



Influence of Motivation on Biology Teachers' Job Performance in Public Secondary Schools in Port Harcourt Metropolis

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ABSTRACT

The purpose of this study was to investigate: influence of motivation on Biology teachers Job Performance in Public Secondary Schools in Port Harcourt Metropolis of Rivers State. The study adopted Descriptive survey design. The population of the study was 111 Biology teachers from public Secondary Schools in Port Harcourt Metropolis of Rivers State. Five research questions and five hypotheses guided the study. The entire population was used and there was no sampling because of its manageable size. The instrument for data collection was a self-structured instrument titled "Influence of Motivation on Biology Teachers Job Performance Questionnaire" which was face and content validated by two experts in Measurement and Evaluation. A total of 111 copies of the questionnaire were administered to the respondents. The reliability of the instrument gave a correlation coefficient indexes above 0.50 which were considered very reliable using the Cronbach's alpha. Mean and standard deviation were used to answer the research questions. While z-test was used in testing the formulated null hypotheses at 0.05 level of significance. Findings of the study revealed that motivation has a significant influence on Biology teachers collaboration, evaluation and feedback of students assessment and teachers' interest in the use of modern techniques. Based on the findings it was recommended that there is need for the government to motivate teachers through provision of professional development to train teachers, provide modern teaching equipment and instructional materials and regular payment of salaries and allowances to teachers of science subjects.

Key Words: influence, motivation, Biology teachers, Job Performance, effective, evaluation, feedback, collaboration, development, instructional resources

INTRODUCTION

Education has been recognized as the fundamental basis on which any nation could function effectively. It's socio-political and economic viability depends solely on the qualitative education given to her citizens. Any nation that wants to be recognized as a developed country must build its human resources firmly (Ormond, 2010). Hence, a country is said to be technologically developed, if majority of her populace are well educated. Therefore, those that impart the needed knowledge or those that build and mould character must be motivated adequately because motivation is the key to performance and improvement. Those who impart the needed knowledge are teachers and their profession is teaching (Orodho, 2014).

The teaching profession previously was accorded with respect, honour and dignity. This enviable profession was a source of motivation to many teachers. Teaching does not only afford life career to teachers, but also render services to the public. Teachers were respected and given pride of place in the society. According to Nwanchukwu (2018), teachers are the producers of bank managers, oil miners, judges, accountants, lawyers, senators, governors, even presidents and so on. But it is the salaries of the teachers that are always delayed and the documents relating to arrears of salaries accrued to teachers that are usually neglected. Yet teachers have succeeded in maintaining and improving educational standard in Nigeria. An understanding of what motivates an individual is necessary to reveal and release his/her potentials.

Attitude to work is a critical determinant of staff level of job performance in any organization. It has to do with the feelings, habits and beliefs that affect the behaviour of staff members at work. It has been observed that the Nigerian civil servants have poor attitude to work which impinges on their job performance. This fact laid the basic fact that many employees lack appropriate training, which do not motivate staff to do well in their daily work in the schools and other organizations. When an employer of labour, whether government or private recruits people into his/their organization, the purpose is to make them work effectively or perform their duties optimally so that the objectives of the organization can be realized. But the employers' objectives and that of the employees are usually at variance. Therefore, the employer(s) must harmonize these objectives and channel them to productive use through motivation. Motivation plays a very important role in determining the level of performance of employees, which in turn influence how effectively the organizations goals will be met.

Motivation comes from a Latin word "movere" which means "move". Motivation is the process of arousing the interest of an individual to take a move towards a certain goal. According to Kochhar (2017) motivation is anything that moves one into action. Motivation involves a number of psychological factors that start and maintain activities towards the achievements of personal goals and refers to reasons that underlie behaviour that is characterized by

willingness and volition. Motivation in education can have several effects on how teachers teach and their behaviour towards teaching the subject matter. Motivation of teachers in the teaching and learning process can direct behaviour towards particular goals, lead to increased effort and energy, enhance cognitive processing, increase imitation of and persistence in activities, determine what consequences are reinforcing and it can also lead to improved performance. Motivation can either be intrinsic or extrinsic. Intrinsic motivation such as achievement, recognition, work content, responsibility, advancement and growth is that which is aroused in the teaching profession itself. It may be aroused because there is joy or interest in the profession as a teacher carries out the activity. When intrinsic motivation develops in teachers, they feel happy as it fulfils their desires. Under such situations, motivation arises out joy and interests which are related to teacher's attempts to tackle their own problems and be committed to their job. The satisfaction which arouse from the activity itself (teaching profession) is the major point. Extrinsic motivation such as salary, supervision, working conditions and interpersonal relations (Weli, 2017) on the other hand is the motivation that comes from external sources such as employers giving incentives to their employees (teachers) in form of allowances, promotion as at when due to mention just a few. Ultimately, both intrinsic and extrinsic motivations are prerequisites for extra efforts, commitment, dedication, good result and improved teachers' performance.

