



International Journal of Indonesian Education and Teaching
<http://e-journal.usd.ac.id/index.php/IJIET>
Sanata Dharma University, Yogyakarta, Indonesia

TEACHER'S CAPACITY MANAGEMENT TECHNIQUES FOR IMPROVED EDUCATIONAL OUTCOME AMONG PRIVATE AND PUBLIC SECONDARY SCHOOL STUDENTS IN NIGERIA

Emmanuel Olorunleke Eseyin

Nigerian Institute of Social and Economic Research, Nigeria

correspondence: ephrata4doptimist@yahoo.com

<https://doi.org/10.24071/ijiet.v6i2.4335>

received 31 January 2022; accepted 13 July 2022

Abstract

The study investigated teacher's capacity management techniques for improved educational outcome of private and public secondary school students in Nigeria. Design of the study was analytical survey and correlation. There were 297 private secondary school teachers in and 258 public secondary school teachers in approved secondary schools in Nigeria who served as respondents for the study. The results of the study showed private secondary school teachers differ from public teachers in capacity monitoring, capacity analysis, capacity tuning, capacity planning and demand management for student's improved educational outcome. There was also a significant relationship between these variables. It was concluded that capacity monitoring contributed to student's educational outcome and as such capacity management training was recommended for these teachers.

Keywords: capacity management, education, educational outcome, Nigeria, private

Introduction

Every learner as well as their parents and guardians look forward to consistent improvement in their educational outcome. This is because the educational outcome of students contributes significantly to their transition rate to higher levels of education as well as labour market opportunities. Student's educational outcome which is often determined through regular assessment also helps to identify the areas of academic strengths and weaknesses among students for necessary intervention. The educational outcome of students has several benefits to students, teachers, parents and other educational stakeholders as this output is used for several educational decisions and as such cannot be ignored in any educational system no matter the level.

The educational outcome of students in private and public secondary schools has been an issue of debate across different educational institutions: universities, polytechnics, colleges of education, secondary schools among others. This because, aside the learning facilities, it is believed that the teaching personnel also influences students learning outcome to a great extent. For example, the study conducted by Mijinyawa, Yeldu, Umar and Hussaini (2017) showed that the performance of students in Biology, Physics and Chemistry favoured the private secondary school students in Birni Kebbi Metropolis, Nigeria more than those in public schools.

Supporting this assertion, the study by Babalola (2018) also corroborated that despite having more experienced teachers than those in the private schools, students in public schools performed lesser academically than their private counterpart. Private and public secondary school students share arguably the same curriculum but sometimes show difference in capacity academically, entrepreneurially, socially and otherwise. Similarly, people have different opinions about the performance of private as well as public secondary school graduates in the society when saddled with the same responsibilities after schooling in the same environment. This has become an issue of concern to many stakeholders and as such an inquiry into the capacity management techniques teachers' use for this category of students for improved educational outcomes as well as labour market efficiency.

Capacity management is a concept used majorly in the field of Information Technology (IT) and it refers to the set of activities carried out to maximize productivity as well as efficiency at all times and under the same condition. This concept is also significant in the field of education as it is used to refer to all efforts put in place to ensure that educational output including performance is optimal under the same condition for different categories of people. Capacity management techniques of teachers refer to all efforts put in place by the teacher to ensure that the abilities of students meet the required standard in line with the objectives of that level of education. In order to balance the differences in the educational outcome as well as labour market competencies of private as well as public secondary school students, instructors must ensure that they regularly implement the needed capacity management techniques for these students so as to balance the educational differentials among them.

One of the techniques that instructors can apply to achieve this objective is by enforcing capacity monitoring techniques. Capacity monitoring is the act of supervising the activities executed by students as well as ensuring that relevant guidance is provided for the purpose of meeting outlined objectives. It is an important practice in the success of any organization (Hervie & Winful, 2018). Capacity analysis on the other hand, focuses on identifying the strength and weakness of each student and group. This strategy has been used to enhance performance in different organizations (Yilmaz & Alouini, 2010). This is necessary for the purpose of decision making as well as providing remedial action. Capacity analysis techniques will enable the teacher identify the point where further action will be required in the teaching and learning process. Teachers also need to enforce relevant capacity planning techniques. Utley and Worthington (2012:12) quipped that:

Capacity planning is the process by which organizations determine the broad level of resources they make available for the delivery of a service or a set of services. Capacity planning is deciding on the amount of equipment or resources sufficient to enable an organization to meet demand for one or more packages of care or objectives while achieving specified service standards.

Capacity planning also involves making future forecast on classroom activities that will be carried out by these students taking into consideration the learning environment as well as the learner's personality. All of these factors are essential for balancing the educational outcome of Private and Public students. The teacher

needs to adapt relevant capacity planning techniques to bring all of these students to a point of optimality in educational outcome. Similarly, the teachers must in the same process engage capacity tuning techniques which is the act of putting in place strategies for improving the performance of each student. It is at the capacity tuning stage that the learning limitations of students are consciously turned to strength. In the same manner, Lalor, Wu and Yu (2017:4) asserted that capacity tuning aligns with the process of improving performance both in terms of accuracy and latent ability. Capacity tuning is also important in the school system such that through the *tuning* protocol, teachers share student work (Croft, Coggshall, Dolan, Powers & Killion, 2010) which ensures that all students are performing almost at the same level. Since these students are produced to take care of societal needs, teachers must make concerted effort to ensure that both categories of student meet the demands of the society and this is the focus of the demand management technique of teachers. Croxton, Lambert, García-Dastugue and Rogers (2002:51) asserted that:

The demand management process is concerned with balancing the customers' requirements with the capabilities of the supply chain. This includes forecasting demand and synchronizing it with production, procurement and distribution capabilities. A good demand management process can enable a company to be more proactive to anticipated demand and more reactive to unanticipated demand.

