Factors affecting lower academic performance of grade 11 STEM students of ECT Excellencia Global Academy Foundation Inc.

Alan A. Bendanillo
April Rose Cansancio
Frances Monique Dungog
Mery Clare Quezon
Irish S. Rubin
Kisha Sermon

Abstract: This study aimed to determine the factors affecting the academic performance of grade 11 STEM students of ECT Excellencia Global Academy Foundation Inc. The factors affecting a student's academic performance arise from several reasons. Accordingly, this study was done to identify the factors affecting the academic performance of grade 11 stem students, which may ultimately help in the improvement of both students and teachers. The students may gain from this research by being able to understand better the elements that may affect their academic performance. They might be able to improve their academic standing by using the findings that this investigation establishes. A quantitative research method was employed. The researchers primarily gathered the data for statistical analysis through which the specified survey questionnaires were distributed to the respondents in this research study. Average weighted mean was used to determine the level of impact of the different factors affecting the respondents' academic performance.

Keywords: Academic performance, Study habits, EEGAFI Students, Factors, and learning skills

INTRODUCTION

In today's competitive world, educational quality is critical as it poses a greater challenge to every stakeholder in the educational spectrum. To define educational quality would include key elemental concepts such as the inclusion of instructional standards, administrative environment, parental efforts, and role (Furstenberg and Hughes, 1995). Different factors are inside and outside of the school that affects the student's low academic performance. These factors include lack of interest and undesirable attitude towards the subject, inadequate learning materials, teaching style, teacher's education, peer pressure and lacking income, but these factors may vary from student-student or place-place. Unfortunately, due to insufficient key requirements such as libraries, labs, curricula, a weak examination system, and overcrowding

classrooms. The Philippines has substandard education that is incompatible with national growth (Garzon, 2006). However, according to Mushtaq and Khan (2012), schools, colleges and universities have no worth without students. Students play an essential and a vital role for any educational learning institution. To achieve the educational aims and objectives, students' learning takes place and that is the acquisition of knowledge, skills and academic performance in school. The students' performance (academic achievement) plays an important role in producing the best quality graduates who will become great leaders and resourceful manpower for the country thus responsible for the country's economic and social development (Yusuf, et.al., 2020). MoE (1996) believes that education increases human capabilities and improves productivity in labor and national growth.

Education is regarded as the initial step in any human endeavor (Farooq et. al., 2011). It is a social institution device for achieving one's objectives and shaping one's destiny (Banard, 2004). It holds a high position in the human race. It improves an individual's efficiency and mental capability. Students are the most essential component of any educational institution. Student performance is a key feature in any academe. Academic performance is measured by examination tests or outputs by students. It is generally regarded as the display of knowledge acquired and skills obtained in a school subject. Success is determined through academic performance or how well a student achieves the requirements set by the educational institution. Currently, in the Philippines' education system, it has 4 levels: Primary School (Primary Education) - K to 6, Junior High School (Lower Secondary Education) - 7 to 10, Senior High School (Upper Secondary Education) - 11 to 12, and lastly, Tertiary Education.

Cognizant of the importance of academic performance, the researchers would like to delve into a review of the factors that influence lower academic performance. Despite the excellent research published by different authors concerning the factors affecting performance, only a few studies have been published. Moreover, the majority of the related studies are from abroad and they may have different results compared to the Philippines because of some issues affecting the countries differently. In addition, this study may be beneficial to educational policymakers and administrators in developing and implementing policies to increase student performance.

STATEMENT OF THE PROBLEM

This research aimed to contribute to the body of knowledge of student performance in the field of education. Specifically, the study had three main research questions, to wit:

1. What are the reasons that a student has a low academic performance in school?

2. How does these factors significantly affect to the students' well-being in their academic discipline?

3. What are the ways that can motivate them to pursue academic interests in school?

RESEARCH OBJECTIVES

This research attempts to discuss the following topics in details:

1. To identify the factors that affect the students' low of academic performance

2. To analyse its impact to the students in the academe and offer suggestions for overcoming their academic failure.

SIGNIFICANCE OF THE STUDY

This research aimed to identify the causes and results of low academic performance from students and parents as well as providing possible solutions to this problem. The following will be the beneficiaries of this research: 1. Researchers, 2. Students, 3. Readers, and 4. Future Researchers. The first beneficiaries are the researchers. In conducting the study, they will discover the different factors that the students must have interest dealing their academic performance in school.