Job satisfaction is very crucial to the development of education and personnel's in the educational industry. In line with this, needs satisfaction and motivation to work are very essential in the lives of teachers because they form the fundamental reason for working in life. The teacher like every other worker works in other to satisfy his or her needs Brown (2014). Many factors plays an important part in the success of educational institutions like teachers, finance, shelter, means of transport. But from them, "teachers" are the most important factors of educational institutions. It is essential for every management to effectively utilize their teachers. Satisfaction refers to individual elements of one's job, like as salary, promotion, growth prospects, physical environment, working hours, so on and so forth. Orodho (2014), teacher satisfaction plays important role in the promotion of teaching and learning excellence. Generally, satisfied teachers are more likely to motivate students to learn in the classroom, to ensure the implementation of educational reforms and feelings of satisfaction and fulfillment.

Teacher empowerment is a source of motivation for teachers. They consider that the more they share in decision-making the greater their job satisfaction will be and hence their job performance, quality of work and the higher their self-esteem will be. The more that teachers see that they have choices in how they complete their work the greater their perception that they are achieving their goals through their own efforts. Teachers are happier when they have some measure of control over their working environment. Autocratic top-down leadership tends to quell teacher motivation and morale. When teachers are not given the opportunity to voice their views and opinions and to participate in making decisions on matters that affect them, they become dissatisfied with their profession (Davis & Wilson 2017)

Pay is regarded as a stick disguised as carrot and it serves to prevent dissatisfaction or to act as a satisfier (not as a motivator). Intrinsic factors such as recognition and praise are more significant motivators. However, negative job related attitudes among teachers do correlate with low salaries to some extent. It is the perception of the inequity in salaries which results in the dissatisfaction and de-motivation of teachers. In the developed world, people working in the business and engineering fields have witnessed markedly higher salary increases due to the high demand for their services, compared to the lower increases in the teaching profession Evans (2017).

Informing teachers that they are doing a good job and recognizing their achievements, both publicly and privately, makes them feel appreciated. Recognition in the form of praise and constructive feedback from colleagues and the principal has a positive impact on teacher motivation, self-esteem, confidence and sense of security. From this they can develop a habit of reflection which can inform their behaviour. Indeed, teachers long for recognition, praise and feedback about their achievements and this is likely to motivate them professionally (Steyn, 2012). Most of the factors affecting teacher motivation in the first world are related to intrinsic motivation. As will be explained in paragraph 2.5.3, intrinsic motivational factors are more influential than the external factors.

Nwanchukwu (2018), opined that the relevance of job satisfaction is very crucial to the long-term growth of any educational system around the world. It probably ranks alongside professional knowledge and skills, centre competencies, educational resources and strategies as the veritable determinants of educational success and performance. Professional knowledge, skills and centre competencies occur when one feels effective in one's behaviour. Teachers' opportunities for promotion are also likely to exert an influence on job satisfaction. Robbins (2013) maintains that promotion opportunities provide for personal growth, increased responsibility, and increased social status. Limited or lack of opportunities of teachers for promotion affects educational outputs negatively. According to Brown (2014), salaries not only assist people to attain their basic needs, but are also instrumental in satisfying the higher level needs of people. Monetary and other kinds of equitable incentives encourage teachers' job satisfaction.

Job satisfaction is either a global feeling about the job or a related constellation of attitudes about various aspects of facets of the job. The facet approach is used to find out which parts of the job produce satisfaction or dissatisfaction. The most important factors conducive to job satisfaction include mentally challenging work, equitable rewards, supportive working conditions and supportive co-workers.

Onyekwere, (2013) looked at collaboration and its effect on job efficiency and asserted that organizations rely on teamwork for their success, efficient inter- professional collaborative effort becomes a crucial tool for achieving organizational goals. Weli (2017), observes that interpersonal interactions involving the exchange of information between employees, peers and top management staff can have significant effects on the employees' psychological job output such as job satisfaction, organizational commitment, burnout and turnover intentions.

Little (2016) asserts that teacher's collaborative effort is a way of "talking about teaching" which includes planning, sharing, preparation, classroom observation, corporative training and individual training. By this practice teachers efficiently enrich themselves through rich experiences and knowledge of their colleagues acquired theoretically and practical based meaningful ideas through exchange programmes. He further notes that the establishment of discussion communities among teachers is very important, hence it assist teachers to develop or acquire new roles and changing ideas.