Teachers who handle private and public secondary school students must ensure that as a result of the relatedness of both institutions, students should be trained to meet the demands of the society competently. This target will reflect in the educational outcome of these students. This will ensure that students in Private and Public meet the immediate and future educational goals and objectives of the education sector. The management of capacity can lead to the attainment of different objectives even in the same environment (Sajid, n.d.). Capacity management is vital for the improvement of the educational performance of private and public secondary school students. Since these students share almost the same curriculum contents, teachers handling these students both generally and specifically need to be acquainted with relevant capacity management techniques. It is the enforcement of these techniques that will close the gap in the educational performance of private and public secondary school students. It is based on this premise that the study x-rays teacher's enforcement of capacity management techniques for improved educational outcome among private and public secondary school students in Nigeria.

Theoretical Framework

The theory upon which this study was anchored is David Kolb's (1984) Experiential Learning Theory. This theory focused on how meaningful learning takes place for improved educational outcome, identified the conditions upon which this goal can be achieved. This theory point to the fact that skills and job requirements must be commensurate and such progress is only made when the cycle of learning is completed. This theory is explained under two stages which are the four-stage cycle of learning as well as the four separate learning styles. These stages work interdependently for the goals of learning to be achieved.

The learning cycle which is the first stage of the experiential learning theory consists of four phases which are concrete learning, reflective observation, abstract conceptualization and active experimentation. The separate learning styles which are the second stage identified the fact that learners want to adapt to a specific learning style, but this is determined by two factors which are how the learning process is approached as well as response to the task ahead. It is the enforcement of these practices that makes learning impactful with all intended objectives achieved. This cycle as postulated by Kolb is revealed in Fig. 1 below:

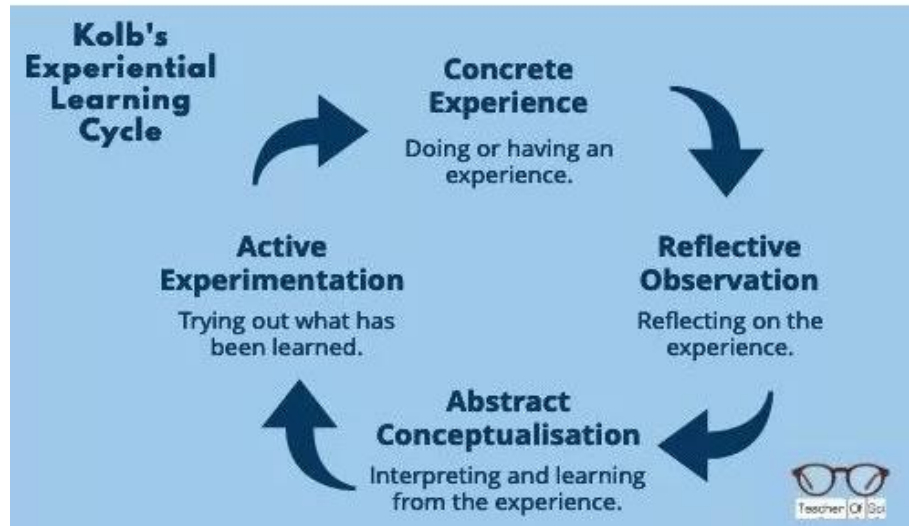


Figure 1. The Learning Cycle

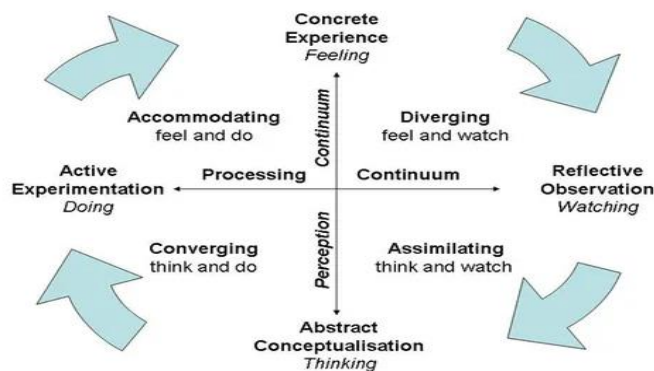


Figure 2. The Learning Style

The experiential learning theory no doubt captures how learning outcome can be enhanced in the classroom and the school in general. This theory focuses on key elements that make students learn meaningfully and these activities involve the participation of the teacher as well as the students. The teacher also has a lot of role to play to make learning easy for the students. This is why the teacher needs to be informed as well as engage meaningful capacity management techniques so as to improve the chances of the students performing well academically. The entire activities executed by the teacher in the capacity management process plays a

significant role in the performance of students across all stages captured in the experiential learning theory developed by David Kolb.

Purpose of the Study

The purpose of the study was to investigate teachers' capacity management techniques for improved educational outcome of private and public secondary school students in Nigeria.