The second beneficiaries will be the students. With the help of this study, the students will gain some information and acquire more knowledge on how important academic performance is in school. The third beneficiaries are the readers, this study does not only to be read by those who wanted but also to the people in general who want to have interest in dealing with the concept of academic performance in school.

The fourth beneficiaries will be the future researchers. This study can be used as their basis in gathering data and information for their research study in the future. This will serve as a portion for further studies.

SCOPE AND LIMITATIONS

This study focuses on the effect of the grade 11 stem student's low academic performance in school. As sampling of the population in this study, grade 11 stem students serve as the respondents of this research and the data were gathered so as to come up with statistical results. Other issues that are not regarded to be contributing factors to student's low academic performance in school will not be covered in this study. The other students who are not grade 11 stem students are not within the scope of this study. A survey and reference questionnaire would be given to the students in scheduled interview as part of the study. The researcher approach will enable them to understand the effects of low academic performance in grade 11 stem students.

REVIEW RELATED LITERATURE

Several studies have been conducted to find out students' academic performance (Malik and Singh et al., 2016). The findings of the research studies focused that student performances are affected by different factors such as peer pressure, the family background and home environment, and the student's preferred learning style.

Most academics observed that a child's associate could impact his/her performance. Social influence looks at how individual thoughts, actions and feeling are

influenced by social group. Learning styles are thought to have a negligible impact on academic performance. It is acknowledged that learning preferences can aid students in enhancing their own learning and hence promote self-directed learning, even though the effect is limited (Furstenberg, 1995). Learning styles can affect a student's academic performance as well as their personal lives, as per Rebecca Ezekiel, a seasoned English consultant and learning specialist. Academic challenges can cause worry and disappointment, but learning styles might minimize these feelings. Additionally, it broadens the student's current methods for studying and learning (Nugent P.M, 2013 April 28). Graetz (1995) conducted a study on socio-economic status of the parents of students and concluded that the socio economic background has a great impact on student's academic performance.

Academic competence is associated with students' ability to manage their study load and is used to assess if students are able to manage the study material in the curriculum (Am J Pharm Educ, 2006). Even though educational services result in changes in learners' knowledge and behavioral patterns, they are sometimes nebulous and challenging to assess. The definition of quality of education varies from culture to culture (Michael, 1998). The environment and the personal characteristics of learners play an important role in their academic success. The performance of the student is affected by communication skills; it is possible to see communication as a variable which may be positively related to performance of the student in open learning. A major distinction of this study from previous studies is that it focuses on open learning (Abdullah AL-Mutairi, 2011).

RESEARCH METHODOLOGY

In this study, quantitative research method was employed. The researchers primarily gathered the data for statistical analysis through which the specified questionnaires were distributed to the respondents in this research study. The respondents in this study were the grade 11 stem students of EEGAFI who responded with utmost clarity and integrity. Since the EEGAFI institution of learning served as the venue of this study, the researchers adapted their unique mode of learning delivery which is "hybrid learning modality." While EEGAFI is a senior high school private school of taught, hence the survey did not concentrate on educational institutions in public sector. There were 100 number of students who randomly selected from a group of students and these are good number of respondents who volunteered to fill out the surveys were randomly chosen from the group. Other 50 number of respondents who have preferred to study from home were enabled to answer the questionnaires through google form, Gmail, and messenger. The respondents received a thorough explanation of the questionnaire, and it took an average of 30 minutes to complete. The questionnaire dealt mainly with the student demographic profile based on their attitude towards study, strictness, attendance, age, and previous academic performance. Copies

of 100 questionnaires were filled with the response that had been given to respondents who were in school for their face-to-face classes by which 125 of them were females and 25 were males.

