

## **Post COVID-19 Teachers' Professional Development Needs for Effective Service Delivery in Secondary Schools in Rivers State**

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### **Abstract**

The paper investigated the post COVID-19 teachers' professional development needs for effective service delivery in secondary schools in Rivers State. Three research questions were answered and three hypotheses tested in the study. Design used for the study was descriptive survey and the population of the study was all the 10, 565 senior secondary school teachers (public and private) in Rivers State while 385 teachers (171 males and 214 females) were sampled for the study using stratified random sampling technique. Instrument used for collecting data was a 15-item questionnaire titled "Teachers Professional Development Needs for Effective Service Delivery Questionnaire" (TPDNESDQ). The instrument was face and content validated by two Educational Management lecturers in the University of Port Harcourt. Cronbach alpha was used to estimate the reliability of the questionnaire with an index of 0.88. The questionnaire was administered by the researcher with the help of five Research Assistants. Research questions raised were answered using mean and standard deviation while the hypotheses were tested at 0.05 level of significance using z-test. The result of the study showed that the major professional development need of teachers was how to use digital technologies in the post COVID-19 era while the challenges faced in this process was majorly a lack of commitment to teachers training by the government. The result of the study showed that addressing this situation will require improved financial allocation for training by the government. The study concluded that no difference existed in the professional development needs of male and female teachers especially in the use of technologies and adaptation to new curriculum. The study recommended the need for teachers' professional needs assessment so that the right training programmes can be provided for teachers in the post COVID-19 era for effective service delivery.

**Keywords:** COVID-19, Teachers' Professional Development, Effective Service Delivery, Secondary Schools

### **Introduction**

In 2019, the world was awakened to a global pandemic known as the coronavirus (COVID-19) which altered the way people interact and do business. During this period, all sectors of the global economy were forced to rethink how to carry out their various operations as face-to-face interactions were restricted. The education sector was no spared as schools were forced to shut down and teaching and learning could not take place and this affected the realization of short-term educational goals and objectives.

Despite the fact that the pandemic is over, there is a new normal way of carrying out essential social services including the provision of educational services. During the pandemic, several schools were forced to reschedule school sessions into morning and afternoon classes while some schools compelled teachers to deliver part of their instructions online and some of these arrangements still remain even after the pandemic forcing teachers to redesign their system of classroom management. According to Perry (2023), the pandemic forced several online, hybrid and blended methods of educational service delivery thereby forcing emerging teacher professional needs. This development required that teachers develop new competencies that will contribute to the delivery of quality educational services in the face of this new educational experiences. As a result of the pandemic, Jen et al., (2022) point out that, during the pandemic, there were new technological challenges that teachers faced as well as how to motivate students especially those with diverse abilities in addition to how to build a supportive teaching and learning system and all of these necessitated the need for teachers to seek for further professional development to handle this new system of teaching and learning system.

Elci and Yaratana (2012:49) point out that, in recent times, teachers have continued to seek for personal ways of meeting their professional needs and the reason for this is not far-fetched as no employee wants to be irrelevant in the work place or face expulsion. The need for teachers to meet their professional development needs has therefore become more important than before as learners have changed in their mode and as well as educational requirements while schools are also changing their system of educational service delivery as a result of the experiences gathered during the COVID-19 pandemic and the need for teachers to rise to this occasion cannot be overemphasized as the failure to do so will not only make the teacher irrelevant but will also affect the attainment of educational goals and objectives negatively.

### **Professional Development**

Professional development can be explained to mean the advancement of one's profession in a way that meets the best practices or laid down standards. Sari (2012) points out that, teachers are only transformed to be meet established standard when they are exposed to relevant and regular teacher development programmes and this professional development according to Villegas-Reimers as cited in Mizova et al., (2021) is a complex lifelong process which commences with a teacher training programs and continues through the career of the teachers where skills, knowledge and values as well as attitudes relevant for delivering quality teaching service can be developed.

