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# The Role of Nutrition in the Academic Performance of Students in the Public School

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**Abstract:**The role of nutrition plays an important part in the academic performance of the students. It energises the mind when proper food intake is utilized. The study examines the role of nutrition in the academic performance of the students along the area ofcognitive learning,affective learning, andpsychomotor learning, likewise to examine the extent of the aforementioned role of nutrition in the academic performance of students in terms ofskills in learning, attitude toward studies, andacademic achievement.

The study employed the quantitative descriptive approach because it defines the characteristics of the study under investigated on the role of nutrition in the academic performance of the students. The study comprised (19) who are License Professional Teachers (LPT) handling Technology and Livelihood Education (TLE) at the Department of Education public schools.This is conducted for the period 2019-2020.

Purposive sampling is employed in the study because of the define characteristics. Purposive sampling is judgmental, subjective and selective sampling. It deliberates the selection based on the needed sampling data.

Results show that there is a significant relationship between the role of nutrition in the academic performance of the students in the area of cognitive learning, affective learning, and psychomotor learning and the extent of the aforementioned role of nutrition in the academic performance of students in terms of skills in learning, attitude toward studies and academic performance among the respondents.

**Keywords:**Role of Nutrition, Academic Performance, Cognitive Learning, Affective Learning, Psychomotor Learning, Skills in Learning, Attitude TowardStudies, and Academic Achievement

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## I. INTRODUCTION

The role of nutrition plays an important part in the academic performance of the students. It energises the mind when proper food intake is utilised. Nutrition contributes to the success of the performance of the students. The significant role of the nutrition to the development of the students in their domain of learning dependson the energy they have in the body and brain. It provides the necessary nutrients needed in the body especially the brain for better learning in their academic performance and achievement. It addresses the emotional and physical needs of the students on both their education and their nutrition that affects their health that lead to their performance in school.It convenes that education and health must go hand in hand. How can a student concentrate on the studies when the stomach is empty? The approaches to this knowledge explore the role of nutrition on the knowledge gain by the students in the enhancement of the lesson. It aligns to promote the innovation of the learning capabilities of the students. The level performance of students can be improved when there is a healthy development on their minds through the value of nutrition they have in their body that nourishes their minds and their brains (Lewallen, et.al.,2015).

Similarly, to their domain of learning, the domains will not materialise or will not function properly when the students cannot absorbed the lesson due to insufficient nutrients they have that can help them develop their knowledge to enhance learning process. The challenges in the different domain reinforces the learning of the students, however, it cannot be nourished by the students because of lack of nutrients they have in their brain that can affect their learning process. Students are willing to learn but the capacity of the brain is limited, even to the extent of physically present but mentally absent due to lack of nutrients they need in the body to energise their mind in learning. Nutrition is needed as vital for improvement of their healthy mind in sustaining the progress of their learning in their academic performance. The determination of the state of the artin their nutrition progresses the benchmark variance of their intrinsic motivation to learn.This is a big challenge to the teachers in their strategies and techniques in carrying the objectives of their lessonto ensure better output in the learning of the students (Henderson, et al., 2018, April). This has been proven by the study conducted by (Michalos, 2017) for the education that will bring happiness because of well-being scenario which defines the function of education to students that influences their enjoyment and happiness because of their well-being due to the nutritional value they have.

In addition, skills in learning are affected due to the nutritional value and capacity of the students. It has been observed that most of the students have no concentration on their lesson when they come to school with no food intake and as such their performance inside the classroom is affected. The nutrition of the school based program provides and reinforces potentials for students in their academic performance. It provides a thorough understanding on the students' point of view regarding the role of nutrition on the learning skills of the students. The acquisition of this knowledge provides a curriculum design for public school teachers to provide program for their students regarding nutrition to help students in the improvement of their skills in learning to carry the objectives of their learning and academic performance. Acquiring important knowledge on the role of nutrition in the academic performance of the students provide skills on their learning. When students acquire proper nutrition, they can easily comprehend and master the lesson. There is a need to focus on the nutrition of the students to attain better learning skills (Rathi, Riddell, &Worsley, 2017). It improves and enhances students learning in terms of information and knowledge development and skills in learning that provides and reflects students to learn and grab the privilege as an advantage to develop and practice their learning skills. It explores and empowers learning because of the nutritional values they have in their body that can energise them in promoting learning inside the classroom, management, set of mind skills and competency. It endeavors students in the improvement of their academic performance (Huda,et.al.,2017).

