginalised groups continue to be excluded from meaningful participation in the classroom (Oyetunde & Igbokwe, 2023). Without intentional and inclusive practices, the education system risks leaving behind the very populations it seeks to empower. The 5IR introduces technologies that, when used ethically and equitably, can transform education. AI-powered learning platforms can personalise instruction, adapt to individual learning needs, and support learners with special needs. Virtual and augmented reality tools can create immersive environments for learners who otherwise struggle in conventional classroom settings. Cloud-based learning management systems can ensure that learning continues beyond the physical classroom, especially for students in remote or conflict-affected regions (Sithole & Chinyamurindi, 2023). Importantly, the 5IR also places emphasis on inclusion by design, a principle that urges innovators to create solutions that serve diverse populations from the outset.

Despite these prospects, the extent to which inclusive education practices informed by the 5IR have been adopted in Nigerian public junior secondary schools remains underexplored. While

government policies recognise the importance of inclusive education, implementation has been uneven and often symbolic. There is also a knowledge gap regarding how these practices align with the broader goals of sustainable development. Studies show that without a deliberate effort to integrate inclusive strategies with technology-enhanced teaching, disparities in educational outcomes are likely to persist (Ejiogu & Ugwuanyi, 2024). Therefore, it is imperative to examine how inclusive education practices in the era of the 5IR can serve as a correlate of achieving SDG 4 in public junior secondary schools. Moreover, focusing on public junior secondary schools is strategic, as this level of education plays a foundational role in shaping the academic, social, and emotional trajectory of learners. Interventions at this stage can have long-term impacts on retention, career readiness, and social inclusion. A school system that embraces inclusive practices not only fosters a culture of equity but also builds national capacity for innovation, tolerance, and sustainable development (UNICEF, 2023).

Hence, inclusive education practices in the age of the 5IR are not merely a response to social justice concerns; they are essential tools for achieving sustainable educational outcomes. As Nigeria and other nations navigate the complexities of educational reform, understanding the interplay between inclusivity, technological advancement, and development goals becomes crucial. This study thus seeks to contribute to that understanding by investigating how inclusive education practices, underpinned by the principles of the 5IR, correlate with the achievement of SDG 4 in public junior secondary schools in Rivers State.

Statement of the Problem

Despite global advancements in education, the realisation of Sustainable Development Goal 4 (SDG 4), which aims to ensure inclusive and equitable quality education for all, remains a significant challenge in many developing regions. In Rivers State, Nigeria, it has been alleged that the implementation of inclusive education practices in public junior secondary schools is often hampered by inadequate infrastructure, limited awareness, and insufficient policy enforcement. As the world embraces the Fifth Industrial Revolution (5IR), characterised by the integration of advanced technologies with human-centric development, there is a growing need to align inclusive education practices with these innovations to promote equity in learning outcomes. However, the extent to which assistive technologies, inclusive curriculum content, and accessible learning

environments are adopted in these schools is unclear. Many learners with diverse needs continue to face systemic barriers that hinder their full participation and achievement in education. This raises concerns about whether current practices effectively correlate with the targets of SDG 4 in the context of the 5IR. It is, therefore, imperative to examine the relationship between inclusive education practices through the lens of the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.

Aim and Objectives of the Study

The aim of this study was to examine the relationship between inclusive education practices in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State. Specifically, the objectives of the study sought to:

1. determine the relationship between assistive technology practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.
2. ascertain the relationship between inclusive curriculum content practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.
3. find out the relationship between accessible learning environment practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.

Research Questions

The following research questions guided the study:

1. What is the relationship between assistive technology practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State?
2. What is the relationship between inclusive curriculum content practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State?
3. What is the relationship between accessible learning environment practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State?

Hypotheses

The following null hypotheses were tested at a 0.05 level of significance.

Ho₁: There is no significant relationship between assistive technology practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.

Ho₂: There is no significant relationship between inclusive curriculum content practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.

Ho₃: There is no significant relationship between accessible learning environment practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.

Methodology

This study employed a correlational research design to determine the relationship between the independent variable (Inclusive Education Practices in the 5IR) and the dependent variable (Sustainable Development Goal 4). The population for this study consisted of 354 public junior secondary schools in Rivers State, specifically 7,492 teachers (i.e., 3,121 male and 4,371 female). Source: Rivers State Universal Basic Education Board, 2025. A stratified sampling technique was employed to select a sample size of 749 respondents, representing 10% of the total population. The research instrument for this study included a questionnaire with two sets: Inclusive Education Practices in the 5IR Assessment Scale (IEP5IRAS) and the Sustainable Development Goal 4 Assessment Scale (SDG4AS). This instrument has two sections (A and B). Section A gathered demographic information from the respondents, while Section B addressed items related to research questions one through three. The instrument's items were rated on a 4-point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD). The instrument was validated, and its reliability was assessed using Cronbach's Alpha reliability statistics, which yielded coefficients of 0.85 and 0.83 for the (IEP5IRAS) and (SDG4AS), respectively. The data for this study were primarily collected by the researcher. A total of 749 copies of the questionnaire were distributed to the respondents, with 658 copies retrieved and deemed suitable for analysis, resulting in an 88% retrieval rate. The data collected for the study were analysed using Pearson