RESULTS AND DISCUSSION

RESULT

In this research study, to determine the demographic profile of the respondents, the researchers utilized the percentage frequency. To shed light the analysis using the simple frequency count and percentage, below is the formula.

$$(P) \% = \frac{F}{N} \quad X$$

Legend:

P=Percentage distribution

F=Frequency

N=Total Number of Respondents

A total of 150 senior high school students (125 female, 25 male) participated in our study. The demographic features of the students are shown in table 1.

Table 1: Demographic features of the respondents		
Age	Frequency	Percentage
15-17	132	88 percent
18-20	10	6.66 percent
21 to above	8	5.33 percent
Total	150	100 percent

Percentage and Mean of Demographic Feature of Age

|	N	Percent	Mean
Age			19.53
Female	125	83.33	
Male	25	16.66	

One of the set objectives was on factors affecting academic work of the senior high school students. Arising from the study, several factors affecting the academic performance. As it is shown in graph no. 1 which is presented below, the data explicitly indicates the percentage and number of respondents who responded the causes or reasons on why students have low academic performance. The formulated statement that consequently have made the respondents to frequently respond is concerned and focused on the factors of absenteeism and tardiness. "Absenteeism and tardiness are one of the reasons why students have low academic performance in school." 80.85% of the students out of 150 students who expressed explicitly their "yes" that they agree the matter on the ground. This is evidenced in the contribution made by one respondent when asked by the teacher "Why are you late today? And you were also absent yesterday?" She responded to her teacher as she said: "I was late today cher because I helped my mother to sell vegetables to our neighbors and I was absent yesterday because I was hanging with my friends and we went to Cebu." It appears that there is this limited academic readiness on the part of the students.

The study also identified that insufficient resources and negative attitudes toward education among senior high students. These factors are perceived to have contributed to students lowly learning outcomes. While 11.5 % of students out of 150 were responded "maybe" and 7.7% out of 151 students who firmly responded with "no" that they don't have to agree that absenteeism and tardiness are the reasons why students have low academic performance in school.
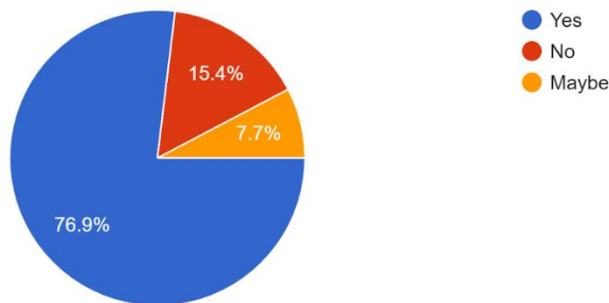
Graph 1

Absenteeism and tardiness are one of the reasons why students have low academic performance in school.
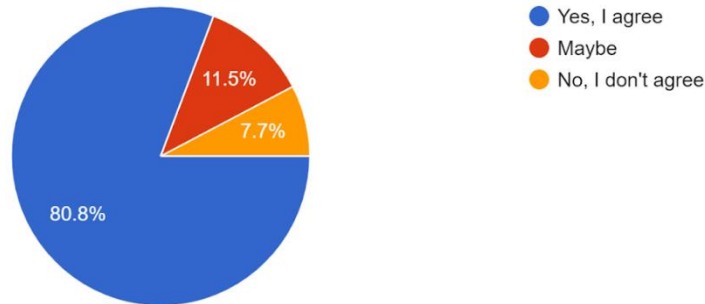
In the results under graph no. 2, it was found that the senior high school students shows evidently to have experienced having a low of academic performance in school. It was found that 76.9% of the respondents out of 150 students were able to experience of having difficulty in their academic achievement, hence, they responded "yes" on this question. "Did you experience having a low academic performance in school?" On the other hand, 15.4% of the respondents firmly responded "no" that they have nothing experience of any negative effects in their learning outcomes. Lastly, 7.7% of the respondents responded "maybe "of their answer.

Graph no. 2

Did you experience having a low academic performance in school?