Furthermore, the role of nutrition on the behavior or attitude of students towards their studiesdevelops techniques in their learning process. When students are eating the right food in sustaining the nutrients of their body determines the effectivity of their involvement in the class participation inside the classroom as compared to those student who are silent because of no food intake, nutrients on the food eaten and exhausted. Nutrition plays an important role on the part of the students as basis for the achievement of their academic performance and as a result of the behavior and attitude, knowledge, self-esteem toward their studies. The level of nutrition of the students can also determine their attitude in their studies and development of their confidence inside the classroom to achieve a better academic performance (Kerrison, Condrasky,& Sharp, 2017). A healthy diet provides a healthy sound and healthy mind. It changes healthy behavior of students during their class participation inside the classroom. A lack of healthy food intake or healthy meal intake affects the behavior of students inside the classroom. Proper knowledge on the nutrition must be given emphasis so that students will be guided properly on their food intake since food intake will play a great role in their health and in their living. Consumption of healthy food will prevent students on their untoward behavior inside the classroom. Healthy food promotion must be given emphasis on them (Hilger, Loerbroks, & Diehl, 2017).

Hence, academic performance can be achieved when proper nutrition is present and observe on the part of the students. Proper nutrition means eating the right food for the maintenance of the brain since brain sustains the energy of the body and supplies the energy needed by the body. The effect of food consumption on the body provides way for the students to learn. Avoid eating foods that are unhealthy like junk foods, noodles and the likes because this can hinder the nutrients of the brain that will lead to poor performance of the students. Eating lifestyle sometime hampers the nutrients of the body. Nutrients of the body determine the reaction of the learning process of the students. The distribution of the micronutrients of the food in the body balances the energy of the students in their academic performance (Aragon, et.al.,2017). Lack of nutrients in the body will result to a psychological factor of the students and their challenges towards their studies. They must be physically and mentally prepared in their academic performance. Promoting the proper nutritional energy helps them to excel in their academic performance. Theaspects and interventions give them the benefits of self-esteem in their studies. Self-compassion, eating behaviors and nutrition behaviors determines students in adapting the performance inside the classroom (Rahimi-Ardabili,et.al.,2018).

**Statement of the Problem**

1. What is the role of nutrition in the academic performance of the students along the area of
    a. cognitive learning
    b. affective learning, and
    c. psychomotor learning?

2. To what extent do the aforementioned role of nutrition in the academic performance of students in terms of
    a. skills in learning
    b. attitude toward studies, and
    c. academic achievement?

3. Is there a significant relationship between the role of nutrition in the academic performance of the students in the area of cognitive learning, affective learning, and psychomotor learning and the extent of the aforementioned role of nutrition in the academic performance of students in terms of skills in learning, attitude toward studies and academic performance among the respondents?

**Hypothesis**

There is a significant relationship between the role of nutrition in the academic performance of the students in the area of cognitive learning, affective learning, and psychomotor learning and the extent of the aforementioned role of nutrition in the academic performance of students in terms of skills in learning, attitude toward studies and academic performance among the respondents.

**Research Design**

The study employed the quantitative descriptive approach because it defines the characteristics of the study under investigated on the role of nutrition in the academic performance of the students. It focuses on the result of the domain of learning of the students and the extent of the aforementioned role of nutrition in the academic performance of the students. It explains the quantitative descriptive analysis of the data in terms of cognitive learning, affective learning, psychomotor learning, skills in learning, behaviors and attitude toward studies and academic achievement of the students (Zook, & Pearce, 2018).

**Research Subject**

The subjects of the study are the License Professional Teachers (LPT) handling Technology and Livelihood Education (TLE) at Novaliches High School. They belong to Secondary Level under the Department of Education (DepEd). This is conducted for the period 2019-2020.

**Research Sampling**

Purposive sampling is employed in the study because of the define characteristics. Purposive sampling is judgmental, subjective and selective sampling. It deliberates the selection based on the needed sampling data. It investigates the criteria of the sampling method on the role of nutrition in the academic performance and achievement of the students (Lohr, 2019).