Research Questions

The research questions raised in the study were as follows:

1. What are teacher's capacity monitoring techniques for improved educational outcome of private and public secondary school students in Nigeria?
2. What are teacher's capacity analysis techniques for improved educational outcome of private and public secondary school students in Nigeria?
3. What are teacher's capacity planning techniques for improved educational outcome of private and public secondary school students in Nigeria?
4. What are teacher's capacity tuning techniques for improved educational outcome of private and public secondary school students in Nigeria?
5. What are teacher's demand management techniques for improved educational outcome of private and public secondary school students in Nigeria?

Research Hypotheses

The following hypotheses were tested at 0.05 level of significance:

1. There is no significant relationship in teacher's capacity monitoring techniques for improved educational outcome of private and public secondary school students in Nigeria
2. There is no significant relationship in teacher's capacity analysis techniques for improved educational outcome of private and public secondary school students in Nigeria
3. There is no significant relationship in teacher's capacity planning techniques for improved educational outcome of private and public secondary school students in Nigeria
4. There is no significant relationship in teacher's capacity tuning techniques for improved educational outcome of private and public secondary school students in Nigeria
5. There is no significant relationship in teacher's demand management techniques for improved educational outcome of private and public secondary school students in Nigeria

Methodology

The design adopted for the study is both analytical survey as well as correlation. Population of the study comprised all the private and public secondary school in Nigeria. However, purposive sampling technique was used to draw two secondary schools from the Northern and Southern regions of Nigeria. Respondents used for the study were private and public teachers in these secondary school who were selected using stratified random sampling technique associated with

convenience sampling since the respondents were drawn based on their availability and accessibility. This was because the schools were drawn from the regions and this was followed by the individual schools and disciplines especially those who were available at the time of the study.

Sample of the study consisted of 297 private teachers as well as 258 public teachers who were drawn for the study. The instrument used for data collection was a 25 items questionnaire tagged “Capacity Management and Educational Outcome Questionnaire” (CMEQQ) and this was validated by four experts in University of Port Harcourt, Nigeria. The reliability of the instrument was determined using Cronbach alpha with an index of 0.84 which was considered adequate for the study. The research questions were answered using mean and standard deviation, while the hypotheses were tested using Cohen’s d statistics at 0.05 level of significance. The criterion mean was determined by adding up the weight of the responses, Strongly Agreed 4, Agreed 3, Disagreed 2 and Strongly Disagreed 1 and the total was divided by 4 to arrive at the criterion mean score of 2.50 used for decision making. A criterion mean score of 2.50 was used to determine whether to accept or reject items in the research questions.

Results and Discussion

Answer to Research Questions

Research Question One: What are teacher’s capacity monitoring techniques for improved educational outcome of private and public secondary school students in Nigeria?

Table 1. Mean and standard deviation scores of teacher’s capacity monitoring techniques for improved educational outcome of private and public secondary school students in Nigeria

S/No	Items	Private n=297		Public n=258		Mean Set	
		Mean \bar{X}_1	SD	Mean \bar{X}_2	SD	X \bar{X}	Decision
1	Innovative ideas among students are often rewarded by the teacher	2.88	0.99	1.92	1.08	2.40	Disagreed
2	Improved ideas, methods and processes are shared by the teacher with the students	2.80	1.08	1.80	1.26	2.30	Disagreed
3	Teachers allow the creation of informal groups which contributes to students educational outcomes	2.64	1.28	2.36	1.21	2.50	Agreed
4	There is provision for regular feedback during teacher and	2.44	1.18	2.26	1.40	2.35	Disagreed

5	students interaction Underperforming students are regularly provided constructive assistance	2.68	1.19	2.66	1.10	2.67	Agreed
	Grand Mean and Standard Deviation	2.69	1.14	2.20	1.21	2.44	Disagreed

*Scale: 1-1.25: Strongly Disagreed (SD), 1.26-2.49: Disagreed (D), 2.50-3.25: Agreed (A), 3.26-4.00: Strongly Agreed (SA)

The responses of the private teachers sampled for the study to items 1, 2, 3, 4 and 5 produced mean scores of 2.88, 2.80, 2.64, 2.44 and 2.68. items 1, 2, 3 and 5 with mean scores of 2.88, 2.80, 2.64 and 2.68 means that the respondents agreed to the items while 4 with mean score of 2.44 was disagreed. The same set of items was responded to by teachers in public with mean values of 1.92, 1.80, 2.36, 2.26 and 2.66. Only item 5 with mean score of 2,66 was agreed to while the other items; 1, 2, 3 and 4 with mean scores of 1.92, 1.80, 2.36 and 2.26 were disagreed in response to the questions raised. In summary, the average mean score of 2.44 implied that the sampled respondents both disagreed on teacher’s capacity monitoring techniques for improved educational outcome of private and public secondary school in Nigeria. However, the grand mean of 2.69 from the private teachers showed that they agreed while the grand mean of 2.20 from the public teachers implied that they disagreed on teacher’s capacity monitoring techniques for improved educational outcome of private and public secondary school students in Nigeria.

Research Question Two: What are teacher’s capacity analysis techniques for improved educational outcome of private and public secondary school students in Nigeria?

