

Teachers Professional Development and Content Delivery in Public Senior Secondary Schools in Rivers State

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Abstract

The study investigated teachers' professional development and instructional delivery in public senior secondary schools in Rivers State. Three objectives were formulated and translated into corresponding research questions and hypotheses. The study adopted a correlational research design. The population for this study was 6,557 teachers in the 302 public senior secondary schools in Rivers State. The sample for this study consisted of 984 teachers. The teachers were stratified into male and female groups. The sample size was determined using 15% of the total population of the study. The instrument that was used for data collection is a self-constructed questionnaire titled Teachers' Professional Development and Instructional Delivery Questionnaire (TPDIDQ). To determine the reliability of the instrument, the completed copies of the questionnaire were analyzed for reliability using Cronbach Alpha method which yielded reliability coefficients of 0.81, 0.83, and 0.88 with an average reliability coefficient of 0.85 which showed the instruments were reliable. The data collected for the study were analyzed using Pearson's Product Moment Correlation Coefficient (PPMCC) formula. Research questions were answered based on the value and direction of the correlation coefficient while hypotheses were tested for significance of relationship at 0.05 level of significance. This was further tested by transforming the coefficient of correlation (r) to t in order to establish the significance or otherwise of the r – value. The study found that there is a moderate positive relationship between workshops and instructional delivery in public senior secondary schools in Rivers State. It concluded that by establishing clear, consistent, and evidence-based professional development criteria, school administrators can create an environment that supports teachers' continuous growth and motivation. This, in turn, can result in better instructional practices, improved student engagement, and overall educational outcomes. It recommended among others that schools should organize frequent workshops focusing on contemporary teaching methods and instructional strategies to improve teachers' content delivery skills.

Introduction

The quest for improvement in instructional delivery had necessitated the application of quality system management standards in the education sector. Instructional delivery is one of the most critical tasks facing every nation's educational institutions, so that the societal demands for improved education service delivery would achieve the best learning outcomes that enhance the quality of life of the citizenry (Weli & Ollor, 2021). It is a well-known fact that the major role of a teacher is instructional delivery (Ayodele & Ayiti, 2018). Instructional delivery involves facilitating, articulating and engineering the minds and attitudes of learners for socioeconomic development and national building. Instructional delivery refers to any specifiable means of controlling or manipulating a sequence of events to produce the required modification of behaviour through learning (Anyagwu, 2012; Ebeniza & Ukegbu, 2015). Instructional delivery embraces all human interactive skills employed by the teacher to promote and facilitate learning in the classroom situation thereby leading to improved performance on the part of the learner. It is a process in which teachers apply catalog of instructional strategies to communicate and interact with the learners around academic instructional, and to support student engagement for better learning outcome (Onwuagboke, Singh & Fook, 2015). It is important to state at this point that teachers cannot be dissociated from the schools where they teach and the academic results of the schools because teaching and learning depend on teachers. If the teacher is ineffective, students under the guidance of the teachers will not achieve any academic growth. Instructional delivery refers to the various methods, approaches and procedures that teachers adopt in order to deliver effectively the instructional of a lesson. The delivery method adopted in the teaching learning process reveals the level of preparedness of the teacher. Experience as well as observation of the researcher as a trained teacher seems to indicate that some teachers are inadequately prepared for their lesson. It seems that teachers attend to their classes in unsettled and harassed states due to unpreparedness for the day's lesson or lateness to work resulting in poor instructional delivery. It appears that teachers use any teaching method that seems easy to them and some adopt the lecture method without considering its suitability to the topic, age, ability or class of the students.

Teachers' professional development (PD) is a continuous process essential for enhancing the quality of education and improving student outcomes. Effective PD helps teachers stay updated with the latest educational research, pedagogical techniques, and technological advancements. According to Darling-Hammond, Hyler, and Gardner (2017), high-quality professional development is characterized by being instructional-focused, incorporating active learning, supporting collaboration, using models of effective practice, providing coaching and expert support, offering feedback and reflection, and being sustained in duration.