In graph no. 3, it was evident from the study that having a low academic performance may affect the lifestyle of the students. In fact, it was found that based on graph below 57.7% of the students responded "strongly agree" to the statement "having a low academic performance may affect your lifestyle as a student." This data shows significantly that most of the respondents from the total of 150 students, majority and a quite good number of the students revealed their agreement of the said statement. On the other hand, 34.6% of the respondents responded "agree" to the statement and no

respondents manifested their "disagreement" and so this just entails that evidently due to the existence of low academic performance may affect the lifestyle of a student.

Graph 3

Having a low academic performance may affect your lifestyle as a student
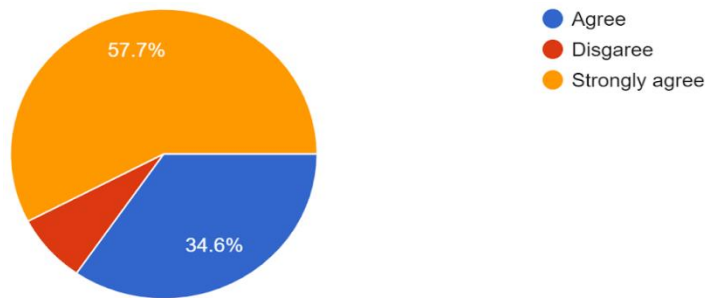
Item Mean and Descriptive Scale Distribution of the EEGAFI Student-Respondents' Perception with Regard to Student-Related Dynamics Affecting their Academic Performance in School

To determine the key essential points of view relating the factors affecting the Academic performance of the respondents, the researchers utilized the weighted mean which was interpreted using the following criterion scale:

Table 2

Numerical Value	Mean Range	Descriptive Scale
3	3.50-4.50	Strongly Agree
2	2.60-3.49	Agree
1	1.00-2.59	Disagree

Item Mean and Descriptive Scale Distribution of the EEGAFI Student-Respondents' Perception with Regard to Student-Related Factors Affecting their Academic Performance in School

The table presents the frequency, item mean and descriptive distribution of the EEGAFI student - respondents' perception regarding the effect of student - related dynamics on their academic performance in school premises. As presented in the table, 2 out of 4 factors got a descriptive scale of "agree", 2 were rated "strongly agree" and the other 2 have responded with the scale of "agree". The highest items mean that significantly got with points of 3.55 and 3.57 are tardiness and absenteeism of students, time spent on gadgets/social media. The attitudes of student toward education manifested with an item mean of 3.42 by which it remarkably refers to agree. While on the matter of socio-economic status of students with the item mean of 3. 28 would be described as "agree" in which this has been perceived to be yes. Clearly, the above-table whose data are visible and significantly showed that the factors of tardiness and absenteeism vividly revealed in the results of this study which implies that the students agree that these factors greatly affect their academic performance in the school arena. The category mean of 3.45 or "agree" implies that the students of ECT Excellencia Global Academy Foundation, Inc. perceived that there are various factors that affect their academic performance in school.

STUDENT-RELATED FACTORS	OPTIONS				
	(D)1	(M)2	(A)3	Item Mean	Descriptive Scale
Absenteeism of students		5	145	3.57	Strongly Agree
Socio-economic status of students		6	144	3.28	Agree
Attitude of students toward education		9	141	3.42	Agree
Tardiness of students		5	145	3.55	Strongly Agree
Total Mean: 3.45 Agree					

DISCUSSION

In this research, the researchers aimed to understand the factors that affect the low academic performance of senior high school students. In the results under objective one, it was found that reported several factors believed to have affected the academic achievement of the students and these are the absenteeism and tardiness. The low academic performance in the academic work stands is, therefore, believed to be a product of a combination of factors not just simply surrounding the learning of the students within the classroom premises but also the social and economic consideration as well. In line with these results were Karvinen, et. al. (2018), who believe that the lack of various resources and support from the family, knowledge gaps and several infrastructural issues might limit the students' full potential in their performance.