**Research Instrument**

**1. Academic performance of students along the area of cognitive learning**

| **Scale** | **Descriptive Level** | **Descriptive Interpretation** |
|---|---|---|
| 4.20-5.00 | Highly Observe | Academic performance on cognitive learning is very high |
| 3.40-4.19 | Observe | Academic performance on cognitive learning is high |
| 2.60-3.39 | Moderately Observe | Academic performance on cognitive learning is good |
| 1.80-2.59 | Not Observe | Academic performance on cognitive learning is poor |
| 1.00-1.79 | Not Observe at all | Academic performance on cognitive learning is very poor |

**2. Academic performance of students along the area of affective learning**

| **Scale** | **Descriptive Level** | **Descriptive Interpretation** |
|---|---|---|
| 4.20-5.00 | Highly Observe | Academic performance on affective learning is very high |
| 3.40-4.19 | Observe | Academic performance on affective learning is high |
| 2.60-3.39 | Moderately Observe | Academic performance on affective learning is good |
| 1.80-2.59 | Not Observe | Academic performance on affective learning is poor |
| 1.00-1.79 | Not Observe at all | Academic performance on affective learning is very poor |

**3. Academic performance of students along the area of psychomotor learning**

| Scale | Descriptive Level | Descriptive Interpretation |
|---|---|---|
| 4.20-5.00 | Highly Observe | Academic performance on psychomotor learning is very high |
| 3.40-4.19 | Observe | Academic performance on psychomotor learning is high |
| 2.60-3.39 | Moderately Observe | Academic performance on psychomotor learning is good |
| 1.80-2.59 | Not Observe | Academic performance on psychomotor learning is poor |
| 1.00-1.79 | Not Observe at all | Academic performance on psychomotor learning is very poor |

**4. Academic performance of students in terms of skills in learning**

| Scale | Descriptive Level | Descriptive Interpretation |
|---|---|---|
| 4.20-5.00 | Highly Observe | Academic performance skills of learning is very high |
| 3.40-4.19 | Observe | Academic performance skills of learning is high |
| 2.60-3.39 | Moderately Observe | Academic performance skills of learning is good |
| 1.80-2.59 | Not Observe | Academic performance skills of learning is poor |
| 1.00-1.79 | Not Observe at all | Academic performance skills of learning is very poor |

**5. Academic performance of students in terms of attitude towards studies**

| Scale | Descriptive Level | Descriptive Interpretation |
|---|---|---|
| 4.20-5.00 | Highly Observe | Academic performance on attitude toward studies is very high |
| 3.40-4.19 | Observe | Academic performance on attitude toward studies is high |
| 2.60-3.39 | Moderately Observe | Academic performance on attitude toward studies is good |
| 1.80-2.59 | Not Observe | Academic performance on attitude toward studies is poor |
| 1.00-1.79 | Not Observe at all | Academic performance on attitude toward studies is very poor |

**6. Academic performance of students in terms of academic achievement**

| Scale | Descriptive Level | Descriptive Interpretation |
|---|---|---|
| 4.20-5.00 | Highly Observe | Academic performance on academic achievement is very high |
| 3.40-4.19 | Observe | Academic performance on academic achievement is high |
| 2.60-3.39 | Moderately | Academic performance on academic |

| | | |
|---|---|---|
| | Observe | achievement is good |
| 1.80-2.59 | Not Observe | Academic performance on academic achievement is poor |
| 1.00-1.79 | Not Observe at all | Academic performance on academic achievement is very poor |

## II. RESULTS

**Table 1: Role of nutrition in the academic performance of students in the area of cognitive learning**

| **A. COGNITIVE LEARNING: Learning is observed through** | **WM** | **Interpretation** | **Ranking** |
|---|---|---|---|
| 1. Recognition and recalling knowledge from memory based on the lesson. | **3.79** | **Observe** | **2.5** |
| 2. Ability to construct meaning from the lesson as to function and activities. | **3.32** | **Moderately Observe** | **5** |
| 3. Ability to carry out lesson trough execution and implementation. | **3.79** | **Observe** | **2.5** |
| 4. Ability to determine lesson through concept, structure and purpose. | **4.13** | **Observe** | **1.5** |
| 5. Ability to judge the lesson based on the criteria and standard. | **4.13** | **Observe** | **1.5** |
| **Average Weighted Mean** | **3.83** | **Observe** | |
| **Standard Deviation** | **1.123** | | |

Table 1 shows the weighted mean and the corresponding interpretation on the role of nutrition of students in the area of cognitive learning. Ability to determine lesson through concept, structure and purpose and Ability to judge the lesson based on the criteria and standard with (WM=4.13) is observe which means academic performance on cognitive learning is high, Recognition and recalling knowledge from memory based on the lesson and Ability to carry out lesson trough execution and implementation with (WM=3.79) is observe which means academic performance on cognitive learning is high and Ability to construct meaning from the lesson as to function and activities with (WM=3.32) is moderately observe which means academic performance on cognitive learning isgood. The overall (AWM=3.83) is observe which means academic performance of students in their cognitive learning is high.