One of the primary goals of PD is to deepen teachers' instructional knowledge and pedagogical skills. For instance, workshops and seminars on specific subjects help teachers gain new insights and innovative strategies for instructional delivery (Desimone & Garet, 2015). In-service training programmes provide opportunities for teachers to enhance their expertise while actively teaching, allowing them to immediately apply new skills in their classrooms. Professional Learning Communities (PLCs) are another effective PD approach. These communities bring together groups of educators to share best practices, discuss challenges, and collaborate on lesson

planning and instructional strategies (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). This collaborative environment fosters continuous learning and professional growth.

Teachers are expected to have sound knowledge of their subject areas to be able to select appropriate and adequate facts for planning of lesson notes, effective delivery of lessons, proper monitoring and evaluation of students' performance, providing regular feed-back on students' performance, improvisation of instructional materials, adequate keeping of records and appropriate discipline of students. Professional development of teachers is a vital task to introduce new and innovative knowledge to the learners, who are the pillars of the future generation. Trained teachers have positive effect on the student academic achievements. Professional development can be formal or informal, including every form of learning experience, involving either individual or group reflection, but should focus on improving classroom practices and professional skills, student performance and school effectiveness. Malunda and Atwebembeire (2018) defined professional development as any activity engaged in by teacher which enhance their knowledge and skills and enable them to consider their attitudes and approaches to education of children, with a view to improve the quality of teaching and learning process. The continuous training of teachers is a necessary task, no reform is acceptable without on-going training that makes teachers capable of facing challenges that come in their profession, so that they can effectively promote and assist their students. It is an attempt to integrate the process of teacher training and re-training of teacher's for skill attainment or professional development. Ojo (2014) posited that for any organization to achieve its stated goals and objective in this competitive world, adequate and relevant professional development of staff cannot be overemphasized. Professional development is an attempt by administrators to assist the classroom teachers to improve on their teaching strategies, techniques, handle new instructional materials or possess the necessary information and skills that are required for effective lesson delivery.

The gaps identified in the study is the long-term impact of PD on teacher performance and student outcomes. Many studies focus on the immediate or short-term effects of PD, but there is less evidence on the sustainability of these improvements over time. Longitudinal studies that track the long-term effects of PD on teaching practices and student achievement are necessary to understand the lasting benefits and potential challenges of PD initiatives. There is also a gap in understanding the specific impact of different PD components. For instance, while mentoring and coaching are frequently mentioned as effective PD strategies, more detailed research is needed to determine which aspects of mentoring (e.g., frequency, duration, mentor-mentee matching) are most beneficial. Similarly, the effectiveness of PLCs and peer observation programmes could be better understood by examining the specific elements that contribute to their success. However, this study aims to fill the gap by providing evidence-based insights on teachers professional development and instructional delivery in public senior secondary schools in Rivers State

Statement of Problem

In public senior secondary schools in Rivers State, the quality of instructional delivery by teachers has a profound and undeniable impact on student learning outcomes and overall

educational performance. Teachers are expected to possess the requisite skills and knowledge to deliver curriculum instruction effectively, ensuring students excel academically and are prepared to meet future challenges. However, many teachers in these schools fail to meet this standard, leading to inadequate instructional delivery that significantly hampers student performance and engagement. Despite the introduction of various professional development programmes such as workshops, in-service training, and mentorship initiatives, the problem persists. Teachers frequently report feeling ill-equipped and unsupported, while students continue to perform poorly and struggle with understanding key subjects. This persistent inadequacy highlights the ineffectiveness of existing professional development strategies in addressing the root causes of subpar instructional delivery.

The consequences of poor instructional delivery extend beyond individual student outcomes, posing broader risks to the educational system in Rivers State. High dropout rates, diminished student motivation, and a lack of readiness for tertiary education or the workforce are direct results. Moreover, the demoralization of teachers, who feel incapable of meeting their responsibilities, exacerbates the issue, creating a cycle of frustration and underachievement.

Addressing this critical challenge demands a bold and evidence-based approach. This study rigorously examined the gaps in current professional development programmes and identified innovative strategies to enhance instructional delivery in public senior secondary schools. Unlike previous research, this study tailored its solutions to the unique context of these schools, aiming to produce sustainable improvements in teaching practices and student outcomes.

The persistent failure of teachers to deliver effective instruction underscores the urgency of a comprehensive overhaul of professional development frameworks. This study provided actionable insights and practical recommendations, establishing a foundation for transformative change in instructional delivery across public senior secondary schools in Rivers State.