Product Moment Correlation Coefficient (PPMC) statistics. Research questions were answered based on the value and direction of the correlation coefficients. Correlation coefficients between 0.90 and 1.00 were considered Very High (VH), 0.70 to 0.80 were High (H), while coefficients between 0.50 and 0.60 were Moderate (M), and between 0.30 and 0.40 were Low (L), with coefficients below 0.20 (< 0.20) classified as Very Low (VL). Additionally, the same correlation statistics were used to test the corresponding hypotheses at a 0.05 significance level. Data obtained were processed using Statistical Packages for the Social Sciences (SPSS) version 23.23.00.

Results and Analysis

The results of the analysed data for the research questions and their corresponding hypothesis are presented in tables as shown below.

Research Question 1: What is the relationship between assistive technology practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State?

Table 2: Pearson Product Moment Correlation (PPMC) Showing the Relationship between Assistive Technology Practice in the 5IR and Sustainable Development Goal 4 (SDG4) in Public Junior Secondary Schools in Rivers State

Variables	n	Df	r	Decision
Assistive Technology Practice	658			
		656	0.121	Very Low Relationship
Sustainable Development Goal 4 (SDG4)	658			

Decision Rule: 0.90 – 1.00 = Very High (VH), 0.70 – 0.80 = High (H), 0.50 – 0.60 = Moderate (M), 0.30 – 0.40 = Low (L), 0.20 (< 0.20) = Very Low (VL).

Source: Researcher's Field Result, 2025.

Data in Table 1 reveal a correlation coefficient of $r = 0.12$. This value is very low, indicating that there is a very low relationship between assistive technology practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.

Research Question 2: What is the relationship between inclusive curriculum content practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State?

Table 2: Pearson Product Moment Correlation (PPMC) Showing the Relationship between Inclusive Curriculum Content Practice in the 5IR and Sustainable Development Goal 4 (SDG4) in Public Junior Secondary Schools in Rivers State

Variables	n	Df	r	Decision
Inclusive Curriculum Content Practice	658	656	0.154	Very Low Relationship
Sustainable Development Goal 4 (SDG4)	658			

Decision Rule: 0.90 – 1.00 = Very High (VH), 0.70 – 0.80 = High (H), 0.50 – 0.60 = Moderate (M), 0.30 – 0.40 = Low (L), 0.20 (< 0.20) = Very Low (VL).

Source: Researcher’s Field Result, 2025.

Data in Table 2 reveal a correlation coefficient of $r = 0.15$. This value is very low, indicating that there is a very low relationship between inclusive curriculum content practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.

Research Question 3: What is the relationship between accessible learning environments practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State?

Table 3: Pearson Product Moment Correlation (PPMC) Showing the Relationship between Accessible Learning Environments Practice in the 5IR and Sustainable Development Goal 4 (SDG4) in Public Junior Secondary Schools in Rivers State

Variables	n	Df	r	Decision
Accessible Learning Environments Practice	658	656	0.183	Very Low Relationship
Sustainable Development Goal 4 (SDG4)	658			

Decision Rule: 0.90 – 1.00 = Very High (VH), 0.70 – 0.80 = High (H), 0.50 – 0.60 = Moderate (M), 0.30 – 0.40 = Low (L), 0.20 (< 0.20) = Very Low (VL).

Source: Researcher’s Field Result, 2025.

Data in Table 3 reveal a correlation coefficient of $r = 0.18$. This value is very low, indicating that there is a very low relationship between accessible learning environments practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.

Test of Hypotheses

Hypothesis 1: There is no significant relationship between assistive technology practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.

Table 4: The Level of Significant Relationship between Assistive Technology Practice in the 5IR and Sustainable Development Goal 4 (SDG4) in Public Junior Secondary Schools in Rivers State

Variables	n	df	r	p-value	Level of Significance	Decision
Assistive Technology Practice	658	656	0.121	4.57	0.05	H_{01} Accepted (Not Significant)
Sustainable Development Goal 4 (SDG4)	658					

Source: Researcher's Field Result, 2025

For the hypothesis tested, it was revealed from Table 4 that r of 0.12 is not significant with $P > 0.05$ because the calculated probability value of 4.57 is higher than the critical probability value (level of significance) of 0.05. Therefore, the null hypothesis was accepted. By implication, there is no significant relationship between assistive technology practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.

