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IMPACT OF SCHOOL TYPE ON STUDY HABIT, ACADEMIC SELF-CONCEPT AND CHEMISTRY ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS IN ANAMBRA STATE, NIGERIA

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ABSTRACT

The study investigated the impact of school type on the study habit, academic self-concept and Chemistry achievement of private and public secondary schools in Anambra state. Specifically, the purpose of this study was to investigate the impact of school type (private/public) on study habit, academic self-concept and Chemistry achievement of secondary school Chemistry students in Anambra State. In pursuance of the aforementioned objectives, three research questions and three hypotheses were postulated. Descriptive survey design was employed. Random sampling technique was used to select the sample size of 124 Students (62males & 62females). Students' Study Habit Questionnaire (SSHQ), Students' Academic Self-concept Questionnaire (SASQ) and Students' Cumulative Achievement Scores (SCAS) were instruments used for data collection. Data was subjected to statistical analysis using the statistical package of social sciences (SPSS). Analysis of Variance (ANOVA) was used to test the null hypothesis at 0.05 level of significance. The findings on study habit showed that school type has significant impact on the study habit of secondary school students in favor of private secondary schools. Findings on academic self-Concept revealed that school type has no significant impact on academic self-Concept of secondary school students while findings on Chemistry achievement revealed that school type has no impact on Chemistry achievement of secondary school students. Based on findings, it was recommended that Chemistry teachers should help the students to develop good study habits by making sure they are actively involved in the learning process as well as teaching Chemistry in a friendly manner and present its concepts in a simple manner so that the students will view the subject as something to learn and not something to fear.

Introduction

Education is an instrument for social transformation, cultural transmission as well as an instrument for scientific and technological development. Nwanna (2009), viewed education as a vital tool for all-round human development. In other words, education is a vital instrument for the development and continuity of every nation and society that embrace it. These views are in line with the Nigeria's philosophy of education as contained in the National Policy on Education (2013), which is based on the beliefs that education is an instrument for national development and social change, a vital tool for promotion of a progressive and united Nigeria, maximizes the creative potentials and skills and a compulsory and right of every Nigerian irrespective of gender, social class or ethnic background. Every society has its own way of educating the people as well as its own goals of education. In Nigeria, the goals of education are based on the development of the

individual into a morally sound and effective citizen, full integration of the individual into the immediate community and provision of equal access to educational opportunities for all citizens within and outside the formal school system (NPE, 2013). The school is a social organization in which social message is transmitted to students. Not only is the school primarily responsible for their formal education and general intellectual growth, it is also responsible for proper social relations among students (Ogbodo, 2010). The school teaches the students to learn and exposes them to situation through which active learning develops. It is the student who does the studying and learning, utilizing all the available situations to achieve acceptable academic performance. The process is an active one and unless the child consciously and purposefully participates in the learning situation, the desired change in behavior will not occur.

In many countries around the globe, education is provided through public education system with all or most of the cost paid by the government but (Ogolla, 2010) reported that this task has not been easy for most governments due to a number of factors such as; growing population, increased cost, financial strains in other areas of governance, lack of political will power and corruption, and all these have obvious implications on the effectiveness of public schools in providing quality education. Private sector involvement in the provision of education appears to be a panacea to addressing part of these problems. Public and Private schools in Nigeria are institutions owned as their names denote. The Public schools in Nigeria, are owned and run by the government at the federal, state or local government levels, while private schools have individuals, organizations or associations as their proprietors and owners, established as profit oriented, business outlets, thus putting their efficacy and quality in doubts most of the times. The government oversees the public secondary schools while individuals, group of persons, Christian missions and organizations oversee the private secondary schools. In the context of this study, public secondary schools, refer to the secondary schools that are funded and managed by the government as service delivery to her citizens while the private secondary schools, are the secondary schools that are independent of government ownership but are funded and managed by individuals, group of persons, Christian missions and organizations as business and profit oriented ventures. A great deal of variance may exist between the types of schools in terms of, effectiveness or appropriateness with reference to the national perspective.