Table 2. Mean and standard deviation scores of teacher’s capacity analysis techniques for improved educational outcome of private and public secondary school students in Nigeria

S/No	Items	Private n=297		Public n=258		Mean Set	
		Mea n \bar{X}_1	SD	Mean \bar{X}_2	SD	X \bar{X}	Decision
6	Students are not given educational responsibilities above their competence level	2.86	1.10	2.46	1.15	2.66	Agreed
7	The suitability of the physical classroom environment is considered before initiating teaching and learning activities	2.60	1.11	2.18	1.29	2.39	Disagreed

8	Teachers select the right combination of teaching tools that will improve student's educational outcome	3.00	0.92	2.34	1.38	2.67	Agreed
9	Teachers undergo regular personal assessment programs to improve their level of teaching competence	2.48	1.16	1.74	1.20	2.11	Disagreed
10	Competitive events are organized to determine students educational competence	2.88	1.10	1.92	1.19	2.40	Disagreed
	Grand Mean and Standard Deviation	2.76	1.08	2.13	1.24	2.45	Disagreed

*Scale: 1-1.25: Strongly Disagreed (SD), 1.26-2.49: Disagreed (D), 2.50-3.25: Agreed (A), 3.26-4.00: Strongly Agreed (SA)

It was revealed in table 2 that the responses of the private teachers sampled for the study to items 6, 7, 8, 9 and 10 produced mean scores of 2.86, 2.60, 3.00, 2.48 and 2.88. Items 6, 7, 8 and 10 with mean scores of 2.86, 2.60, 3.00 and 2.88 implied that the items were agreed while item 9 with mean score of 2.48 was disagreed in relation to the question items raised. Teachers in public also responded to the same set of items with mean scores of 2.46, 2.18, 2.34, 1.74 and 1.92. All of these items were below the criterion mean score of 2.50 used for decision making and as such implied that they were disagreed in respect to the questions raised. The average mean score of 2.45 showed that the private teachers as well as the public teachers collectively disagreed on teacher's capacity analysis techniques for improved educational outcome of private and public secondary school students in Nigeria. However, the private teachers sampled for the study agreed with a grand mean score of 2.76 while the public teachers disagreed with a grand mean score of 2.13 on teacher's capacity analysis techniques for improved educational outcome of private and public secondary school students in Nigeria.

Research Question Three: What are teacher's capacity planning techniques for improved educational outcome of private and public secondary school students in Nigeria?

Table 3. Mean and standard deviation scores of teacher's capacity planning techniques for improved educational outcome of private and public secondary school students in Nigeria

S/No	Items	Private n=297		Public n=258		Mean Set		Decision
		Mean \bar{X}_1	SD	Mean \bar{X}_2	SD	\bar{X}	\bar{X}	
11	Teachers have alternative action	3.10	0.93	2.16	1.41	2.63		Agreed

	plans for meeting educational goals and objectives						
12	The future roles and responsibilities of students are considered when designing classroom instruction	2.84	1.12	2.30	1.31	2.57	Agreed
13	The cost and benefit implication of educational programmes are considered by teachers before initiation	2.72	1.18	2.34	1.07	2.53	Agreed
14	Requirements for each classroom activities are scheduled ahead of time in line with intended educational objectives	2.72	0.87	2.46	1.39	2.59	Agreed
15	Emphasis is laid on assembling the best skill sets that will improve student's educational outcome	2.90	0.96	1.90	1.32	2.40	Disagreed
	Grand Mean and Standard Deviation	2.86	1.01	2.23	1.30	2.54	Agreed

*Scale: 1-1.25: Strongly Disagreed (SD), 1.26-2.49: Disagreed (D), 2.50-3.25: Agreed (A), 3.26-4.00: Strongly Agreed (SA)

Table 3 showed the mean scores of private teachers sampled for the study to items 11, 12, 13, 14 and 15 as 3.10, 2.84, 2.72, 2.72 and 2.90 while the public teachers sampled for the study responded to the same set of items with mean scores of 2.16, 2.30, 2.34, 2.46 and 1.90. All the items responded to by the private teachers were all agreed in respect to the items raised while the same set of items were all disagreed by the public teachers sampled for the study. However, averagely, the respondents both agreed with an average mean value of 2.54 on teacher's capacity planning techniques for improved educational outcome of private and public secondary school students in Nigeria. Private teachers however agreed with a grand mean score of 2.86 while the public teachers disagreed with a grand mean score of 2.23 on teacher's capacity planning techniques for improved educational outcome of private and public secondary school students in Nigeria.

Research Question Four: What are teacher’s capacity tuning techniques for improved educational outcome of private and public secondary school students in Nigeria?

Table 4. Mean and standard deviation scores of teacher’s capacity tuning techniques for improved educational outcome of private and public secondary school students in Nigeria

S/No	Items	Private n=297		Public n=258		Mean Set	
		Mean \bar{X}_1	SD	Mean \bar{X}_2	SD	X \bar{X}	Decision
16	Educational problems among students are assessed and categorized	2.60	0.98	1.72	1.13	2.16	Disagreed
17	Students performance are measured before any modification in the curriculum	2.98	0.91	2.42	1.18	2.70	Agreed
18	Teachers identify learning bottlenecks among students and eliminate them	2.76	1.02	2.54	1.18	2.65	Agreed
19	Teaching strategies that improve student’s educational outcome are often adopted	3.18	0.64	2.42	1.15	2.80	Agreed
20	Teachers fully understand the factors that contribute optimally to student’s educational outcome	3.02	0.97	2.32	1.08	2.67	Agreed
	Grand Mean and Standard Deviation	2.91	0.90	2.28	1.14	2.60	Agreed

