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TIME RESOURCE MANAGEMENT PRACTICES AND SUSTAINABLE EDUCATION DELIVERY IN PUBLIC UNIVERSITIES IN RIVERS STATE

OBAA, Patience Ochinya[1] & Cynthia Obiageli Patricia OKERE, PhD[2]

[1&2] Department of Educational Management, Faculty of Education, Rivers State University, Nkpolu-oroworukwo, Port Harcourt, Rivers State

Email: Parfectpatos123@gmail.com[1], Cynthia.okere@ust.edu.ng[2]

ABSTRACT

This study examined the relationship between time resource management practices and sustainable education delivery in public universities in Rivers State. Specifically, the study investigated the relationship between structured academic timetabling and scheduling, time allocation for instructional delivery and time management for research and scholarly activities. A correlational research design was adopted for the study. The study was conducted in three public universities in Rivers State: University of Port Harcourt, Rivers State University, and Ignatius Ajuru University of Education. The population of the study comprised 240 academic staff, and a sample of 150 was selected using stratified random sampling. Data were collected using structured questionnaires titled "Time Resource Management Practices Questionnaire (TRMPQ)" and "Sustainable Education Delivery Questionnaire (SEDQ)." The instruments were validated by experts in Educational Management and Educational Measurement and Evaluation. Reliability coefficients of 0.81 and 0.84 were obtained using the Cronbach Alpha method, indicating high internal consistency. Data were analyzed using Pearson Product Moment Correlation Coefficient (PPMCC), while hypotheses were tested through t-transformation of the correlation coefficients at the 0.05 level of significance. The findings revealed that structured academic timetabling and scheduling ($r = .72$, $t = 12.32$, $p < .05$), time allocation for instructional delivery ($r = .78$, $t = 14.80$, $p < .05$) and time management for research and scholarly activities ($r = .69$, $t = 11.32$, $p < .05$ all had high positive and significant relationships with sustainable education delivery in public universities in Rivers State. The study concluded that effective time resource management practices significantly enhance sustainable education delivery in public universities. It was recommended, among others, that university administrators should develop comprehensive time management frameworks, strengthen academic timetabling systems and ensure adequate time allocation for instructional and research activities.

KEYWORDS: Time resource management, academic timetabling, instructional delivery, sustainable education delivery, Rivers State.

INTRODUCTION

Time resource management refers to the deliberate, systematic planning, coordination, and utilization of time as a strategic organizational resource within educational institutions to facilitate effective and efficient execution of academic programmes and institutional

objectives. In university settings, time is one of the most critical yet most mismanaged resources, often determining the pace of academic delivery, the quality of learning experiences, and the long-term sustainability of educational programmes. Every academic activity from lectures, seminars, and practical sessions to research, examinations, and student engagement is governed by time, making its proper management indispensable for institutional success. Babalola and Ayeni (2021) observed that systematic time resource management in Nigerian universities promotes institutional efficiency, reduces academic disruptions, and significantly enhances the overall sustainability of educational delivery. This view underscores the imperative for administrators of public universities in Rivers State to adopt deliberate, evidence-based approaches to managing time as a critical academic resource.

The concept of time resource management in higher education encompasses a wide range of administrative and academic functions, including academic calendar planning, timetabling, examination scheduling, allocation of contact hours for teaching and research, and the creation of structured time for student support activities. In Nigerian public universities, the challenge of irregular academic calendars, frequent disruptions caused by strike actions, and poorly coordinated timetables has persistently undermined the quality and continuity of educational delivery. Fadipe (2020) emphasized that effective time management in tertiary institutions is fundamental to improving the productivity of academic staff, enhancing student learning outcomes, and ensuring the overall efficiency of institutional operations. The cumulative effect of poor time management in Nigerian public universities is evident in delayed graduations, reduced research output, and diminished programme relevance, all of which collectively threaten the sustainability of education delivery.

Sustainable education delivery refers to the capacity of a higher institution to consistently provide quality academic programmes, maintain programme continuity, produce measurable academic outcomes, and ensure equitable access to learning opportunities over time without compromising institutional standards. Akpan and Nwadiani (2022) defined sustainable education delivery as the ability of institutions to maintain uninterrupted academic services while continuously improving teaching quality, research output, and student learning achievement. In public universities in Rivers State, sustainable education delivery has become a growing concern due to the impact of poor resource planning including the mismanagement of time resources on institutional performance and programme sustainability.