Aim and Objectives of the Study

The aim of the study is to investigate teachers' professional development and instructional delivery in public senior secondary schools in Rivers State. Specifically, the objectives of the study sought to:

1. Examine the extent of relationship between workshops and instructional delivery in public senior secondary schools in Rivers State.
2. Ascertain the extent of relationship between seminar and instructional delivery in public senior secondary schools in Rivers State.
3. Investigate the extent of relationship between in-service training programmes and instructional delivery in public senior secondary schools in Rivers State.

Research Questions

The following research questions guided the study:

1. What is the extent of relationship between workshops and instructional delivery in public senior secondary schools in Rivers State?
2. What is the extent of relationship between seminar and instructional delivery in public senior secondary schools in Rivers State?
3. What is the extent of relationship between in-service training programmes and

instructional delivery in public senior secondary schools in Rivers State?

Hypotheses

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

HO1: There is no significant relationship between workshops and instructional delivery in public senior secondary schools in Rivers State.

HO2: There is no significant relationship between seminar and instructional delivery in public senior secondary schools in Rivers State.

HO3: There is no significant relationship between in-service training programmes and instructional delivery in public senior secondary schools in Rivers State.

Theoretical Framework

The theory that guided this study is Adult Learning (Andragogy) Theory by Malcolm (1970), **Adult Learning (Andragogy) Theory by Malcolm (1970),**

The Adult Learning Theory, also known as Andragogy, was developed by Malcolm Knowles in 1970. This theory focuses on the specific ways adults learn and contrasts these methods with how children, or pedagogical learners, typically learn. According to Knowles, adults possess unique characteristics and motivations for learning, which influence their engagement with professional development programmes and instructional delivery in educational settings. Adult learning is driven by several key assumptions: self-directedness, prior experiences, readiness to learn, orientation to learning, and intrinsic motivation. These assumptions shape how adult learners—such as teachers—approach learning and professional growth in a classroom context.

Knowles emphasized that adults are generally self-directed learners. This means they take responsibility for their own learning, often seeking out opportunities to acquire new knowledge and skills that they can immediately apply in their professional settings. In contrast to children, who rely on teachers to guide their learning, adults prefer to have autonomy in the learning process, determining their own goals and paths of study. In the context of teachers' professional development, this is evident in how teachers may prefer workshops, seminars, and mentorship programmes that allow them to focus on areas they find personally relevant or where they feel improvement is needed.

Another fundamental aspect of Knowles' theory is the emphasis on prior experience. Adults come into learning situations with a wealth of prior knowledge and experiences, which serve as a foundation for building new understanding. Teachers, in particular, bring their classroom experiences, subject knowledge, and pedagogical strategies into professional development programmes. Therefore, professional development activities such as in-service training and Professional Learning Communities (PLCs) are most effective when they recognize and build upon these existing experiences. When teachers participate in PLCs or mentorship programmes, they often exchange ideas and reflect on their practices, allowing them to deepen their understanding of instructional delivery by integrating new strategies with their prior experiences. Knowles also highlighted that adults are ready to learn when they recognize a need to solve a specific problem or when the learning is directly relevant to their roles. For teachers, readiness to learn may arise from the need to improve their instructional methods, manage classroom

challenges more effectively, or align with curriculum changes. Workshops, educational conferences, and in-service training programmes that address practical classroom issues or instructional delivery challenges tend to resonate with adult learners because they see immediate applicability. As a result, these forms of professional development are tailored to meet the specific needs of teachers, enhancing their ability to deliver instructional more effectively and efficiently.

Orientation to learning is another key element in Knowles' andragogical framework. Adult learners are problem-centered rather than instructional-centered. This implies that adults prefer to learn in a manner that enables them to solve real-world problems, which directly contrasts with children's focus on learning instructional for future use. In the context of teachers' professional development, this means that seminars, workshops, and mentorship programmes should focus on equipping teachers with practical skills that they can apply to classroom management, curriculum development, and instructional delivery. Teachers are likely to engage more deeply with professional development programmes when they perceive that the knowledge and skills they are acquiring will help them address immediate challenges, such as adapting to new pedagogical approaches or addressing diverse student needs.

