



Influence of Peer Pressure on Achievement and Retention of Biology Concepts among Senior Secondary School Students in Kaduna State

ANYANWU, Raymond Ifeanyi
Department of Biology,
Federal College of Education, Zaria, Kaduna State.

ABSTRACT

This paper researched the Influence of Peer Pressure on Achievement and retention of Biology Concepts among Senior Secondary School Students in Sabon-gari Local Government Area, Kaduna State. Three research questions and three null hypotheses guided the research. The study employed a descriptive research design. The population of the study was 1471 students from 9 public senior secondary schools in the Sabon-gari local government area, from which 150 SSII biology students in 5 schools were selected as a sample, using the purposive sampling method. The instrument for data collection was Peer Group Influence Questionnaire and the students' academic assessment for the 2019/2020 session. Data gathered was analyzed using means, standard deviations and simple percentages for the research questions; and Pearson Product Moment Correlation Coefficient for the null hypotheses. Findings revealed that senior secondary school biology students in the Sabon-gari local government area exhibit a low level of peer pressure, and there is a positive and significant relationship between peer pressure and students' academic performance and retention of biology concepts. It was recommended among others that school authorities/teachers should pay attention towards encouraging good peer group activities in schools, especially in the area of group discussion.

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INTRODUCTION

All activities of education, whether within or outside the classroom, are geared towards ensuring the attainment of educational objectives. In schools, the extent to which educational objectives are achieved could be partly determined by the level of peer pressure and students' time management in their studies. Okorie (2014) noted that peers play a large role in the socio-emotional development of secondary students. This influence begins at an early age and increases through the teenage years of a child. It is natural, healthy and important for secondary school students (adolescents) to have friends and rely on them as they grow and mature. Hardcastle (2012) noted that a peer could be an individual someone looks up to in behaviour, or someone who one would think is equal to his/her age or ability. On the other hand, the term pressure implies the force that influences people to do something that they might not otherwise choose to do (Mukama, 2013). According to

Hartney (2014), peer pressure refers to the influences that peers can have on one another. Peer pressure is an emotional or mental force from people belonging to the same social group (such as age, grade or status) to act or behave like themselves (Weinfied 2014). Jones (2016) defined peer pressure as the ability of people from the same social rank or age to influence another of the same social rank or age bracket. Peer pressure is usually associated with teens although its influence is not confined to teenagers alone. A clear instance is when mature adults, young adults and children are seen to be doing things to be accepted by their peers. Peer pressure is commonly associated with episodes of adolescents' risk-taking activities such as delinquency, drug abuse and illicit sexual behaviours. This is because these behaviours are frequent in the company of peers (Mukama, 2013).

Peer pressure can manifest in positive behaviours such as volunteering for a



charity, community development or excelling in academics (Kellie, 2013). It can also produce negative influences, where students can encourage each other to skip classes, steal, cheat, use drugs or alcohol, or become involved in other risky behaviours. Bankole and Ogunsakin (2015) noted that the majority of secondary students with substance abuse problems began using drugs or alcohol due to peer pressure. Studies have shown that many socially accepted students who do not manage their time well make lower grades than less socially accepted adolescents (Hartney, 2002 & Omotere, 2015). This is possible because socially accepted students may spend more time worrying about their social life rather than studying which eventually may affect their academic performance.

Academic performance refers to how well a student is accomplishing his or her tasks and studies (Scott, 2012). Grades are certainly the most well-known indicators of academic performance. Grades are students' scores for

their classes and overall session. Grades are most often a tallying or average of assignment and test scores and may often be affected by factors such as attendance, an instructor's opinion of a student as well as the level of learning by the student. Grading systems vary greatly across country and school; common scales include a percentage from 0-100, lettering systems from A-F, and grade point averages (GPA) from 0.00-5.00. In this context, academic performance refers to the extent to which students have achieved mastery of biology concepts they were exposed to in school.