Classroom assessment or continuous assessment is the preserve of the teacher as assessments are part of the routine of classroom activities. The teacher designs quizzes, short answer objective tests, portfolios among many other instruments for investigating students' learning. According to Oluremi (2020), an ideal educational system would ensure that teachers develop their instructional materials and assessments concurrently so as to achieve a sound balance between curricula, teaching activities and assessment. There is an indicated that one of the strategies for effecting good classroom practices is to integrate assessment and instruction.

Assessment of learning is not a progressing process. It includes the procedure of checking on, reflecting and modifying the learning techniques in an arranged and cautious way. In this process, observations are made time to time to collect data to determine the level of students' knowledge, understanding and performance. It is done by giving particular tasks to students based on their previous achievement in classroom. Thus, during the orientation of the newly employed teachers, notice and information are devised to them to proper understand the values of continuous assessment for their job enhancement. As a matter of facts, continuous assessment provides day-to-day feedback about the learning and teaching process. In other words, it encourages the understanding of teaching as a formative process that evolves over time with feedback and input from students.

Continuous Assessment clearly guides learning activities as it determines the extent of achievement and performance of the teachers as well as the students. Webber (2012) observed that one way to guide learning towards deeper learning is to apply the so called continuous assessment in form of learning assignments that are due throughout the whole course instead of conventional practice of having an exam in the end of the course as teaching and learning can be affected by various actions. Orodho (2014) underlined the idea that the organization of the course content and assessment play important roles in high quality learning. In addition to physical learning environment the mental environment of the course has to be taken care of. It is important to support learning process by choosing assessment methods that encourage reflection and critical thinking as well as awarding conceptual understanding as means of enhancing deeper model of teaching and learning (Pietikäinen & Karinen, 2016).

The fundamental way of sustaining teachers' effectiveness in educational system is through motivational process. Commitment to work remains a function of motivation. Motivational process allows for increase in input and output. In line with the thought of Evans (2017) that high morale helps to create a more conducive, inviting and stable environment. It has been noted that motivation has the capacity of compensating for the difficulties and challenges experienced in the profession by teachers. In accordance with Webber (2012), the more motivated an employee is, the more likely they are to have organizational commitment and identify themselves with the organization and this will meet some of the unmet needs, and connect them with the organization.

Motivation of teachers seems to be more necessary now due to the pressure on the profession by challenges of contemporary development and technological advancement. Loss of interest and enthusiasm in the profession can be compensated through motivational ideals (Okoro, 2018). In agreement with Adams equity theory of motivation of 1963 which emphasis the need to motivate the employee in order to achieve greater output; the theory stated that fair treatment of the people remains a factor of motivation, in the other way round, when they feel unjustly or unfairly treated, they give in to feelings of disaffection and demotivation. Teachers' comparison of their income which they considered very critical to their motivation is in consonance with the equity theory which stated that people make comparison with their reward and the reward of others who are in a similar situation. Hence, he called for fairness in the reward system between input and output of the employee. This as well applies to teachers considering the fact that they hold the key to the development of the society. Abraham Maslow's theory of human need emphasized the need for the satisfaction of basic needs as one climbs the ladder. The motivation of teachers will serve the school and students well, because it based on their motivation that their commitment to teaching becomes more effective and hence transcends into positive effect on students learning as well as positive outcomes. The conception towards teachers' willful engagement to effective work order is based on their motivation by relevant authorities. According to Robbins (2013), the believe is that once teachers' pay, working conditions and fringe benefits given to teachers are judged to be good by the teachers, they will put in more effort at work.

Teachers can motivate each other through constant interaction. This serves as a forum where issues concerning the profession can be discussed, and performance evaluation carried out. By this action, individual challenges can be given a unified attention or approach and will eventually be eliminated. This is necessary due to the important place the teacher occupies in the developmental process of a nation. Ormond (2010), opines that the teacher is the most important of all the resources needed to actualize goals of achieving a viable economy. Hence motivating them translates into creating a viable and stable economy. Steyn (2012) asserts that the success or failure of any educational system depends mainly on the teachers. This is where effective motivation of teachers' comes to play. It is a well-known fact that a well-motivated teacher, who is provided with working incentives, good working conditions and adequate remuneration is bound to be dedicated to his or her teaching so as to bring about the needed learning on the part of the students.