The relevance of Adult Learning Theory to teachers' professional development and instructional delivery in public senior secondary schools is profound. Teachers are adult learners who benefit from professional development programmes that acknowledge their self-directed nature, respect their prior experiences, and provide them with practical, problem-solving tools. Workshops, seminars, and mentorship programmes designed with these principles in mind help teachers develop the skills and knowledge necessary for effective instructional delivery in their classrooms. This, in turn, leads to enhanced teaching performance and improved student outcomes, aligning with the broader goals of educational institutions to provide quality education.

Conceptual Clarifications

Workshop as Teachers Professional Development Programme

Workshops are one of the most prominent and effective forms of professional development used to enhance the knowledge, skills, and competencies of individuals, especially teachers. They serve as a platform for interactive learning where participants engage in practical activities, discussions, and hands-on experiences that address specific topics or skills. In the context of education, workshops are designed to equip teachers with innovative teaching techniques, classroom management strategies, and curriculum development skills that improve their professional performance and, by extension, the academic outcomes of students.

One of the most significant benefits of workshops is their participatory nature. Unlike traditional lecture-based learning environments, workshops encourage active engagement, discussion, and collaboration among participants. This collaborative model allows teachers to exchange ideas,

share experiences, and learn from one another's successes and challenges (Ojo, 2020). For instance, a workshop on classroom management could allow teachers to role-play different scenarios, provide feedback on each other's approaches, and discuss various strategies for dealing with disruptive students or managing diverse classrooms. This type of interaction fosters practical learning that participants can immediately apply in their professional roles.

Another key feature of workshops is their focus on targeted skill development. Workshops are usually structured to address specific areas of professional practice, making them highly relevant to the participants' needs. For teachers, workshops can cover a range of topics such as integrating technology into teaching, designing inclusive lesson plans, improving instructional delivery, and assessment techniques (Adediran, 2021). By focusing on these distinct areas, workshops enable teachers to acquire new competencies or refine existing skills, thus enhancing their capacity to deliver high-quality education.

Workshops also offer flexibility in terms of format and duration. They can be conducted in various settings, including face-to-face gatherings, online platforms, or hybrid formats. This flexibility makes workshops accessible to a wider range of participants, especially in remote or under-resourced areas where access to professional development opportunities might be limited. According to Nwachukwu (2019), workshops conducted in virtual formats have gained significant relevance, especially during the COVID-19 pandemic. These online workshops allowed teachers to continue their professional development despite restrictions on physical gatherings, offering real-time learning and interaction through digital platforms. The shift to online workshops has also opened up the opportunity for continuous learning as educators can access recorded sessions and revisit important instructional whenever necessary.

Workshops are often led by experts or experienced practitioners who have a deep understanding of the subject matter. The presence of a knowledgeable facilitator ensures that the instructional delivered is accurate, up-to-date, and aligned with best practices in the field. This expert guidance enables participants to gain insights into the latest trends and methodologies in education. Additionally, facilitators can provide personalized feedback and coaching during workshops, further supporting participants in their professional growth (Eze, 2020). This immediate feedback is invaluable as it helps teachers identify areas where they can improve and gives them actionable steps to make those improvements. In addition to enhancing individual skill sets, workshops also contribute to a sense of professional community among teachers. By participating in workshops, educators form networks with their peers, creating a support system that extends beyond the duration of the event. These professional networks can be instrumental in fostering collaboration, sharing resources, and providing ongoing support as teachers implement the strategies learned during the workshop. The relationships built during these sessions can lead to long-term professional partnerships and continuous knowledge sharing (Ogundele, 2021).