The West African Examination Council (WAEC) Chief Examiner's Report (2020) has also confirmed the general trend of poor performance of senior secondary school students in sciences and biology in particular. Analysis of WAEC results for the years 2016-2020 revealed the fact about the performance of Nigerian senior secondary school students in biology (Table 1).

Table 1: Students' Academic Performance in Biology Nationwide (2016-2020)

| Year | Total enrolment | No Absent | No Sat | % Sat | No Passed with C6 & above | % Passed with C6 & above | No Passed below C6 | % Passed below C6 |
|------|-----------------|-----------|---------|-------|---------------------------|--------------------------|--------------------|-------------------|
| 2016 | 428,513 | 1,069 | 427,444 | 99.75 | 153,778 | 35.97 | 273,666 | 63.78 |
| 2017 | 478,235 | 1,047 | 477,188 | 99.78 | 167,465 | 35.09 | 309,723 | 64.69 |
| 2018 | 477,573 | 1,018 | 476,555 | 99.79 | 245,330 | 51.48 | 231,225 | 48.31 |
| 2019 | 575,757 | 1,669 | 574,088 | 99.71 | 232,474 | 40.49 | 341,614 | 59.22 |
| 2020 | 641,622 | 2,914 | 638,708 | 99.54 | 253,549 | 39.69 | 385,159 | 59.85 |

Source: WAEC Office, Lagos (2020)

Several factors have generally been identified as the causes of poor academic performance. These include students' inability to manage their time, peer influence, family factors, among others. Secondary students are particularly vulnerable to peer pressure because they are at a stage of development when they are separating more from their parents' influence but have not yet established their values or understanding about the human relationship or the consequences of their behaviour (Parker 2013, Okorie 2014). They are also typically striving for social acceptance at this stage and may be willing to engage in behaviours that will allow them to be accepted but are against their better judgment. At this stage whether male or female, the pattern of thinking is that in which immediate needs tend

to have priority over long term ones and because they lack knowledge and skill to make healthy choices. Peer pressure may be present in the workplace, at school or within society and can affect people of all ages. It may affect people in different ways but in this study, the focus is on peer pressure as it affects academic performance and retention of biology concepts among senior secondary students.

So far, the researcher believes that studies on peer influence on academic performance and retention of biology concepts among senior secondary students in biology are yet exhaustive. This study, therefore, seeks to investigate and build upon existing knowledge on peer influence and academic performance.

Corresponding author: Anyanwu, R. I. ✉ anayaray1@gmail.com ✉ Department of Biology, Federal College of Education, Zaria. © 2022. Faculty of Technology Education. ATBU Bauchi. All rights reserved



Evidence abounds to support the downward trend in academic performance of senior secondary students in Nigerian secondary schools. Parents, teachers, curriculum experts have expressed considerable concern about this poor performance in external examinations such as the West African Examination Council. These groups of individuals tend to cast blame on the influence of negative peer pressure and poor time management as being responsible for poor academic performance. It is suspected that the negative peer pressure with attendant poor time management for studies lure secondary students into engagement in negative habits such as excessive drinking of alcohol, smoking, of Indian hemp, engagement in unhealthy sexual behaviour, cultist activities and other maladjustive behaviours that distract them from academic pursuit. These unhealthy behaviours of students may in turn impact their academic performance without their knowledge.

It is because of these concerns that this study was carried out to determine the influence of peer pressure on academic performance and retention of biology concepts by senior secondary school students in Sabon-gari Local Government Area of Kaduna state.

Objectives of the Study

The objectives of the study are to:

1. Determine the level of peer pressure influence among senior secondary biology students in Sabon-gari Local Government Area of Kaduna state.
2. Determine the relationship between peer pressure and academic performance of senior secondary biology students in Sabon-gari Local Government Area of Kaduna state.
3. Determine the relationship between peer pressure and retention of biology concepts among senior secondary biology students in the Sabon-gari Local Government area of Kaduna state.