**Table 2:Role of nutrition in the academic performance of students in the area of affective learning**

| **B. AFFECTIVE LEARNING: Learning is observed through** | **WM** | **Interpretation** | **Ranking** |
|---|---|---|---|
| 1. Students have the sense of learning, existence of response, awareness and willingness. | **4.30** | **Highly Observe** | **2** |
| 2. Students have the active attention and proper motivation to learn, willing to response, and feeling of satisfaction. | **4.10** | **Observe** | **3** |
| 3. Students have the attitude of worth, beliefs, acceptance, preferenceand of commitment of values. | **3.41** | **Observe** | **4** |
| 4. Students internalise values and beliefs according to priority. | **3.17** | **Moderately Observe** | **5** |
| 5. Students can relate behavior that reflects set of values in life, practicing and acting on their values and beliefs. | **4.58** | **Highly Observe** | **1** |
| **Average Weighted Mean** | **3.91** | **Observe** | |
| **Standard Deviation** | **1.099** | | |

Table 2 shows the weighted mean and the corresponding interpretation on the role of nutrition of students in the area of affective learning.Students can relate behavior that reflects set of values in life, practicing and acting on their values and beliefs with (WM=4.58) is highly observe which means academic performance on affective learning is very high, Students have the sense of learning, existence of response, awareness and willingness with (WM=4.30) is highly observe which means academic performance on affective learning is very high, Students have the active attention and proper motivation to learn, willing to response, and feeling of satisfaction with (WM=4.10) is observe which means academic performance on affective learning is high, Students have the attitude of worth, beliefs, acceptance, preference and of commitment of values with (WM=3.41) is observe which means academic performance on affective learning is high, Students internalise values and beliefs according to priority with (WM=3.17) is moderately observe which means academic performance on affective learning isgood. The overall (AWM=3.91) is observes in which students performance on affecting learning is high.

**Table 3: Role of nutrition in the academic performance of students in the area of psychomotor learning**

| **C. PSYCHOMOTOR LEARNING: Learning is observed through** | **WM** | **Interpretation** | **Ranking** |
|---|---|---|---|
| 1. Students can encode information and activities in expressing and interpreting information or concepts. | **3.58** | **Observe** | **4** |
| 2. Students can express their learning through gesture, posture, facial expression and/or creative movement. | **3.90** | **Observe** | **2.5** |
| 3. Students can relate to endurance, flexibility, agility, strength, reaction-response time. | **4.30** | **Highly Observe** | **1** |
| 4. Students can relate to body movement, visuals, auditory, touch or coordination and the ability to take information from the environment and react. | **3.90** | **Observe** | **2.5** |
| 5. Students have the skills related to complex action like walking, running, jumping, pulling, pushing and manipulation. | **3.54** | **Observe** | **5** |
| **Average Weighted Mean** | **3.84** | **Observe** | |
| **Standard Deviation** | **1.120** | | |

Table 3 shows the weighted mean and the corresponding interpretation on the role of nutrition of students in the area of psychomotor learning. Students can relate to endurance, flexibility, agility, strength, reaction-response time with (WM=4.30) is highly observe which means academic performance on psychomotorlearning is very high, Students can express their learning through gesture, posture, facial expression and/or creative movement and Students can relate to body movement, visuals, auditory, touch or coordination and the ability to take information from the environment and react with (WM=3.90) is observe which means academic performance on psychomotorlearning is high, Students can encode information and activities in expressing and interpreting information or concepts with (WM=3.58) is observe which means academic performance on psychomotorlearning is high and Students have the skills related to complex action like walking, running, jumping, pulling, pushing and manipulation with (WM=3.54) is observe which means academic performance on psychomotorlearning is high. The overall (AWM=3.84) is observe which means that affective learning of students is high among them.

**Table 4:Extent of the role of nutrition in the academic performance of students in terms of skills in learning**

| **A. SKILLS IN LEARNING: Academic performance is observed through** | **WM** | **Interpretation** | **Ranking** |
|---|---|---|---|
| 1. Students are innovative, creative, competitive, and have the ability to present concept in their lesson. | **3.83** | **Observe** | **4.5** |
| 2. Students have the skills in creative thinking, can learn, and can communicate with passion and ideas. | **3.90** | **Observe** | **3** |

| | | | |
|---|---|---|---|
| 3. Students possess skills to define problems and design proper solutions in an effective way. | **4.08** | **Observe** | **2** |
| 4. Students inspire, motivate and empower to learn and expand mind of their classmates. | **4.12** | **Observe** | **1** |
| 5. Students acquire skills and knowledge for various situations in the classroom. | **3.83** | **Observe** | **4.5** |
| **Average Weighted Mean** | **3.95** | **Observe** | |
| **Standard Deviation** | **1.088** | | |