In Nigeria, Biology is a core subject for many science disciplines in senior secondary schools in Nigeria. The science curriculum is designed in such a way that it will produce educated individuals some of whom will take to biological science as a professional pursuit. The study of biology education benefits students in a number of ways (Webber, 2012):

- i. It promotes understanding of the relationship between man and his environment.
- ii. It promotes the knowledge of the interrelationship existing between living and non-living components of the environment.
- iii. It imparts factual knowledge and stimulates scientific, reflective thinking in the learner in order to produce better informed individuals.
- iv. It inculcates scientific skills and attitudes in individuals.
- v. Biology also bring into focus the need to maintain good health such as clean water, clean air, good sanitation, balance diet, vaccination against infectious disease, exercise and having adequate rest.

vi. Biology stimulates interest in biological-based hobbies such as growing flowers, collecting insects thereby encouraging leisure activities for individual enjoyment and conservation of plants and animals for the purpose of tourism and leisure attraction.

A good knowledge of the importance of biology benefits students and creates interest in learning. Hence, the need for effective study of biology in secondary schools is emphasized. In this study, biology as a science-teaching subject was used to investigate teachers' motivation and job performance.

Organizational managers employ several strategies to ensure effective job performance; key among them is employee motivation. Most writers explain that motivation is a process of an individual's psychology. It is a process that arouses, energizes, directs and sustains behaviour and performance. People can be aroused and energized by ensuring that they are effectively motivated, which will in turn make them experience a higher satisfaction with their jobs making them to be more committed to their job. Consequently, teachers like any other employees are assumed to be motivated with their work performance in exchange for incentives that correspond to or enable them to reach personal goals. The factors that influence the motivation of teachers are mainly intrinsic and extrinsic factors. Intrinsic factors are those which come from a person whereas extrinsic motivation factors are those which are determined by the level and type of external rewards that are available. Claeys (2011) has identified a third factor and she calls it altruistic. She defines this factor as "a love for and desire to work with children and or young persons and an inclination to serve society". There are various extrinsic factors that influence teacher's performance and they include attractive remuneration, student discipline, good working conditions, favourable educational policies and high occupational status. Teachers are very important in creating the quality of education given to learners in schools, since they set most of the educational activities and spend highest amount of quality learning time with the learners not forgetting that the motivation levels of the learners towards their academic achievement is mainly determined by the teachers. It is through teachers' commitment that the success of the implementation of educational reforms can be guaranteed. It isn't debatable that an attractive remuneration improves the living standards of the employees, teachers included. The living standard of teachers in most African countries is low since their remuneration is less than other professionals. He further appreciates that teachers have heavy workloads and a better pay would only be a way of recognizing their good work and place them in a better position in the society. Olatunji (2011) observes that sustainable pay not only improves the living standard of the teachers but also serves as a source of intrinsic satisfaction to the teacher as an employee and as an individual. According to Olatunji (2011) the teachers' morale and level of motivation can be attributed to both their living and working conditions which in turn will influence their performance in the classroom.

It is possible to make the teaching profession enticing and competitive by ensuring working conditions that offer relevant incentives such as loans and scholarships as well as opportunity for promotions. However, this is not the case in most situations since the teaching profession does not offer the above incentives. At the same time when the incentives come, they are in poor packages for example there are limited opportunities for career advancement, the housing provided to teachers is poor, the levels of supervision are also wanting in the sense that they are full of selective justice and witch hunting. Teachers are scarcely involved in decision-making process in their institutions which does not provide a conducive school working environment which may lead to high teacher turn-over (Brown, 2014).

Little (2016) recognizes that extrinsic factors like recognition by the public due to his/her achievement, being assigned individual responsibilities and intrinsic factors like enjoying the time spent with children, being excited by the duty of contributing to the learners' knowledge, loving to teach one's subject matter, opportunity to have new experiences all do add to the level of teacher's motivation. The three scholars explain that the extrinsic and intrinsic factors of motivation do interact. They argue that pay does not draw anyone to the teaching profession but when other factors like the working conditions are poor, then pay as a factor takes a greater importance. Claeys (2011) agrees by explaining that most teachers in Nigeria take teaching as a calling and as a result they acknowledge their intrinsic benefits over their extrinsic benefits. In such situations good working environment like manageable workload, good staff relations, good teacher-student relations and proper administration do contribute a lot to the teachers' job satisfaction.