Furthermore, Mizova et al., (2021) state that, teacher professional development focuses on the teacher's acquisition or upgrade of knowledge, skills and attitudes about one's job for the implementation of quality education. Professional development deals with the building of contemporary competencies that makes a teacher relevant in the current educational system. In another dimension, the Organization of Economic Cooperation and Development (OECD) as cited in El-Islami et al., (2022:2) states that "professional development of teachers deals with

activities that develop a teacher's skills, knowledge, expertise and other characteristics" and all of these are required to deliver quality teaching at any level of education. Avalos (2011), summarizes it by stating that, in the process of professional development, the teacher learns, learns how to learn, and transforms his or her knowledge into practice for the benefit of their students' growth. This is required to be a successful teacher in today's education system.

### **Effective Service Delivery**

Education is a social service and the teacher is at the center of delivering this essential service. Service delivery is the process of meeting the expectation of service customers based on established conditions. According to Zeithaml et al., as cited in Nzenwata (2020) service delivery is that gap between what a customer expects from a service provider and what they perceive or receive as the serviced outcome. This service which is an assistance or intervention provided to get a job done is only delivered when the expectations of the customer is met. The effectiveness of service delivery therefore hinges on the extent to which the purpose for which the service was provided has been met and whether or not the customer is satisfied. Service delivery can be relative but according to Jiwan (2016) providing services at places that are acceptable and satisfying to recipients of the services is what defined an effective service delivery.

### **Teachers' Professional Development Needs in the Post COVID-19 Era**

The professional needs of teachers in the teaching profession no doubt changes from time to time as the education system changes based on reforms and innovations that takes place in the education sector. There are several changes that have taken place in the education sector over the years and most recent is the COVID-19 pandemic which redefined how teaching and learning are administered in and outside the classroom and this calls for a revision of teachers' professional development competencies. However, the kind of intervention provided for the teacher in the capacity building process must be one that is able to solve a problem and meet emerging or existing educational needs.

The research carried out by Chitiyo et al., (2019) reveals that more teachers are demanding for training in the management of disabilities in the classroom while others demanded for training on the management of the instructional methods to meet the diverse needs of students in the classroom. In the face of transition to hybrid and virtual mode of teaching and learning, teachers must begin to rethink how the learning needs of students can be met based on this development and this will require the teachers themselves to be prepared for this process through appropriate training.

Similarly, Karlberg and Bezzina (2022) point out that, while some teachers are requesting for special education training in today's schools, others are requesting for training on the use of emerging technologies which is at the core of the recent developments occasioned by the COVID-19 pandemic. This is closely followed by the fact that some teachers seek to be further trained on how to manage learners behaviour and this is likely to be the case in today's

classroom as the adoption of technology in the classroom can result to the development of technology driven behaviours which the teacher must begin to address for meaningful teaching and learning to take place in the classroom. The new system of education which is gradually taking over how education is delivered in the classroom will also require teachers building their competencies ahead for the challenges that may arise in the school.

Badri et al., (2016) on their part identify the fact that there are teachers whose development needs is basically on how to handle their subject areas, build pedagogical competences, understanding the new curriculum in the school, carry out student evaluation and assessment practice, classroom management, teaching children contemporary skills as well as counselling. It is only when the professional development needs of teachers are identified and satisfied that these expectations can be met and the school system rejigged after the COVID-19 pandemic experience.

### **Challenges in Meeting Teachers Professional Development Needs in the Post COVID-19 Era**

There is no doubt the teachers require new skills and knowledge to meet the emerging educational demands occasioned by the pandemic and for delivering quality educational services going forward. However, several schools especially the public ones are most likely to face challenges in the process of meeting teachers' professional development needs in the face of these developments.

In their opinion, Mankk and Raiha (2022) aside the fact that, inadequate technology and technological skills will pose a challenge in developing teachers competencies in today's digital world, meeting individual needs of teachers will also be a challenge as no two teachers are the same and this no doubt will be a capital intensive process for some schools. This is because teacher's professional needs will differ from one school and location to another and meeting these varieties of needs will be challenging for some schools and even the government.

There is no doubt also that several schools lack the infrastructural facilities to carry out internal training programmes and the educational reforms taking place in recent times also makes it difficult for some schools to properly situate the kind of training and development activities that will be required by their teachers. The lack of policy directive makes it difficult for some schools to take a side that will yield maximum benefit after exposing their teachers to these training activities. Similarly, Burns (2015) identifies that there are challenges of difficult working conditions, systematic challenges, conflict of interests, poorly designed professional development programmes, policy and guideline gaps and all of these are constraint that can affect the implementation of successful professional development programmes for teachers. This is in addition to budgetary challenges and lack of harmonized scheme in most schools and this makes the enforcement of professional development programmes for teachers to be a heinous task in the post COVID-19 era.