*Scale: 1-1.25: Strongly Disagreed (SD), 1.26-2.49: Disagreed (D), 2.50-3.25: Agreed (A), 3.26-4.00: Strongly Agreed (SA)

Items 16, 17, 18, 19 and 20 were responded to in table 4 by private teachers with mean scores of 2.60, 2.98, 2.76, 3.18 and 3.02 and since these items were all above the criterion mean score of 2.50, they were all agreed in response to the items raised. However, the public teachers sampled for the study responded to the same set of items with mean scores of 1.72, 2.42, 2.54, 2.42 and 2.32. Only item 18 with mean score of 2.54 was agreed while the remaining items were disagreed in respect

to the items raised. In summary, the average mean score of 2.60 indicated that the respondents both agreed on teacher’s capacity tuning techniques for improved educational outcome of private and public secondary school students in Nigeria. Individually, the private teachers with grand mean score of 2.91 agreed while the public teachers with mean score of 2.28 disagreed on teacher’s capacity tuning techniques for improved educational outcome of private and public secondary school students in Nigeria.

Research Question Five: What are teacher’s demand management techniques for improved educational outcome of private and public secondary school students in Nigeria?

Table 5. Mean and standard deviation scores of teacher’s demand management techniques for improved educational outcome of private and public secondary school students in Nigeria

S/No	Items	Private n=297		Public n=258		Mean Set	
		Mean \bar{X}_1	SD	Mean \bar{X}_2	SD	X \bar{X}	Decision
21	Teachers hold regular communication with general education stakeholders	2.34	0.97	2.32	1.25	2.33	Strongly Disagreed
22	Teachers have and institute personal policies for promoting and graduating students	3.06	0.99	1.52	1.24	2.29	Disagreed
23	Teachers prepare their students for varieties of societal needs as well as for different sectors	3.04	0.96	1.80	1.14	2.42	Disagreed
24	Teachers have ways of publicizing educational activities and achievements	2.22	1.16	1.82	1.29	2.02	Disagreed
25	Classroom activities are professionally scheduled to meet market and societal demand	2.86	1.03	2.34	1.24	2.60	Agreed
Grand Mean and Standard Deviation		2.70	1.02	1.96	1.23	2.33	Disagreed

*Scale: 1-1.25: Strongly Disagreed (SD), 1.26-2.49: Disagreed (D), 2.50-3.25: Agreed (A), 3.26-4.00: Strongly Agreed (SA)

Table 5 showed that private teachers sampled for the study responded to items 21, 22, 23, 24 and 25 with mean scores of 2.34, 3.06, 3.04, 2.22 and 2.86. Items 21 and 24 with mean scores of 2.34 and 2.22 were disagreed while items 22, 23 and

25 with mean values of 3.06, 3.04 and 2.86 were agreed. On the other hand, the public teachers responded to the same set of items with mean scores of 2.32, 1.52, 1.80, 1.82 and 2.34. Since all of these items were below the criterion mean score of 2.50 used for decision making, they were all disagreed in respect to the items raised. The average mean score of 2.33 implied that the respondents disagreed on teacher’s demand management techniques for improved educational outcome of private and public students in secondary schools in Nigeria. The private teachers sampled for the study agreed with a grand mean score of 2.70 while the public teachers disagreed with a grand mean score of 1.96 on teacher’s demand management techniques for improved educational outcome of private and public secondary school students in Nigeria.

Hypotheses Testing

HO₁: There is no significant relationship in teacher’s capacity monitoring techniques for improved educational outcome of private and public secondary school students in Nigeria

Table 6. t-test of relationship in teacher’s capacity monitoring techniques for improved educational outcome of private and public secondary school students in Nigeria

Variable	n	df	Cohen’s D	r	t-cal.	t-crit.	Sig. Level	Decision
Capacity Monitoring	297	2	0.41	0.20	4.80	3.17	0.05	Significant Relationship
Educational Outcome	258	553						

In table 6, the value of Cohen’s D of 0.41 implied a weak effect and the correlation value of r=0.20 also showed a low positive relationship between capacity monitoring and improved educational outcome. The value of t-cal. of 4.80 which was more than the value of t-crit. of 3.17 also indicated that there was a significant relationship in teacher’s capacity monitoring techniques for improved educational outcome of private and public secondary school students in Nigeria

HO₂: There is no significant relationship in teacher’s capacity analysis techniques for improved educational outcome of private and public secondary school students in Nigeria

Table 7. t-test of relationship in teacher’s capacity analysis techniques for improved educational outcome of private and public secondary school students in Nigeria

Variable	n	df	Cohen’s D	r	t-cal.	t-crit.	Sig. Level	Decision
Capacity Analysis	297	2	0.54	0.26	6.34	3.17	0.05	Significant Relationship
Educational Outcome	258	553						

Table 7 indicated the value of Cohen’s D to be 0.54 which was a medium effect and the correlation value of r=0.26 also implied a low positive relationship between capacity analysis and improved educational outcome. Also, the value of t-

cal. of 6.34 which was more than the value of t-crit. of 3.17 implied a significant relationship in teacher’s capacity analysis techniques for improved educational outcome of private and public secondary school students in Nigeria

HO₃: There is no significant relationship in teacher’s capacity planning techniques for improved educational outcome of private and public secondary school students in Nigeria