Teaching involves interactions that go a long way into changing people's lives and it is therefore a wonderful and beautiful profession. To be a teacher in Nigeria, however is at times a tall order given the working conditions which range from overcrowded classrooms to handling many lessons a week which can add to thirty- five hours a week. The roles of a teacher are overwhelming as he or she assumes the role of a second parent to the students. He or she is expected to plan for instruction supervision, pass instruction to students, maintain discipline as well as be a role model. Administrators need to work towards having a well-motivated teachers' staff since the responsibilities of teachers are many and can at times be overwhelming. These responsibilities involve being surrogate parents, instructors, disciplinarians, time planners as well as being role models. Frase (2012) cited recognition of good work done and correct, prompt feedback as major motivating factors for teachers.

Statement of the Problem

The purpose of every organization is to achieve set goals and objectives. The achievements of goals depend to a large extent on the quality of workers employed in such organization. Every employer is supposed to guarantee that each specialist release their obligations perceptibly. To get the best out of workers, it is not out of place to motivate them by consistent payment of their salaries, wages, allowances and other incentives likely to trigger their dedication, willingness and boost their morale to work. [[

However, it has been observed that many workers especially secondary school teachers regret choosing teaching career due to poor promotion schemes, part payment or non-payment of teachers' salaries as at when due, welfare of teachers, lack of workshop training and incentives that accrue to them. In some cases, there had been no on-the-job training, recognition, salary benefits and working conditions, unwillingness to work and absenteeism hence providing avenue for negative attitude and poor performance as a result of inadequate motivation. The question is 'could these factors of motivation

significantly influence biology teacher's job performance in public secondary schools in Port Harcourt Metropolis? In an attempt to provide answers to this question, the researcher therefore examines influence of motivation on biology teachers' job performance in secondary schools in Port Harcourt Metropolis.

Purpose of the Study

The purpose of this study is to find out the influence of motivation on biology teachers' job performance in public secondary schools. The study specifically intends to:

1. Ascertain the influence of motivation on biology teachers collaboration with research teams to make new discoveries in biology in public secondary schools in Port Harcourt Metropolis.
2. Determine the influence of motivation on biology teachers effective evaluation and feedback of students assessment in public secondary schools in Port Harcourt Metropolis.
3. Find out the influence of motivation on biology teachers selection, development and use of instructional resources in science teaching and learning in public secondary schools in Port Harcourt Metropolis.

Research Questions

1. What is the influence of motivation on biology teachers' collaboration with research teams to make new discoveries in biology in public secondary schools in Port Harcourt Metropolis?
2. What is the influence of motivation on biology teachers effective Evaluation and feedback of students assessment in public secondary schools in Port Harcourt Metropolis?
3. What is the influence of motivation on biology teachers' selection, development and use of instructional resources in science teaching and learning in public secondary schools in Port Harcourt Metropolis?

Hypotheses

1. There is no significant difference in the mean responses of Biology teachers in Obio/Akpor and Port Harcourt City Local Government Areas on the influence of motivation on biology teachers collaboration with research teams to make new discoveries in biology in public secondary schools in Port Harcourt Metropolis.
2. There is no significant difference in the mean responses of Biology teachers in Obio/Akpor and Port Harcourt City Local Government Areas on influence of motivation on biology teachers effective Evaluation and feedback of students assessment in public secondary schools in Port Harcourt Metropolis.
3. There is no significant difference in the mean responses of Biology teachers in Obio/Akpor and Port Harcourt City Local Government Areas on the influence of motivation on biology teachers selection, development and use of instructional resources in science teaching and learning in public secondary schools in Port Harcourt Metropolis.

METHODOLOGY

The study adopted a Descriptive survey research Design. According to Nwankwo (2013), a descriptive survey is that study in which the researcher collects data usually from a large sample drawn from a given population and describes certain attributes or features of the sample as they are and as required by the study at that particular time without manipulating any independent variables of the study. The population for the study was 111 biology teachers which comprised of 63 Biology teachers in Obio/Akpor Local Government Area and 48 Biology teachers in Port Harcourt City Local Government Area from public senior secondary schools in, Rivers State. Available data shows that there are (21) public secondary schools in Obio/Akpor Local Government Area and (16) public secondary schools in Port Harcourt City Local Government Area. There was no sampling because of its manageable size. Hence, the entire population size of one hundred and eleven (111) Biology teachers from 21 public senior secondary schools in Obio/Akpor and 16 public senior secondary schools in Port Harcourt Metropolis of Rivers State were used.. Mean and Standard Deviation were used to answer the research questions with a criterion mean of 2.50. The hypotheses were tested using z-test statistics at 0.05 level of significance.

RESULTS

Research Question 1: What is the influence of motivation on biology teachers' collaboration with research teams to make new discoveries in biology in public secondary schools in Port Harcourt Metropolis?

