INFLUENCE OF SCIENCE TEACHERS' ATTITUDE TOWARDS THE TEACHING SCIENCE SUBJECTS IN OYO STATE, NIGERIA

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Abstract
Attitude can be viewed as a response that could be positive or negative to any situation, event or object. An individual's attitude is based on three components: cognitive, affective, and behavioural; hence, the role of the attitude of science teachers' in attracting students, and sustaining the interest in the science subjects at the senior secondary school is of utmost important. The objective of this study was to assess science teachers' attitude towards science teaching in senior secondary schools in Oyo State, Nigeria. It was a descriptive research of the survey type in which simple random sampling technique was used to select 180 science teachers. A questionnaire instrument adapted from Patchaivaziamman and Krishnamurthy (2010) was used for the data collection. A reliability index of 0.89 was obtained by the test-retest method using Pearson Product Correlation Coefficient. The data collected were analyzed using frequency count, percentages, t-test. These were used to answer the research questions and also test the hypotheses. The findings of the study showed that science teachers generally had positive attitude towards science teaching ($t= 13.00$ at $p < 0.05$). Based on the findings of this study it is hereby recommended that; the science teachers should regularly develop positive attitude towards the teaching of science subject since they are the role model. They should be well catered for by paying their salaries and allowance on time. They should be encouraged to motivate others in science teaching. Others science teachers should seek for knowledge in other areas to update their own area for the better performance of the students. Both male and female science teachers should be given equal exposure and opportunities for science teaching.
Keywords: Attitude, Science teachers and Teaching

Introduction

The attitude of an individual is based on three components; cognitive, affective, and behavioural. The cognitive components are the thought, beliefs and ideas about something or object. The affective is the person's emotion or feeling that something evokes fear, sympathy, hate etc. The behavioural is the tendency or disposition to act in certain ways toward something or object. Attitude is a point of view about a situation. It is a way of thinking. It is an inward feeling expressed by outward behaviour. It has implications for the learner, the teacher, the social group with which the individual leaner relates. Attitudes are formed as a result of some kind of learning experiences. They may also be learned simply by following the example or opinion of parent, teacher or friend. This is mimicry or imitation, which also has a part to play in the teaching and learning situation. In this respect, the learner draws from teachers' disposition to form own attitude, which might likely affect learning outcomes (Standslause, Maito & Ochiel, 2013).

According to Hussain, Ali, Khan, Ramzan and Qadeer (2011), individuals' attitude towards t profession have effect on the performance. It is also acceptable for the teaching profession, because the attitude and perception of a profession affect the teachers competence achievement, and attitude towards the profession with a great importance of fulfilling the requirements (Durmusoghu,Yanik & Akkoyunlu, 2009; Terzi & Tezci, 2007). The quality of teaching mostly depends on the attitude of the teacher which

is reflected, to a very great extent, in the quality of students' care taken by the teacher. Science teaching deals with human minds; teachers have a higher responsibility to the society to produce competent and compassionate students with adequate knowledge and skill. Consequently, enormous demands and responsibilities are on teacher's professionalism. The International Commission on Education for the 21st century (1996) report that learning the treasure within identified and suggested four pillars which can strengthen the quality of present education system. The four pillars are: teacher centered; student centered; teacher-student centered and student-teacher centered (Learning to know, learning to do, learning to be and to live together) respectively. A teacher who has a positive attitude towards teaching profession and dedication to teaching can effectively build up these four pillars (United Nations Educational, Scientific and Cultural Organization (UNESCO, 1996).

Patchaivaziamman and Krishnamurthy (2010) observed that attitude is an important concept to understand human behaviour. This means individual's prevailing tendencies to respond positively or negatively to an object, person or group of people, institutions or events depends on the attitude. People attitude towards professions has an effect on the performance. Attitude towards a job task is one of the most important factors to be successful in the profession (Cakir, 2005). For this reason, the general belief that an individual who does not like a profession cannot be successful in the profession is quite common in society. For instance, to be successful in the teaching profession requires patience, dedication and continuous operation. Teacher's attitude is an important variable in classroom application because of the relationship between teacher and learner. Science teachers are the teachers that teaching science subject such as Mathematics, Physics, Chemistry, Biology and Agricultural Science in the senior secondary schools.