Research Questions

The following research questions will guide the study:

1. What is the level of peer pressure influence among senior secondary students in biology in the Sabon-gari Local Government Area?
2. What is the relationship between peer pressure and academic performance of senior secondary school students in biology in the Sabon-gari Local Government Area?
3. What is the relationship between peer pressure and retention of biology concepts among senior secondary biology students in the Sabon-gari Local Government Area?

Null Hypotheses

The null hypotheses postulated for the study were:

Ho1: There is no significant influence of peer pressure among senior secondary biology students in Sabon-gari Local Government Area of Kaduna state.

Ho2: There is no significant relationship between senior secondary students' peer pressure and their academic performance in biology in Sabon-gari Local Government Area.

Ho3: There is no significant relationship between students' peer pressure and retention of biology concepts among senior secondary students in the Sabon-gari Local Government Area.

METHODOLOGY AND MATERIALS

This study employed a descriptive research design. This design was appropriate as descriptive research is designed to find out the existing situation of a particular phenomenon of concern.

The population of the study included all senior secondary schools in Sabon-gari Local Government Area of Kaduna State. As at the time of this research, there were nine public senior secondary schools in the Sabon-gari local government area with a total students population of 1,471 (M.O.E, Kaduna State 2020).

Table 2: Population for the Study

| S/N | Name of school | No of Males | No of Females | Total |
|-----|--------------------|-------------|---------------|-------|
| 1 | GSS, Chindit Zaria | 82 | 79 | 161 |
| 2 | GDSS Kwangila | 95 | 73 | 168 |
| 3 | GSS Basawa | 108 | 68 | 176 |



| S/N | Name of school | No of Males | No of Females | Total |
|-------|-------------------|-------------|---------------|-------|
| 4 | GGSS Samaru | -- | 144 | 144 |
| 5 | GSS Bomo | 142 | -- | 142 |
| 6 | GCC Muchiya | 91 | 89 | 170 |
| 7 | Aminu Sec School | 102 | 88 | 190 |
| 8 | GGSS Dogon-Bauchi | -- | 170 | 170 |
| 9 | GSS Chikaji | 67 | 73 | 140 |
| TOTAL | | 687 | 784 | 1471 |

Source: Zaria Inspectorate Division, Kaduna State Ministry of Education (2020)

Sample and Sampling Technique

From the total population of 1,471, a sample size of 150 was selected from five senior secondary schools for the study, using the purposive sampling technique. Purposive

sampling is a non-probability sampling technique that is selected based on characteristics and the objective of the study. Table 3 presents the sample of the research.

Table 3: Sample for the Study

| S/N | Name of school | No of Males | No of Females | Total |
|-------|-------------------|-------------|---------------|-------|
| 1 | Aminu Sec. School | 17 | 13 | 30 |
| 2 | GDSS Kwangila | 18 | 12 | 30 |
| 3 | GSS Basawa | 19 | 11 | 30 |
| 4 | GGSS Samaru | -- | 30 | 30 |
| 5 | GSS Chindit | 18 | 12 | 30 |
| TOTAL | | 72 | 78 | 150 |

The research instruments that were used to collect the data were a questionnaire titled Peer Group Influence Questionnaire (PGIQ), and 1st, 2nd and 3rd term results of SSII students' academic assessment (SAA) in Biology for the 2019/2020 academic session. The PGIQ was designed by the researchers while the SAA scores were obtained from the examination offices of the respective schools.

To determine the reliability of the instrument, the researcher trial tested on a representative sample of 10 female and 10 male students from GCC Muchiya, which is outside the sample under study. Cronbach Alpha Statistical analysis was used to determine the reliability coefficient of the instrument. The result of the data analysis gave an Alpha coefficient value of 0.76,

indicating that the instrument was reliable to be used for the study.

The data collected were analysed using means, standard deviation and simple percentages for the research questions while the Pearson's Product Moment correlation coefficient was used to test the three null hypotheses at a 0.05 level of significance. For item analysis, a criterion level of 2.95 and below was set as a benchmark for accepting response to an item as non-agreement while 3.05 and above-indicated agreement on PGIQ.