Structured academic timetabling and scheduling involves the organized arrangement of teaching hours, examination periods, staff workload distributions, and other academic activities within a defined academic calendar to ensure orderly, uninterrupted programme delivery. Effective timetabling ensures that courses are taught at appropriate intervals, institutional resources are optimally utilized, and time conflicts are minimized. Larabi-Marie-Sainte et al. (2021) found that the design of course timetables significantly affects student attendance behaviour and academic performance, with structured scheduling associated with notably lower absenteeism and improved learning outcomes compared to poorly planned timetabling arrangements. Poor timetabling, on the other hand, results in overlapping course schedules,

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overloading of lecture venues, inadequate contact hours, and, ultimately, poor programme sustainability and declining academic quality in public universities.

Time allocation for instructional delivery refers to the deliberate assignment of adequate and appropriate time for teaching, tutorials, practical sessions, and other learning activities that constitute the core of academic programme delivery. Adequate instructional time ensures that curriculum content is properly covered, students receive sufficient academic exposure, and teaching quality is maintained at acceptable standards. Oboegbulem and Eze (2021) reported that adequate time allocation for instructional activities is significantly associated with improved academic performance among university students and enhanced programme effectiveness in Nigerian higher institutions. When instructional time is compromised through unplanned administrative activities, staff absenteeism, or academic disruptions, the quality and sustainability of education delivery declines, resulting in poor student outcomes and programme inefficiency.

Time management for research and scholarly activities involves the systematic creation and protection of time within the academic schedule for staff members to engage in research, publication, innovation, and continuous professional development. Research output is a critical component of university sustainability, institutional accreditation, and national ranking. Kyvik and Aksnes (2015) found that improved funding conditions and dedicated time for research are among the strongest predictors of scholarly productivity, with academic staff who have better-protected research time recording significantly higher publication rates. In many public universities in Rivers State, the absence of protected research time, attributable to excessive teaching loads and administrative demands, reduces scholarly productivity and undermines the long-term sustainability of educational programmes.

Sustainable education delivery in public universities is manifested through several key indicators. Programme effectiveness and continuity refer to the consistent implementation of academic programmes in accordance with established standards and timelines, ensuring that students complete their studies within the expected duration. Ejere (2021) noted that time-related disruptions in universities directly compromise programme continuity and significantly reduce institutional credibility. Quality of academic output encompasses the standard of teaching, research, and learning outcomes produced by the institution, all of which are directly influenced by how time is managed across academic activities.

Staff productivity and performance in universities reflect the level of commitment, efficiency, and output of academic and non-academic staff in their core responsibilities. Staff performance is closely tied to time management, as poorly organized academic environments reduce motivation, efficiency, and commitment to institutional goals. Nwogu and Obi (2022) reported that institutions with structured time management frameworks record significantly higher levels of staff performance and academic productivity than those without such systems in Nigerian public universities. Student learning achievement and engagement reflect the ability of institutions to support students' academic success and facilitate active participation in learning processes. Kuh et al. (2005) established that student engagement in educationally purposeful activities is strongly associated with improved academic achievement and

institutional retention, with the quality of time allocated to structured academic engagement serving as a critical determinant of educational outcomes.

Time resource management practices in public universities in Rivers State are critical to addressing the persistent challenges of poor programme implementation, academic disruptions, and declining educational quality. The three public universities in Rivers State University of Port Harcourt, Rivers State University, and Ignatius Ajuru University of Education face common challenges of irregular academic calendars, inadequate timetabling systems, research time deficits, and insufficient structured time for student engagement. Ibara and Odeh (2022) noted that inadequate management of academic time in Rivers State universities contributes to programme delays, reduced research output, and declining student performance. The sustainability of education delivery in these institutions therefore depends on the adoption of evidence-based time resource management practices.