Table 8. t-test of relationship in teacher’s capacity planning techniques for improved educational outcome of private and public secondary school students in Nigeria

Variable	n	df	Cohen’s D	r	t-cal.	t-crit.	Sig. Level	Decision
Capacity Planning	297	2	0.54	0.26	6.34	3.17	0.05	Significant Relationship
Educational Outcome	258	553						

In table 8, the value of Cohen’s D of 0.54 implied a medium effect and the correlation value of $r=0.26$ indicated a low positive relationship between capacity planning and improved educational outcome. Furthermore, the value of t-cal. of 6.34 which was more than the value of t-crit. of 3.17 also showed a significant relationship in teacher’s capacity planning techniques for improved educational outcome of private and public secondary school students in Nigeria

HO₄: There is no significant relationship in teacher’s capacity tuning techniques for improved educational outcome of private and public secondary school students in Nigeria

Table 9. t-test of relationship in teacher’s capacity tuning techniques for improved educational outcome of private and public secondary school students in Nigeria

Variable	n	df	Cohen’s D	r	t-cal.	t-crit.	Sig. Level	Decision
Capacity Tuning	297	2	0.62	0.29	7.14	3.17	0.05	Significant Relationship
Educational Outcome	258	553						

It was revealed in table 9 that the value of Cohen’s D of 0.62 showed a medium effect and the correlation value of $r=0.29$ also indicated a low positive relationship between capacity tuning and improved educational outcome. In a related manner, the value of t-cal. of 7.14 which was more than the value of t-crit. of 3.17 indicated a significant relationship in teacher’s capacity tuning techniques for improved educational outcome of Private and Public students in secondary schools in Nigeria

HO₅: There is no significant relationship in teacher’s demand management techniques for improved educational outcome of private and public students in secondary schools in Nigeria

Table 10. t-test of relationship in teacher's demand management techniques for improved educational outcome of Private and Public students in secondary schools in Nigeria

Variable	n	df	Cohen's D	r	t-cal.	t-crit.	Sig. Level	Decision
Demand Management Educational Outcome	297	2	0.65	0.31	7.68	3.17	0.05	Significant Relationship

Table 10 indicated that the value of Cohen's D of 0.65 implied a medium effect and the correlation value of $r=0.31$ also showed a low positive relationship between demand management and improved educational outcome. The value of t-cal. of 7.68 which was more than the value of t-crit. of 3.17 also showed a significant relationship in teacher's demand management techniques for improved educational outcome of private and public secondary school students in Nigeria

Discussion of Findings

Teacher's Capacity Monitoring Techniques

The average mean score of 2.44 indicated that the respondents disagreed on teacher's capacity monitoring techniques for improved educational outcome of private and public secondary school students in Nigeria. This outcome aligns with the outcome of a related study carried out by Ladwig (2005) which showed that there was need for pedagogy audit for a successful capacity monitoring. This means that the enforcement of capacity monitoring technique is still lacking in most educational institutions. However, as indicated in the grand mean of the respondents, teachers in Private showed more commitment to capacity monitoring techniques than those in Public. The only point of agreement was that the respondents both agreed that they provide regular constructive assistance to underperforming students. This is done to assist these students improve in their academic performance.

However, in the area of rewarding innovative ideas, sharing ideas and methods and creation of informal groups, teachers in Private indicated that they agreed on these items as practiced for improvement in the educational outcome of their students. This implies that teachers in Private share relevant ideas with their students as well as allow them create informal groups that will enable them improve in their educational outcome. Further findings showed that these teachers do not have mechanisms in place to get feedback from their students. This no doubt will have negative consequence on the performance of these students. Similar study carried out by Mngomezulu (2015) also agreed that there are some level of laxity and lack of decisiveness in the extent of implementation of capacity monitoring strategies. It is therefore important for teachers in Private and Public to develop as well as implement relevant capacity monitoring techniques to improve the educational outcome of their students.

Teacher's Capacity Analysis Techniques

It was revealed from the findings of the study that the teachers used for the study averagely disagreed on teacher's capacity analysis techniques for improved educational outcome of private and public secondary school students in Nigeria.

However, the private teachers agreed while the public teachers disagreed on teacher's capacity analysis techniques for improved educational outcome of private and public secondary school students in Nigeria. This implied that private teachers were better at enforcing capacity analysis techniques for improving the educational outcome of their students than the public teachers. Similar study conducted by Lindfeldt (2015) showed that the application of capacity analysis techniques helps in the proper evaluation of future objectives. This may explain why students in private secondary schools who are taught private teachers perform better in their educational outcome than students taught in public secondary school.

In all the items raised to measure teachers' capacity analysis techniques for improving the educational outcome of their students. Teachers who handle private students agreed that they engaged capacity analysis techniques such as giving students higher responsibilities, considering the suitability of the classroom, selecting the right tools and engaging regular competitive activities and this promotes the educational outcome of their students. In the study conducted by O'Neill, Schmidt and Warren (2016), it was revealed as part of the findings of the study that the application of capacity analysis techniques is responsible increase on size of outcome or products. However, the teachers disagreed that they engaged in adequate personal assessment programmes to improve their teaching competence. All of these go a long way to improve the educational outcome of their students and this is a practice that teachers in public secondary schools need to embrace.

