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## SCHOOL FEEDING AND STUDENTS' ACADEMIC PERFORMANCE IN ILORIN METROPOLIS PRIVATE AND PUBLIC SECONDARY SCHOOLS: A KEY TO GLOBAL COMPETITIVENESS

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### ABSTRACT

*School feeding is necessary for all secondary school students due to the fact that no nations' education should be toyed with, this is also because growth and development of any nation hinges upon the quality of education obtainable in any given nation. Also, for any nation to actually compete globally in this 21st century, it should be fast in tackling issues connecting to the quality of education of its nation. Therefore, this study investigated school feeding and academic performance of students in Ilorin metropolis private and public secondary schools. The objectives of this study were to determine; (i) academic performance of students fed with meals and those not fed in private/public secondary schools in Ilorin metropolis; (ii) if the number of meals students are given have any effect on academic performance of students in private/public secondary schools in Ilorin metropolis secondary schools; (iii) effect of school enrollment on academic performance of students in private/public secondary schools in Ilorin metropolis; (iv) relationship between school feeding and students' academic performance in secondary schools in Ilorin metropolis; (vii) the effect of students participation in class activities on academic performance and ; (vii) the impact of class attendance on academic performance. Descriptive survey design was used for this research. The population for this study comprised two private and two public secondary schools in Ilorin metropolis using Purposive sampling. 200 students and 20 teachers and four principals were drawn as participants for the study. Correlation, t-test and Regression analysis was used to analyze the data collected, the entire hypothesis formulated were tested. The findings were that: the academic performance in secondary schools with feeding programmes were high in Ilorin metropolis; there is a significant difference between the academic performance of students who are fed and those who are not fed. The study concluded that when students are well fed they tend to exhibit excellent performance, hence the need for more nutritious diet in schools. Based on the conclusion, the study therefore, recommended that the government should add other schools to the feeding programmes and make it mandatory to accommodate all the secondary schools in Ilorin metropolis and Kwara state by extension, since, it has been revealed from the findings of the study that school feeding helps in building child's cognitive strength.*

**Keywords:** Cognition, Private and Public Secondary Schools, School Feeding, Students' Academic Performance.

## INTRODUCTION

School feeding in secondary schools is necessary as it helps in providing the students with balanced diet and prepares students for global competitiveness. It has been discovered by health nutritionist that eating balanced diet improves the cognitive level of school children which transforms into better academic performance. School feeding is vital to overall development of a child, be it children between the ages of 0 – 9 or 10 – 18. Good nutrition is necessary to maintain balance in a student; this is so because the effect of malnutrition on students can bring a devastating effect which can impact on the level of cognitivism and in turn lead to low performance academically (Leiberman, 2003). In the view of the current economic situation of the country, most students go to school without food, some eat an unbalanced diet, and this could lead to a down trend in the educational system.

A student who eats a diet of nutritious foods, is more likely to be able to exhibit a better behavior and relate easily with other people than one who is poorly fed or mal-nutritioned; in this later group, one is usually prone to disinterest and interaction problems. Research has proved definitely that good nutrition goes a long way to improve students' learning, and there would be fewer absenteeism and improvement in rational behaviour of students and fewer classroom distractions (Sorhaindo & Feinstein, 2006).

Students with low nutritional status have negative mental alertness, for example, deficiency in iron at early stages of child's growth/ development can decrease transmission of dopamine (an enzyme), which affects child's cognition tendency (Politt, 1993). Glitch in essential nutrients, especially, thiamine, vitamin E, B, iodine, and zinc, have shown to impede intelligibility (Chenoweth, 2007). Benton and Roberts (1988) asserted that improvements in nutritional level of students influences the level of comprehension and creativity of the school child.

Researches, generally found that an improved dietary is associated with greater achievement on school examinations (Florence, Agbridge & Veugelers, 2008). Findings have shown from number of researches, that each one of the student is endowed with ability to perform well in school. Failure in the provision of good nutrition in school children puts a good number of them at risk of missing out on achieving their potentials. The action taken by some schools in recent times, especially private schools in the Ilorin metropolis to feed their students in the school, is a step in the right direction. Since it's helping in the provision of healthier food choices in schools which in turn help to set students up for a more prosperous future full of clear opportunities.