The results of this present study conform to the findings about problems arising from parents in this study and this is evident to the study conducted by Gonzales et al. (1996) who argue that variables such as parents' educational level and family socio-economic status cannot alone be linked with students' academic success; other variables such as academic support from parents, siblings, and friends can play important role in students' success. Achievement motivation is not a single construct but rather subsumes a variety of different constructs like ability self-concepts, task values, goals, and achievement motives. The few existing studies that investigated diverse motivational constructs as predictors of school students' academic achievement above and beyond students' cognitive abilities and prior achievement showed that most motivational constructs predicted academic achievement beyond intelligence and that students' ability self-concepts and task values are more powerful in predicting their achievement than goals and achievement motives (Robbins et al.,2004). It is of no shadow of doubt that EEGAFI School advocates an academic discipline program thereby a multiple intelligences offered to the students who would exceled in all facets of learning style development. This is so because the school founder/principal in the name of Dr. Francisca T. Uy inculcated to the minds and hearts to the students the technique and fundamental principles in learning as she said, "In this 21st century of educational learning, we humans are no longer living in the world of isolation but instead we are now living in the world of collaboration." And she further believed that "the best and real manifestation of learning is when the students can do of what they have learned."

Meanwhile, a suggested concerted effort by both the lecturers and students to raise the academic performance in school resulting in reduced variation in student performance, a scenario that would have resulted in the lack of statistical significance of investigated determinants of academic performance (Mlambo, V. (2011). This is in accordance with the findings of Richardson (1994) who reported that the academic performance of the students is as good, if not better than younger students in most settings. As long as the students are admitted into study programs for which they possess the basic competencies, then their performance will not be worse than that of their younger peers. Indeed, Richardson (1994) concludes that students seek a deeper meaning towards their academic work and were less likely to adopt a surface approach or reproducing orientation like the younger students (Mlambo, V. (2011).

CONCLUSION

The goal of this study was to identify the elements contributing to grade 11 stem student's low academic performance. Comparisons were drawn with successful institutions in the same location. Certain elements that are thought to contribute to generally low academic performance were discovered to be present in both school classes. Despite the fact that there are factors that exist nevertheless, these could have an impact on the realm of teaching and learning paradigm. Needless to say, the effects were the same for both group of students, limiting the possibility of any unusual issues that contributes and constitutes the students who have low academic performance in school. The challenge would always be on hands of the teachers and administrators for these stakeholders play a vital role in the educational process but without neglecting the responsibilities of the students who are always at the center in the learning process. Indeed, as what Bendanillo (2022) purported that education should be viewed as student-to-teacher participation and leaner-to-educator collaboration. Hence, education always entails a social endeavour.

Furthermore, the study was able to identify however, the factors that are specifically and significantly affect the academic performance of the students in school. The student's low academic performance was attributed to the teachers, students, parents, and school environment. It must be emphasized that these elements frequently interact with one another. For instance, a teacher's tardiness or absence would prevent the completion of the curriculum and would have an impact on the motivation, passion, and dedication of the students to learn. Though what has been given an attention to this issue and main concern of this study is the mere focus on the student's academic performance in the class.

RECOMMENDATIONS

The primary recommendations resulting from this research are as follows:

To stimulate the student's interest in their physical, mental, and emotional well-being so they can focus to their studies. Also, an extensive and thorough study is needed

with the involvement as well of the teachers, concerned parents and the school environment for further studies of this related topic.

Look for the actual cause of your academic failure and try to use it to your advantage to create clear guidelines for future achievement.

Schools should ensure teachers and pupils develop a positive attitude towards the academic work of all learners and allow the students to take the necessary breaks from comfort to stay active, as memory needs rewards to continue learning with passion and determination.

Instead of blaming the students for not studying enough for the examinations, find the reasons why you failed instead. Self-blame is sometimes more sensible than blaming the teachers or the difficulty of the exam's problems.

References

Abdullah AL-Mutairi, 2011 - Mushtaq, I., & Khan, S. N. (2012). Factors affecting students' academic performance. Global journal of management and business research, 12(9), 17-22.

Am J Pharm Educ,2006 - Sansgiry, S. S., Bhosle, M., & Sail, K. (2006). Factors that affect academic performance among pharmacy students. American journal of pharmaceutical education, 70(5).

Banard, 2004 - Asif, M. F., Safdar, H., & Ali, S. (2020). Factors affecting the performance of school students: A case study of Bahawalpur. Ilkogretim Online, 19(3), 3650-3660.