Table 1: Mean Responses of respondents on Collaboration with Research Teams to make New Discoveries

| S/ N | Items | ObioAkpok LGA N=63 | | Decision | PHC LGA N=48 | | Decision |
|----------------------|--|-----------------------|-------------|--------------|-----------------|-------------|--------------|
| | | \bar{X} | SD | | \bar{X} | SD | |
| 1. | Biology teachers expenses on collaborative activities with research teams on new discoveries are funded by school authority | 3.31 | 0.78 | Agree | 2.90 | 0.72 | Agree |
| 2. | Biology teachers are encouraged by school authorities to collaborate with other science teachers. | 3.08 | 0.61 | Agree | 2.65 | 0.51 | Agree |
| 3. | Professional development is provided to train Biology teachers in collaborative planning and decision making | 3.13 | 0.77 | Agree | 3.09 | 0.73 | Agree |
| 4. | Biology teachers recommendations derived through collaboration are given serious considerations for implementation by school heads | 2.73 | 0.63 | Agree | 2.96 | 0.69 | Agree |
| 5. | Biology Teachers are sponsored to attend STAN conference and activities annually. | 3.01 | 0.69 | Agree | 3.08 | 0.70 | Agree |
| 6. | Rewards are given to Biology teachers to collaborate | 2.76 | 0.52 | Agree | 3.68 | 0.64 | Agree |
| Grand Mean/SD | | 3.00 | 0.66 | | 3.06 | 0.67 | |

Data on Table 1 revealed that items 1, 2, 3, 4, 5 and 6 on the influence of motivation on biology teachers' collaboration with research teams to make new discoveries in biology in public secondary schools in Port Harcourt Metropolis had grand mean scores of 3.00 and 3.06. With grand mean scores 3.00 and 3.06 which are above the criterion mean of 2.50, this infers that the respondents agreed that motivation influence biology teachers collaboration with research teams to make new discoveries in biology in public secondary schools in Port Harcourt Metropolis.

Research 2: What is the influence of motivation on biology teachers effective Evaluation and feedback of students assessment in public secondary schools in Port Harcourt Metropolis?

Table 2: Mean Responses of respondents Effective Evaluation and Feedback of Students Assessment

| S/N | Items | ObioAkpok LGA N=63 | | Decision | PHC LGA N=48 | | Decision |
|-----|---|-----------------------|------|--------------|-----------------|------|--------------|
| | | \bar{X} | SD | | \bar{X} | SD | |
| 7 | Biology teachers skills are upgraded regularly for effective evaluation and feedback of students assessment | 3.25 | 0.72 | Agree | 2.95 | 0.58 | Agree |
| 8 | There are reward for Biology teachers to enhance proper evaluation | 3.10 | 0.60 | Agree | 3.09 | 0.53 | Agree |
| 9 | Good working conditions provided for Biology teachers in schools | 2.77 | 0.50 | Agree | 3.04 | 0.62 | Agree |

| | | | | | | | |
|----------------------|---|-------------|-------------|--------------|-------------|-------------|--------------|
| 10 | Instructional materials for teaching are provided for Biology teachers. | 3.19 | 0.69 | Agree | 3.30 | 0.76 | Agree |
| 11 | Regular remunerations are provided for Biology teachers | 3.04 | 0.64 | Agree | 2.79 | 0.69 | Agree |
| 12 | Biology teachers welfare are provided by school Heads | 2.80 | 0.50 | Agree | 3.50 | 0.72 | Agree |
| Grand Mean/SD | | 3.03 | 0.61 | | 3.10 | 0.65 | |

Data on Table 2 revealed that items 7, 8, 9, 10, 11 and 12 on influence of motivation on biology teachers effective Evaluation and feedback of students assessment in public secondary schools in Port Harcourt Metropolis had grand mean scores of 3.03 and 3.10. With grand mean scores 3.03 and 3.10 which are above the criterion mean of 2.50, this implies that the respondents agreed that motivation influence biology teachers effective Evaluation and feedback of students assessment in public secondary schools in Port Harcourt Metropolis.

Research Question 3: What is the influence of motivation on biology teachers' selection, development and use of instructional resources in science teaching and learning in public secondary schools in Port Harcourt Metropolis?