School feeding is the provision of nutrition based food to students in schools by the school authority which is seen as a programme channeled towards building a balanced child who has the potential to develop both in cognitive, psychomotor and affective domains. School works in conjunction with experts in nutrition to draw up a table of diet that is balanced, the one in which all necessary vitamins will not be compromised, or also the effort or the aim will be defeated. Feeding the student with high sugar content food have been proven by research to be counter- productive, for in as much as the child needs glucose for energy, too much consumption of it impacts negatively on the brain function (Chenoweth, 2007). Therefore, school feeding should be purpose driven, which is building students with high cognitive level and high intelligence level, those who can compete with their counterpart globally. This study therefore, examined school-feeding and academic performance of secondary school students in the Ilorin metropolis private and public secondary schools.

## **NEEDS FOR SCHOOL FEEDING**

Some schools in Ilorin Metropolis are yet to discover the need for school feeding. School feeding can be used to address the problem of malnutrition in students which if not addressed will continue to create health problem in students which in turn leads to absence in schools and other related problems, when the problem of school feeding is taken care of in every school, there will be improvement in learning, children will like to come to school, the academic performance of students will improve and finally there will be greater parents and community involvement in schools.

**The following are the specific need for school feeding.**

**i. Alleviation of hunger and increase in cognitivism**

Most students go to school with little or no food, with the promise from parents of getting it better when they return, the funny aspect of this is that the child goes to school hungry and returns to eat cheat food, with the worst of diets. If this continues, the tendency to have decline in cognition is inevitable, but with the school intervention in providing good nutrition food, the hunger in the child is curtailed and improvement in cognition will be recorded.

**ii. Malnutrition and deficient learning is alleviated**

Deficiencies of vital nutrients such as iron, and vitamins B can render a student ineffective in the classroom with regard to cognition. A child who is deficient in iron is restless, inattentive in class and finds school uninteresting; this means that learning becomes difficult and uninteresting, School feeding will go a long way to alleviate this problem hence deficient learning is reversed (Sorhaindo & Feinstein in, 2006).

## **STATEMENT OF THE PROBLEM**

It has been observed by the researcher that some students in Kwara State do not maximize their full potential as a result of hunger which they carry from homes to schools, due to economic situations of their parents and guardians. Also, the school due to inadequate funding and lack of infrastructure could not provide food to students, even where the provision is made, students are not fed with balanced diets. Number of studies have shown that students develop their potential to the fullest when adequate nutrition is consumed. Also a pilot study that was carried out by the world food programmes in Malawi on school feeding programme revealed that school feeding made a reasonable impact on academic performance as well as school attendance and enrollment (Sasson, 2012).

Therefore, this study is set to investigate the effect of school feeding on academic performance of secondary school students in selected private and public school in Ilorin Metropolis Kwara State Nigeria.

## **PURPOSE OF THE STUDY**

This study investigated the effect of school feeding on academic performance of students in private and public secondary schools in the Ilorin Metropolis. Specifically, the study was to;

- i. To determine the academic performance of students fed with meals and those who were not fed in private/public secondary schools in Ilorin, Kwara State.
- ii. To investigate if the number of meals the students are supplied with have any effect on the academic performance of students in private/public schools in Ilorin, Kwara State,
- iii. To examine the effect of school enrolment on academic performance of students in

- private/public secondary schools in Ilorin, Kwara State.
- iv. To determine the effect of students' participation in class activities on academic performance in the schools under study.
- v. To determine if class attendance has effect on students' academic performance.
- vi. To determine the relationship between school feeding and academic performance of students in private /public secondary schools in the Ilorin metropolis.

### **RESEARCH QUESTIONS**

- i. What is the effect of school enrollment on academic performance of students in private/public secondary schools in Ilorin metropolis, Kwara State?
- ii. What is the effect of students' participation in class activities on the academic performance of students in the schools under study?
- iii. Is there any impact of class attendance of students on the academic performance of students in the schools under study?
- iv. Is there any significant difference between academic performance of students fed and those who were not fed in private/public secondary schools in Ilorin, Kwara State?
- v. Do number of meals given to students have any effect on academic performance of students in secondary schools in Ilorin, Kwara State?
- vi. Is there any significant relationship between school feeding and academic performance of students in Ilorin metropolis secondary schools?

