Academic performance of students that eat in canteen and students that cook their food

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KEYWORDS	A B S T R A C T
Academic performance, Students, Eat in canteen, Cook their food	The purpose of this study is to investigate on the academic performance of university undergraduates that eat from the canteen and students that cook their food. Problems facing the academic performance of student are the following factors; gender, age, learning preferences, learning environment and others. The studies also aim at considering statistically significant difference between the academic performance of student that eat from the canteen and student that cook their food. The sample size consisting of one hundred and fifty three (153) students in Imo State University in the Department of industrial Chemistry, Chemistry and Industrial Microbiology. Data collected was analyzed using chi-square test of statistics and t- test of statistics. Among the findings of this study includes; higher academic performance of students that eat their food in canteen. Also, it was discovered that students perform better than their male counterpart. By way of conclusion and recommendation, the government can help to build more cafeteria-setting in the university system where, student can procure their food rather than spending time to cook.

Introduction

Academic performance refers to how students deal with their student to and how they cope with or accomplish difficult tasks given to them by their teachers. Academic performance is the ability to study and remember facts and being able to communicate your knowledge verbally or down on paper.

Most people know that academic performance is generally refers to how well

a student is accomplishing his or her tasks and studies, but there are quite a number of factors that determine the level and quality of students academic performance.

Scoh (2008) gave a clear description of factors that determine the level of student academic performance which are as fellows

1. **Grade**: Certainly the most well-known indicator of academic performance,

grades are the students score for their classes and overall tenure. Grades are most often a tallying or average or assignment and test scorers and may often be affected by factors such as attendances instructor opinion of the student as well grading system vary gently by country and schools common scale include a percentage from 1-100, A-E or above.

2. **Attendance**: It would be difficult to perform well in class, if the student doesn't attend is compulsory and numerous unexcused absence may lead to notifying the students parents, barring of make-up work for missed assignment and tests or direct or grade. In extreme instances, parent have been even been taken to court and given jail time for their truant students.

3. **Standardized Tests:** Standardized tests are those that provide a consistent measure of a student performance with those that take the same test often nationwide. As the testing procedures and scoring are consistent regardless where the test is taken, standardized tests can provide a more direct representatives of the takers knowledge and aptitude than his or her grade in school.

4. **Extra Curriculum Activities:** Although, by definition voluntary involvement in extra-curriculum activities such as sports voluntary work, school newspaper develop and showcase student initiative and leadership skills, as well as provide insight into the students interest and priorities. Extracurricular activities, therefore can a student more attractive to College and employers.

5. **Behaviour:** Yet another measure of academic performance is the assessment of the students behavior while in school. Grade school often have struck guideline for student behaviour and violation such as academic dishonesty (cheating and phagiansm) and class disruptions can lead to disciplinary action.

Academic performance of student that eat canteen and students that cook their food is measured with grade point average (G.P.A). Moreso, grade point average (G.P A) is a commonly used indicator of academic performance. Many department set of minimum G.P.A that should be maintain in order to continue. In the university level minimum G.P.A. require by a student is 2.0 notheless, for any graduate program, a G.P.A of 3.5 or higher is considered an indicator for good academic performance.

The G.P.A. still remains the most common factor used by administrator to evaluate progression in an academic environment.

The inability of students to perceive the passage of time contributes a lot to poor performance of undergraduate students most especially student that cook their food, find it difficult to meet up well due to stress and students see cooking as a time consume factor.

Canteens a place where food is prepared and eaten and are used to serve food on an institutional level, militaries, school and large offices may use canteen to meet the food needs of their work forces and student. A typical canteen is a facility in which diners walk a long a food line with trays which can be filled with various food items. Diners them seat themselves eat and tray at the end of the meal student who eat in the canteen takes it as a recreational activities

and where they at ease with their meal. Student who know what they are doing, who eat from canteen really perform well due to they don't experience stress as such like student who cook their food.

Cognitive development and maturity (which are associated with age) are necessary for worthwhile performance of students age of the individual as it increase usually affects every area of human performance.

Ukueze (2007) therefore, it has become necessary to examine the academic performance of undergraduates. Another variable, considered in this study is gender. Gender relates to the difference in sex that is either male or female and how his quality affects their disposition and perception toward life and academic performance is inconclusive. This has necessitated the need to find out if there is any significant difference between male and female undergraduates as reflected in their academic performance.

Brain nourishment is a nutritional techniques for maintaining and improving cognitive performance for the purpose enhancing intelligence and emotional well-being. Nutrition is essential to brain functioning while the brain makes up just about two percent of the body weight. It consumes so percent of daily calorie intake. Nutrients can, therefore have a dramatic effect on thinking, concentration, intelligence level, memory reaction, time emotion and brain-ageing.

