

Management of Indigenous Knowledge and Quality Education Delivery in Public Senior Secondary Schools in Rivers State, Nigeria

Ukala Chinyere Catherine

Department of Educational Management
Faculty of Education University of Port Harcourt

ABSTRACT

The study investigated management of indigenous knowledge and quality education delivery in senior secondary schools in Rivers State, Nigeria. Three objectives, three research questions and three hypotheses guided the study. The study adopted correlational research design. The population for this study consisted of the 313 principals in 313 public senior secondary schools in Rivers State. The sample size used for the study was 313 respondents using census sampling technique. The instruments for data collection are two self-structured questionnaires titled “Management of Indigenous Knowledge Questionnaire and Quality Education Delivery Questionnaire with 30 items. The reliability coefficient of management of indigenous knowledge was .86 and quality education delivery was .87 while utilization of indigenous knowledge was .83 and strategies to improve indigenous knowledge was .89 using Cronbach method. The research questions were answered using simple regression statistics, while t-test was used to test the hypotheses at 0.05 level of significance. The findings among others showed that management of indigenous knowledge contributed to quality education delivery by 21.8% while the hypothesis showed that management of indigenous knowledge significantly contributed to quality education delivery in senior secondary schools in Rivers State.

Keywords: Management, Indigenous, Knowledge, Education

INTRODUCTION

Indigenous knowledge is seen as the philosophy, skill and culture which constitute a way of life developed over the years by local communities through historical interactions with their natural environment. This interaction plays a crucial role in the ways they handle the challenges of life. However, contemporary discourse in education increasingly recognises the importance of contextually relevant knowledge systems for improving teaching and learning outcomes (Battiste, 2020; UNESCO, 2017). In many postcolonial societies such as Nigeria, indigenous knowledge – that is, the body of cultural, environmental, and communal insights passed down through generations often remains underutilized or sidelined in formal school curricula (Clarke, 2020; Jacob, and Samuel, 2020). When effectively managed and integrated into teaching practices, indigenous knowledge can serve as a powerful foundation upon which students build cultural identity and achieve deeper academic engagement. However, many schools remain reliant on lecture-dominant methods that often overlook local knowledge systems and innovative technological methods of instruction (Habler, 2019) which remains silent or ignored in the field of development. In Rivers State, significant heterogeneity in

cultural practices and resource distribution complicates the implementation of new pedagogical models (Eric & Ezeugo, 2019).

Although government initiatives encourage the use of Information and Communication Technology (ICT) tools, teacher proficiency in such technologies and awareness of indigenous pedagogical strengths are unevenly distributed (Othieno et al., 2024). This gap underscores the urgency for research exploring the practical ramifications of combining indigenous education strategies with modern technology to advance student learning and cultural appreciation. Overcoming this gap necessitates a deliberate management of local knowledge resources, encompassing systematic documentation, teacher training, and alignment with national educational policies. This study therefore explores how managing indigenous knowledge can enhance the overall quality of education in Rivers State's public secondary schools.

Despite Underpinning this study was a combination of constructivist theory and sociocultural learning theory (Vygotsky, 2022; Battiste, 2020). Constructivism suggests that learners form knowledge most effectively when actively engaged (Nwankwo et al., 2024; Ukala et al., 2023) and encouraged to connect new information to prior experiences and cultural contexts (Hattie, 2023). Socio-cultural learning theory emphasises how cultural practices, beliefs, and social interactions shape cognitive development. By effectively managing (i.e., collecting, documenting, archiving, and disseminating) indigenous knowledge, teachers can leverage local contexts to make formal education more relevant, thus promoting deeper comprehension and long-term retention (Darling-Hammond, 2020).

Management of Indigenous Knowledge

Management of indigenous knowledge refers to the systematic processes involved in identifying, preserving, transferring, and appropriately utilising local cultural and community wisdom within educational settings (Battiste, 2020; Brown, 2017). Indigenous education draws on local languages, traditions, and problem-solving strategies passed down through generations (Battiste, 2020). Research indicates that students exposed to culturally relevant content often demonstrate higher motivation, better attendance, and improved conceptual understanding (Jebson, 2023). In Nigeria, the prevalence of diverse ethnic groups underscores the potential richness that local knowledge systems bring to the classroom if harnessed appropriately (Clarke, 2020). However, a persistent challenge lies in training teachers to effectively document and adapt indigenous knowledge for contemporary curricula while maintaining cultural authenticity and integrity.