Several empirical studies have examined aspects of time management and educational sustainability in Nigeria. Babalola and Ayeni (2021) found that poor time planning in Nigerian universities undermines institutional effectiveness, but their study did not focus specifically on sustainable education delivery as a composite variable. Fadipe (2020) established that time management improves staff performance in tertiary institutions, but the study was not limited to public universities in Rivers State. Oboegbulem and Eze (2021) reported a significant relationship between instructional time allocation and student performance but did not examine the broader dimensions of time resource management. Larabi-Marie-Sainte et al. (2021) examined the impact of timetabling design on student performance but did not integrate this variable with other time management dimensions. Kyvik and Aksnes (2015) found that structured research time improves scholarly productivity but did not examine sustainable education delivery as the dependent variable. Igwe and Nwosu (2022) investigated academic calendar management and continuity but did not integrate student engagement time allocation. Ogbondah (2022) linked student engagement time to academic retention but did not empirically test the relationship with sustainable education delivery. These studies, while valuable, reveal a significant gap in empirical investigation of the comprehensive relationship between multiple dimensions of time resource management and sustainable education delivery in public universities within the Rivers State context. This study therefore addresses this gap by examining how structured academic timetabling and scheduling, time allocation for instructional delivery, time management for research and scholarly activities, and time allocation for student engagement programmes collectively relate to sustainable education delivery in public universities in Rivers State.

Statement of the Problem

Public universities in Rivers State are mandated to deliver quality, consistent, and sustainable education that meets national academic standards and serves the developmental needs of the state and the nation. Ideally, time resource management in these institutions should involve structured academic timetabling and scheduling, adequate time allocation for instructional delivery and protected time for research and scholarly activities. When these time management dimensions are effectively implemented, they are expected to enhance programme

effectiveness and continuity, improve the quality of academic output, increase staff productivity and performance, and strengthen student learning achievement and engagement, thereby ensuring sustainable education delivery.

However, the reality in many public universities in Rivers State reveals a significant gap between the ideal and the actual time resource management practices. Structured academic timetabling is often poorly implemented, leading to course conflicts, inadequate contact hours, and disrupted academic schedules. Time allocation for instructional delivery is frequently reduced by unplanned administrative activities, recurrent strike actions, and academic staff absenteeism. Time management for research and scholarly activities is largely absent from formal academic schedules, resulting in excessive teaching loads that crowd out research time and reduce scholarly output. These deficiencies negatively affect programme effectiveness and continuity, lower the quality of academic output, reduce staff productivity, and weaken student learning achievement, thereby threatening the sustainability of education delivery in Rivers State public universities.

The present situation in Rivers State public universities is characterized by frequent academic disruptions, extended programme durations beyond stipulated periods, declining research output, and increasing student dissatisfaction with academic support services. These challenges are partly rooted in the inadequate management of time as an academic resource. Poor academic calendar management, absence of protected research time, inadequate instructional scheduling, and the lack of structured student engagement time collectively undermine the capacity of these institutions to deliver sustainable quality education. There is therefore an urgent need to empirically examine how time resource management practices relate to sustainable education delivery in public universities in Rivers State, so that appropriate institutional policies and administrative strategies may be recommended to address this persistent challenge.

Purpose of the Study

The purpose of this study was to examine the relationship between time resource management practices and sustainable education delivery in public universities in Rivers State. Specifically, the objectives were to:

1. examine the relationship between structured academic timetabling and scheduling and sustainable education delivery in public universities in Rivers State.
2. determine the relationship between time allocation for instructional delivery and sustainable education delivery in public universities in Rivers State.
3. ascertain the relationship between time management for research and scholarly activities and sustainable education delivery in public universities in Rivers State.

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Research Questions

1. What is the relationship between structured academic timetabling and scheduling and sustainable education delivery in public universities in Rivers State?
2. What is the relationship between time allocation for instructional delivery and sustainable education delivery in public universities in Rivers State?
3. What is the relationship between time management for research and scholarly activities and sustainable education delivery in public universities in Rivers State?

Hypotheses

1. There is no significant relationship between structured academic timetabling and scheduling and sustainable education delivery in public universities in Rivers State.
2. There is no significant relationship between time allocation for instructional delivery and sustainable education delivery in public universities in Rivers State.
3. There is no significant relationship between time management for research and scholarly activities and sustainable education delivery in public universities in Rivers State.

Methodology

This study adopted a correlational research design because it sought to examine the relationship between time resource management practices and sustainable education delivery in public universities in Rivers State without manipulating any of the variables. The correlational design was considered appropriate because it enabled the researcher to determine the strength, direction, and significance of the relationships between the independent variable dimensions structured academic timetabling and scheduling, time allocation for instructional delivery and time management for research and scholarly activities, and the dependent variable, sustainable education delivery. The design also provided an empirical basis for establishing whether changes in time resource management dimensions are associated with corresponding changes in programme effectiveness and continuity, quality of academic output, staff productivity and performance, and student learning achievement and engagement.

