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Research Article

Factors Affecting Academic Performance of BS Food Technology Students

Marielle D. Gamboa*

Department of Food Technology, Institute of Engineering and Applied Technology, Bulacan Agricultural State College, 3010, Philippines

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*Corresponding author:

E-mail:

marielle.gamboa@basc.edu.ph

ABSTRACT

The study aims to evaluate the factors affecting the academic performance of Bachelor of Science in Food Technology (BSFT) students of Bulacan Agricultural State College. Purposive sampling was used in the study wherein all BSFT students were instructed to answer a survey disseminated through social media platforms. The instrument comprises questions to obtain program selection information during admission test and a 5-point Likert scale (5-definitely true to me; 4-true to me; 3-uncertain; 2-not true to me; 1-definitely not true to me) to rate the given factors. Six factors were evaluated in this study which includes the course, study habit, learning style, motivation, teacher, and social factors. Results showed that the majority of students are positive in their academic performance. Students appear to be confident in their study habits. The BSFT students agree that the professors have demonstrated professional, ethical, and moral attitudes toward them. Results also showed that BSFT students express more compassion in their studies than in their social life. It is recommended that activities to improve the engagement of students in the program should be created. This could be done through immersion in some of the actual work of food technology professionals e.g. research and community involvement. Realizing their contribution to society may improve their perception of the course and enhance their study habits toward better academic performance.

Keywords: *Academic performance, Factors, Food technology*

Introduction

Bachelor of Science in Food Technology (BSFT) is one of the course offerings of Bulacan Agricultural State College. This 4-year program focuses on the scientific conversion of raw materials into safe, nutritious, and palatable food products. The program encompasses areas

from post-harvest handling to the distribution of food products in the market. Thus, a food technologist is known to be an expert in analyzing food properties, developing innovative food products, adhering to food laws and regulations, and creating food quality management systems.

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The primary goal of every program is to produce graduates competent enough to meet the demands of society. To be able to fulfill this, the program should monitor the academic performance of its students. Academic performance measures a student's ability to complete tasks and studies. Grades, attendance, attitude, motivation, and study behavior are all commonly associated with it. Several studies were conducted to determine the factors affecting the academic performance of students in higher education. Dela Cruz and Guido (2013) evaluated the role of course, study habit, learning style, motivation, professor and social aspects in Astronomy student's academic achievement. The findings demonstrated a negative link between the parameters and the student's overall weighted average. This indicates that when the overall weighted average increases, the factors influencing academic success decrease. Class attendance has also been identified as one element influencing students' academic achievement. Landin and Perez (2015) discovered a link between student's attendance and their grades. Students who regularly attend lectures perform better than those who do not. Poor academic performance was also observed in working students (Rubin and Wright, 2017) and those who experienced house instability (Silva et al., 2015).

The factors associated with academic performance may differ from one student to another. It can also differ per school and program; thus, the purpose of this study is to evaluate the factors influencing the academic performance of BS Food Technology students. Analyzing academic performance provides valuable information on the possible retention rate and graduation rate of the program. It can also become a basis for possible interventions as to what factors negatively affect BSFT students' performance. Thus, this study aims to evaluate the different factors such as course, study habit, learning style, motivation, teacher, and social factors.

Methods

Purposive sampling was employed in the study. 91 students of BSFT program from the first to fourth year were instructed to answer the online instrument that was disseminated

through social media platforms. The instrument comprises questions to obtain demographic information and a 5-point Likert scale (5-definitely true to me; 4-true to me; 3-uncertain; 2-not true to me; 1-definitely not true to me) to rate the given factors. The 5-point Likert scale survey questionnaire was adapted from Dela Cruz and Guido (2013) with slight modifications to fit the objectives of the present study. Descriptive statistics such as mean, frequency distribution, and percentage were used to analyze the data collected.

Results and Discussion

Out of the 91 students in the BSFT program, only 63 students were able to answer the survey questionnaire. 38.1% 1st-year students, 14.3% are 2nd-year students, 25.4% and 22.2% are 3rd year and 4th year students, respectively. The respondents were also asked about their Senior High School (SHS) strand and program choice during admission. The majority of the BSFT students took General Academic Strand (GAS, 34.9%) and Technical-Vocational-Livelihood (TVL, 15.9%) during their SHS. Most of the respondents said that BSFT was not their first program of choice during admission (74.6%). Instead of the BSFT program, the three highest program choices were BS Education (28.6%), BS Hospitality Management (17.5%), and BS Business Administration (11.1%). They were admitted to BSFT because it was their alternate choice of program (20.6%), they were influenced by colleagues (12.7%), they were interested in the program after researching (12.7%), and there were no available slots for their first and second choices of the program (11.1%). Regardless of their reasons, the majority agreed that they were going to finish the program (90.5%).