In the recent times, the rate of proliferation of private secondary schools is alarming and has continued to rise to the point of competing with the public secondary schools in terms of population of students. It is obvious that in the present days, Christian missions that started establishment of private secondary schools are no longer the only ones involved in the proliferation, the efforts of individuals, group of persons and organizations are seen. Their involvement has led to increase in the number of students studying with them in private schools. (Kingdon, 2017) reported that unrecognized / unregistered private schools account for significant number of these private schools and that this unofficial, low-cost private schools are tremendously mushrooming in urban localities with

informal settlements demonstrating high levels of patronage. The preference for private schools by parents and guardians may not be unconnected to the vulnerability of public schools to industrial actions ('strikes'), which has varied negative implications on all stake holders. Despite the flaws in private school education delivery such as: not hiring certified teachers, not using up-to-date teaching method, highly expensive and some others being 'magic centers' for examination malpractice, and many more, as reported by researchers; (Olatoye, 2009), the quest and surge for private school patronage remains on the increase. It is in the public domain that many of the schools indicted for various types of examination malpractice, by the West African Examination Council (WAEC) are mostly private schools. Could this be the reason for the unflinching patronage by parents and guardians? So far, reports on the academic achievement of students in private and public secondary schools in Chemistry has continued to be contradictory, and hence a worrisome issue of concern requiring further investigation. This is evident from the reports of Islam (2021), Omachonu (2019), Olatoye (2009) and Rabiya (2018). Islam (2021), reported that students in public secondary schools perform better than their counterparts in private secondary schools, while according to Olatoye (2009), Omachonu (2019) private secondary school students have greater academic achievement than students in public secondary schools. From the reports of Rabiya (2018), there is a significant difference between the academic achievement of private and public secondary school students in favor of private schools. This study, therefore, considers it worthwhile to investigate the study Habit, self-concept and Chemistry achievement of private and public secondary school students to see where the reported differences are coming from.

Study habit is referred to as an individual or a student behavioral action related to their studies. Okenezi and Braide (2018), defined study habit as the consistent ways a person studies with regards to gaining knowledge. According to Islam (2021), study habits are students' repeated actions to study from the beginning to the end of their educational programs. Study habits involve actions, activities and practices geared towards gaining knowledge for mastery both within and outside the school. These activities and practices involve the act of planning and time scheduling for reading, problem solving, note-taking, time management, organizing and holding of study groups and use of library which the students practice repeatedly in order to accomplish the task of learning (Jota et al., 2014). Study habits are intended to elicit and guide one's cognitive processes during learning as well as learning tendencies that enable students work privately or in group. In other words, study habit involves the totality of all the students' activities and practices relevant to their studies. Ebele and Olofu (2017), opined that development of good time management by the students is very important. According to them, students should realize that there is time to read and study, time to be with friends, time to be with family, time to be in class and time to be alone. How students apply their individual study habit differ from students to students and from school to school. That is to say that students show uniqueness in the ways they study. These uniqueness account for the differences in their academic achievements in

Chemistry and other related subjects. How students' study, greatly determine their level of academic achievements. The level of preparation and learning strategies developed and employed consciously by students, go a long way to influence their level of academic performance, generally, and this can be greatly influenced by the student's self-concept.

Self-concept is a general term used to refer to the idea a person has about himself or herself. Ogbodo (2017), viewed self-concept as the set of beliefs that one has about their personality. According to her, self-concept involves what a person thinks of his characteristics such as abilities, skills and knowledge. Self-concept is also viewed as how a person thinks about, evaluates and perceives himself or herself (Bharathi & Sreedevi, 2016). That is to say that, to be aware of oneself is to have a concept of oneself. In the context of this study, Academic self-concept may be defined as students' perception in relation to performance in Chemistry. The students' perception is the product of the picture they have of Chemistry, the understanding of their capabilities and abilities, interest in learning new Chemistry concepts and confidence in performing well in the subject. Usman & Olosunde (2017), opined that students can develop self-concept in when the teacher makes the study of the subject to be interesting and engaging as well as through motivation which can be in form of reinforcement. According to Okonkwo & Samuel (2021), some students see Chemistry as an abstract subject and therefore, making the teaching and learning of Chemistry to be interactive, student-centered with lots of interesting activities may help students develop and improve their individual self-concept. How students think of their abilities and skills in relationship to Chemistry determines their achievement and performance. Usman and Olosunde (2017), reported that self-concept of students produces commensurable change in their academic achievements.