The study was conducted in three public universities in Rivers State, Nigeria: University of Port Harcourt, Rivers State University, and Ignatius Ajuru University of Education. These universities were purposively selected because they represent the main federally and state-funded public higher institutions of learning in Rivers State, making them appropriate for investigating time resource management practices in the context of sustainable education delivery. These institutions are also subject to similar administrative regulations and academic calendars, making comparative assessment meaningful within a single study.

The population of the study consisted of 240 academic staff drawn from the three selected public universities in Rivers State. A sample of 150 academic staff was drawn using stratified random sampling. The stratification was based on faculty/college affiliation within each university to ensure proportional representation of all academic departments and faculties in the sample. From the University of Port Harcourt, 65 academic staff were selected; from Rivers

State University, 55 academic staff; and from Ignatius Ajuru University of Education, 30 academic staff, totalling 150 participants.

The instruments used for data collection were structured questionnaires divided into two sections: "Time Resource Management Practices Questionnaire (TRMPQ)" and "Sustainable Education Delivery Questionnaire (SEDQ)." Section A of the TRMPQ contained items on structured academic timetabling and scheduling, time allocation for instructional delivery and time management for research and scholarly activities. Section B, the SEDQ, contained items on programme effectiveness and continuity, quality of academic output, staff productivity and performance, and student learning achievement and engagement. The items were structured using a four-point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD) to enable respondents to express their level of agreement with each statement.

The instruments were validated through face and content validation by three experts in Educational Management and two experts in Educational Measurement and Evaluation from Rivers State University and Ignatius Ajuru University of Education. Their observations, corrections, and suggestions were incorporated into the final versions of the instruments to ensure clarity, adequacy, and content relevance of the questionnaire items. The reliability of the instruments was determined through a pilot study involving 20 academic staff from a public university outside the main study area. Data obtained from the pilot study were analyzed using the Cronbach Alpha reliability method. The reliability coefficient for the TRMPQ was 0.81, while the SEDQ yielded a reliability coefficient of 0.84, indicating high levels of internal consistency and confirming that both instruments were reliable for data collection.

The researcher, with the assistance of three trained research assistants, personally administered 150 copies of the questionnaire to respondents across the three selected universities. A total of 143 copies were successfully retrieved and found usable for data analysis, representing a retrieval rate of 95.3%, which was considered adequate for the study. The five questionnaire copies not returned were from academic staff who were not available during the data collection period. The direct administration method enhanced accessibility to respondents and ensured a high response rate, while also providing opportunities to address any ambiguities encountered by respondents during completion.

Data collected for this study were analyzed using the Pearson Product Moment Correlation Coefficient (PPMCC). The research questions were answered based on the value and direction of the correlation coefficient. Correlation coefficient values from 0.10 to 0.40 were regarded as low correlation, 0.50 as moderate correlation, while values from 0.60 to 1.00 were regarded as high correlation. The hypotheses were tested at the 0.05 level of significance by transforming the correlation coefficient (r) into t-values using the t-transformation formula. The null hypothesis was rejected where the calculated t-value exceeded the critical t-value at the 0.05 alpha level with 141 degrees of freedom; otherwise, it was retained. This statistical procedure enabled the study to determine the strength, direction, and significance of the relationships between each dimension of time resource management and sustainable education delivery in public universities in Rivers State.

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Results and Discussion

Research Question 1: What is the relationship between structured academic timetabling and scheduling and sustainable education delivery in public universities in Rivers State?

Table 1: Pearson Product Moment Correlation (PPMCC) analysis on the relationship between structured academic timetabling and scheduling and sustainable education delivery

Correlations	Structured Academic Timetabling and Scheduling	Sustainable Education Delivery	Correlation Level
Structured Academic Timetabling and Scheduling Pearson Correlation	1	.72	High
Sig. (2-tailed)		.000	
N	143	143	
Sustainable Education Delivery Pearson Correlation	.72	1	
Sig. (2-tailed)	.000		
N	143	143	

Table 1 shows the summary of the Pearson Product Moment Correlation analysis on the relationship between structured academic timetabling and scheduling and sustainable education delivery in public universities in Rivers State. The Pearson correlation value of .72 indicates a high positive relationship between structured academic timetabling and scheduling and sustainable education delivery. This finding implies that effective organization of academic timetables, proper scheduling of courses, examinations, and staff workloads, and the maintenance of a structured academic calendar are associated with greater sustainability of educational delivery in public universities. Structured timetabling enhances programme continuity, ensures adequate contact hours for instructional delivery, reduces academic disruptions, and promotes quality academic output. The result suggests that university administrators should prioritize the development and enforcement of structured academic timetabling systems to enhance sustainable education delivery.