Teacher's attitude is often translated into specific classroom and instructional practices which in turn affect student behavioral and learning outcomes (Cook, 2002). The teachers' knowledge of the subject matter and the method of teaching are known to be highly important in bringing about good performance among the students (Shulman, 1994). Therefore, teachers who are specialists in a particular subject should normally be more effective than those who are not specialists in that particular subject. This is because; teachers are faced with problems when they venture into areas where they do not have adequate content and pedagogical knowledge to establish an environment that is conducive to learning. Teachers are regarded as the basic tools in education and curriculum implementations. The quality of any nations' education is determined by the qualities of the teachers and their attitude to the profession (Afolabi, 2007).

Gender determines what is expected, allowed and valued in a woman or a man in a given context. The differences in societal value of men and women in terms of responsibilities, activities undertaken, access and control over resources as well as decision taken are all gender based. Nsofor (2000) observed that gender stereotype is responsible for the low representation of women in Science and Technology. Olaoye and Ogunkola (2004) found out the composite and relative effects of science teachers' gender on attitude to science teaching that does not have influence on students' performance. Afolabi (2007) observed teachers' attitude and gender factor as determinant of pupils' performance in primary science and reported that the gender has no effect on students' performance. Basu and Chakroboty (1996) found out that students taught by male teachers achieve higher than those taught by female teachers. This was in contrast to the submissions of Adedipe (1986) that reported students that are taught by female teachers, performed significant better than those taught by their male counter.

Purpose of the Study

The main purpose of the study was to assess the influence of attitude of science teachers towards science teaching in Senior Secondary Schools in Oyo State, Nigeria. Specifically, this study found:

1. the influence of attitude of science teachers towards science teaching in Senior Secondary Schools in Oyo State Nigeria.

2. the influence of attitudes of science teachers towards science teaching based on the area of specialization.
3. the influence of attitudes of science teachers towards science teaching based on gender.

Research Questions

1. What is the influence of attitude of science teachers towards science teaching in Senior Secondary Schools in Oyo State Nigeria?
2. What is the influence of attitude of science teachers towards science teaching based on the area of specialization?
3. What is the influence of attitude of science teachers towards science teaching based on gender?

Research Hypotheses

The following hypotheses were formulated and tested in the study:

1. Science teachers do not have positive influence of attitude toward science teaching in Oyo State Nigeria.
2. There is no significant difference in the influence of attitude of science teachers towards science teaching based on areas of specialization.
3. There is no significant difference in the influence of attitude of science teachers towards science teaching based on gender.

Methodology

This study adopts a descriptive research of the survey type. The population for this study was all the science teachers in all Secondary Schools located in Oyo State Nigeria. Teachers of Biology, Chemistry, Physics, Agricultural science and Mathematics were involved in the study. A random sample was used to select one hundred and eight (180) science teachers in the State. The instrument that was used was the researcher questionnaire. Also the attitude of the science teachers was determined in this study.

Results

Research Question 1:

What is the influence of attitude of science teachers towards science teaching in Senior Secondary Schools in Oyo State Nigeria?

Research Hypothesis 1:

Science teachers do not have positive influence of attitude toward science teaching in Oyo State Nigeria. In providing answer for research question and hypothesis, score of science teachers in senior secondary schools in Oyo State, Nigeria were tested using t-test statistics. The mean attitudinal score was compare with 80. The result of the analysis is presented above 80 is regarded as positive influence of attitude in the Table 1:

Table 1:

Summary of Mean Attitudinal Score and t- test for testing attitude of Science Teachers' towards Science Teaching in Oyo State, Nigeria

	Number of respondents	Minimum Score	Maximum Score	Mean Attitudinal Score	Std. Deviation	t	df	p-value
Total	180	64	98	90.50	52.11	13.03	179	0.00

Table 1 shows the numbers of responses of science teachers towards science teaching in senior secondary schools in Oyo State, Nigeria. The individual attitude to science teaching scores for all the science teachers were found out and they were valued from the highest to the lowest scorer. Scores above 80 were positive attitude and those below 80 scores were negative. The total number of respondents was 180

science teachers, the minimum score was 64 and the maximum score was 98. The mean attitudinal score is 90.50. This was found to be significantly higher than the cut off score (80). The effect of attitude of science teachers to science teaching was significantly positive since p-value (0.00) < 0.05 (t =13.03; df 180 and p-value 0.00). Thus, the null hypothesis one(Ho_1) which state that there is no significant positive effect of attitude of science teachers towards science teaching in senior secondary schools in Oyo State was rejected. This shows that science teachers in the Oyo State generally had positive influence towards science teaching.