Table 4 shows the extent of the role of nutrition in the academic performance of the students in terms of skills in learning. Students inspire, motivate and empower to learn and expand mind of their classmates with (WM=4.12) is observe which means academic performance skills of learningis high, Students possess skills to define problems and design proper solutions in an effective way with (WM=4.08) is observe which means academic performance skills of learningis high, Students have the skills in creative thinking, can learn, and can communicate with passion and ideas with (WM=3.90) is observe which means academic performance skills of learningis high, Students are innovative, creative, competitive, and have the ability to present concept in their lesson and Students acquire skills and knowledge for various situations in the classroom with (WM=3.83) ) is observe which means academic performance skills of learningis high. The overall (AWM=3.95) is observe which means that the academic performance of the students in their skills in learning is high.

**Table 5:Extent of the role of nutrition in the academic performance of students in terms of attitude towards studies**

| **B. ATTITUDE TOWARD STUDIES: Academic performance is observed through** | **WM** | **Interpretation** | **Ranking** |
|---|---|---|---|
| 1. Students show enthusiasm in the subject taught. | **3.95** | **Observe** | **4** |
| 2. Students display a strict attitude toward classroom control. | **3.87** | **Observe** | **5** |
| 3. Students participate in various activities inside the classroom. | **4.10** | **Observe** | **3** |
| 4. Students attend class regularly and never come to class late. | **4.20** | **Highly Observe** | **1** |
| 5. Students express freely his/her opinion during class discussion. | **4.18** | **Observe** | **2** |
| **Average Weighted Mean** | **4.06** | **Observe** | |
| **Standard Deviation** | **1.058** | | |

Table 5 shows the extent of the role of nutrition in the academic performance of the students in terms of attitude towards studies. Students attend class regularly and never come to class late with (WM=4.20) is highly observe which means academic performance on attitude toward studies is very high, Students express freely his/her opinion during class discussion with (WM=4.18) is observe which means academic performance on attitude toward studies is high, Students participate in various activities inside the classroom with (WM=4.10) is observe which means academic performance on attitude toward studies is high, Students show enthusiasm in the subject taught with (WM=3.95) is observe which means academic performance on attitude toward studies is high and Students display a strict attitude toward classroom control with (WM=3.87) is observe which means academic performance on attitude toward studies is high. The overall (AWM=4.06) is observe in which that the performance of students in their attitude toward studies is high.

**Table 6:Extent of the role of nutrition in the academic performance of students in terms of academic achievement**

| **C. ACADEMIC ACHIEVEMENT: Academic performance is observed through** | **WM** | **Interpretation** | **Ranking** |
|---|---|---|---|
| 1. Students are active in class participation and discussion. | **4.24** | **Highly Observe** | **2.5** |
| 2. Students focus on the lessons and provide output in the learning process. | **3.92** | **Observe** | **4** |

| | | | |
|---|---|---|---|
| 3. Students pay close attention to direction both in oral and in written. | **4.30** | **Highly Observe** | **1** |
| 4. Students develop time management in studies and attend class regularly. | **3.89** | **Observe** | **5** |
| 5. Students establish academic goals to accomplish the task required in the subject. | **4.24** | **Highly Observe** | **2.5** |
| **Average Weighted Mean** | **4.12** | **Observe** | |
| **Standard Deviation** | **1.043** | | |

Table 6 shows the extent of the role of nutrition in the academic performance of the students in terms of academic achievement. Students pay close attention to direction both in oral and in written with (WM=4.30) is highly observe which means academic performance on academicachievement is very high, Students are active in class participation and discussion and Students establish academic goals to accomplish the task required in the subject with (WM=4.24)is highly observe which means academic performance on academicachievement is very high, Students focus on the lessons and provide output in the learning process with (WM=3.92) is observe which means academic performance on academicachievement is high and Students develop time management in studies and attend class regularly with (WM=3.89) is observe which means academic performance on academicachievement is high. The overall AWM=4.12) is observe in which the performance of students in their academic achievement is high.