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Research Question 2: What is the relationship between time allocation for instructional delivery and sustainable education delivery in public universities in Rivers State?

Table 2: Pearson Product Moment Correlation (PPMCC) analysis on the relationship between time allocation for instructional delivery and sustainable education delivery

Correlations	Time Allocation for Instructional Delivery	Sustainable Education Delivery	Correlation Level
Time Allocation for Instructional Delivery Pearson Correlation	1	.78	High
Sig. (2-tailed)		.000	
N	143	143	
Sustainable Education Delivery Pearson Correlation	.78	1	
Sig. (2-tailed)	.000		
N	143	143	

Table 2 presents the Pearson Product Moment Correlation analysis on the relationship between time allocation for instructional delivery and sustainable education delivery in public universities in Rivers State. The Pearson correlation value of .78 indicates a high positive relationship between time allocation for instructional delivery and sustainable education delivery. This finding implies that adequate and appropriate time assigned for lectures, tutorials, practical sessions, and other teaching and learning activities contributes significantly to programme sustainability. Sufficient instructional time ensures comprehensive curriculum coverage, improves teaching quality, enhances student academic performance, and promotes the overall effectiveness of educational delivery. The result therefore indicates that adequate time allocation for instructional activities is critical to achieving sustainable education delivery in public universities in Rivers State.

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Research Question 3: What is the relationship between time management for research and scholarly activities and sustainable education delivery in public universities in Rivers State?

Table 3: Pearson Product Moment Correlation (PPMCC) analysis on the relationship between time management for research and scholarly activities and sustainable education delivery

Correlations	Time Management for Research and Scholarly Activities	Sustainable Education Delivery	Correlation Level
Time Management for Research and Scholarly Activities Pearson Correlation	1	.69	High
Sig. (2-tailed)		.000	
N	143	143	
Sustainable Education Delivery Pearson Correlation	.69	1	
Sig. (2-tailed)	.000		
N	143	143	

Table 3 shows the Pearson Product Moment Correlation analysis on the relationship between time management for research and scholarly activities and sustainable education delivery in public universities in Rivers State. The Pearson correlation value of .69 indicates a high positive relationship between time management for research and scholarly activities and sustainable education delivery. This finding implies that the deliberate allocation and protection of time for staff research, publication, innovation, and professional development activities is associated with improved sustainability of educational delivery. Adequate research time enhances academic staff scholarly productivity, improves institutional research output, strengthens faculty credibility, and supports the overall quality and sustainability of academic programmes. The result suggests that university administrators should establish institutional frameworks for protecting and managing research time among academic staff.

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Test of Hypothesis 1

Table 4: Summary of t-Transformation on the significant relationship between structured academic timetabling and scheduling and sustainable education delivery

Variables	N	Df	t-Trans.	t-crit.	Sig.	Remark
Structured Academic Timetabling and Scheduling	143	141	12.32	1.96	0.000	Rejected
Sustainable Education Delivery	143					

The data in Table 4 revealed that the calculated t-value of 12.32 is greater than the critical t-value of 1.96 at the 0.05 alpha level with 141 degrees of freedom. Therefore, the null hypothesis, which states that there is no significant relationship between structured academic timetabling and scheduling and sustainable education delivery in public universities in Rivers State, is rejected. The alternative hypothesis, which states that a significant relationship exists, is upheld. This implies that effective academic timetabling and scheduling significantly enhances sustainable education delivery by improving programme continuity and stability, ensuring adequate instructional time, reducing academic disruptions, and promoting quality academic output in public universities in Rivers State.

Test of Hypothesis 2

Table 5: Summary of t-Transformation on the significant relationship between time allocation for instructional delivery and sustainable education delivery

Variables	N	Df	t-Trans.	t-crit.	Sig.	Remark
Time Allocation for Instructional Delivery	143	141	14.80	1.96	0.000	Rejected
Sustainable Education Delivery	143					

The data in Table 5 revealed that the calculated t-value of 14.80 is greater than the critical t-value of 1.96 at the 0.05 alpha level with 141 degrees of freedom. Therefore, the null hypothesis, which states that there is no significant relationship between time allocation for instructional delivery and sustainable education delivery in public universities in Rivers State, is rejected. The alternative hypothesis is accepted. This implies that adequate time allocation for instructional delivery significantly contributes to sustainable education delivery through

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improved curriculum coverage, enhanced teaching effectiveness, better student academic performance, and greater programme effectiveness and continuity in public universities.