RESULTS AND DISCUSSION

Research Question 1: What is the level of peer pressure influence among senior secondary school students in biology in the Sabon-gari local government area?

Table 4: Frequency, Percentage and Means of the Level of Peer Pressure among Senior Secondary School Students

| S/N | Item | SA | A | UD | D | SD | Mean |
|-----|---|----------------|---------------|---------------|----------------|----------------|------|
| 1 | I put on the kind of cloth my friends like because I want to look like them | 43 (28.66%) | 13 (8.67%) | 10 (6.67%) | 44 (26.67%) | 40 (29.33%) | 2.83 |
| 2 | I cannot do anything on my own without my friends because they are my source of inspiration | 17 (11.33%) | 7 (4.67%) | 21 (14%) | 29 (28.67%) | 62 (41.33%) | 1.97 |



| S/N | Item | SA | A | UD | D | SD | Mean |
|-----|---|----------------|----------------|----------------|----------------|----------------|-------|
| 3 | What I do is determined by my friends | 25 (16.67%) | 36 (24.%) | 14 (9.33%) | 40 (26%) | 35 (23.33%) | 2.84 |
| 4 | If I don't engage in group discussion with my friends before exams/test, I cannot perform better | 44 (29.33%) | 57 (38%) | 13 (8.67%) | 21 (14%) | 15 (10%) | 3.63* |
| 5 | My friends do not negatively influence my academic performance | 20 (13.33%) | 67 (44.9%) | 19 (12.67%) | 24 (16%) | 20 (13.33) | 3.29* |
| 6 | My interaction with friends helps me to improve my academic performance in school | 46 (30.67%) | 44 (29.33%) | 17 (11.33%) | 30 (20%) | 13 (8.7%) | 3.53* |
| 7 | I cannot do without my friends because they make me feel glad | 63 (42%) | 27 (18%) | 14 (9.33%) | 20 (13.33%) | 26 (17%) | 3.54* |
| 8 | My friends make me disobey school rules and regulations because I always like being with them | 13 (8.67%) | 9 (6%) | 10 (6.67%) | 68 (45.33%) | 50 (33%) | 2.11 |
| 9 | Whenever I'm my friends, I feel like smoking | 7 (4.67%) | 7 (4.67%) | 9 (6%) | 67 (44.67%) | 60 (40%) | 1.89 |
| 10 | I love attending clubs when I am with my friends | 13 (8.67%) | 11 (7.33%) | 16 (10.67%) | 36 (24%) | 74 (49.44%) | 2.02 |
| 11 | When I am with my friends drinking, I do not feel hungry | 13 (8.67%) | 18 (12%) | 10 (6.67%) | 46 (30.67%) | 63 (42%) | 2.15 |
| 12 | I prefer going out with my friends than attend biology classes | 8 (12%) | 15 (10%) | 24 (16%) | 39 (26%) | 54 (36%) | 3.16* |
| 13 | My art student friends encourage me not to attend biology classes any more | 16 (10.67%) | 35 (24%) | 23 (15.33%) | 39 (26%) | 36 (24%) | 2.69 |
| 14 | Whatever thing I do is determined by my friends | 25 (16.67%) | 35 (23.33%) | 15 (10%) | 28 (18.67%) | 47 (31.33%) | 2.75 |
| 15 | I abandon my biology practicals/class assignment and go to be with my friends who don't offer biology | 19 (26.66%) | 13 (8.67%) | 6 (4%) | 52 (34.67%) | 60 (40%) | 2.19 |
| 16 | I cannot do my homework because I always engage in games with friends when I return from school | 36 (24%) | 47 (31.33%) | 5 (3.33%) | 30 (20%) | 32 (21.34%) | 3.17* |
| 17 | I enjoy studying with my friends in school | 36 (26%) | 47 (32.67%) | 5 (3.33%) | 30 (14.67%) | 32 (21.34%) | 3.27* |
| 18 | I do not go to my friends for clarification on what I was taught in class | 19 (12.67%) | 14 (9.33%) | 27 (18%) | 38 (25.33%) | 52 (34.67%) | 2.40 |
| 19 | I have well planned time-table for studies on my own | 39 (26%) | 64 (42.6%) | 5 (3.33%) | 14 (9.33%) | 28 (16%) | 3.48* |
| 20 | I feel that I can always cover missed lessons | 27 (18%) | 12 (8%) | 14 (9.33%) | 45 (30%) | 52 (34.67%) | 2.56 |