Quality Education Delivery Secondary Schools

Quality education typically features engaging pedagogy, relevant curriculum, adequate resources, and meaningful learning outcomes (UNESCO, 2017; Slavin, 2018). In the context of Rivers State, these indicators must align with the local environment and cultural heritage if lessons are to resonate with learners. Scholars argue that indigenous knowledge management can be a catalyst for higher-order thinking and better performance, provided there is administrative support, community engagement, and ongoing professional development to guide implementation.

Empirical Evidence and Gaps

Although recent policy documents highlight the importance of cultural relevance in Nigerian schools (Jacob & Samuel, 2020), integrating with systems with modern pedagogical tools to foster meaningful learning experiences (Habler, 2019; UNESCO, 2017). Despite promising theoretical frameworks, empirical data on such integrative approaches in Rivers State, integrating the active management of indigenous knowledge remain sparse. Additionally, while some schools have embraced pockets of technology usage or introduced cultural elements, systematic exploration of their combined effect on students' performance is lacking (Eric & Ezeugo, 2019). With these observations, a thorough investigation is essential to determine how teacher practices, administrative policies, and community collaborations can institutionalize indigenous knowledge management and, by extension, elevate the quality of education in Rivers State.

Challenges in the Management of Indigenous Knowledge

Challenges are instruments that hinder the actualization of organizational goals and objective. There are several challenge befalling the management of indigenous knowledge for quality educational delivery in public senior secondary schools in Rivers State. One of the major issues in managing indigenous knowledge generally is language barriers; for instance in Rivers State, there are language barriers due to more than ten ethnic languages that it becomes a problem of which one to be introduced during instrumental delivery.

Indigenous knowledge of often transmitted orally and lack formal written documentation. This has the effect of making it loose valuable information over time especially as the older generation translates. Moreover, indigenous knowledge most time resists to change, minding adaptation to new technologies and the knowledge to remain the way their ancestors that used it. It also includes sensitivity respect and access to indigenous common and digital divide among others.

Strategies in the Management of Indigenous Knowledge

The environment where we line is dynamic. Civilized society employs all available knowledge at their disposal whether such knowledge is documented or acquired. Knowledge Is an important procedure factors any civilized society must recognize. It could be acquired through experience, oral transition, folk tales or education. It could be by perception, discovery, experience or learning something in the school system of such Environment that ensure students are impacted upon with necessary tradition, culture, skills, ethics, thou among others which they will in turn use to impact on the society positively. Every culture has a procedure for carrying out its activities efficiently to achieve its goals and objectives.

As a result there are strategies that enable teachers as well as government to play the role effectively.

1. Development of the child's physical skills Character through moral training.
2. Development of intellectual and Social skill of the learner.
3. To acquire specific vocational training among the youth for self reliance.
4. To develop healthy attitude towards labour high integrity, accountability and transparency

Statement of the Problem

Despite reforms to make the curriculum more engaging, the persistent under utilization of locally relevant content and limited integration of technological tools seems to pose challenges for learners in public senior secondary schools in Rivers State. Consequently, students seem to find classroom content abstract, disconnected from their life experiences, and lacking the dynamism that modern pedagogical technologies can provide. This shortcoming underscores the need for a focused investigation into the extent to which indigenous knowledge management can bolster educational quality.

Aim and Objectives of the Study

The aim of this study is to investigate management of indigenous knowledge and quality education delivery in senior secondary schools in Rivers State, Nigeria. Specifically, the study sought to:

1. examine the extent management of indigenous knowledge contributes to quality education delivery in senior secondary schools in Rivers State.
2. identify the extent utilization of indigenous knowledge contributes to quality education delivery in senior secondary schools in Rivers State.
3. find out the extent strategies to improve indigenous knowledge contributes to quality education delivery in senior secondary schools in Rivers State.

Research Questions

The following research questions guided the study

1. To what extent does management of indigenous knowledge contributes to quality education delivery in senior secondary schools in Rivers State?
2. To what extent does utilization of indigenous knowledge contributes to quality education delivery in senior secondary schools in Rivers State?
3. To what extent does strategies to improve indigenous knowledge contributes to quality education delivery in senior secondary schools in Rivers State?

Research Hypotheses

The following null hypotheses were tested at 0.05 alpha level of significance

1. Management of indigenous knowledge does not significantly contribute to quality education delivery in senior secondary schools in Rivers State.
2. Utilization of indigenous knowledge does not significantly contribute to quality education delivery in senior secondary schools in Rivers State.
3. Strategies to improve indigenous knowledge do not significantly contribute to quality education delivery in senior secondary schools in Rivers State.