### **RESEARCH HYPOTHESES**

- i. There is no significant difference in the academic performance of students who took meals and those who did not take meals in private and public secondary schools in Ilorin, Kwara State.
- ii. There is no significant difference in the academic performance of students who took meal in private/public secondary schools in Ilorin, Kwara State on the basis of number of meals taken.
- iii. There is no significant relationship between school enrollment and academic performance.
- iv. There is no significant relationship between students' participation in class activities and academic performance.
- v. There is no significant relationship between class attendance and academic performance of students in the schools under study.
- vi. There is no significant relationship between school enrollment, participation in class activities, class attendance and academic performance of students in the schools under study.
- vii. There is no significant relationship between school feeding and students' academic performance in private/public secondary schools in Ilorin metropolis.

### **SCOPE OF THE STUDY**

This study was limited to 2 private secondary schools and 2 public secondary schools in Ilorin Metropolis where students were fed and where students are not fed. School feeding, the independent variable was measured in terms of the type of food and number of times students were fed, class attendance, school enrolment and participation in class activities while academic performance was measured using 2021 student's WAEC results. Questionnaires were used to amass pertinent data for the study while a checklist was designed to collect students' results in the schools under study. Purposive sampling and random sampling techniques was used to select the schools and respondents to participate in the study.

## RESEARCH METHODOLOGY

The research method used for this study is the descriptive survey of correlational type. The analysis was carried out using Statistical Package for Social Science (SPSS). The participants for this study were drawn from 2 private and 2 public secondary schools which were purposively chosen for the study, from which 200 students and 20 teachers and four Principals were randomly selected making 224 participants in all. The schools used for this study were chosen based on the fact that two out of the four schools have a long term record of school feeding while the other two have none. The researchers personally administered the questionnaire to the participants and collected them back and this helped in meaningful returns of the completed instruments. Statistical tools used in analyzing the data are simple percentage, t-test and Analysis of Variance (ANOVA). The formulated hypotheses were tested at 0.05 level of significance.

## RESULTS

This section presents the descriptive analysis of research questions, testing of hypotheses and interpretation of results. All the data collected from the questionnaire were presented and interpreted.

**Table 1: Frequency distribution of school feeding**

|              | Frequency  | Valid Percent |
|--------------|------------|---------------|
| No           | 100        | 50.0          |
| Yes          | 100        | 50.0          |
| <b>Total</b> | <b>200</b> | <b>100.0</b>  |

Table 1 shows that 100(50.0%) of the students indicated that they were fed at school, while 100(50.0%) of the students indicated that they were not being fed at school.

**Table 2: Frequency distribution on the number of times fed in a day**

|              | Frequency  | Valid Percent |
|--------------|------------|---------------|
| None         | 100        | 50.0          |
| Once         | 49         | 24.5          |
| Twice        | 51         | 25.5          |
| <b>Total</b> | <b>200</b> | <b>100.0</b>  |

Table 2 reveals that 100(50.0%) students indicated that they were not fed at all, 49(24.5%) showed that they were fed once in a day and 51(25.5%) showed that they were fed twice a day.

Research Question One: What is the effect of school enrollment on academic performance of students in private/public secondary schools in Ilorin metropolis, Kwara State?

**Table 3: Model Summary of effect of school enrollment on academic performance of students**

| Model | R    | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
|       | .449 | .202     | .198              | .133                       |

Table 3 shows that from the Adjusted R Square which is 0.198, implies that 19.8% of variation in the students' academic performance was explained or accounted for by the school enrollment.

**Table 4: The ANOVA results of effect of school enrollment on academic performance of students**

| Model      | Sum of Squares | df  | Mean Square | F      | Sign | Remark      |
|------------|----------------|-----|-------------|--------|------|-------------|
| Regression | .879           | 1   | .879        | 50.042 | .000 | Significant |
| Residual   | 3.478          | 198 | .018        |        |      |             |
| Total      | 4.358          | 199 |             |        |      |             |

The table 4 shows that  $F = 50.042$ ,  $p\text{-value} = 0.0005 < 0.05$ . This implies that school enrollment has a significant effect on the academic performance of students in private/public secondary schools in Ilorin metropolis, Kwara State.