Seminar as Teachers Professional Development Programme

Seminars are normally organized for professionals or personnel in organizations to keep them adequately informed of certain educational issues or development, which are vital to the Service

Delivery of their primary functions and professional growth. The topics are generally chosen by the organizers who also commission or invite some resource people to prepare and/or present papers for the seminars. Unlike professional conferences where the presenter is given a few minutes to present his paper, papers at seminars are usually read by the presenter and discussed by the participants. Seminars could also be prepared in a book form and given to the participants, during the seminars. In this case, it will be easier for the participants from various schools to organize similar seminars in their respective schools (Singh & Sharma, 2004). Development programmes has the distinct role in the achievement of an organisational goals by incorporating the interest of organization and the work force (Stone, 2002). Seminar is one of the important factors in the business world because it increases the efficiency and the effectiveness of both teachers' and the organizations. The employee Service Delivery depends on various factors, but most important factor of employee Service Delivery is development programmes. A seminar is a topic oriented event designed to educate and inform an audience about a broad subject of interest (Altalib, 1993). Seminars are simply a group of people coming together for the discussion and learning of specific techniques and topics. Usually there are several keynote speakers within each seminar, and these speakers are usually experts in their own fields, or topics. Several topic reviews are scheduled each day throughout the seminar, and attendees can usually make their choice or topic from among these scheduled events. Attending a seminar has numerous benefit to the organisations including improving communication skills, gaining expert knowledge, networking with other and renewing motivation.

In-Service Training as Teachers Professional Development Programme

In-service training is a crucial component of teachers' professional development, designed to enhance the skills, knowledge, and overall effectiveness of educators while they are actively engaged in teaching. This form of training provides continuous learning opportunities for teachers, enabling them to keep pace with the ever-evolving educational landscape, pedagogical innovations, and emerging educational policies. In-service training, which can take various forms such as workshops, seminars, conferences, or on-the-job training, plays an essential role in ensuring that teachers remain competent and well-equipped to meet the diverse needs of their students.

One of the primary purposes of in-service training is to update teachers on new educational trends, methodologies, and technologies. The rapid changes in education, such as the integration of digital tools, changes in curriculum, and advances in learning theories, require teachers to continually refine their teaching strategies. In-service training helps to bridge the gap between existing practices and current innovations. For example, a teacher trained several years ago might not be proficient in using modern educational technologies such as virtual classrooms, digital assessment tools, or online learning platforms (Olowu, 2021). Through in-service training, such teachers can acquire the necessary skills to incorporate these technologies into their classrooms, thus enhancing their teaching efficiency. Moreover, in-service training serves as a platform for the professional growth of teachers, enabling them to deepen their subject matter expertise. Many teachers, especially those in specialized subjects like mathematics,

science, or foreign languages, require regular updates on advancements in their respective fields. This ensures they are not only knowledgeable about the instructional but are also aware of the best pedagogical practices to teach that instructional effectively. For instance, a biology teacher attending in-service training on recent scientific discoveries may learn new techniques to make complex concepts more accessible to students (Ajayi, 2022). In this way, in-service training helps teachers stay relevant and provides them with the tools to enhance the learning experience for their students. In addition, in-service training fosters collaboration and the exchange of ideas among teachers. These programs often bring together educators from different schools, regions, or even countries, providing them with the opportunity to share best practices, challenges, and successes. This collaborative learning environment allows teachers to gain new insights, learn from the experiences of others, and build professional networks that can provide ongoing support throughout their careers. As Ogunsanya (2020) noted, teachers who engage in collaborative in-service training programs often experience significant improvements in their teaching practices due to the exchange of innovative ideas and techniques.

Another important aspect of in-service training is its role in helping teachers adapt to changes in educational policies and reforms. Governments and educational authorities frequently introduce new policies aimed at improving the quality of education, such as changes in curriculum standards, assessment methods, or inclusive education practices. In-service training equips teachers with the necessary knowledge and skills to implement these changes effectively. For instance, when a new curriculum is introduced, in-service training can provide teachers with the necessary tools to align their teaching strategies with the new objectives and ensure that they are delivering the instructional in accordance with national standards (Ikechukwu, 2021). Furthermore, in-service training is a key mechanism for addressing the specific developmental needs of teachers. Teachers may face various challenges in their classrooms, such as managing diverse student populations, addressing behavioral issues, or differentiating instruction to cater to students with different learning abilities. In-service training programs can be tailored to address these specific challenges, offering teachers practical strategies to improve their classroom management skills, develop inclusive teaching practices, or better support students with learning disabilities. For example, a teacher attending an in-service training program on inclusive education may learn how to create lesson plans that cater to students with varying levels of ability, ensuring that no student is left behind (Okeke, 2019).