Teacher's Capacity Planning Techniques

In the findings of the study, it was averagely agreed by the respondents of the study that teacher's engaged capacity planning techniques for improved educational outcome of private and public secondary school students in Nigeria. This finding slightly agreed with the outcome of a related study conducted by Sule, Ogbadu and Olukotun (2012) showed that 88.89% of the respondents were of the opinion that capacity planning is necessary for efficient and effective functioning among the Kogi State higher institutions. Therefore, teachers need to engage relevant capacity planning techniques as a way of achieving efficiency and effectiveness in service delivery which will in turn improve the educational outcome of their students.

In a related dimension, the capacity planning techniques engaged by private were not adequately engaged by teachers in public secondary schools and this can indeed have negative effect on the educational outcome of their students. Teachers in public secondary schools therefore need to embrace the capacity planning techniques engaged by their fellow private teachers as way of improving the educational outcome of their students. In their study, Nyhuis and Filho (2002) found out that capacity planning helps in the reduction or elimination of static and dynamic bottlenecks and this practice if engaged by public institutions will go a long way to contribute to the educational outcome of their students.

Teacher's Capacity Tuning Techniques

It was revealed in the outcome of the study that private and public teachers averagely agreed on teacher's capacity tuning techniques for improved educational outcome of private and public secondary school students in Nigeria. This finding was similar to the result of the study conducted by Jiang, He, Chen, Liu, Gao and Zhao (2020) which showed that tuning strategy achieves new state-of-the-art

performance on a number of tasks. However, teachers in Private agreed on all the items raised such as the assessment and categorization of student problems, measuring students' performance before modifying the curriculum, identifying and eliminating students' educational bottlenecks, engaging teaching strategies that will improve students' performance as well as identifying factors that influence students' performance. These practices go a long way to improve the educational outcome of students, but teachers in public secondary schools do not appropriately engage these techniques which are counterproductive to their service delivery.

It is important based on this premise that teachers of public secondary schools need to embrace available capacity tuning techniques as this will assist them to achieve better educational outcomes like other students in private secondary schools. Supporting this position, Bar-Hillel, Di-Nur, Ein-Dor, Gilad-Bachrach and Ittach (2007) quipped in the outcome of their study that tuning policies improves outcome more than 20% while in other cases it is about 40%. This finding no doubt points to the fact that when teachers engage capacity tuning strategies irrespective of the discipline, there is bound to be an improvement in the educational outcome of their students which is a benefit that public secondary schools can draw from if these techniques are adopted.

Teacher's Demand Management Techniques

In the findings of the study, it was averagely disagreed that teachers in private and public secondary schools engaged demand management techniques for improved educational outcome of private and public secondary school students in Nigeria. On the other hand, there was difference in opinion of teachers in private and those in public secondary schools on the extent to which these techniques were engaged. Related study carried out by Ali, D'Amours, Gaudreault and Carle (2018) showed that there is the potential to improve the performance of the demand management process of any organization by adhering to priorities. This is a practice that teachers in private and public secondary schools need to adapt to for improvement in students' educational outcome.

The teachers jointly disagreed that they regularly engaged all educational stakeholders in their services and that they have a means of publicizing their educational activities. There was a related study carried out by Alonso, Verdun and Caro (2013) which showed that there was need for the design of a global framework covering all three levels of demand management process which are strategic, tactical and operational. This practice will help to ensure that all employees adopting this technique will be able to improve on the quality of their service delivery and the performance of their students in particular.

Conclusion

The concept of capacity management has been in use in the area of science and technology for a long time. Capacity management has been used and has contributed immensely to output, performance and productivity across different sectors of the global economy. This phenomenon has been gaining increasing attention in the field of education as a tool for increasing individual and institutional performance. However, it was revealed in the study that there is a difference in the extent to which educational stakeholders have accepted this practice. The study has been able to show that employees in the same organization still exhibit different

disposition towards the adoption of capacity management techniques for improving the educational outcome of students.

Over the years, there has been a notable difference in the educational outcome of students in private and public secondary schools. This study has been able to suggest that the difference in the educational outcome of these students may be due to the capacity management techniques engaged by their teachers in the school system. It was revealed in the study that teachers in private and public secondary schools differ in their application of capacity monitoring, capacity analysis, capacity tuning, capacity planning and demand management techniques. These techniques have great influence on educational outcome as it has in the field of science and technology but has been duly embraced by teachers in private than those in public secondary schools.

Improvement in the educational outcome of students in public secondary schools can be at par with that of students in private secondary schools if teachers in the public secondary schools make concerted effort to engage these capacity management techniques in their teaching and learning activities. Educational outcome, output and productivity can be attained if all employees particularly teachers engage these techniques in the course of discharging their duties. In the long run, it is certain that if teachers irrespective of their areas of discipline engage relevant capacity management techniques, performance is expected to increase in the long run. However, every stakeholder in the education system have a role to play in achieving this objective. Students, teachers, school administrators and the government must develop the right skills and knowledge, engage available tools, create an enabling environment and make relevant policies respectively for the capacity management techniques employed during teaching and learning activities to contribute to improvement in the educational outcome of students in both private and public secondary schools concurrently.