**Table 5: Summary of regression analysis showing the contribution of school enrollment on academic performance of students**

| Model               | Unstandardized<br>B | Coefficients<br>Std. Error | Standardized<br>Coefficients<br>Beta | T     | Sig. | Remark      |
|---------------------|---------------------|----------------------------|--------------------------------------|-------|------|-------------|
| (Constant)          | .071                | .030                       |                                      | 2.389 | .018 | Significant |
| School<br>Enrolment | .133                | .019                       | .449                                 | 7.074 | .000 |             |

Table 5 reveals that the value of the  $\beta = 0.449$  and  $p\text{-value} = 0.0005 < 0.05$ . This table tells more about the contribution of school enrollment on the academic performance of students. The value of the Beta shows that there was a moderate effect. Hence, there was a moderate effect of school enrollment on the academic performance of students in private/public secondary schools in Ilorin metropolis, Kwara State.

**Research Question Two: What** is the effect of students' participation in class activities on the academic performance of students in the schools under study.

**Table 6: Model Summary of effect of students' participation on academic performance of students**

| Model | R    | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
|       | .449 | .202     | .198              | .133                       |



Table 6 shows that from the Adjusted R Square which is 0.198, implies that 19.8% of variation in the students' academic performance was explained or accounted for by the school enrollment.

**Table 7: The ANOVA results of effect of students' participation on academic performance of students**

| Model      | Sum of Squares | df  | Mean Square | F      | Sign | Remark      |
|------------|----------------|-----|-------------|--------|------|-------------|
| Regression | .879           | 1   | .879        | 50.042 | .000 | Significant |
| Residual   | 3.478          | 198 | .018        |        |      |             |
| Total      | 4.358          | 199 |             |        |      |             |

The table 7 shows that  $F = 50.042$ ,  $p\text{-value} = 0.0005 < 0.05$ . This implies that students' participation has a significant effect on the academic performance of students in private/public secondary schools in Ilorin metropolis, Kwara State

**Table 8: Summary of regression analysis showing the contribution of students' participation on academic performance of students**

| Model                      | Unstandardized<br>B | Coefficients<br>Std. Error | Standardized<br>Coefficients<br>Beta | T     | Sig. | Remark      |
|----------------------------|---------------------|----------------------------|--------------------------------------|-------|------|-------------|
| (Constant)                 | .071                | .030                       |                                      | 2.389 | .018 | Significant |
| Students'<br>Participation | .133                | .019                       | .449                                 | 7.074 | .000 |             |

Table 8 reveals that the value of the  $\beta = 0.449$  and  $p\text{-value} = 0.0005 < 0.05$ . This table tells more about the contribution of students' participation on the academic performance of students. The value of the Beta shows that there was a moderate effect. Hence, there was a moderate effect of students' participation on the academic performance of students in private/public secondary schools in Ilorin metropolis, Kwara State.

**Research Question Three:** Is there any impact of class attendance of students on the academic performance of students in the schools under study?

**Table 9: Model Summary of effect of class attendance on academic performance of students**

| Model | R    | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
|       | .449 | .202     | .198              | .133                       |

Table 9 shows that from the Adjusted R Square which is 0.198, implies that 19.8% of variation in the students' academic performance was explained or accounted for by the class attendance.

**Table 10: The ANOVA results of effect of class attendance on academic performance of students**

| Model      | Sum of Squares | df  | Mean Square | F      | Sig. | Remark      |
|------------|----------------|-----|-------------|--------|------|-------------|
| Regression | .879           | 1   | .879        | 50.042 | .000 | Significant |
| Residual   | 3.478          | 198 | .018        |        |      |             |
| Total      | 4.358          | 199 |             |        |      |             |

The table 10 shows that  $F = 50.042$ ,  $p\text{-value} = 0.0005 < 0.05$ . This implies that class attendance has a significant effect on the academic performance of students in private/public secondary schools in Ilorin metropolis, Kwara State.