Table 3: Mean Responses of respondents on selection, development and use of instructional resources in Science Teaching and learning

| S/N | Items | ObioAkpok LGA | | Decision | PHC LGA | | Decision |
|-------------------|--|---------------|-------------|--------------|-------------|-------------|--------------|
| | | N=63 | | | N=48 | | |
| | | \bar{X} | SD | | \bar{X} | SD | |
| 13. | Professional development to train biology teachers on modern techniques in science teaching and learning are provided | 3.20 | 0.68 | Agree | 2.55 | 0.72 | Agree |
| 14. | School laboratories are upgraded regularly to meet modern standard | 3.01 | 0.60 | Agree | 2.65 | 0.61 | Agree |
| 15. | Improvisation for science teaching are provided by school authority | 2.70 | 0.74 | Agree | 3.09 | 0.72 | Agree |
| 16. | Biology teachers concerns and issues relating to pedagogy addressed by school authority | 2.56 | 0.55 | Agree | 2.85 | 0.62 | Agree |
| 17. | Working conditions are favourable for biology teachers | 3.31 | 0.65 | Agree | 3.13 | 0.69 | Agree |
| 18. | Biology teachers are encouraged by school authorities in the use of modern techniques in science teaching and learning | 3.50 | 0.69 | Agree | 3.01 | 0.76 | Agree |
| Grand Mean | | 3.05 | 0.65 | | 2.88 | 0.69 | |

Data on Table 3 revealed that items 13, 14, 15, 16, 17 and 18 on influence of motivation on biology teachers' selection, development and use of instructional resources in science teaching and learning in public secondary schools in Port Harcourt Metropolis had grand mean scores of 3.05 and 2.88. With grand mean scores 3.05 and 2.88 which are above the criterion mean of 2.50, this implies that the respondents agreed that motivation influence biology teachers' selection, development and use of instructional resources in science teaching and learning in public secondary schools in Port Harcourt Metropolis.

Test of Hypothesis

H₀: There is no significant difference in the mean responses of Obio/Akpok and Port Harcourt city Local Government Areas on the influence of motivation on biology teachers collaboration with research teams to make new discoveries in biology in public secondary schools in Port Harcourt Metropolis.

Table 4: z-test Analysis of Difference in opinion of respondents between Obio/Akpor and PHALGA

| L.G.A | N | Mean | SD | Df | z-cal. | z.cri. | Sig. | Decision |
|------------|----|------|------|----|--------|--------|------|-----------------|
| Obio/Akpor | 63 | 2.90 | 0.66 | 33 | 1.57 | ±1.96 | 0.05 | Rejected |
| PHC | 48 | 3.10 | 0.67 | | | | | Not significant |

Data on Table 4 revealed z-test analysis of difference in the mean responses of Obio/Akpor and Port Harcourt City Local Government Areas biology teachers in public secondary schools on the influence of motivation on biology teacher's collaboration with research teams to make new discoveries in biology in public secondary schools in Port Harcourt Metropolis. At 0.05 level of significance and 33 degree of freedom, the z-calculated value of 1.57 was less than the z-critical value of ± 1.96 ; therefore, the null hypothesis was accepted which states that there is no significant difference in the mean responses of Obio/Akpor and Port Harcourt City Local Government Areas biology teachers in public secondary schools on the influence of motivation on biology teachers collaboration with research teams to make new discoveries in biology in public secondary schools in Port Harcourt Metropolis.

Ho₂: There is no significant difference in the mean responses of Obio/Akpor and Port Harcourt City Local Government Areas on influence of motivation on biology teachers effective Evaluation and feedback of students' assessment in public secondary schools in Port Harcourt Metropolis.

Table 5: z-test analysis of difference in opinion of respondents between Obio/Akpor and PHALGA

| School Type | N | Mean | SD | Df | z-cal | z.cri | Sig | Decision |
|-------------|----|------|------|----|-------|-------|------|-----------------|
| Obio/Akpor | 63 | 3.09 | 0.61 | 33 | 0.33 | ±1.96 | 0.05 | Rejected |
| PHC | 48 | 3.05 | 0.65 | | | | | Not significant |

Data on Table 5 revealed z-test analysis of differences in the mean responses of Obio/Akpor and Port Harcourt City Local Government Areas biology teachers in public secondary schools on influence of motivation on biology teachers' effective evaluation and feedback of student's assessment in public secondary schools in Port Harcourt Metropolis. At 0.05 level of significance and 33 degree of freedom, from the result, the z-calculated value of 0.33 was less than the z-critical value of ± 1.96 ; therefore, the null hypothesis was accepted which states that there is no significant difference in the mean responses of Obio/Akpor and Port Harcourt City Local Government Areas biology teachers in public secondary schools on influence of motivation on biology teachers effective evaluation and feedback of students assessment in public secondary schools in Port Harcourt Metropolis.

Ho₃: There is no significant difference in the mean responses of Obio/Akpor and Port Harcourt city Local Government Areas on the influence of motivation on biology teachers selection, development and use of instructional resources in science teaching and learning in public secondary schools in Port Harcourt Metropolis.