**7. On the significant relationship between the role of nutrition in the academic performance and the extent of the aforementioned role of nutrition in the academic performance of students.**

| **Variable** | **Computed r-value** | **Relationships *significant * not significant** | **Hypotheses *accepted *rejected** |
|---|---|---|---|
| **Cognitive Learning** | | | |
| 1. Skills in learning | 0.473 | significant | rejected |
| 2. Attitude toward studies | 0.508 | significant | rejected |
| 3. Academic Achievement | 0.544 | significant | rejected |
| **Affective Learning** | | | |
| 1. Skills in learning | 0.478 | significant | rejected |
| 2. Attitude toward studies | 0.526 | significant | rejected |
| 3. Academic Achievement | 0.550 | significant | rejected |
| **Psychomotor Learning** | | | |
| 1. Skills in learning | 0.474 | significant | rejected |
| 2. Attitude toward studies | 0.521 | significant | rejected |
| 3. Academic Achievement | 0.545 | significant | rejected |

**Significant at 0.05 level, one-tailed test, df at 28 with critical r-value of 0.456**

Table 7 shows that there is a significant relationship between the role of the nutrition and the extent of the nutrition in the academic performance of the students in terms of the different domain against the skills in learning, attitude toward studies and academic performance since the computed r value is higher than the critical value of 0.456 which reveals significant therefore the null hypothesis is rejected and the alternative hypothesis is accepted.

## III. DISCUSSION

The role of nutrition on the part of the development of students in their learning process helps to enhance their memory in their studies. Especially, when the food taken is with full of nutrients, diet to sustain the needed energy of the brain, it explores and provides competency and perception to the development of students in their exposure to learning which has a preparation and impact for the learning process of students. On the other hand, intense experiences of the teachers in the public school challenge them personally on how to deal with students who have problems on their nutrition and observe that they are weak and inattentive inside

the classroom. Therefore, the nutrition of the students enhances and provides experiences and framework on their competitiveness and effectiveness in their skills of learning (Maher, et. al., 2015).

Furthermore, on the role of nutrition in the academic performance of students in the area of cognitive learning is observed which means their academic performance is high. This is the contribution of nutrition on the part of the students. Experts and educators recognise the engagement of the academic performance of the students in their learning process that tend to lead activities problem solving to the level and development skills in the cognitive process of students in terms of Blooms Taxonomy classification of their learning process. They know analytically and observe situation inside the classroom as motivators to students in their learning process particularly on the food they eat to support their brain in the development of their learning process. Motivational strategies are given emphasis. However, consider the economic situation of the students in studying in the public or government sector, they will just take something to survive and they are not aware of the nutrition of the food that can supply to their body needs and energy. Consider the students perception in their engagement to their academics and the system in the education in adopting situation to solve the issue on the nutrition of the students though strategiesand techniques of teaching diverts to promote their academic performance (Amouei, Farajollahi, &Zarabian, 2018).

Moreover, on the role of nutrition in the academic performance of the students in the area of affective learning is observed which means their academic performance is high. Accordingly, the students can relate behavior that reflects set of values in life, practicing and acting on their values and beliefs since they have the necessary energy and strength because of the nutrition they have in their body. They have also the necessary learning senses and can response willingly in the lesson inside the classroom setting and awareness. The concern of the public school teachers or educators on their students is to promote awareness of food supplement that can help them in the development of their brains due to the many fancies and sophisticated food around, hence; it affects their minds and nutrition on their body. Building the positive innovation and effect of the food intake of the students can lead them to malfunction of their body energy and brain that can affect their academic performance in relation to their studies. The attitude of the students depends on the nutrition they have in their body that dictates their performance in their academics. This gives an impact and effect to their studies. The general implication of the nutrition in their body understands and increases the process of their learning which has a significant role on their studies. Inculcating to students the importance of having a good nutrition will help them improve their way of living in a little way and as such academic performance will increase and improve also (Robinson, &Leonhardt, 2018).

Moreover, on the role of nutrition in the academic performance of students in the area of psychomotor learning is observed since students can relate agility, endurance, strength, flexibility and can react to the question raised by the teacher. On the other hand, student can also express their gesture, facial expression, creative movement and posture in their learning enhancement and they can relate to their body movement, auditory, visuals coordination, touch and information ability in the classroom setting and environment. Hence, students can encode information, expression and interpretation of the concept activities. Also they have the skills for complex action like jumping, running, walking, pulling and pushing manipulation. It determines the efficiency and effectiveness of context psychomotor learning and outcome to the students' enhancement. It shows their interest to determine their psychomotor learning in an effective way due to the help of the nutrients to their body that provides vitamins to explore their learning process. They can respond to what is being done inside the classroom to the best they can and very enthusiastic and dynamics in the classroom participation. This can be applied effectively in the classroom setting (Oktaviani, Subekti, &Lisdiana, 2018).