## **Strategies for Teachers' Professional Development in the Post COVID-19 Era**

Investing in teachers' professional development is more important today more than ever before as a result of innovations, changes and reforms taking place globally not just in the education sector but also in other sectors that have implications on the education system. Chang (2012) alludes to the fact that teachers must engage in continuous professional development and this must be done through lifelong learning and this fact cannot be disputed. This means that teachers must be given the opportunity to acquire further education and certifications that will build their skills and knowledge in required areas.

In a related manner, Loucks-Horsley et al as cited in El-Islami et al., (2022:2) point out the strategies that can be adopted to improve on teachers' professional development and this includes changes in the curriculum, coaching and mentoring, revised instructional materials selection process, organizing workshops, seminars and study group as well as creating professional networks among others. This means that teachers must be given the freedom to interact and interface with colleagues and institutions that can enable them build relevant skills and knowledge that can be deployed in solving contemporary educational challenges in the post COVID-19 era. Furthermore, Nishimura (2014) points out that, internally, schools must be ready to develop specific problem-solving sessions where teachers are able to come together and work together in identifying and finding solution to an educational problem.

Researchers, such as, Hismanoglu (2010) on their part suggest the need for peer coaching, study groups, mentoring, in-service training and team teaching. The need to build the capacity of teachers must therefore commence with an internal as well as institutional will by providing internal as well as external platforms where teachers can be able to build their capability to address the educational challenges that have been occasioned by the COVID-19 pandemic as this will be relevant in the delivery of relevant and problem-solving educational services.

## **Empirical Reviews**

Researcher have carried out different studies to determine the need for teachers' professional development and how this can affect the process of teaching and general school administration and one of such studies was conducted by Yenen and Yontem (2020) on teachers' professional development needs. There were 35 teachers working in State schools in Cappadocia provinces of Turkey who were drawn as respondents for the study. The study used both qualitative and quantitative methods of analysis, and the findings showed that special education, scientific research methods, and participation in projects as well as other professional activities were the areas where the sampled teachers' professional development was most in need. Additional research results showed that teachers needed professional development in the areas of instructional technology, material production, student engagement, assessment and evaluation, and collaborative abilities.

On their part, Karlberg and Bezzina (2022) investigated the professional development needs of beginning and experienced teachers in four municipalities in Sweden. The study's findings revealed that the majority of new teachers (75.3%) said they needed training in special education, while 73.7% said they needed training in using technology in the classroom. Others need training in dealing with students' behavioral concerns in class (70.3%), while those who want training in conflict resolution (62.5%) trailed closely behind. Kalman et al., (2022) also investigated teacher learning and professional development during the COVID-19 pandemic. Three questionnaires were given to the 441 classroom teachers who took part in the study from various Turkish provinces using a cross-sectional survey design. The study's findings showed that during the pandemic, classroom teachers tried to take part in professional development activities. The adoption of a need-based perspective in teachers' efforts to advance their professional development was also mentioned, but this was constrained by a lack of technological resources, inadequate infrastructure, and unfavorable psychological effects, which prevented it from being as successful as it could be.

Tafazoli (2021) also conducted a study on teachers' professional development amid the COVID-19 outbreak. It was revealed that there was a disregard for teachers' preferences and concerns and that the tool used were likely to fail to deliver the expected outcomes. It was also determined that there may be a risk that the technology being used will be so strongly resisted that it never manages to reach its full potential unless teachers feel reassured that they are in control of their professional development. Yan-Hong and Yi-Huang (2020) also conducted another study on strategies for improving professional development of teachers in primary and secondary schools in Taiwan after the Implementation of 12-Year Basic Education Curriculum. The study used a systematic review process, and the results showed that effective strategies for enhancing teachers' professional development included the creation of pre-service teacher professional literacy standards, the use of international surveys as a guide, enhancing the effectiveness of educational leadership, and the implementation of a support system for teacher professional development. These studies demonstrated the necessity of teacher professional development as a way to raise the standard of instruction provided in schools.