In line with the findings of the study, relevant recommendations for each of the issues discussed were highlighted as follows:

1. The government and school owners need to provide relevant monitoring devices for teachers in the various areas of specialization which can be used to measure the capacity of students. This will help these teachers to be able to quickly identify students who are in need of further educational aid and provide remedial education when and where necessary.
2. Government regulatory agencies need to take the issue of school supervision seriously. There should be provision for internal and external supervision where teacher's capacity analysis techniques for student's academic performance can be easily assessed to ensure that the right educational goals and objectives are achieved.
3. There is need for schools to draw out short, medium and long term educational objectives which will guide the academic activities of teachers. These objectives will guide teachers' capacity planning techniques so that intended educational goals and objectives can be achieved both in the short and long term.
4. Teachers need to collaborate with their students and other educational stakeholders such as educational planners to assess the capacity of students and design measures for dealing with students learning difficulties so that

the goals and objectives of education will not just be actualized but will be improved upon on a regular basis.

5. There is need for establishment of an education-labour market organization that will moderate the relationship between the schools and the labour market. This organization will guide the school on the demands of the labour market as well as engage students who are graduated from the secondary schools into relevant sectors of the labour market where they will make meaningful contribution to the society.

References

- Ali, M. B., D'Amours, S., Gaudreault, J. & Carle, M. A. (2018). Configuration and evaluation of an integrated demand management process using a space-filling design and Kriging metamodeling. *Operations Research Perspectives*, 5, 45-58
- Alonso, I. A., Verdun, J. C. & Caro, E. T. (2013). Case study of strategic IT demand management in organizations: Exploratory results. *Procedia Technology*, 9, 900-909
- Babalola, J. O. (2018). Comparative study of performances between private and public schools in English Language programme. *Asian Journal of Humanities and Social Studies*, 6(1), 25-33
- Bar-Hillel, A., Di-Nur, A., Ein-Dor, L., Gilad-Bachrach, R. & Ittach, Y. (2007). *Workstation capacity tuning using reinforcement learning*. Retrieved from file:///C:/Users/HP/AppData/Local/Temp/Workstation_capacity_tuning_using_reinforcement_le.pdf
- Croft, A., Coggshall, J. G., Dolan, M., Powers, E. & Killion, J. (2010). *Job-embedded professional development: What it is, who is responsible, and how to get it done well*. Retrieved from https://files.eric.ed.gov/fulltext/ED520830.pdf
- Croxton, K. L., Lambert, D. M., García-Dastugue, S. J. & Rogers, D. S. (2002). The demand management process. *The International Journal of Logistics Management*, 13(2), 51-66.
- Hervie, D. M. & Winful, E. C. (2018). Enhancing teachers' performance through training and development in Ghana Education Service: A case study of Ebenezer senior high school. *Journal of Human Resource Management*, 6(1), 1-8.
- Jiang, J., He, P., Chen, W., Liu, X., Gao, J. & Zhao, T. (2020). *SMART: Robust and efficient fine-tuning for pre-trained natural language models through principled regularized optimization*. Retrieved from https://arxiv.org/pdf/1911.03437.pdf
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development* (Vol. 1). Englewood Cliffs, NJ: Prentice-Hall.
- Ladwig, J. G. (2005). Monitoring the quality of pedagogy. *Leading & Managing*, 11(2), 70-83.
- Lalor, J. P., Wu, H. & Yu, H. (2017). *CIFT: Crowd-informed fine-tuning to improve machine learning ability*. Retrieved from file:///C:/Users/HP/AppData/Local/Temp/Improving_Machine_Learning_Ability_with_Fine-Tunin.pdf

- Lindfeldt, A. (2015). *Railway capacity analysis: Methods for simulation and evaluation of timetables, delays and infrastructure*. Retrieved from <http://www.diva-portal.org/smash/get/diva2:850511/FULLTEXT01.pdf>
- Mijinyawa, M., Yeldu, Y. M., Umar, Z. & Hussaini, H. B. (2017). Comparative analysis of the academic performance of public and private senior secondary school students in science in Birnin Kebbi Metropolis, Kebbi State, Nigeria. *The Beam: Journal of Arts & Science*, 11, 1-11.
- Mngomezulu, N. M. (2015). *Strategies of monitoring teaching and learning: A school management team perspective* (Unpublished Master's Thesis of the Department of Educational Leadership, Management and Policy, University of Kwazulu-Natal, Durban, South Nigeria).
- Nyhuis, F. & Filho, N. A. P. (2002). Methods and tools for dynamic capacity planning and control. *Gestao & Producao*, 9(3), 245-260
- O'Neill, M., Schmidt, C. & Warren, G. (2016). *Capacity analysis*. Retrieved from <file:///C:/Users/HP/AppData/Local/Temp/CapacityAnalysis-CIFR-December2016FINAL.pdf>
- Sajid, M. (n.d.). *Strategic capacity planning*. Retrieved from https://www.academia.edu/9568618/Capacity_Planning_and_Analysis
- Sule, J. G., Ogbadu, E. E. & Olukotun, G. A. (2012). Capacity planning and its implications on the infrastructural development needs of some selected higher institutions in the eastern senatorial district of Kogi State. *Global Journal of Management and Business Research*, 12(23), 62-80
- Utley, M. & Worthington, D. (2012). *Capacity planning*. Retrieved from <https://pdfs.semanticscholar.org/5aaf/77fc62cb49baff0deb7c3f786663c7b9b69e.pdf>
- Yilmaz, F. & Alouini, M. (2010). A unified MGF-based capacity analysis of diversity combiners over generalized fading channels. *IEEE Transactions on Communications*, 10 (20), 1-26