Academic achievement is the outcome of education which extends to what a student, teacher or institution has achieved in the educational goals (Ugwuanyi et al., 2019). Academic achievement is the extent of success made by an individual or students in a learning task. It can also be viewed as the knowledge attended and skills developed which are designed by test scores (Adamu et al., 2019). Islam (2021) defined academic achievement as performance outcome which shows the extent a person has accomplished specific goals in the instructional environment.

The present study adopts the social learning theory by Bandura (1977) as a theoretical framework. This theory posits that individuals primarily learn by observing others. According to this theory, social modeling and good behaviour are essential tools in the classroom. When students observe certain actions being met by a positive outcome, it increases the likelihood of the student repeating the behaviour. Learning is an everyday activity, and students who find themselves in public and private schools are bound to the influenced academically by the qualities of the models them find within the learning environment

Statement of the Problem

Unarguably, the access and availability of private schools in Nigeria has not been free of controversy and its quality and efficacy has equally been under question. On one hand, they are in in high demand and growing in numbers, while on the other hand, they are unreasonably very expensive, and in public discourse. Kingdon (2016) reported that their growth is often dubbed the "mushrooming of teaching shops". Majority of the private schools in Nigeria are lacking in both material and human resources. This could be as a result of its profit-oriented nature. Many do not have qualified teachers, and still the demand for private school is increasing astronomically. Surprisingly, empirical reports on the quality and efficacy (Omachonu, 2019) and academic achievement (Olatoye & Olasehinde, 2014) of private schools as compared to public schools are inconsistent, conflicting and therefore inconclusive in their findings, some reported that private schools perform better while others reported in favor of public schools. The question that prompted this investigation is; Where lies the secret of the superiority of the private schools over the public schools despite all the problems facing the private schools as reported by Olatoye, (2009). This study, therefore, investigated two non-cognitive, psychological constructs that literature reported as having the potency of influencing academic achievement. Specifically, the study compared the study habits, academic self-concept and academic achievement of Chemistry students in private and public secondary schools in Anambra State.

Purpose of Study

The general purpose of this study is to examine the impact of School type (Public/Private) on Study habit, Academic self-concept and Chemistry Achievement of Secondary School Student in Anambra State. Specifically, this study intends to determine if:

1. School type (Public/Private) will have an impact on the Study Habit of Secondary School Chemistry students in Anambra State.
2. School type (Public/Private) will have an impact on Academic Self-concept of secondary school Chemistry students in Anambra State.
3. School type (Public/Private) will have an impact on Chemistry Achievement of secondary school Chemistry students in Anambra State

Research questions

1. Will school type (Public/Private) have a significant impact on the Study Habit of secondary school Chemistry students?
2. Will school type (Public/Private) have a significant impact on Academic Self-concept of secondary school Chemistry students?
3. Will school type (Public/Private) have a significant impact on Chemistry Achievement of secondary school Chemistry students?

Research hypotheses

The following research hypotheses were formulated to guide the study and tested at 0.05 level of significance:

H0[1]: School type (Public/Private) will not have a significant impact on study habit of secondary school Chemistry students.

HO[2]: School type (Public/Private) will not have a significant impact academic self-concept of secondary school Chemistry students.

HO[3]: School type (Public/Private) will not have a significant impact on Chemistry achievement of secondary school Chemistry students.