### **Aim and Objectives of the Study**

The aim of the study was to investigate the post COVID-19 teachers' professional development needs for effective service delivery in secondary schools in Rivers State. The specific objectives of the study were to:

1. identify the post COVID-19 teachers' professional development needs for effective service delivery in secondary schools in Rivers State.
2. determine the challenges to teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State.
3. examine the strategies for enhancing teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State.



## **Research Questions**

The following research questions guided the study:

1. What are the post COVID-19 teachers' professional development needs for effective service delivery in secondary schools in Rivers State?
2. What are the challenges to teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State?
3. What are the strategies for enhancing teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State?

## **Hypotheses**

The following hypotheses were tested at 0.05 level of significance:

1. There is no significant difference between the mean ratings of male and female teachers on the post COVID-19 teachers' professional development needs for effective service delivery in secondary schools in Rivers State.
2. There is no significant difference between the mean ratings of male and female teachers on the challenges to teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State.
3. There is no significant difference between the mean ratings of male and female teachers on the strategies for enhancing teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State.

## **Methodology**

This study adopted the descriptive survey design while the population of the study comprised all the 10, 565 senior secondary school teachers (public and private) in Rivers State out of which 385 teachers (171 males and 214 females) were sampled for the study using the Taro Yamane minimum sample size determination formula and the respondents were selected using the stratified random sampling technique across the public and private secondary schools and by gender. The instrument used for gathering data was a 15-item questionnaire tagged 'Teachers Professional Development Needs for Effective Service Delivery Questionnaire' (TPDNESDQ) which was designed on a four-point modified Likert scale of Strongly Agree, Agree, Disagree and Strongly Disagree with weighted scores of (SA=4), (A=3), (D=2) and (SD=1). The weights were summed up to 10 and divided by 4 to arrive at 2.50 used for decision making to agree or disagree with the questionnaire items. The questionnaire was face and content validated by two Educational Management lecturers in the University of Port Harcourt. The reliability index of the questionnaire was 0.88 using Cronbach Alpha statistics. The questionnaire was administered by the researcher with the assistance of five Research Assistants while the questionnaires were retrieved on the spot to enable a 100% completion rate. The research questions were answered

using mean and standard deviation while the hypotheses were tested at 0.05 level of significance using z-test.

## Results

### Answer to Research Questions

**Research Question One:** What are the post COVID-19 teachers' professional development needs for effective service delivery in secondary schools in Rivers State?

**Table 1: Mean and Standard Deviation Scores on the Post COVID-19 Teachers' Professional Development Needs for Effective Service Delivery in Secondary Schools in Rivers State**

S/No	Items	Male Teachers n=171		Female Teachers n=214		Average Mean	Decision
		Mean $\bar{x}_1$	SD	Mean $\bar{x}_2$	SD		
1	Assistance is required on how to use digital technology for instructional delivery	2.99	0.70	2.90	0.75	2.95	Agreed
2	Teachers need training on how to attend to the educational needs of special need students	2.47	0.98	2.66	0.94	2.57	Agreed
3	Training is required on how to handle emerging antisocial behaviour among students	2.76	0.81	2.87	0.76	2.82	Agreed
4	Professional development programmes are required on changes in teachers' subject area	2.87	0.76	2.84	0.78	2.86	Agreed
5	Teachers need to be trained on current curriculum reforms	2.81	0.80	2.88	0.76	2.85	Agreed
	<b>Grand Mean and Standard Deviation</b>	<b>2.78</b>	<b>0.81</b>	<b>2.83</b>	<b>0.80</b>	<b>2.81</b>	<b>Agreed</b>

Data on Table 1 showed that, the responses of the male teachers produced mean responses of 2.99, 2.47, 2.76, 2.87 and 2.81 to items 1, 2, 3, 4 and 5 while the female teachers' responses to the same set of items with mean responses of 2.90, 2.66, 2.87, 2.84 and 2.88. All of the items were agreed since the scores were above the criterion mean score of 2.50 used for making decision except item 2 from the male teachers with mean value of 2.47 implying that it was



rejected because the male teachers did not so much consider the need for training on how to attend to special need students. The highest average mean set of 2.95 implied that the teachers consider the need for training on how to use digital technologies as their major training need. The grand mean scores of 2.78 and 2.83 from the male and female teachers supported the average mean set score of 2.81 to imply that the teachers averagely agreed on all the items as the post COVID-19 teachers' professional development needs for effective service delivery in secondary schools in Rivers State. Summarily, the male and female teachers agreed that they needed training on how to use digital technologies, manage emerging antisocial behaviours, deal with changes in their subject areas and manage curriculum reform but they differed on the need for training on handling special need children.