They must adjust to being away from home, perhaps for the first time and maintain a balance between high level of academic success and a new social environment. These daily stressors do not cause anxiety by themselves stress results from interaction between stressor and the individual perception and reaction to them.

However, Zimmer *et al.* (2001) find dating has a positive effect on the emotional health of adolescent.

Ugori (2008) have shown that students performance is declining this could be because and non-school related demands and responsibilities.

Ukpong (2007) this problems seem to be a major one that requires urgent and serious solution since student academic performance affects the quality of human resources within the society.

Objectives of the study

The main objectives of this research is academic performance of students that eat in canteen and students that cook their food, the specific objectives are as follows;

1. To examine the academic performance of student in general.
2. To examine the academic performance of student that eat from canteen.
3. To examine the academic performance student that cook their food
4. To identify the factors affecting academic performance of students.

Hypothesis

1. There is no significant different between those who cook their food and those who eat from canteen.

2. There is no significant relationship between gender, and academic performance of undergraduates.

Materials and Method

This chapter explains the procedure used in carrying out research work. This include area of study, research design, population of the study, sample and sampling techniques, instrument for data collection technique, reliability of the instrument, data collection technique and data analysis technique.

Research Design

The researcher used descriptive and experimental method of research design. The descriptive research helps the researcher to describe the academic performance of student that eat from the canteen and students that cook their food.

On the otherhand, the experimental research design helps in getting the variable necessary for proper assessment.

Area of study

The study took place in Imo State University, Imo State in the Department Industrial Chemistry, Industrial Microbiology and Chemistry. The student attitude toward the questionnaire was encouraging.

Population of the study

The population of this study comprises the number of students in the Faculty of Sciences in the Departments of Industrial Chemistry, Industrial Microbiology and Chemistry. And the target population is the 300 level students of Departments in the Faculty.

Sample and sampling techniques

Sample represents all the student in the case study of the Faculty. Sample size will be determined mathematically using Yaro Yamens formular as quoted in Amara and Amechi (2005).

Sample size and sampling techniques

$$n = \frac{N}{1+N(e)^2}$$

Where n = sample size
       E = toterable limit size
       N = population size

Therefore, if the number of student in the department under investigation 250

e = 0.05
N = 250

$$n = \frac{N}{1+N(e)^2} \qquad \frac{250}{1+250(0.05)^2}$$

$$= \frac{250}{1+250 \times 0.0025}$$

$$= \frac{250}{1.63} = \underline{153}$$

Then, the sample size for the study is $\underline{153}$

Instrument for data collection

Particular attention is paid in collecting data; primary data is a data the researcher developed himself. The researcher used primary data and secondary data for this study. The instruments that will serve effective purpose under this study are questionnaire and observation.

The primary data was collected by the researcher using the following primary method.

The use of questionnaire: This has been considered very adequate for the research work. It is a popular tool for collecting data: it is a data of self administered form, whereby the respondents reads the questions and answer them usually in the space provided. Secondary data are also used such as journal, results, magazines and others.

Validation of instrument

The questionnaire used for this study was validated by my supervisor and three other lecturers in my department Home Economics. The corrections given by them were effected accordingly before the distribution of the questionnaire.

Reliability of the instrument

The reliability of the questionnaire was established through test and re-test method. This was done by administering the questionnaire to 20 respondents in Home Economics who were randomly selected. The responses collected from the scores were co-related and efficient by using cronbach co-efficient alpha was a modification form of kudder –Richardson (K-R) Method used to estimate the internal consistency of the test instrument. The result co-efficient is 0.83 showing the reliability of the questionnaire.

Data collection technique

For the data collection 153 copies of the structured questionnaire was distributed by the researcher within the Faculty the student were selected and the questionnaire was collected by hand.

Method of data analysis techniques

The data collected by the researcher from the respondents for this study was subjected and presented using the descriptive statistical tools with respect to the objectives of the study.

The formular adopted is Ch-square method and T-statistic method, which was use in all the scoring system from the responses of the respondents.

Chi-Square

$$X^2 = \frac{(0-\epsilon)^2}{\epsilon}$$

Where x^2 = is the chi-square method
0 = is the observed frequency
ϵ = is the expected frequency
Decision rule: If the calculated value
Value x^2 is greater, we have to accept the alternative hypothesis only.