Selection of the desired degree program during the admission test is a critical process as it sets the motivation and educational goal of the student. According to Fouarge and Heß (2023), students' occupational preferences and educational choices are strongly linked to a high incidence of dropping out in higher education. After high school graduation, students select the program that suits their occupational preference after college, thus if constraints such as financial incapacity, peer and family

pressure, and academic performance, i.e. GPA of the student, prevent them from selecting their preferred educational program, and instead select what is available to them or at the time, there is a likelihood that students will have a hard time adjusting to the program and may result in poor academic performance.

Given the above data, it is noted that the majority did not choose BSFT as their program but ended up enrolling in the program due to mentioned reasons. The results of the present study supported Quintos et al (2020) who evaluated the mismatch between the SHS strand and the pursued college course of the students. According to their study, there is a mismatch of 39% and 31%, for two succeeding academic years between the SHS strand and the program they pursued in college. The topmost contributing factors for this mismatch are family and peer pressure, and the accessibility of the program in the nearby university. Thus, it is empirical that these things are considered in creating activities during the first year of college

students to keep them informed of the career opportunities and motivated in their current program.

Course factor

Table 1 shows the mean responses of the students about their course. The fourth-year students responded perfectly stating that they are convinced that the course will help them achieve their goals. The positive response can be due to the fact they had already been exposed to the industry through their practicum, hence, they already have an idea about the nature of the work they will do when they graduate. Both first year and third year students also agreed that the following statements were true to them. In contrast, second year students were uncertain if they were confident with the course possibly due to poor academic standing in the course. Because of this, respondents were also unsure if the course can make them successful.

Table 1. Course factors' influence on BSFT students' academic performance

Course Factors	Year Level				Mean
	1 st	2 nd	3 rd	4 th	
1. This course has the potential to accomplish my ambitions.	3.75	3.44	3.75	4.64	3.90
2. The amenities on this course are quite appealing and conducive.	4.13	3.56	4.13	4.57	4.14
3. This course has given me confidence.	3.67	2.89	3.81	4.57	3.79
4. I know I can get good academic standing in pursuing this course.	3.71	3.22	3.75	4.29	3.78
5. This course can make my career successful.	3.83	3.00	3.88	4.71	3.92
Mean	3.82	3.22	3.86	4.56	3.91

Study habits factor

Table 2 reflects the factors related to the study habits of BSFT students. As shown, fourth year students responded that they enjoy studying the course. They also think clearly and enjoy going beyond assigned work in food

technology. Both first- and third-year students also agreed with the above criteria. This indicates that students are satisfied with their study habits. On the other hand, second-year students were uncertain in all statements.

Table 2. Study habit factors' influence on BSFT students' academic performance

Study Habit Factors	Year Level				Mean
	1 st	2 nd	3 rd	4 th	
1. In my spare time, I enjoy activities relating to food technology.	3.54	3.33	3.44	3.86	3.56
2. When I'm dealing with food technology, I can think clearly.	3.83	3.33	3.63	4.36	3.83
3. In food technology, I appreciate going above and beyond my allotted tasks.	3.92	3.11	4.06	4.36	3.94
4. I try to solve more problems than are required of me.	3.63	2.89	3.94	4.00	3.68
5. Food technology is a course that I have enjoyed studying.	3.92	2.67	3.88	4.50	3.86
Mean	3.77	3.07	3.79	4.21	3.77

Learning style

The unique methods in which an individual receives and retains new information and abilities are referred to as a student's learning style. A student's learning style has a direct and beneficial impact on their academic achievement (Nizam et al., 2019). It is also one determinant of academic success of a student (Watters and Watters, 2007). First-, third- and

fourth-year students responded positively to their learning style (Table 3). Students were able to appreciate the BSFT program as they were enthusiastic in discovering and working with activities related to the program. Though second year students were interested in learning new discoveries and everything about food technology, they were unsure about the problem-solving portion.