Methodology

The study adopted a correlational research design. The population for this study was 6,557 teachers in the 302 public senior secondary schools in Rivers State. The sample for this study consisted of 984 teachers. The teachers were stratified into male and female groups. The sample size was determined using 15% of the total population of the study. To achieve this, the simple random sampling technique was employed to select 57 schools from 15 Local Government Areas. The selection of the schools involved writing the names of all the schools, mixing them in a basket, and picking one school at a time until 57 schools are selected. The 57 schools will

represent 20% of the total population of 302 schools in Rivers State, while the 984 teachers represented 15% of the total population of 6,557 teachers in public senior secondary schools in Rivers State.

The instrument that was used for data collection is a self-constructed questionnaire titled Teachers' Professional Development and Instructional Delivery Questionnaire (TPDIDQ). The instrument was structured using a modified 4-point Likert rating scale: Strongly Agree (SA), Agree (A) – 3 points, Disagree (D) – 2 points, Strongly Disagree (SD) – 1 point for Research Question 1, and Very High Extent (VHE), High Extent (HE), Low Extent (LE), and Very Low Extent (VLE) for Research Questions 2-6. The weighted points were summed as $4+3+2+1 = 10/4 = 2.50$, thus 2.50 was the criterion mean. To determine the reliability of the instrument, the researcher administered twenty (20) copies of the instrument to the respondents from the selected public schools who were outside the sample of the study but were part of the population of the study. The completed copies of the questionnaire were analyzed for reliability using Cronbach Alpha method which yielded reliability coefficients of 0.81, 0.83 and 0.88 with an average reliability coefficient of 0.85 which showed the instruments were reliable.

The researcher, with the help of two research assistants administered the research instruments to the respondents where they administered 984 copies of the research instrument to the selected respondents. However, due to poor accessibility and availability on several visits to the respondents for collection, only 797 (81% rate) were retrieved and this proportion was used for the analyses. The data collected for the study were analyzed using Pearson's Product Moment Correlation Coefficient (PPMCC) formula. Research questions were answered based on the value and direction of the correlation coefficient, (positive and high, positive but low, or negative and high or negative but low or moderate). Hypotheses were tested for significance of relationship at 0.05 level of significance. This was further tested by transforming the coefficient of correlation (r) to t in order to establish the significance or otherwise of the r – value.

Results and Discussions

In an attempt to satisfy the objectives of the study which were stated in chapter one, the researcher now proceeded to present and analyze the relevant Information collected through the questionnaire that were distributed.

Research Question 1: What is the extent of relationship between workshops and instructional delivery in public senior secondary schools in Rivers State?

Table 4.1: Correlation Matrix of Pearson's Product Moment Correlation on the relationship between workshops and instructional delivery in public senior secondary schools in Rivers State

		Instructional Delivery	Workshops	Remarks
Instructional Delivery	Pearson Correlation	1	.574	Moderate Positive Relationship
	Sig. (2-tailed)		.000	
	N	797	797	
Workshops	Pearson Correlation	.574	1	
	Sig. (2-tailed)			
	N	797	797	

Correlation is Significant at the 0.01 level (2-tailed).

Table 4.1 showed the relationship between workshops and instructional delivery in public senior secondary schools in Rivers State. The Pearson correlation statistics measured the strength and direction of a relationship between two variables. In this case, the correlation coefficient between workshops and instructional delivery is .574, which indicates that there is a moderate positive relationship between workshops and instructional delivery in public senior secondary schools in Rivers State. Therefore, the answer to Research Question 1 states that there is a moderate positive relationship between workshops and instructional delivery in public senior secondary schools in Rivers State.

Research Question 2: What is the extent of relationship between seminar and instructional delivery in public senior secondary schools in Rivers State?

Table 4.2: Correlation Matrix of Pearson's Product Moment Correlation on the relationship between seminar and instructional delivery in public senior secondary schools in Rivers State

		Instructional Delivery	Seminar	Remarks
Instructional Delivery	Pearson Correlation Sig. (2-tailed)	1	.501 .000	Moderate Positive Relationship
	N	797	797	
Seminar	Pearson Correlation Sig. (2-tailed)	.501	1	
	N	797	797	

Correlation is Significant at the 0.01 level (2-tailed).