T- Statistic

$$\frac{X_1 - \overline{X_2}}{\sqrt{SP^2\left(1/N_1 + 1/N_2\right)}}$$

$\overline{X_1}$ = The first sample mean
X_2 = The second sample mean
n_1 = The size of the first sample
n_2 = The size of second sample
Sp^2 = Pull sample variance

Decision rule

If the computed T- calculated on the critical region we reject the null hypothesis, if the T-tabulated is at the critical region we accept the null hypothesis.

Results and Discussion

Table 1 summary; the result of the above table shows that 42.14% of the respondent are between 21-25yrs, 28.57 between 16-20yrs, 17.14% between 26-30yrs, and 12.14%yrs between 31yrs and above. This shows that majority of the respondents are really young in age, could mean ability to study.

Table 2 Summary

The above table shows that sex distribution of the respondents, 78.87% of them are female while 21.13 are male. The

percentages of this shows that number of female are higher than male in the Faculty.

Table 3 summary; from the table 49.31% of the student eat from canteen 29.17% of the student eat from medium between i and ii while 21.53% of the student eat self prepared meal. The result shows that the student that eat from canteen are higher

Table 4 summary; from the table 51.78% female eat from the canteen while 43.33% of male eat from the canteen 33.33% male eat self prepared meal 29.46% female eat from medium between i and ii while 23.33 of male eat from medium I and ii. The result above shows that the number of female that eat in the canteen are higher.

Table 5 summary; from the data collected on the table above shown 50.76% of students that eat from canteen has high performance, 25.30% has average performance while 23.94% has low performance the result show that high number of student that eat in the canteen has high performance.

Summary, from the table above 48.39% of student eat self prepared meal has high performance, 32.26% of student that eat self prepared has low performance while 19.35% that eat self prepared has average performance.

From the above, 42.86 of student that eat from medium between i and ii has low performance 33.33% has average performance while 23.81% has high performance.

From all indication, on the academic performance of student base on their feeding style, the data collected shows that 50.70% of student that eat from canteen has high performance 33.33% of student that eat from medium between i and ii has average

performance while 42.86% from the student that eat from medium i and ii has highest low performance.

Table 6 summary, from the data, collected 45.74% of female student has high performance while 34.64% of male has high performance, 36.54% of male has low performance and 28.85 of male has average performance and 26.59 has low performance.

Table 7 shows how the expected frequency is calculated

Computation of degree of significance and degree of freedom (DF)

Degree of freedom (DF)

DF	(C-1)	(r-1)
DF	(3-1)	(2-1)
Df	= 2	

Decision Rule

Where X^2 calculated $<$ X^2 tabulated
 Accept the null hypothesis (H_0)
Where X^2 calculated X^2 tabulated
Reject the null hypothesis and accept this alternative hypothesis
Assuming 0.05 level of significance and degree of freedom (2) = 5.99
$\therefore X^2 cal = 2.063$ and $X^2 tab = 5.79$

Here we accept H_0 accordingly concluding that there is a significant difference between the academic performance of female to male.

Finding the mean difference

$$\frac{\epsilon f (x - x)2}{\epsilon f}$$

$$S_1^2 = \frac{\epsilon x_1 - \epsilon \underline{x}^2}{n_1}$$

$$= \dfrac{1578 - \dfrac{682}{4}}{4 - 1}$$

$$= \dfrac{430}{3} = 140$$

$$S_2^{\,2} = \dfrac{\dfrac{\text{€}x_2 - \text{€}\underline{x}^2}{N_2}}{N_2 - 1}$$

$$= \dfrac{251 - \dfrac{(31)^2}{4}}{4 - 1}$$

Pulling the variable together

$$Sp^2 \dfrac{(n_1 - 1)s_1 + (n_2 - 1)s_2}{n_1 + n_2 - 2}$$

$n_1 \quad = 4$
$n_2 \quad = 4$
$s_1 \quad = 140$
$s_2 \quad = 3.5$

$$\dfrac{(4 - 1)140 + 3 \times 3.5}{8 - 2}$$

$$= \dfrac{430.5}{6} \quad = \quad 71.75$$

$$Sp^2 = 71.75$$

∴ Test for statistic

$$t = \dfrac{\overline{X_1} - \overline{X_2}}{SP\left(^1/n_I + {}^1/n_2\right)}$$

$$\dfrac{4 - 4}{71.22\left(^1/_4 + \tfrac{1}{4}\right)}$$

$$= 0.01.$$

Decision Rule

If the computed T-Calculated is on the critical region we regret the null

hypothesis, if the T – tabulated is the critical region we accept the null hypothesis.

∴

$$t^{0.10}_{n_1 + n_2 - 2}$$

=

$$0.10$$

$$4 + 4 - 2$$

$$t^{0.10}_{6} = 1.3352$$

Since the t-calculated is not at the critical region, we accept the null hypothesis and conclude there is a significant difference in the academic performance of students that eat in canteen and student that prepares their food.