METHODOLOGY

The study adopted correlational research design. The population for this study consisted of the 313 principals in 313 public senior secondary schools in the 23 Local Government Areas of Rivers State. The sample size used for this study was 313 respondents representing 100% of the entire population using census sampling technique. The instruments for data collection are two self-structured questionnaires titled "Management of Indigenous Knowledge Questionnaire" (MIKQ) and Quality Education Delivery Questionnaire (QEDQ) with 30 items. A sample of 30 principals from Bayelsa State who share the same characteristics were used for

the reliability test. The reliability coefficient of management of indigenous knowledge was .82 and quality education delivery was .87 while management of indigenous knowledge was .86, utilization of indigenous knowledge was .76 and strategies to improve indigenous knowledge was .89 respectively using Cronbach method. Out of 313 copies of the questionnaire administered, 300 copies were properly filled and retrieved which represented 96% success. The research questions were answered using simple regression statistics, while t-test was used to test the hypotheses at 0.05 level of significance.

RESULTS

Data Presentation

Research Question 1

To what extent does management of indigenous knowledge contribute to quality education delivery in senior secondary schools in Rivers State?

Table 1: Simple regression on the extent management of indigenous knowledge contribute to quality education delivery in senior secondary schools in Rivers State

Model	R	R Square	Adjusted R Square
1	.467 ^a	.218	.051

Table 1 revealed that the regression and regression square coefficients are .467 and .218. The extent of contribution is obtained from coefficient of determinism. The coefficient of determinism is 21.8% (.218×100). This showed that management of indigenous knowledge contributed to quality education delivery by 21.8% in senior secondary schools in Rivers State.

Research Question 2

To what extent does utilization of indigenous knowledge contribute to quality education delivery in senior secondary schools in Rivers State?

Table 2: Simple regression on the extent utilization of indigenous knowledge contribute to quality education delivery in senior secondary schools in Rivers State

Model	R	R Square	Adjusted R Square
1	.481 ^a	.231	.040

Table 2 revealed that the regression and regression square coefficients are .481 and .231. The extent of contribution is obtained from coefficient of determinism. The coefficient of determinism is 23.1% (.231×100). This showed that utilization of indigenous knowledge contributed to quality education delivery by 23.1% in senior secondary schools in Rivers State.

Research Question 3

To what extent does strategies to improve indigenous knowledge contribute to quality education delivery in senior secondary schools in Rivers State?

Table 3: Simple regression on the extent strategies to improve indigenous knowledge contribute to quality education delivery in senior secondary schools in Rivers State

Model	R	R Square	Adjusted R Square
1	.473 ^a	.223	.271

Table 3 revealed that the regression and regression square coefficients are .473 and .223. The extent of contribution is obtained from coefficient of determinism. The coefficient of determinism is 22.3% (.223×100). This showed that strategies to improve indigenous knowledge contributed to quality education delivery by 22.3% in senior secondary schools in Rivers State.

Test of Hypotheses

- **Hypothesis 1:** Management of indigenous knowledge does not significantly contribute to quality education delivery in senior secondary schools in Rivers State.

Table 4: t-test associated with simple regression on the extent management of indigenous knowledge contribute to quality education delivery in senior secondary schools in Rivers State

Model		Unstandardized Coefficients		Standardized Coefficients	t	P-value	Decision
		B	Std. Error	Beta			
1	(Constant)	28.520	2.080		13.709	.000	Hp rejected
	Management of indigenous knowledge	.227	.056	.467	4.055	.000	

Table 4 showed that management of indigenous knowledge has t-test value of 4.055 with probability value (p-value) of 0.00. The result revealed that the p-value of 0.00 is less than the alpha level of 0.05. Therefore, the null hypothesis was rejected. By implication, management of indigenous knowledge significantly contributed to quality education delivery in senior secondary schools in Rivers State.

- **Hypothesis 2:** Utilization of indigenous knowledge does not significantly contribute to quality education delivery in senior secondary schools in Rivers State.

Table 5: t-test associated with simple regression on the extent utilization of indigenous knowledge contribute to quality education delivery in senior secondary schools in Rivers State

Model		Unstandardized Coefficients		Standardized Coefficients	t	P-value	Decision
		B	Std. Error	Beta			
1	(Constant)	42.450	1.529		27.756	.000	Hp rejected
	Utilization of indigenous knowledge	.151	.042	.481	3.603	.000	

Table 5 showed that utilization of indigenous knowledge has t-test value of 3.603 with probability value (p-value) of 0.00. The result revealed that the p-value of 0.00 is less than the alpha level of 0.05. Therefore, the null hypothesis was rejected. By implication, utilization of indigenous knowledge significantly contributed to quality education delivery in senior secondary schools in Rivers State.

- **Hypothesis 3:** Strategies to improve indigenous knowledge does not significantly contribute to quality education delivery in senior secondary schools in Rivers State.