Table 6: z-test Analysis of Difference in opinion of respondents between Obio/Akpor and PHALGA

| L.G.A | N | Mean | SD | Df | z-cal | z.cri | Sig | Decision |
|------------|----|------|------|----|-------|-------|------|-----------------|
| Obio/Akpor | 63 | 3.05 | 0.65 | 33 | 1.32 | ±1.96 | 0.05 | Rejected |
| PHC | 48 | 2.88 | 0.69 | | | | | Not significant |

Data on Table 6 revealed z-test analysis of differences in the mean responses of Obio/Akpor and Port Harcourt City Local Government Areas biology teachers in public secondary schools on the influence of motivation on biology teachers selection, development and use of instructional resources in public secondary schools in Port Harcourt Metropolis. At 0.05 level of significance and 33 degree of freedom, from the result, the z-calculated value of 1.32 was less than the z-critical value of ± 1.96 ; therefore, the null hypothesis was accepted which states that there is no significant difference in the mean responses of Obio/Akpor and Port Harcourt City Local Government Areas biology teachers in public secondary schools on the influence of motivation on biology teachers selection, development and use of instructional resources in science teaching and learning in public secondary schools in Port Harcourt Metropolis.

Discussion of Findings

This chapter has adequately treated and analyzed five research questions and five hypotheses and as a result, appropriate conclusions and findings have been deduced. After reviewing the topic: "influence of motivation on biology teachers' job performance in port Harcourt Metropolis. The result on Table 1 on biology teachers collaboration with research teams to make new discoveries in biology, the result showed that all the respondents agreed that motivation plays an important role in making biology teachers to collaborate, it is observed that when teachers expenses are funded by school authorities, professional development is provided and teachers encouraged by school heads, they become a major sources of motivation. Teachers when provided with all they need are more likely to collaborate or combine with other teachers to make new discoveries in school and improve teaching and learning in schools. From the statistical evidence in the test of hypotheses 1, the result showed no significant difference (as indicated by z-cal = 1.57 being less than the value of the z-critical at 1.96), between biology teachers in Obio/Akpor and Port Harcourt City Local Government Areas with regards to influence of

motivation on Biology teachers collaborations with research teams to make new discoveries in biology. The study is in line with Weli (2017), who asserted that teams that work collaboratively often access greater resources, recognition and rewards.

The result on Table 2 on biology teachers effective evaluation and feedback of students assessment showed that all biology teachers accented to motivation having greater influence on job performance of teachers, when teachers skills are upgraded on proper evaluation of students, incentives provided and rewards are given, they encourage or motivate teachers to pay attention to their work and boost their morale in their job performance which improves the evaluation of students while assessing them and get possible feedback. Also from the statistical evidence in test of hypotheses 2, the result showed no significant difference (as shown by z-cal value =0.33 being less than the z-critical value of 1.96 at 0.05 level of significance) between biology teachers in Obio/Akpor and PHC LGA Areas on the motivation of biology teachers effective evaluation and feedback of students assessment. To further corroborate the findings of the study, Okoro (2018) stated that teachers evaluation on students requires effective measurement, capacity building and proper incentives to motivate teaches to improve professional practice.

In response to research questions in Table 3, the result showed biology teachers selection, development and use of instructional resources. The study showed that when teachers are trained, school laboratories upgraded and working conditions favorable they play important role in motivating teachers selection, development and use of instructional resources, teaching training improves their abilities to use and manipulate science equipment. Statistical evidence in test of hypotheses 3, the result showed no significant difference (as shown by z-cal =1.32 being less than the z critical value of 1.96 at 0.05 level of significance) between biology teachers in Oboi/Akpor and PHC on the motivation of biology teachers selection, development and use of instructional resources. Ormond (2010) stated that technology is now a fundamental facilitator in the learning process and an important commodity in the field of education thereby enhancing learning in many ways.

Conclusion

Biology as a subject which is science oriented needs not to be taught orally alone, series of laboratory practical and improvisation are done, when teachers are motivated by school heads, Government and non-governmental organizations through professional development, compelling rewards, good working conditions, concerns and issues of teachers addressed, school laboratories provided and upgraded regularly and incentives and remunerations given to teachers they boost morals of teachers and encourage growth in job performance.

Recommendations

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

There is need for the government to motivate teachers because of low productivity as a result no regular promotion, lack of welfare and no incentives for them.

There should be provision of professional development to train teachers, provide modern teaching equipment and instructional materials and provide reward and incentives for teachers.

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