Test of Hypothesis 3

Table 6: Summary of t-Transformation on the significant relationship between time management for research and scholarly activities and sustainable education delivery

Variables	N	Df	t-Trans.	t-crit.	Sig.	Remark
Time Management for Research and Scholarly Activities	143	141	11.32	1.96	0.000	Rejected
Sustainable Education Delivery	143					

The data in Table 6 revealed that the calculated t-value of 11.32 is greater than the critical t-value of 1.96 at the 0.05 alpha level with 141 degrees of freedom. Therefore, the null hypothesis, which states that there is no significant relationship between time management for research and scholarly activities and sustainable education delivery in public universities in Rivers State, is rejected. The alternative hypothesis is accepted. This implies that effective management and protection of research time for academic staff significantly enhances sustainable education delivery by improving scholarly output, institutional research capacity, faculty credibility, and the overall quality of academic programmes in public universities in Rivers State.

Discussion of Findings

The findings from Research Question 1, presented in Table 1, revealed that there is a high positive and significant relationship between structured academic timetabling and scheduling and sustainable education delivery in public universities in Rivers State ($r = .72$; $t = 12.32$; $p < .05$). The result indicates that effective organization of academic schedules, proper allocation of teaching periods, and the maintenance of a structured academic calendar contribute significantly to programme continuity, quality instructional delivery, staff productivity, and student learning achievement. This finding is consistent with the work of Larabi-Marie-Sainte et al. (2021), who demonstrated that structured course timetabling significantly reduces student absenteeism and improves academic performance, affirming that well-organised scheduling frameworks contribute positively to institutional educational outcomes. The finding is also consistent with that of Igwe and Nwosu (2022), who reported that effective academic calendar management plays a crucial role in sustaining programme continuity and ensuring uninterrupted educational delivery in Nigerian federal universities. The corresponding hypothesis tested further showed that the calculated t-value of 12.32 was greater than the critical t-value of 1.96, leading to the rejection of the null hypothesis and confirming the

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existence of a significant relationship between structured academic timetabling and scheduling and sustainable education delivery.

The findings from Research Question 2, presented in Table 2 also revealed a high positive and significant relationship between time allocation for instructional delivery and sustainable education delivery in public universities in Rivers State ($r = .78$; $t = 14.80$; $p < .05$). This suggests that adequate and appropriate time assigned for teaching, tutorials, practical sessions, and other learning activities significantly enhances programme sustainability. The finding supports the work of Oboegbulem and Eze (2021), who found that adequate time allocation for instructional activities is significantly associated with improved academic performance among university students and enhanced programme effectiveness in Nigerian higher institutions. Similarly, Ololube (2022) reported that instructional time management in Nigerian universities is a critical determinant of educational quality, staff performance, and long-term institutional sustainability. The hypothesis associated with this objective showed that the calculated t-value of 14.80 exceeded the critical t-value of 1.96, resulting in the rejection of the null hypothesis. This confirms that time allocation for instructional delivery has a significant relationship with sustainable education delivery in public universities in Rivers State.

The findings from Research Question 3, presented in Table 3 revealed a high positive and significant relationship between time management for research and scholarly activities and sustainable education delivery in public universities in Rivers State ($r = .69$; $t = 11.32$; $p < .05$). The result implies that the systematic allocation and protection of time for research, publication, and scholarly development are associated with improved quality of academic output, enhanced institutional credibility, and greater programme sustainability. This finding is in agreement with Kyvik and Aksnes (2015), who found that academic staff with improved research conditions and dedicated time for scholarly activities record significantly higher publication rates, with structured research time identified as a key predictor of scholarly output. The finding also aligns with Drucker (2006), who emphasized that effective time management is a foundational practice in building productive and sustainable knowledge-driven organizations, including universities. The hypothesis tested indicated that the calculated t-value of 11.32 was greater than the critical t-value of 1.96, leading to the rejection of the null hypothesis. This outcome confirms that time management for research and scholarly activities significantly influences sustainable education delivery in public universities in Rivers State.