Table 4.2 showed the relationship between seminar and instructional delivery in public senior secondary schools in Rivers State. The Pearson correlation statistics measured the strength and direction of a relationship between two variables. In this case, the correlation coefficient between seminar and instructional delivery is .501, which indicates that there is a moderate positive relationship between seminar and instructional delivery in public senior secondary schools in Rivers State. Therefore, the answer to Research Question 2 states that there is a moderate positive relationship between seminar and instructional delivery in public senior secondary schools in Rivers State.

Research Question 3: What is the extent of relationship between in-service training programmes and instructional delivery in public senior secondary schools in Rivers State?

Table 4.3: Correlation Matrix of Pearson's Product Moment Correlation on the relationship between in-service training programmes and instructional delivery in public senior secondary schools in Rivers State

		Instructional Delivery	In-service Training Programmes	Remarks
Instructional Delivery	Pearson Correlation Sig. (2-tailed)	1	.524 .000	Moderate Positive Relationship
	N	797	797	

In-service Training Programmes	Pearson	.524	1
	Correlation		
	Sig. (2-tailed)		
	N	797	797

Correlation is Significant at the 0.01 level (2-tailed).

Table 4.3 showed the relationship between in-service training programmes and instructional delivery in public senior secondary schools in Rivers State. The Pearson correlation statistics measured the strength and direction of a relationship between two variables. In this case, the correlation coefficient between in-service training programmes and instructional delivery is .524, which indicates that there is a moderate positive relationship between in-service training programmes and instructional delivery in public senior secondary schools in Rivers State. Therefore, the answer to Research Question 3 states that there is a moderate positive relationship between in-service training programmes and instructional delivery in public senior secondary schools in Rivers State.

Hypotheses Testing

The following hypotheses are postulated in null form for the study, and will be tested at 0.05 level of significance, thus;

Hypothesis 1: There is no significant relationship between workshops and instructional delivery in public senior secondary schools in Rivers State.

Table 4.4 Summary of Pearson's Product Moment Correlation on the relationship between workshops and instructional delivery in public senior secondary schools in Rivers State.

Variable	N	df	r	r-cal	p-value	Decision
Workshops	797	795	.574			
Instructional delivery	797			18.26	0.05	Rejected

Table 4.4 presented the Summary of Pearson's Product Moment Correlation on the relationship between workshops and instructional delivery in public senior secondary schools in Rivers State. The Pearson correlation coefficient (r) was .574, indicating a moderate positive relationship. The calculated r-value (r-cal) was 18.26, with a corresponding p-value of 0.05. Since the p-value is equal to or less than the significance level of 0.05, the null hypothesis was rejected. This implies that there is a statistically significant relationship between workshops and instructional delivery in public senior secondary schools in Rivers State.

HO2: There is no significant relationship between seminar and instructional delivery in public senior secondary schools in Rivers State.

Table 4.5 Summary of Pearson's Product Moment Correlation on the relationship between seminar and instructional delivery in public senior secondary schools in Rivers State

Variable	N	df	r	r-cal	p-value	Decision
Seminar	797	795	.501			
Instructional delivery	797			18.26	0.05	Rejected

Table 4.5 presented the Summary of Pearson's Product Moment Correlation on the relationship between seminar and instructional delivery in public senior secondary schools in Rivers State . The Pearson correlation coefficient (r) was .501, indicating a moderate positive relationship. The calculated r-value (r-cal) was 18.26, with a corresponding p-value of 0.05. Since the p-value is equal to or less than the significance level of 0.05, the null hypothesis was rejected. This implies that there is a statistically significant relationship between seminar and instructional delivery in public senior secondary schools in Rivers State.

HO3: There is no significant relationship between in-service training programmes and instructional delivery in public senior secondary schools in Rivers State

Table 4.6 Summary of Pearson's Product Moment Correlation on the relationship between in-service training programmes and instructional delivery in public senior secondary schools in Rivers State

Variable	N	df	r	r-cal	p-value	Decision
In-service training programmes	797	795	.524			
Instructional delivery	797			18.26	0.05	Rejected

Table 4.6 presented the Summary of Pearson's Product Moment Correlation on the relationship between in-service training programmes and instructional delivery in public senior secondary schools in Rivers State. The Pearson correlation coefficient (r) was .524, indicating a moderate positive relationship. The calculated r-value (r-cal) was 18.26, with a corresponding p-value of 0.05. Since the p-value is equal to or less than the significance level of 0.05, the null hypothesis was rejected. This implies that there is a statistically significant relationship between in-service training programmes and instructional delivery in public senior secondary schools in Rivers State.