**Research Question Two:** What are the challenges to teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State?

**Table 2: Mean and Standard Deviation Scores on the Challenges to Teachers' Professional Development Needs for Effective Service Delivery in Secondary Schools in the Post COVID-19 Era in Rivers State**

S/No	Items	Male Teachers n=171		Female Teachers n=214		Average Mean	Decision
		Mean $\bar{x}_1$	SD	Mean $\bar{x}_2$	SD		
6	Variations in teachers professional development needs	2.90	0.79	2.83	0.78	2.87	Agreed
7	Inadequate financial allocation for teacher development	2.86	0.82	2.85	0.77	2.86	Agreed
8	Lack of training facilities in schools	2.82	0.85	2.81	0.78	2.82	Agreed
9	Schools lack professional development guidelines	2.84	0.83	2.87	0.76	2.86	Agreed
10	Lack of government commitment to teachers training	2.92	0.78	2.89	0.75	2.91	Agreed
	<b>Grand Mean and Standard Deviation</b>	<b>2.87</b>	<b>0.81</b>	<b>2.85</b>	<b>0.77</b>	<b>2.86</b>	<b>Agreed</b>

Table 2 indicated that the responses of the male teachers to items 6, 7, 8, 9 and 10 were 2.90, 2.86, 2.82, 2.84 and 2.92 while the female teachers responded to the same set of items with mean responses of 2.83, 2.85, 2.81, 2.87 and 2.89. The entire items responded to by both the male and female teachers were above the criterion mean score of 2.50 used for decision making and suggested that the respondents all agreed to the items. The highest average mean score of 2.91 indicated that the lack of commitment from the government was the major challenge faced in meeting the professional training needs of teachers and this was followed by the variations in the training need of teachers. The grand mean score of 2.87 and 2.85 from the male and female

teachers aligned with the average mean score of 2.86 to point to the fact that the teachers averagely agreed to the items listed as the challenges to teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State. Summarily, the male and female teachers agreed that variations in their professional development needs, inadequate financial allocation, inadequate training facilities, lack of professional guidelines and lack of government commitment were the challenges to their professional development needs.

**Research Question Three:** What are the strategies for enhancing teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State?

**Table 3: Mean and Standard Deviation Scores on the Strategies for Enhancing Teachers' Professional Development Needs for Effective Service Delivery in Secondary Schools in the Post COVID-19 Era in Rivers State**

S/No	Items	Male Teachers n=171 Mean $\bar{x}_1$ SD		Female Teachers n=214 Mean $\bar{x}_2$ SD		Average Mean	Decision
11	Teamwork should be encouraged among teachers	2.45	1.01	2.41	1.04	2.43	Disagreed
12	Teachers should be encouraged to register with professional networks	2.63	0.92	2.76	0.89	2.70	Agreed
13	Regular workshops and seminars should be organized for teachers	2.84	0.83	2.91	0.74	2.88	Agreed
14	Teacher mentoring and coaching programme should be instituted in schools	2.82	0.84	2.93	0.72	2.88	Agreed
15	Teachers school be given support for further education	2.96	0.70	2.98	0.72	2.97	Agreed
	<b>Grand Mean and Standard Deviation</b>	<b>2.74</b>	<b>0.86</b>	<b>2.80</b>	<b>0.82</b>	<b>2.77</b>	<b>Agreed</b>