Research Method

The research design is a descriptive survey design. The present study was carried out in Idemili North Local Government Area, Anambra State. The population as at the time of the study consists of two thousand, seven hundred and eighty- six (2786) Senior Secondary School students (SS2) in private and public secondary schools in Idemili North Local Government Area from sixteen (16) public schools and nineteen (19) private schools in the area. The public secondary schools are made up of 1251 students while the population of private schools are made up of 1535 students. Simple random sampling technique was used to select ten (10) secondary schools; five (5) public schools and five (5) private schools in Idemili North Local Government Area to ensure equal chance of being selected. A sample of one hundred and twenty-four (124) students was used for the study. The one hundred and twenty-four (124) students selected comprised sixty-two (62) students from public secondary schools and sixty-two (62) Students from private secondary schools. Two research instruments were given out to respondents, they include, Study Habit Questionnaire and Academy Self-concept Questionnaire developed by Reynolds (1988). Chemistry achievement was measured using the students' cumulative assessment scores in Chemistry, as provided by their teachers. Using the Cronbach's Alpha as a medium to test for scale reliability/Internal consistency, the researcher obtained an alpha coefficient of 0.69 on the academic self-concept scale, and an alpha coefficient of 0.91 on the Study habit scale. Data collected from respondents was subjected to data analysis using the Statistical package for social sciences (SPSS) version 25. Statistical method adopted for data analysis is a One-way analysis of variance (ANOVA).

Presentation of Results

This chapter presents the summary of the study analysis on Study Habit, Academic Self-concept and Chemistry Achievement of Secondary School Students in Private and Public secondary schools in Idemili North Local Government Area, Anambra state.

Table 1: Summary table of Mean and Standard Deviation; a Descriptive statistic on Study Habit.

	School type	N	Mean	Std. Deviation	Std. Error
Study Habit	Public School	62	190.18	35.218	4.473
	Private School	62	203.85	26.084	3.313
	Total	124	197.02	31.617	2.839

The above table is the descriptive statistics on Study habit of secondary school students, both in public and private schools.

Table 2: Summary table of Mean and Standard Deviation; a Descriptive statistic on Academic Self-concept.

	School type	N	Mean	Std. Deviation	Std. Error
Academic Self-concept	Public School	62	112.52	18.676	2.372
	Private School	62	116.92	12.301	1.562
	Total	124	114.72	15.903	1.428

The above table is the descriptive statistics on Academic Self-concept of secondary school students, both in public and private schools.

Table 3: Summary table of Mean and Standard Deviation; A Descriptive statistic on Chemistry Achievement.

	School type	N	Mean	Std. Deviation	Std. Error
Chemistry achievement	Public School	62	62.40	16.708	2.122
	Private School	62	64.21	13.859	1.760
	Total	124	63.31	15.314	1.375

The above table is the descriptive statistics on Chemistry Achievement of secondary school students, both in public and private schools.

Research Question 1: Will School Type (Public/Private) Have a Significant Impact on the Study Habit of Secondary School Chemistry Students?

Table 4: Analysis of variance on the impact of School type (Public/Private) on the Study habit of secondary school students.

		Sum of Squares	df	Mean Square	F	Sig.
Study Habit	Between Groups	5799.226	1	5799.226	6.039	.015
	Within Groups	117158.742	122	960.318		
	Total	122957.968	123			

Findings on **table 4** show that school type has a significant impact on the study habit of secondary school students with a level of significance lesser than .05 level (P = .015) with an F ratio of 6.03. This implies that school type influences the study habit of students. The mean score in **table 1** show that students in private schools have a better study habit (mean = 203.85) against students in public school (mean 190.18). Findings in **table 4**, show that this difference is significant. According to findings, the research hypothesis with states that school type will not have a significant impact on study habit of secondary school Chemistry student is hereby rejected.

Research Question 2: Will School Type (Public/Private) Have a Significant Impact on Academic Self-concept of Secondary School Chemistry Students?

Table 5: Analysis of variance on the impact of school type (Public/Private) on Academic Self-concept of secondary school Chemistry students.