Farooq et. Al, 2011 - Sudhakar, G. P., Farooq, A., & Patnaik, S. (2011). Soft factors affecting the performance of software development teams. Team Performance Management: An International Journal.

Bendanillo, A. (2022). Education in Immanuel Kant and John Dewey: A Comparative Analysis. Available at SSRN 4249493.

Furstenberg and Hughes,1995 - Farooq, M. S., Chaudhry, A. H., Shafiq, M., & Berhanu, G. (2011). Factors affecting students' quality of academic performance: a case of secondary school level. Journal of quality and technology management, 7(2), 1-14.

Furstenberg, 1995 - Farooq, M. S., Chaudhry, A. H., Shafiq, M., & Berhanu, G. (2011). Factors affecting students' quality of academic performance: a case of secondary school level. Journal of quality and technology management, 7(2), 1-14.

Garzon, 2006 - Farooq, M. S., Chaudhry, A. H., Shafiq, M., & Berhanu, G. (2011). Factors affecting students' quality of academic performance: a case of secondary school level. Journal of quality and technology management, 7(2), 1-14.

Gonzales et al. 1996 - Gonzales, N. A., Cauce, A. M., Friedman, R. J., & Mason, C. A. (1996). Family, peer, and neighborhood influences on academic achievement

among African-American adolescents: One-year prospective effects. American journal of community psychology, 24(3), 365-387.

Graetz (1995) - Alos, S. B., Caranto, L. C., & David, J. J. T. (2015). Factors affecting the academic performance of the student nurses of BSU. International Journal of Nursing Science, 5(2), 60-65.

Karvinen, et. al. 2018,- Abdullah, S. F., Shah, N. A., & Idaris, R. M. (2020). Stress and its relationship with the academic performance of higher institution students. International Journal of Advanced Research in Education and Society, 2(1), 61-73.

Malik and Singh et al., 2016 - Malik, M. S. I. (2020). Predicting users' review helpfulness: the role of significant review and reviewer characteristics. Soft Computing, 24(18), 13913-13928.

Michael, 1998 - Farooq, M. S., Chaudhry, A. H., Shafiq, M., & Berhanu, G. (2011). Factors affecting students' quality of academic performance: a case of secondary school level. Journal of quality and technology management, 7(2), 1-14.

Mlambo, V. 2011- Mlambo, V. (2011). An analysis of some factors affecting student academic performance in an introductory biochemistry course at the University of the West Indies. The Caribbean Teaching Scholar, 1(2).

Mlambo, V. 2011 - Mlambo, V. (2011). An analysis of some factors affecting student academic performance in an introductory biochemistry course at the University of the West Indies. The Caribbean Teaching Scholar, 1(2).

MoE 1996 - Moe, R., Erwin, J. E., & Carlson, W. (1996). Factors affecting Gerebera jamesonii early seedling branching and mortality. HortTechnology, 6(1), 59-61.

Mushtaq and Khan 2012 - Mushtaq, I., & Khan, S. N. (2012). Factors affecting students' academic performance. Global journal of management and business research, 12(9), 17-22.

Nugent P.M, 2013 April 28 - Thomas, J., Utley, J., Hong, S. Y., Korkmaz, H., & Nugent, G. (2020). A Review of the Research. Handbook of Research on STEM Education.

Richardson 1994 - Mlambo, V. (2011). An analysis of some factors affecting student academic performance in an introductory biochemistry course at the University of the West Indies. The Caribbean Teaching Scholar, 1(2).

Richardson 1994 - Mlambo, V. (2011). An analysis of some factors affecting student academic performance in an introductory biochemistry course at the University of the West Indies. The Caribbean Teaching Scholar, 1(2).

Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., and Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? a meta-analysis. Psychol. Bull. 130, 261–288. doi: 10.1037/0033-2909.130.2.261.

Yusuf, et.al., 2020 - Abas, N. H., Yusuf, N., Suhaini, N. A., Kariya, N., Mohammad, H., & Hasmori, M. F. (2020). Factors affecting safety performance of construction projects: A literature review. In IOP Conference Series: Materials Science and Engineering (Vol. 713, No. 1, p. 012036). IOP Publishing.