Similarly, on the extent of the role of nutrition in the academic performance of the students in terms of skills in learning is observed since students can be motivated, empowered, inspired to expand their mind and learn. They have the skills because of the strength and energy from their body that boost their knowledge in the learning process. Hence, students can possess the skills because they have the nutritional value in their brains where learning for them runs smoothly and attain the goals as student. They can also define problems and issues in their lessons and provide proper solution in an effective manner. They are also resourceful and creative enough in their learning and thinking and can communicate with passion and sense with their ideas in their skills of learning. A standard competency in learning is a challenging one especially when the brain has no vitamins and nutrients, skills in learning is affected. It can only be effective when there is vitamin in the brains because of the role of the nutritional value they have in their mind and in their body. This can help boost the morale of the students in their learning process. They can even have the necessary innovation when their brain has the nutritional value for them to think, to be creative, to be competitive and have the qualities to have the concept from their lesson. This can be acquired in the different classroom situation based on the skills and knowledge of the students and be based on the nutritional value of their brains to support the skills in the students learning process (McDermid, & Worden, 2019).

Consequently, on the extent of the role of nutrition in the academic performance of the students in terms of attitude toward their studies is observed since students attend their classes regularly and never come to

class late. They can see in their face whether they are happy or sad. Those students who are happy have taken something in their stomach while those students who have not taken their breakfast are unhappy. These are the observation of the public school teachers among their students. Teacher can also observe that those students who actively participate in the classroom are those students who have nutritional value of food they have eaten because they can expressly say their opinion, active during the discussion. They can even participate in the different classroom activities. They are very dynamic and enthusiastic in the subject being taught to them. They can possess or display strict attitude in the classroom control. Attitude of the students toward their studies is based on their lifestyle. It highlights their attitudes and interpersonal which collaborates their positive attitude. It can be observe that their attitude has the proper cooperation inside the classroom because they have the necessary nutrients in their brain through the role of the food intake they have. Their perception inside the classroom is high and reveals positivity experiences (Bar, Leurer, Warshawski, &Itzhaki, 2018).

Nevertheless, on the extent of the role of nutritional value in the academic performance of students in terms of academic achievement is observed since students pay close attention to the class discussion especially during examination time where they can follow direction properly in both written and in oral. They are active and knowledgeable on what to do in all aspect of their learning process. It can be observed too that they can establish academic goals to accomplish the task given to them or requirements of the subject. They have the focused on the lessons provided and achieve goals set by their teachers. This is observed in the output of their learning process. They have adequate time management in meeting the deadlines and their attendance to their classes regularly. The extent of nutrition has a connection on the academic performance of the students. How students excel when the stomach is empty? Nutrition has implication towards the academic performance of the students inside the classroom. It demonstrates the domain of learning to their academic achievement and performance in the school (Asigbee, Whitney, & Peterson, 2018).

## IV. CONCLUSIONS

1. It shows that there is an ability to determine lesson though concept, structure and purpose and ability to judge the lesson based on the criteria and standard is observed which means performance of students in cognitive learning is high.
2. It shows that students can relate behavior that reflect set of values in life, practicing and acting on their values and beliefs is observed which means performance of students in affective learning domain is high.
3. It shows that students can relate to endurance, flexibility, agility, strength, reaction-response time is observed which means performance of students in psychomotor learning domain his high.
4. It shows that students inspire, motivate and empower to learn and expand mind of their classmate is observed which means performance of students in their skills of learning is high.
5. It shows that students attend their classes regularly and never come to class late is observed which means performance of students' attitude toward their studies is high.
6. It shows that students pay attention to direction both in oral and in written is observed which means performance of students in their academic performance is high.
7. It shows that there is a significant relationship between the role of nutrition in the academic performance of the students in the area of cognitive learning, affective learning, and psychomotor learning and the extent of the aforementioned role of nutrition in the academic performance of students in terms of skills in learning, attitude toward studies and academic performance among them.

## V. RECOMMENDATIONS

1. Encourage students to eat more nutritional food which will help them in their academic performance and to help them function properly in their lessons and activities.
2. Students should internalise values and believes that nutrition is important in their living which also support them in their studies in achieving their academic performance.
3. Students should practice eating the right food, eat nutritional food to help them develop their skills related activities in their school inside and outside setting of the classroom. This can help them manipulate an activities required in their academic performance.
4. Stress the importance of role of nutrition on the part of the students to help them become innovative, creative, competitive, and have the ability to present the concept in their lesson, likewise students can acquire skills and knowledge for various situation inside the classroom.
5. Students should display a strict attitude toward classroom control especially when they have the right nutritional food as part of their learning process.
6. Students must develop their time management in their studies and attend their classes regularly despite of the kind of food they eat which help them in their academic performance in school.