Hypothesis 2: There is no significant relationship between inclusive curriculum content practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.

Table 5: The Level of Significant Relationship between Inclusive Curriculum Content Practice in the 5IR and Sustainable Development Goal 4 (SDG4) in Public Junior Secondary Schools in Rivers State

Variables	n	df	r	p-value	Level of Significance	Decision
Inclusive Curriculum Content Practice	658	656	0.154	4.13	0.05	Ho ₂ Accepted (Not Significant)
Sustainable Development Goal 4 (SDG4)	658					

Source: Researcher's Field Result, 2025

For the hypothesis tested, it was revealed from Table 5 that r of 0.154 is not significant with $P > 0.05$ because the calculated probability value of 4.13 is higher than the critical probability value (level of significance) of 0.05. Therefore, the null hypothesis was accepted. By implication, there is no significant relationship between inclusive curriculum content practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.

Hypothesis 3: There is no significant relationship between accessible learning environment practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.

Table 6: The Level of Significant Relationship between Accessible Learning Environment Practice in the 5IR and Sustainable Development Goal 4 (SDG4) in Public Junior Secondary Schools in Rivers State

Variables	n	df	r	p-value	Level of Significance	Decision
Accessible Learning Environments Practice	658	656	0.183	4.19	0.05	Ho ₃ Accepted (Not Significant)
Sustainable Development Goal 4 (SDG4)	658					

Source: Researcher's Field Result, 2025

For the hypothesis tested, it was revealed from Table 6 that r of 0.18 is not significant with $P > 0.05$ because the calculated probability value of 1.89 is higher than the critical probability value (level of significance) of 0.05. Therefore, the null hypothesis was accepted. By implication, there is no significant relationship between accessible learning environment practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State.

Discussion of Findings

The first finding of the study revealed a very low relationship between assistive technology practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State. Also, a corresponding hypothesis tested established no significant relationship between assistive technology practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State. These findings contradict United Nations (2015), Al-Azawei et al. (2016), Burgstahler (2020), Adebayo and Lawal (2022), WHO (2024) who studies present information that there is a link between assistive technology practice in the 5IR and Sustainable Development Goal 4 (SDG4). A possible explanation to these findings could be attribute to limited infrastructure, inadequate teacher training, and poor policy

implementation. The implication of the result is that the constraints would hinder effective integration of inclusive education technologies as advocated in the 5IR, thereby weakening their impact on achieving quality education for all which is the target of SDG4.

The second finding of the study showed a very low relationship between inclusive curriculum content practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State. Similarly, a corresponding hypothesis tested established no significant relationship between inclusive curriculum content practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State. These findings oppose UNESCO (2020) Ogunyemi (2023), and UNICEF (2025) whose works averred that there is positive significant relationship between inclusive curriculum content practice in the 5IR and Sustainable Development Goal 4 (SDG4). A possible explanation to these findings may stem from outdated curricula and insufficient alignment with inclusive education standards. This implies that the disconnect as revealed by the findings would hamper efforts to equitable, quality education in line with SDG4 objectives.

The second finding of the study showed a very low relationship between accessible learning environments practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State. Similarly, a corresponding hypothesis tested established no significant relationship between accessible learning environments practice in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State. These findings contradict UNESCO (2020), Schwab and Zahidi (2021), and Yunus and Iqbal (2024), whose studies presented empirical evidence that there is a significant relationship between accessible learning environments practice in the 5IR and Sustainable Development Goal 4 (SDG4). An explanation to these findings may be due to poor infrastructural development and lack of investment in adaptive facilities. The implication of this would be the restriction access of learners with diverse needs, undermining the goal of inclusive and equitable education.

Conclusion

Based on the findings, the study concludes that there is a very low and insignificant relationship between assistive technology, inclusive curriculum content, accessible learning environments as inclusive education practices in the 5IR and Sustainable Development Goal 4 (SDG4) in public junior secondary schools in Rivers State. This suggests a significant gap between policy intentions and practical implementation of inclusive education practices. Consequently, targeted efforts are needed to strengthen infrastructure, training, and policy enforcement to align 5IR practices with the goals of quality education and inclusive education.

Recommendations

Given the findings and conclusion of the study, the following are recommended:

1. Government through the Ministry of Education should make deliberate efforts to integrate assistive technology into teaching and learning processes through adequate funding, training, and policy support to advance the achievement of SDG4 in the 5IR context.
2. Curriculum developers should integrate inclusive content to align with 5IR principles to ensure all learners are equitably supported in achieving the objectives of SDG4
3. Educational policy makers and school administrators should improve infrastructure and adopt inclusive design standards to create accessible learning environments that support the realisation of SDG4 in the 5IR era.

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