Table 3. Learning style factor's influence on BSFT students' academic performance

Learning Style Factors	Year Level				Mean
	1 st	2 nd	3 rd	4 th	
1. I enjoy figuring out how to solve problems.	3.88	3.11	3.81	4.29	3.84
2. I am eager to learn about new developments in food technology.	4.25	4.11	4.13	4.64	4.29
3. You get rewarded for your efforts in food technology.	4.13	3.89	3.69	4.29	4.02
4. Everything relating to food technology sparks my curiosity.	3.96	3.89	3.69	4.50	4.00
5. When I work with food technology problems, I see that my thinking and reasoning abilities improve.	3.92	3.11	3.88	4.36	3.89
Mean	4.03	3.62	3.84	4.41	4.01

Motivation factor

Motivation is defined as the willingness to do something. There are two kinds of motivation: intrinsic and external. The desire to understand a given topic is referred to as intrinsic motivation, whereas external motivation consists of reward and appreciation for a job well done (Dela Cruz and Guido, 2013). As shown in

Table 4, students are unsure whether they try to learn more than what is taught in class, but whenever they have difficulty in their subjects, they study more. This shows that despite having challenges with some of their subjects, BSFT students demonstrate a positive attitude toward the course.

Table 4. Motivation factors' influence on BSFT students' academic performance

Motivation Factors	Year Level				Mean
	1 st	2 nd	3 rd	4 th	
1. I try my best in all I do.	4.54	4.22	4.25	4.71	4.46
2. When I am unsuccessful, I study persistently.	4.25	3.67	3.88	4.50	4.13
3. It is sufficient for me to pass the course with an acceptable mark.	3.75	3.67	4.00	4.14	3.89
4. I don't strive to learn anything beyond what is taught in class.	3.21	3.11	3.31	3.29	3.24
5. When I'm having trouble understanding food technology topics, I study way too much.	3.83	3.44	3.56	3.86	3.71
Mean	3.92	3.62	3.80	4.10	3.89

Teacher factor

The role of a teacher is to facilitate the learning process in a classroom. The effectiveness of a teacher is reflected in how classroom is managed, which is influenced by a variety of elements including teacher-student communication, motivation and teaching methodologies

(Koutrouba, 2020). All BSFT students responded positively to the given teacher factors (Table 5). They agreed that FT professors are fair, punctual and ethical. Furthermore, FT professionals discussed the topics well and kept the students motivated.

Table 5. Teacher factors' influence on BSFT's academic performance

Teacher Factors	Year Level				Mean
	1 st	2 nd	3 rd	4 th	
1. During class, my professor explains everything in great depth.	4.46	3.89	3.88	4.57	4.25
2. My professor motivates us, which has increased our interest in learning.	4.50	3.67	4.06	4.57	4.29
3. My professor attends our class on a regular and consistent basis.	4.33	3.67	3.94	4.71	4.22
4. My professor assigns grades in an objective and fair manner.	4.46	3.67	3.81	4.64	4.22
5. My professor is ethically and morally sound.	4.50	4.11	4.19	4.64	4.40
Mean	4.45	3.80	3.98	4.63	4.28

Social factors

An individual's academic performance might be impacted by their social life in terms of time demands and psychological state. These factors consist of romantic relationships, organizations, clubs, sports, and other extra-curricular activities (Umar, 2010). As reflected in the mean responses, first- and third-year students were uncertain in most criteria. They tend to have poor social activities because of

schoolwork. This supports the work of Umar (2010), which found a negative correlation between social factors and academic achievement. This indicates that a student's frequent social activities are detrimental to their academic success, in contrast to the findings of Strapp and Farr (2010), who found that participation in extracurricular activities connected to a student's major helps them attain academic success.

Table 6. Social factors' influence on BSFT's academic performance

Social Factors	Year Level				Mean
	1 st	2 nd	3 rd	4 th	
1. I use Facebook and other social networking websites.	3.71	4.00	3.56	4.00	3.78
2. I've always thought of gaming as a habit.	3.00	3.56	3.00	3.50	3.19
3. Even if I have school assignment, I go when a friend invites me.	2.75	3.00	2.81	3.07	2.87
4. I go out with friends after school hours.	3.29	3.56	3.13	3.43	3.32
5. I am used to keeping myself entertained while doing my assignments.	3.71	3.56	3.44	4.00	3.68
Mean	3.29	3.53	3.19	3.60	3.37

Conclusion and Recommendations

The findings of the study reveal that the majority of students feel positive about their academic performance. Students appear to be self-assured about their study habits. The food technology Instructors and Professors have demonstrated professional, ethical, and moral attitude toward the students, and it also shows that BSFT students express more compassion in their academics than in their social lives.

It is recommended that activities to improve the engagement of students in the program should be created, particularly for second-year students. This could be done through immersion in some of the actual work of food technology professionals. Realizing their contribution to society may improve their perception of the course and enhance their study habits toward better academic performance.

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