7. There must be thorough studies on the role of nutrition in the academic performance of the students because the result of the study is significant where nutritional food helps in the academic performance of the students like the function of the nutritional food to the brain and development of the students.

## REFERENCES:


[1]. Amouei, N., Farajollahi, M., &Zarabian, F. (2018). The Role of Perception of the Curriculum components in predicting academic engagement in nutrition students of ShahidBeheshti University of Medical Sciences. Research in Medical Education, 10(3), 3-12.

[2]. Aragon, A. A., Schoenfeld, B. J., Wildman, R., Kleiner, S., VanDusseldorp, T., Taylor, L., & Stout, J. R. (2017). International society of sports nutrition position stand: diets and body composition. Journal of the International Society of Sports Nutrition, 14(1), 16.

[3]. Asigbee, F. M., Whitney, S. D., & Peterson, C. E. (2018). The link between nutrition and physical activity in increasing academic achievement. Journal of School Health, 88(6), 407-415.

[4]. Bar, M. A., Leurer, M. K., Warshawski, S., &Itzhaki, M. (2018). The role of personal resilience and personality traits of healthcare students on their attitudes towards interprofessional collaboration. Nurse education today, 61, 36-42.

[5]. Henderson, P., Islam, R., Bachman, P., Pineau, J., Precup, D., &Meger, D. (2018, April). Deep reinforcement learning that matters. In Thirty-Second AAAI Conference on Artificial Intelligence.

[6]. Hilger, J., Loerbroks, A., & Diehl, K. (2017). Eating behaviour of university students in Germany: Dietary intake, barriers to healthy eating and changes in eating behaviour since the time of matriculation. Appetite, 109, 100-107.

[7]. Huda, M., Sabani, N., Shahrill, M., Jasmi, K. A., Basiron, B., &Mustari, M. I. (2017). Empowering learning culture as student identity construction in higher education. In Student Culture and Identity in Higher Education (pp. 160-179). IGI Global.

[8]. Kerrison, D. A., Condrasky, M. D., & Sharp, J. L. (2017). Culinary nutrition education for undergraduate nutrition dietetics students. British Food Journal, 119(5), 1045-1051.

[9]. Lewallen, T. C., Hunt, H., Potts-Datema, W., Zaza, S., & Giles, W. (2015). The whole school, whole community, whole child model: A new approach for improving educational

[10]. Lohr, S. L. (2019). Sampling: Design and Analysis: Design and Analysis. Chapman and Hall/CRC.

[11]. Maher, J., Pelly, F., Swanepoel, E., Sutakowsky, L., & Hughes, R. (2015). The contribution of clinical placement to nutrition and dietetics competency development: a student-centred approach. Nutrition & dietetics, 72(2), 156-162.

[12]. McDermid, J. M., & Worden, M. K. (2019). Teaching and Practicing Cultural Competency Skills with Medical Students Using Nutrition-Focused Case Scenarios. Medical Science Educator, 29(1), 5-6.

[13]. Michalos, A. C. (2017). Education, happiness and wellbeing. In Connecting the quality of life theory to health, well-being and education (pp. 277-299). Springer, Cham.

[14]. Oktaviani, P., Subekti, N., &Lisdiana, L. (2018). The Contextual Learning with Handout and Arthropod's Preservation of High School Students Learning Outcomes. Journal of Biology Education, 7(1), 73-81.

[15]. Rahimi-Ardabili, H., Reynolds, R., Vartanian, L. R., McLeod, L. V. D., &Zwar, N. (2018). A systematic review of the efficacy of interventions that aim to increase self-compassion on nutrition habits, eating behaviours, body weight and body image. Mindfulness, 9(2), 388-400.

[16]. Rathi, N., Riddell, L., &Worsley, A. (2017). Secondary school students' views of food and nutrition education in Kolkata, India. Health Education, 117(3), 310-322.

[17]. Robinson, C., &Leonhardt, J. M. (2018). Consumer Innovativeness and Loyalty to Non-GMO Foods: The Role of Cognitive and Affective Beliefs. Journal of food products marketing, 24(1), 39-55.

[18]. Zook, K. L., & Pearce, J. H. (2018). Quantitative Descriptive Analysis In Applied Sensory Analysis of Foods (pp. 43-71). Routledge.