From the data analysis, the researcher was able to make the following findings. When the researcher used percentage to analyze the result from the reponses of respondent, find out that majority of the student are within 21-25years with high percent of 42.14% showing more ability to study.

The result also showed that the performance of student in general are average performance with the high percent of 42.36%. When chi-squares was used to analyze the reponses from the respondent, of different gender. The researcher was able to find out there is a significant difference

between the academic performance of male and female, indicating the female performed better and this finding agrees with that of Ugorri (2008) who found a significant difference(P<0.05) based on gender.

Also, when t-statistic was used to compare the performance of student that eat in canteen and student that cook their food, the result showed that there was a significant difference (P<0.05)between those that eat in canteen and those that cook their food, indicating the people that eat canteen perform better.

From the foregoing discussion it can be concluded that those who eat from the canteen performed better than those who cooked their food. This is justifiable because

those who eat in canteen have more time to read and do their assignment, hence their performance.

Conclusion

The following conclusions were drawn from the above finding. The University students in the Department of industrial Chemistry. The academic performance of students that prepared their food is very poor due to much work load, leading to stress that made them not to focus very well.

Also the result show that, their female counterpart focus well in their studies than male showing that their male is easily distracted.

Table.1 Age Group of Respondents

Age group	Number of respondent			Total	Percentage
	Canteen	**Self prepared**	**Medium between i & ii**		
16-20yrs	21	8	11	40	28.57%
21-25yrs	32	12	15	59	42.14%
26-30yrs	7	8	9	24	17.14%
31yrs above	8	3	6	17	12.14%
Total					**100**

Table.2 Sex distribution

Sex	Number of respondent			Total	Percentage
	Canteen	**Self prepared**	**Medium i & ii**		
Male	13	10	7	30	21.13%
Female	58	21	33	112	78.87%
Total	71	31	40	142	100

Table.3 Where their Foods are Prepared

Feed style	Numbers	Percentage%
Self prepared	31	21.53%
Feed in canteen	71	49.31%
Medium between i and ii	42	29.17%
Total	142	100%

Table.4 Feeding Styles of the Gender

Feed Styles	Number of respondent			Percentage	
	Male	Female	Male	female	
Canteen	13	58	43.33%	51.79%	
Self prepared	10	21	33.33%	18.75%	
Medium i & ii	7	33	23.33%	29.46%	
Total	**30**	**112**	**100**	**100**	

Table.5 Academic Performance of Student Based on their Feeding Style

(i) Feeding in Canteen

Academic Performance	Number	Percentages
High performance	36	50.70%
Average performance	18	25.35%
Low performance	17	23.94%
Total	**71**	**100**

(ii) Self Prepared

Academic Performance	Number	Percentages
High performance	15	48.39%
Average performance	6	19.35%
Low performance	10	32.26%
Total	**31**	**100**

(iii) Medium Between i and ii

Academic Performance	Number	Percentages
High performance	1o	23.81%
Average performance	14	33.33
Low performance	18	42.86
Total		**100**

Table.6 Academic Performance in General

Academic performance	Male	Female	Male	Female
High performance	18	43	34.62%	45.74
Average performance	15	25	28.85%	26.59
Low performance	17	26	36.54%	27.66
Total	**52**	**94**	**100**	**100**

Table.7 Testing of Hypothesis

S/N	Male	Female	Total
1	(A) 13 (15)	B 58 (56)	71
2	(C) 10 6.55	(D) 21 (24.45)	31
3	(E) 7 (8.45)	(F) 33 (31.55)	40
Total	**30**	**112**	**142**

To test the hypothesis of male and female feeding style to their academic performance

Table.8 Chi-Square Computed Table

O	ϵ	$0-\epsilon$	$(0-\epsilon)^2$	$\dfrac{(0-\epsilon)^2}{\epsilon}$
13	15	-2	-4	0.267
58	56	2	4	0.071
10	6.55	3.45	11.9	1.817
21	24.45	-3.45	-11.9	1.409
7	8.45	-1.45	-2.1	1.249
33	31.55	1.45	2.1	0.069
				$\therefore X^2 = 2.063$

Table.9 To Test the Hypothesis of Academic Performance of Students that eat from Canteen and Student that eats self Prepared Food

Number	Canteen	Self prepared
1	21	8
2	32	12
3	7	8
4	8	3

$\overline{X_1}$	$\overline{X_2}$	X_1^2	X_2^2
21	8	441	64
32	12	1024	144
7	8	49	64
8	3	64	9
68	31	1578	251

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