**Table 11: Summary of regression analysis showing the contribution of school enrollment on academic performance of student**

| Model               | Unstandardized<br>B | Coefficients<br>Std. Error | Standardized<br>Coefficients<br>Beta | T     | Sig. | Remark      |
|---------------------|---------------------|----------------------------|--------------------------------------|-------|------|-------------|
| (Constant)          | .071                | .030                       |                                      | 2.389 | .018 | Significant |
| CLASS<br>ATTENDANCE | .133                | .019                       | .449                                 | 7.074 | .000 |             |

Table 11 reveals that the value of the  $\beta = 0.449$  and  $p\text{-value} = 0.0005 < 0.05$ . This table tells more about the contribution of class attendance on the academic performance of students. The value of the Beta shows that there was a moderate effect. Hence, there was a moderate effect of class attendance on the academic performance of students in private/public secondary schools in Ilorin metropolis, Kwara State.

**Research Question Four:** Is there any significant difference between academic performance of students fed and those who were not fed in private/public secondary school in Ilorin, Kwara State?

**Table 12: The summary of t-test on the difference between students that were fed and students that were not fed**

| DO YOU TAKE MEALS AT SCHOOL? |     | N    | Mean  | Std. Deviation | Std. Mean Error            |
|------------------------------|-----|------|-------|----------------|----------------------------|
| Student                      | NO  | 100  | .20   | .081           | .008                       |
| Performance                  | YES | 100  | .34   | .169           | .017                       |
| Independent Sample t-test    |     |      |       |                |                            |
|                              | N   | X    | SD    | T-critical     | T-cal Level of Sig. Remark |
| No                           | 100 | 0.20 | 0.81  | 1.96           | 7.074 0.0005 Significant   |
| Yes                          | 100 | 0.34 | 0.169 |                |                            |



Table 12 reveals that students that were fed had a mean rating of 0.34 and students that were not fed had a mean rating of 0.20. Also,  $T_{\text{cal}} = 7.074$  which is greater than  $T_{\text{critical}} = 1.96$ . The level of significance =  $0.0005 < 0.05$ . This means that there was a significant difference between students that were fed and those that were not fed in private/public secondary school in Ilorin, Kwara State.

**Research Question Five:** Do number of meals given to students have any effect on academic performance of students in secondary schools in Ilorin, Kwara State?

**Table 13: Model Summary of effect of the number of meals given to the students on academic performance of students**

| Model | R     | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|-------------------|----------------------------|
|       | .445a | .198     | .194              | .133                       |

Table 13 shows that from the Adjusted R Square which is 0.198, implies that 19.8% of variation in the students' academic performance was accounted for by the number of meals given to the students in secondary schools in Ilorin, Kwara State.

**Table 14: The ANOVA results of effect the number of meals given to the students on academic performance of students**

| Model      | Sum of Squares | df  | Mean Square | F      | Sign | Remark      |
|------------|----------------|-----|-------------|--------|------|-------------|
| Regression | .862           | 1   | .862        | 48.819 | .000 | Significant |
| Residual   | 3.496          | 198 | .018        |        |      |             |
| Total      | 4.358          | 199 |             |        |      |             |

Table 14 shows that  $F = 48.819$ ,  $p\text{-value} = 0.0005 < 0.05$ . By implication, the number of meals given to students has a significant effect on the academic performance of students in private/public secondary schools in Ilorin metropolis, Kwara State.

**Table 15: Summary of regression analysis showing the contribution of the number of meals given to the students on academic performance of students.**

| Model                            | Unstandardized<br>B | Coefficients<br>Std. Error | Standardized<br>Coefficients<br>Beta | T      | Sig. | Remark      |
|----------------------------------|---------------------|----------------------------|--------------------------------------|--------|------|-------------|
| (Constant)                       | .210                | .013                       |                                      | 16.586 | .000 | Significant |
| IF YES, HOW<br>MANY TIMES A DAY? | .079                | .011                       | .445                                 | 6.987  | .000 |             |

Table 15 reveals that the value of the  $\beta = 0.445$  and  $p\text{-value} = 0.0005 < 0.05$ . The result shows that the contribution of the number of meals given to students on the academic performance of students. The value of the Beta shows that there was a moderate effect. Therefore, there was a moderate effect of

number of meals given to students on the academic performance of students in private/public secondary schools in Ilorin metropolis, Kwara State. This means that the academic performance of students increases with the number of meals given to students and vice versa.

**Research Question Six:** Is there any significant relationship between school feeding and academic performance of students in Ilorin metropolis secondary schools.