Discussion of Findings

Relationship between Workshops and Instructional Delivery in Public Senior Secondary Schools in Rivers State

The findings obtained for Research Question 1 in Table 4.1 indicated a moderate positive

relationship between workshops and instructional delivery in public senior secondary schools in Rivers State, with a correlation coefficient (r) of .574. Hypothesis 1, tested in Table 4.4, revealed a significant relationship between workshops and instructional delivery, with a t-test transformation of 18.26, greater than the critical value of +1.96. This finding aligns with Ojo and Adewale (2020), who emphasized that workshops enhance teachers' abilities by equipping them with modern pedagogical techniques and strategies to improve instructional delivery. Similarly, Agbo and Nwosu (2019) observed that workshops promote collaborative learning among teachers, enabling them to adopt innovative teaching methods. Moreover, Akpan and Obi (2018) found that teachers who regularly participate in workshops demonstrate improved classroom management and instructional delivery skills.

Workshops provide hands-on training and opportunities for professional interaction, reinforcing teachers' confidence and ability to address diverse learning needs. This corroborates the assertion of Eze (2021), who stated that workshops bridge the gap between theoretical knowledge and practical application, empowering educators to deliver quality instruction tailored to student needs.

Relationship between Seminars and Instructional Delivery in Public Senior Secondary Schools in Rivers State

The findings obtained for Research Question 2 in Table 4.2 indicated a moderate positive relationship between seminars and instructional delivery, with a correlation coefficient (r) of .501. Hypothesis 2, tested in Table 4.5, revealed a significant relationship, with a t-test transformation of 18.26, exceeding the critical value of +1.96. This result aligns with findings by Okafor and Chukwu (2019), who highlighted that seminars create a platform for teachers to explore new instructional strategies and share experiences that enhance their classroom practices. Similarly, Adebayo (2020) noted that seminars encourage reflective practices, enabling teachers to identify and address gaps in their instructional delivery. Seminars facilitate knowledge exchange and foster professional growth among teachers, as noted by Ezeokoli (2020), who observed that teachers who engage in seminars demonstrate improved critical thinking and adaptability in instructional delivery.

Relationship between In-Service Training Programmes and Instructional Delivery in Public Senior Secondary Schools in Rivers State

The findings obtained for Research Question 3 in Table 4.3 indicated a moderate positive relationship between in-service training programmes and instructional delivery, with a correlation coefficient (r) of .524. Hypothesis 3, tested in Table 4.6, revealed a significant relationship, with a t-test transformation of 18.26, surpassing the critical value of +1.96. This finding aligns with the work of Adekunle and Abimbola (2018), who revealed that in-service training programmes equip teachers with updated knowledge and skills essential for effective instructional delivery. In addition, Ajayi and Ogunleye (2019) found that such training enhances teachers' ability to implement curriculum changes and address diverse student needs. These results are further supported by Nwachukwu (2021), who asserted that in-service training fosters continuous professional development, enabling teachers to align their instructional delivery with

contemporary educational standards.

Conclusion

The findings of this study underscore the significant relationships between teachers' professional development and content delivery in public senior secondary schools in Rivers State. Specifically, positive correlations were established between workshops, seminars and in-service training programmes and instructional delivery. These results highlight the importance of a comprehensive approach to professional development that goes beyond traditional methods, recognizing diverse strategies like workshops, mentorship, and collaborative learning. By establishing clear, consistent, and evidence-based professional development criteria, school administrators can create an environment that supports teachers' continuous growth and motivation. This, in turn, can result in better instructional practices, improved student engagement, and overall educational outcomes.

Recommendations

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

1. Schools should organize frequent workshops focusing on contemporary teaching methods and instructional strategies to improve teachers' content delivery skills.
2. Schools should encourage regular seminars where teachers can share experiences, strategies, and innovative teaching techniques.
3. Education authorities should design in-service training programmes tailored to meet the specific needs of teachers in different subjects and pedagogical approaches.

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