| S/N | Item | SA | A | UD | D | SD | Mean |
|--|--|---------------|----------------|----------------|----------------|----------------|------|
| 21 | sitting together with my friends It does not matter if social activities interfere with my study time | 14 (9.33%) | 16 (10.67%) | 17 (11.33%) | 47 (31.33%) | 56 (37.34%) | 2.23 |
| Mean peer pressure influence = 2.75 | | | | | | | |

The result in Table 4 shows the frequency distributions, percentages and mean scores on the items for the level of peer pressure among the respondent's area. The result indicated an average mean peer pressure influence of 2.75 indicating non-agreement, which implies a low level of peer pressure influence among senior secondary school biology students.

Research Question 2: What is the relationship between peer pressure and academic performance of senior secondary school students in biology in the Sabon-gari local government area? This analysis was carried out by correlating peer pressure scores of the subjects with their 1st term examination scores in biology. The results are given in Table 5.

Table 5: Relationship between Peer Pressure and Students' Academic Performance

| Variable | N | Scores | Mean | R |
|--------------------------------|-----|--------|-------|------|
| Peer Pressure scores | | 424.87 | 2.83 | |
| Performance scores of 1st term | 150 | 502.3 | 33.49 | 0.82 |

Table 5 shows a positive relationship of 0.82 between peer pressure and the student's academic performance with a peer pressure mean score of 2.83 and an academic performance mean score of 33.49.

retention of biology concepts among senior secondary school biology students in the Sabon-gari local government area? In this case, the academic performance score of students in their 2nd term was correlated with the peer pressure scores. The result is shown in Table 6.

Research Question 3: What is the relationship between peer pressure and

Table 6: Relationship between Peer Pressure and Retention of Biology Concepts

| Variable | N | Scores | Mean | R |
|---|-----|--------|-------|------|
| Peer Pressure scores | | 424.87 | 2.83 | |
| Academic performance scores of 2nd term | 150 | 4900 | 32.67 | 0.78 |

Table 6 indicates a positive relationship of 0.78 between peer pressure and students' retention of biology concepts. The mean score of peer pressure influence is 2.83, which is lower than the academic performance score mean of 32.67.

Testing of Hypotheses

Hypothesis 1: There is no significant influence of peer pressure among senior secondary biology students in Sabon-gari Local Government Area of Kaduna state.

Table 7: Analysis of Significance of Peer Pressure among Students

| Variable | Average Mean | Average SD |
|--|--------------|------------|
| Items on disagreement 1,2,3,8,9,10,11,13,14,15,18,20,21 | 2.35 | 0.78 |
| Items on agreement 4,5,6,7,12,16,17,19 | 3.38 | 0.86 |

To answer this hypothesis, the items on disagreement was analysed with the items

on the agreement, and the result showed that the items on disagreement have an average



mean score of 2.35 with a standard deviation of 0.78 as against the items on an agreement that has an average mean of 3.38 with a standard deviation of 0.86. This means the difference between the two means is 1.03 while that between the standard deviations is 0.08. The differences are far too small. Also, the coefficients of variation for agreement and disagreement are equally low (25% and 33% respectively). There is no significant influence of peer pressure among senior secondary

school biology students. The null hypothesis is therefore retained, implying that there is no significant influence of peer pressure among senior secondary biology students in Sabon-gari Local Government Area of Kaduna state.