**Table 16:** The relationship between school feeding and academic performance of students

| Items               | Mean | Std   | Pearson Correlation | Sig 2-tailed | Remark      |
|---------------------|------|-------|---------------------|--------------|-------------|
| School feeding      | 1.50 | 0.501 | 0.449               | 0.0005       | Significant |
| Student Performance | 0.27 | 0.148 |                     |              |             |

**P < 0.05**

Table 16 reveals that the Pearson Correlation ( $r$ ) = 0.449 and the p-value = 0.0005 < 0.05. This implies that there is a positive and moderate relationship between school feeding and the academic performance of students in private/public secondary schools in Ilorin metropolis, Kwara State. Hence, students' academic performance increases with an increase in school feeding.

## RESEARCH HYPOTHESES

**Hypothesis One:** There is no significant relationship between school enrollment and academic performance.

**Table 17:** The relationship between school enrollment and academic performance of students

| Items               | Mean | Std   | Pearson Correlation | Sig 2-tailed | Remark      |
|---------------------|------|-------|---------------------|--------------|-------------|
| School Enrolment    | 1.50 | 0.501 | 0.449               | 0.0005       | Significant |
| Student Performance | 0.27 | 0.148 |                     |              |             |

Table 17 reveals that the Pearson Correlation ( $r$ ) = 0.449 and the p-value = 0.0005 < 0.05. This implies that there is a positive and moderate relationship between school enrollment and the academic performance of students in private/public secondary schools in Ilorin metropolis, Kwara State. Hence, students' academic performance increases with an increase in school enrollment. Hypothesis Two: There is no significant relationship between students' participation in class activities and academic performance.

**Table 18: The relationship between students' participation and academic performance of students**

| Items                  | Mean | Std   | Pearson Correlation | Sig 2-tailed | Remark      |
|------------------------|------|-------|---------------------|--------------|-------------|
| Students Participation | 1.50 | 0.501 | 0.449               | 0.0005       | Significant |
| Student Performance    | 0.27 | 0.148 |                     |              |             |

**P < 0.05**

Table 18 reveals that the Pearson Correlation ( $r$ ) = 0.449 and the p-value = 0.0005 < 0.05. This implies that there is a positive and moderate relationship between students' participation in class activities and the academic performance of students in private/public secondary schools in Ilorin metropolis, Kwara State. Hence, the higher the students participate in class activities, the higher the students' academic performance.

**Hypothesis Three:** There is no significant relationship between class attendance and academic performance of students in the schools under study.

**Table 19: The relationship between students' class attendance and academic performance of students**

| Items                      | Mean | Std   | Pearson Correlation | Sig 2-tailed | Remark      |
|----------------------------|------|-------|---------------------|--------------|-------------|
| Students' Class Attendance | 1.50 | 0.501 | 0.449               | 0.0005       | Significant |
| Student Performance        | 0.27 | 0.148 |                     |              |             |

**P < 0.05**

Table 19 reveals that the Pearson Correlation ( $r$ ) = 0.449 and the p-value = 0.0005 < 0.05. This implies that there is a positive and moderate relationship between students' class attendance and the academic performance of students in private/public secondary schools in Ilorin metropolis, Kwara State. Therefore, the higher the students' class attendance in class activities, the higher the students' academic performance.

## **DISCUSSION OF FINDINGS**

The findings revealed that class attendance impacted students academic performance as students in schools with feeding programmes do not record truant behaviour as much as the schools without feeding programmes.

The findings on Table 16 shows that the academic performance of students in the schools with feeding programme is as a result of school feeding being undertaken by the school, if the school feeding is introduced in all other schools it will definitely increase the academic performance of students in those schools, and this is line with the findings of Florence, Abridge and Veugelers (2008) that improved dietary increases the ability to perform well in school.

The findings also showed that students who had more meals had a better academic performance, that is, there is increase in academic performance as a result of increase in number of times students were fed.

From the findings in table 17, it is revealed that increase academic performance is as a result of increase in school enrolment especially in schools that have feeding programmes and this is in line with the findings of Sorhaindo and Feinste in (2006) that with good feeding there would be fewer absenteeism and classroom distractions.

Table 18 has shown that positive relationship exists between students' participation and academic performance which is in line with the findings of Benton and Roberts (1988) that nutritional level influences the level of comprehension and creativity of the school children. And it is observed that schools with feeding programmes recorded higher students' class participation than those without feeding programmes.

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