In table 3, the responses of the male teachers to items 11, 12, 13, 14 and 15 were 2.45, 2.63, 2.84, 2.82 and 2.96 while the female teachers' responses were 2.41, 2.76, 2.91, 2.93 and 2.98. Items 12-15 were all agreed by the respondents but they both disagreed to item 11 with mean values that were less than the criterion mean indicating that the teachers did not consider teamwork as a way of meeting their professional development needs in this era. Item 15 with the highest average mean score of 2.97 indicated that providing support for further education was the major

strategy the teachers consider as essential in meeting their professional development need. The grand mean value of 2.74 from the male teachers and 2.80 from the female teachers agreed with the average mean set score of 2.77 to reveal that the teachers both agreed averagely to the items listed as the strategies for enhancing teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State. Summarily, the male and female teachers agreed that registering teachers in professional networks, participation in workshop programmes, mentoring and support for further education were ways of meeting their professional needs but they both disagreed on teamwork as a strategy for meeting these needs.

### **Test of Hypotheses**

**Hypothesis One:** There is no significant difference between the mean ratings of male and female teachers on the post COVID-19 teachers' professional development needs for effective service delivery in secondary schools in Rivers State.

**Table 4: Summary of z-test Analysis on the Difference between the Mean Opinion Scores of Male and Female Teachers on the Post COVID-19 Teachers' Professional Development Needs for Effective Service Delivery in Secondary Schools in Rivers State**

Variable	n	Mean	SD	df	z-cal.	z-crit.	Level of Significance	Decision
Male Teachers	171	2.78	0.81	383	0.61	1.96	0.05	H <sub>0</sub> not rejected
Female Teachers	214	2.83	0.80					

Table 4 revealed that at the intersection of the degrees of freedom of 383 and the level of significance of 0.05, the value of z-crit. was 1.96 and this value was above the estimated z-cal. value of 0.61 and as such, the null hypothesis was not rejected but upheld indicating that there was no significant difference between the mean ratings of male and female teachers on the post COVID-19 teachers' professional development needs for effective service delivery in secondary schools in Rivers State.

**Hypothesis Two:** There is no significant difference between the mean ratings of male and female teachers on the challenges to teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State.

**Table 5: Summary of z-test Analysis on the Difference between the Mean Opinion Scores of Male and Female Teachers on the Challenges to Teachers' Professional Development Needs for Effective Service Delivery in Secondary Schools in the Post COVID-19 Era in Rivers State**

Variable	n	Mean	SD	df	z-cal.	z-crit.	Level of Significance	Decision
Male Teachers	171	2.87	0.81	383	0.25	1.96	0.05	H <sub>0</sub> not rejected
Female Teachers	214	2.85	0.77					

Table 5 showed that at the intersection of the degrees of freedom of 383 and the level of significance of 0.05, the value of z-crit. was 1.96 and this value was above the estimated z-cal. value of 0.25 and on this note, the null hypothesis was not rejected but upheld showing that there was no significant difference between the mean ratings of male and female teachers on the challenges to teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State.

**Hypothesis Three:** There is no significant difference between the mean ratings of male and female teachers on the strategies for enhancing teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State.

**Table 6: Summary of z-test Analysis on the Difference between the Mean Opinion Scores of Male and Female Teachers on the Strategies for Enhancing Teachers' Professional Development Needs for Effective Service Delivery in Secondary Schools in the Post COVID-19 Era in Rivers State**

Variable	n	Mean	SD	df	z-cal.	z-crit.	Level of Significance	Decision
Male Teachers	171	2.74	0.86	383	0.70	1.96	0.05	H <sub>0</sub> not rejected
Female Teachers	214	2.80	0.82					

Table 6 indicated that at the intersection of the degrees of freedom of 383 and the level of significance of 0.05, the value of z-crit. was 1.96 and this value was above the estimated z-cal. value of 0.70 and as such, the null hypothesis was not rejected but upheld establishing that there was no significant difference between the mean ratings of male and female teachers on the strategies for enhancing teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State.

## **Discussion of Findings**

The male and female teachers agreed in their responses that their professional needs are that they needed training on how to use digital technologies, manage emerging antisocial behaviours, deal with changes in their subject areas and manage curriculum reform but they differed in their response on the need for training on how to handle special needs children. The result of the study also showed that there was no significant difference between the mean ratings of male and female teachers on the post COVID-19 teachers' professional development needs for effective service delivery in secondary schools in Rivers State. The result of the study showed that the teachers believed that training on how to use technological devices was the major professional development needs of the teachers and this may not be unconnected with the fact that this was the platform used for teaching and learning during the COVID-19 era and has now being adopted by some schools as the new normal. This agrees with the findings of the study by Yenen and Yontem (2020) which showed that teachers needed professional development in the areas of instructional technology, material production, student engagement, assessment and evaluation, and collaborative abilities. Teachers therefore need assistance on how to use digital technologies for their various classroom activities.