Hypothesis 2: There is no significant relationship between senior secondary students' peer pressure and their academic performance in biology in Sabon-gari Local Government Area.

Table 8: Relationship between Peer Pressure and Students' Academic Performance

| Variable | N | Scores | Mean | Df | r | Decision |
|--------------------------------|-----|--------|-------|-----|-------|-------------|
| Peer Pressure scores | 150 | 424.87 | 2.83 | | | |
| Performance scores of 1st term | 150 | 5023 | 33.49 | 148 | 0.82* | Significant |

At 0.05 confidence level, critical $r = 0.16$

Results in Table 8 shows the peer pressure scores of the students correlated with their 1st term academic performance scores. The result indicated that the correlation coefficient obtained was 0.82 and significant at a 0.05 level of significance. This means that there exists a positive relationship between peer pressure and students' academic performance in biology in Sabon-gari Local Government Area. The null hypothesis is thus rejected, meaning that there exists a significant

relationship between senior secondary students' peer pressure and their academic performance in biology in Sabon-gari Local Government Area.

Ho3: There is no significant relationship between students' peer pressure and retention of biology concepts among senior secondary students in the Sabon-gari Local Government Area.

Table 9: Relationship between Peer Pressure and Retention of Biology Concepts

| Variable | N | Scores | Mean | Df | r | Decision |
|---|-----|--------|-------|-----|------|-------------|
| Peer Pressure scores | 150 | 424.87 | 2.83 | | | |
| Academic performance scores of 2nd term | 150 | 4900 | 32.67 | 148 | 0.78 | Significant |

At 0.05 confidence level, critical $r = 0.16$

Table 9 analysed the students' peer pressure score and the 2nd term academic performance score. The result showed a correlation coefficient of 0.78. This means that there exists a positive and significant relationship between peer pressure and retention of biology concepts among senior secondary school biology students in the Sabon-gari local government area. Therefore, the null hypothesis is hereby rejected, indicating that there is a significant relationship between students' peer pressure and retention of biology concepts among senior secondary students in the Sabon-gari Local Government Area.

DISCUSSION OF FINDINGS

From the results obtained, it is evident that there exists a low level of peer pressure among senior secondary school biology students. Data from Table 4 shows that a higher percentage of students experienced a low level of peer pressure. The experience of a low level of peer pressure among the students means that peer groupings exert a positive influence on their members in this regard. This implies that peer pressure could influence senior secondary school biology students to engage in group discussions, going to the library to read, that will enhance their academic performance. This finding supports the view of Black (2012) that, peer pressure may be a



positive influence and could help to motivate them to do their best.

Results from Table 8 shows that there is a positive and significant relationship between peer pressure and the academic performance of in-school adolescents. The finding implies that in-school adolescents experience positive peer influence. However, their ability to perform very well was attributed to other factors studied. Probably, their teacher was able to cover the scheme of work before the assessment. As a result, it leads to good academic performance. This finding supports the findings of Head (2009), who report that a child whose siblings and peers are well motivated towards their academic work tend to achieve higher than one whose peer is more interested in social life.

Table 9 also reveals a positive and significant relationship between peer pressure and students' retention of biology concepts. This might be the reason why Mgbodile (2015) stated that peer pressure might have the ability to assist students in retaining certain concepts taught them and allow meaningful learning in the absence of fear, stress and tension.

RECOMMENDATIONS

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

1. School authorities/teachers should pay attention to encouraging good peer group activities in schools, especially in the area of group discussions.
2. Teachers should use teaching methods that will encourage cooperation among the students to inculcate in them better group behaviours.
3. Biology teachers should devise proper methods of grouping students for learning to encourage students' development of good learning behaviours.

CONCLUSION

This study concludes that peer groupings have an influence on students' learning and relate positively and significantly to their academic performance and retention of concepts. Also, negative peer pressure can

bring about poor academic performance and retention of concepts.

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