Conclusion

Based on the findings of the study, it was concluded that time resource management practices are critical factors in achieving sustainable education delivery in public universities in Rivers State. The study established that structured academic timetabling and scheduling, time allocation for instructional delivery and time management for research and scholarly activities all have high positive and significant relationships with sustainable education delivery. This indicates that effective management of time across these dimensions enhances programme effectiveness and continuity, the quality of academic output, staff productivity and performance, and student learning achievement and engagement.

The study further concluded that the sustainability of education delivery in public universities in Rivers State depends largely on the adoption of evidence-based and deliberate time resource management practices. Akpan and Nwadiani (2022) affirmed that sustainable education delivery is only achievable when institutions systematically align their resource management strategies including time with institutional standards and long-term academic goals. When adequate time is allocated to instructional activities, research, and structured timetabling, public universities are better positioned to provide quality educational services, maintain institutional standards, improve stakeholder satisfaction, and sustain long-term programme effectiveness. Therefore, sound time resource management remains indispensable for achieving and maintaining sustainable education delivery in public universities in Rivers State.

Recommendations

Based on the conclusions of the study, the following recommendations were made:

1. University administrators and senate committees in public universities in Rivers State should develop and enforce comprehensive academic timetabling policies that clearly define course scheduling, teaching loads, examination periods, and workload distributions for all academic staff to minimize disruptions and enhance programme continuity.
2. University management should implement institutional policies that guarantee adequate and protected time for instructional delivery, ensuring that teaching hours are not compromised by administrative activities, ensuring that minimum contact hours are maintained across all programmes and faculties in public universities.
3. Academic administrators should establish formal research time frameworks that protect a designated proportion of each academic staff member's weekly schedule for research, publication, and professional development, so as to improve scholarly productivity and enhance the quality of academic output in public universities in Rivers State.

References

Akpan, C. P., & Nwadiani, M. (2022). Sustainable education delivery and institutional governance in Nigerian public universities. *Journal of Educational Administration and Policy Studies, 14*(2), 45–60.

Babalola, J. B., & Ayeni, A. O. (2021). Time management and institutional effectiveness in Nigerian universities. *Journal of Educational Management, 19*(3), 55–70.

Drucker, P. F. (2006). *The effective executive: The definitive guide to getting the right things done*. HarperBusiness.

Ejere, E. I. (2021). Time management practices and organizational productivity in Nigerian public institutions. *Nigerian Journal of Management Studies, 12*(4), 88–103.

Fadipe, J. O. (2020). Time management and the enhancement of educational delivery in Nigerian tertiary institutions. *Journal of the Nigerian Educational Research Association, 23*(1), 12–28.

Ibara, E. C., & Odeh, B. C. (2022). Time resource challenges and academic quality in public universities in Rivers State. *International Journal of Educational Management and Leadership, 8*(1), 61–76.

Igwe, R. O., & Nwosu, C. C. (2022). Academic calendar management and programme continuity in Nigerian federal universities. *Journal of Educational Administration, 16*(3), 78–93.

Kuh, G. D., Kinzie, J., Schuh, J. H., & Whitt, E. J. (2005). *Student success in college: Creating conditions that matter*. Jossey-Bass.

Kyvik, S., & Aksnes, D. W. (2015). Explaining the increase in publication productivity among academic staff: A generational perspective. *Studies in Higher Education, 40*(8), 1438–1453. https://doi.org/10.1080/03075079.2015.1060711

Larabi-Marie-Sainte, S., Jan, R., Al-Matouq, A., & Alabduhadi, S. (2021). The impact of timetable on student's absences and performance. *PLOS ONE, 16*(6), e0253256. https://doi.org/10.1371/journal.pone.0253256

Nwogu, E. U., & Obi, C. N. (2022). Staff performance management and academic productivity in public universities in Nigeria. *Nigerian Journal of Higher Education Research, 9*(1), 14–30.

Oboegbulem, A. I., & Eze, T. I. (2021). Instructional time allocation and student academic achievement in Nigerian universities. *Journal of Curriculum and Instructional Development, 11*(4), 66–81.

Ogbondah, L. (2022). Student engagement time and academic retention in Rivers State University. *Journal of Educational Development in Nigeria, 13*(2), 50–65.

Ololube, N. P. (2022). Educational management and institutional performance in Nigerian universities: Challenges and prospects. *International Journal of Educational Management, 36*(4), 102–118.

UNESCO. (2021). *Reimagining our futures together: A new social contract for education*. UNESCO Publishing.