Research Question 2

What is the influence of attitude of science teachers towards science teaching based on the area of specialization?

Research Hypothesis 2:

There is no significant difference in the influence of attitude of science teachers towards science teaching based on areas of specialization.

Table 2:

ANOVA Table and Mean Attitudinal Scores of Science Teachers in Oyo State, Nigeria based on Areas of Specialization

Total	Sum of Squares	Df	Mean Square	F	Sig
Between Areas of Specialization	80.38	4	20.10	0.40	0.81
Within Areas of specialization	8738.82	175	49.94		
Total	8819.20	179			

The results in Table 2 reveals that there is no significant difference in the influence of attitude of science teachers to science teaching in senior secondary schools in Oyo State, Nigeria based on their areas of specialization since the p-value (0.81) is higher than the alpha level of 0.05 The mean square range between 20.10 and 49.94. Thus, the null hypothesis (Ho_2), which states that there is no significant difference in the influence of attitude of science teachers towards science teaching based on area of specialization, is therefore not rejected.

Research Question 3:

What is the influence of attitude of science teachers towards science teaching based on gender?

Research Hypothesis 3:

There is no significant difference in the influence of attitude of science teachers towards science teaching based on gender.

Table 3:

Mean Attitudinal Scores and t-test for testing attitude of science teachers in Oyo State, Nigeria based on Gender

Gender	No of Respondents	Mean Attitudinal Score	Standard Deviation	Std. Error Mean	t	df	p-value
Male	94	83.17	6.94	0.72	2.51	178	0.64
Female	86	80.58	6.90	0.74			

Table 3 shows that the mean attitudinal scores for male was 83.17 and for female was 80.58 and that no significant difference exists between the attitude of male and female science teachers since the p-value (0.64) > 0.05. The influence of attitude of science teachers is positive towards science teaching. The null

hypothesis (Ho_3), which states that there is no significant difference in the influence of attitude of science teachers' towards teaching based on gender, is not rejected.

Discussion

It was found that effect of attitude of science teachers towards science teaching in senior secondary schools in Oyo State, Nigeria was significant based on their responses. It could be as a result of helpful behaviour, resourcefulness, enthusiasms, good method of presentation and concern for students and teachers knowledge of the subject matter and the acceptance that they are role model. This is in agreement with the findings of Onoshakpokaiye (2011) who examined the influence of teachers' attitude on students' learning of Mathematics and reported that teachers are a vital force in educational effectiveness of the classroom instructional level.

Standslause, Maito and Ochiel (2013) examined teachers and students attitude towards mathematics and found that mathematics teachers had positive effect on attitude towards mathematics teaching. Abimbola and Abidoye (2013) examined the views of Kwara State senior school Biology teachers on the status of ecology teaching and their result indicated that there was no significant difference in the teaching of ecology. This result contradicted the findings of Maliki (2013) who conducted a study on the attitude of teachers towards the teaching profession and the result indicated that teachers have negative attitude towards teaching profession.

It was revealed from the results of this study that there was no significant difference in the effect of attitude of science teachers towards science teaching based on their area of subject specialization. Science teachers (Mathematics, Physics, Chemistry, Biology and Agric. Science) had a general positive attitude towards science teaching in the senior secondary school in Oyo State Nigeria. The preceding results could be due to the fact that the science teachers are satisfied with their service rules, facilities and therefore properly concentrated on academic affairs, this could have translated into better academic performance. This is in agreement with the findings of Renu and Sudipa (2012) who investigated whether private school premium' as manifested in student learning outcomes.

According to them, and the result indicated that standard characteristics of teachers based on areas of subject specialization do not have any significant influence on student's learning outcome. Greenberg, Rhodes and Stancavage (2004) identified a link between teacher classroom practices and students academic performance and concluded that mathematics teachers who specialized in mathematics produced students with achievement scores in mathematics. It was established in this study that there was no significant difference in the effect of attitude of science teachers towards science teaching based on their gender. This may be hinged on the fact that intelligence is not gender based. The preceding finding is in line with the findings of Owolabi and Adebayo (2012) who found out that gender difference of the teachers had no effect on their ability to impact knowledge. The reports of Belagali (2011), Tripta (2007), Hussain, Ali, Khan, Ramzan and Qadeer (2011) and Soundarajan (2013) were in contrast to the preceding result above. They reported that female teachers had more positive attitude than male teachers.

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