The male and female teachers also agreed that they required training in their subject areas and other areas where the curriculum has been altered and this might include some of the educational changes which some schools have made as a result of the COVID-19 which altered some course contents and how they are delivered to students. The teachers also indicated that they required training on how to manage students' behaviour and this may be of need as some of these students are now digitally exposed resulting to the development of new behaviours which were not previously so in the classroom. However, the respondents had different opinion on their need for training on how to handle special need students. This result differed from the findings of the study by Karlberg and Bezzina (2022) where majority (75.3%) of the teachers indicated that they needed training in special education. The male teachers disagreed while the female teachers agreed but this might be an issue of opinion or experiences that the teachers have had in the classroom which had influenced their decision in this case.

The male and female teachers agreed that challenges to their professional development needs included variations in their professional development needs, inadequate financial allocation, inadequate training facilities, lack of professional guidelines and lack of government commitment which were all identified as the challenges to their professional development needs in the post COVID 19 era. There was no significant difference between the mean ratings of male and female teachers on the challenges to teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State. The teachers agreed that part of the challenges that may be faced in the professional development process includes the fact that there are variations in their training needs, inadequate financial allocation for teachers' training, lack of training facilities in the schools, lack of professional development guidelines and the major challenge which was lack of commitment to teachers training by the

government. These findings were in tandem with the outcome of the study by Kalman et al., (2022) which also showed that professional development of staff in the study area was constrained by a lack of technological resources, inadequate infrastructure, and unfavorable psychological effects, which prevented it from being as successful as it could be.

The male and female teachers agreed that registering teachers in professional networks, participation in workshop programmes, mentoring and support for further education were strategies of meeting their professional needs but they both disagreed on teamwork as a strategy for meeting these needs. There was no significant difference between the mean ratings of male and female teachers on the strategies for enhancing teachers' professional development needs for effective service delivery in secondary schools in the post COVID-19 era in Rivers State. The teachers indicated that support for further education was their major need and this aligns with the result of the study by Yan-Hong and Yi-Huang (2020) where good educational leadership, and the implementation of a support system for teacher professional development were considered as strategic to meeting teachers' professional development needs. The teachers also agreed to the need for mentoring and coaching, participation in workshops and seminars and professional networking but they both disagreed that teamwork will contribute to their professional development needs. This suggests the need for school administrators to be cautious in the process of recommending development programmes for teachers as the result of the study by Tafazoli (2021) indicated in its case that the technology recommended for teachers was being resisted that it never manages to reach its full potential unless teachers feel reassured that they are in control of their professional development. Planning professional development programmes for teachers in the post COVID-19 era must therefore necessarily be a collaboration between the teachers and the school administrators as well as the government in order to improve on teachers' service delivery for educational goals attainment.

## **Conclusion**

The study concluded based on the data analyzed that in the post COVID-19 era, there are professional development needs that teachers require such as building competencies on new technologies, subject mastery and adaptation to curriculum reforms but this is hindered by several challenges including lack of budgetary commitment to teachers' professional development. There was also no significant difference between the opinion of the male and female teachers on their professional development needs and the challenges and strategies for improving the professional development needs of the teachers for effective service delivery.

## **Recommendations**

The following recommendations were made based on the findings of the study:

1. School administrators need to carry out a professional development needs assessment to understand the training needs of the teachers and plan the required training programmes that will enable teachers to be able to discharge effective service delivery in this post COVID-19 era.



2. The government needs to make adequate financial commitment for training of teachers and other capacity building activities so as to enable them acquire the needed skills and knowledge for the discharge of quality services that are in line with the changes in the school system.
3. Internal training programmes through coaching, mentoring and other in-service programmes should be organized within the school by the principals to enable teachers share knowledge and information that will improve on their professional competence in the school in lien with changes that have taken place after the COVID-19 pandemic.

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