		Sum of Squares	df	Mean Square	F	Sig.
Academic Self-concept	Between Groups	601.040	1	601.040	2.404	.124
	Within Groups	30508.081	122	250.006		
	Total	31109.121	123			

Findings on **table 5** show that school type has no significant impact on Academic self-concept of secondary school Chemistry students with a level of significance higher than .05 level (P = .124) with an F ratio of 2.4. This implies that school type (Public/Private) does not have a significant effect on the academic self-concept of secondary school Chemistry students. The mean score in **table 2** show that students in private schools have a higher mean score of Academic self-concept (mean = 116.92) against students in public school (mean 112.52), however findings in **table 5**, show that this difference is not significant. According to findings, the research hypothesis with states that school type will not have a significant impact on academic self-concept of secondary school Chemistry students is hereby not rejected.

Research Question 3: Will School Type (Public/Private) Have a Significant Impact on Chemistry Achievement of Secondary School Chemistry Students?

Table 6: Analysis of variance on the impact of school type (Public/Private) on Chemistry Achievement of secondary school Chemistry students.

		Sum of Squares	df	Mean Square	F	Sig.
Chemistry Achievement	Between Groups	101.161	1	101.161	.429	.514
	Within Groups	28745.194	122	235.616		
	Total	28846.355	123			

Findings on **table 6** show that school type has no significant impact on Chemistry Achievement of secondary school students with a level of significance higher than .05 level (P = .514) with an F ratio of 0.43. This implies that school type (Public/Private) does not have a significant effect on Chemistry Achievement of secondary school chemistry students. The mean score in **table 3** show that students in private schools have a higher mean score on Chemistry Achievement (mean = 64.21) against students in public school (mean 62.40). Regardless, findings in **table 6**, show that this difference is not significant.

According to findings, the research hypothesis with states that school type will not have a significant impact on chemistry achievement of secondary school Chemistry student is hereby not rejected.

Discussion of the findings

Findings from research question one show that school type has a significant impact on the study habit of secondary school chemistry students. This implies that school type influences the study habit of students. The significant impact on study habit is in favour of private secondary school students. This result is not in consonance with the findings of Islam (2021), whose findings showed that school type has no impact on study habits of private and public secondary schools. The mean scores in table 1 shows that students in private schools have a better study habit than students in public school. This could be as a result of strict supervision, scrutiny and monitoring by the authorities of private schools. It is logical to assume that parents who send their children to private school would demand nothing short of excellence. This in-turn would influence the level of care and supervision of authorities on the academic activities of students so they don't lose patronage, being a profit-oriented venture unlike government owned secondary school.

Findings from research question two show that school type has no significant impact on Academic self-concept of secondary school students. This finding is in tandem with Olatoye (2009), whose study showed that school type has no significant effect on the academic self-concept of secondary school students in Ogun state. However, the mean scores in table 2 showed that students in private schools have higher academic self-concept than students in public schools. The finding is in line with the findings of Oluwatosin et al. (2014) who revealed that students attending private secondary schools have higher level of Academic self-Concept compared to those attending public secondary schools.

Findings from research question three show that school type has no significant impact on Chemistry Achievement of secondary school Chemistry students. This finding conflicts with Rabiya (2018) who revealed that private school students performed significantly better than their public-school counterparts. The mean scores in table 3 show that students in private schools have a higher mean score on Chemistry Achievement than students in public schools. This agrees with the results from Musbahu et al. (2021) which showed that Students in private secondary schools excel in Chemistry more than students in public secondary schools.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Chemistry teachers in both private and public secondary schools should assist the students in the developing good and effective study habits by ensuring the students are actively involved in the learning process as this will in turn improve their Chemistry achievement.
2. Chemistry teachers in both private and public secondary schools should endeavor to teach Chemistry in a friendly manner and present its concepts in a simple manner so that the students will view the subject as something to learn and not something to fear
3. School administrators, counsellors and teachers should help the Students improve their academic self-concept in

Chemistry by using reinforcement, praises and rewards where necessary.

4. The government and school managers should employ qualified Chemistry teachers to handle Chemistry subject in secondary schools.
5. The Government and state ministry of education should help in making sure public schools have Chemistry laboratories for effective teaching and learning of Chemistry

Conclusion

Based on the findings of the study, it was concluded that school type has an impact on study habit of secondary school Chemistry students in Anambra State. School type has no impact on academic self-Concept and Chemistry achievement of secondary school Chemistry students Anambra state.

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