Table 6: t-test associated with simple regression on the extent strategies to improve indigenous knowledge contribute to quality education delivery in senior secondary schools in Rivers State

Model		Unstandardized Coefficients		Standardized Coefficients	t	P-value.	Decision
		B	Std. Error	Beta			
1	(Constant)	17.583	1.859		9.458	.000	Hp rejected
	strategies to improve indigenous knowledge	.524	.050	.473	10.426	.000	

Table 6 showed that strategies to improve indigenous knowledge have t-test value of 10.426 with probability value (p-value) of 0.00. The result revealed that the p-value of 0.00 is less than the alpha level of 0.05. Therefore, the null hypothesis was rejected. By implication, strategies to improve indigenous knowledge significantly contributed to quality education delivery in senior secondary schools in Rivers State.

SUMMARY OF FINDINGS

The Findings of this Study are Summarized as Shown Below:

1. Management of indigenous knowledge contributed to quality education delivery by 21.8%.
2. Utilization of indigenous knowledge contributed to quality education delivery by 23.1%.
3. Strategies to improve indigenous knowledge contributed to quality education delivery by 22.3%.
4. Management of indigenous knowledge significantly contributed to quality education delivery in senior secondary schools in Rivers State.
5. Utilization of indigenous knowledge significantly contributed to quality education delivery in senior secondary schools in Rivers State.
6. Strategies to improve indigenous knowledge significantly contributed to quality education delivery in senior secondary schools in Rivers State.

Management of Indigenous Knowledge and Quality Education Delivery

The first finding of the study revealed that management of indigenous knowledge contributed to quality education delivery by 21.8% while the hypotheses showed that management of indigenous knowledge significantly contributed to quality education delivery in senior secondary schools in Rivers State. This is in agreement with Coffelt et al. (2022) that communication skills are the one that holds the power to bridge the gap between mankind. There is need for principal communication skill that will bring about quality education delivery in secondary schools. School leaders have developed potential for dealing with all temperament people whether argumentative or empathetic. This is a skill is possessed by students or working professional to ensure quality education delivery. For students, this may turn very helpful if the teachers plan activities and sessions to cultivate communication skills rightly at correct time as

it will be beneficial for them in all Spheres of life, Stevens (2018). Indigenous communication skills have long been an issue within the teaching industry. Poor communication as one of the primary causes of deficiency within labor management relations. In the twenty-first century workplace, there are increasing expectations of students entering into the workforce to possess exceptional indigenous communication skills (Mitchell et al, 2021).

Utilization of Indigenous Knowledge and Quality Education Delivery

The second finding of the study revealed that utilization of indigenous knowledge contributed to quality education delivery by 23.1% while the hypothesis show that utilization of indigenous knowledge significantly contributed to quality education delivery in senior secondary schools in Rivers State. This is in agreement with Remedios (2023) that utilization of indigenous knowledge entails that the students are made to work together to achieve slated goals. Organizing the students on utilization of indigenous knowledge encourages collaboration and enhanced team relationship. Warrick (2022) deduced that implementing the utilization of indigenous knowledge could considerably enhance performance, morale, effectiveness, efficiency, job satisfaction, innovative thinking, unity of purpose, quality and loyalty to an organization and speed in accomplishing tasks.

Strategies to Improve Indigenous Knowledge and Quality Education Delivery

The third finding of the study revealed that strategies to improve indigenous knowledge contributed to quality education delivery by 22.3% while the hypothesis showed that strategies to improve indigenous knowledge significantly contributed to quality education delivery in senior secondary schools in Rivers State. This is in agreement with Fulya et al. (2018) that the strategies to improve indigenous knowledge help one in managing any circumstances that may arise many difficulties. These strategies to improve indigenous knowledge strengthen one to withstand in any of the situation and come up with its solution. Keeping the current situation in mind one should work over his strategies as they are the part of an unexpected world, where any kind of situation may turn into an adverse one. This is the reason students are prepared to overcome difficult circumstances. The teacher can manage this by coordinating the students to think critically using their initiative to proffer solutions in problem situations.

CONCLUSION

The study was concluded that management of indigenous knowledge contributed to quality education delivery by 21.8%, utilization of indigenous knowledge contributed to quality education delivery by 23.1%, strategies to improve indigenous knowledge contributed to quality education delivery by 22.3% in senior secondary schools in Rivers State.

Recommendations

The following are hereby recommended:

1. Classroom teachers should improve their indigenous communication skill in order to ensure to quality education delivery in senior secondary schools in Rivers State.
2. Teachers should always utilize indigenous knowledge to ensure quality education delivery.
3. Teachers should constantly improve their strategies to improve indigenous knowledge to ensure quality education delivery in senior secondary schools in Rivers State.

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