# Factors Influencing the Career Choice of the BIT-Food Technology Students SY 2023-2025

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## ABSTRACT

This study investigated the factors associated with the choice of Bachelor of Industrial Technology (BIT) major in Food Technology among students enrolled in BIT-FT. Utilizing a descriptive-correlational research design, data were collected from 86 respondents across three-year levels through a validated Likert-scale survey. The research examined three primary dimensions: Personal/Interpersonal, Institutional, and Socio-Economic factors. Statistical analysis using One-Way ANOVA revealed that there are no significant differences in the factors affecting career choice when respondents are categorized by age ($p=0.165$), sex ($p=0.682$), or Senior High School track ($p=0.314$). This indicates a unified motivational profile within the BIT Food Technology cohort, suggesting that the program attracts a specific demographic driven by consistent industrial interests regardless of their diverse academic or demographic backgrounds. Furthermore, Pearson Product-Moment Correlation analysis demonstrated a very strong positive relationship between Personal Factors and the final choice of major ($r=0.91$), followed closely by Institutional Factors ($r=0.88$). These results highlight that while students are primarily driven by internal passion and self-efficacy, the quality of university laboratories and the perceived industrial relevance of the curriculum serve as critical validation points for their commitment. Socio-Economic Factors also showed a strong correlation ($r=0.82$), reflecting the students' rational alignment with the "recession-proof" demand of the ASEAN food manufacturing sector. The study concludes that internal interest, supported by high-quality institutional facilities and clear marketability, remains the cornerstone of student recruitment and retention in industrial technology programs. It is recommended that the institution continues to prioritize laboratory upgrades to sustain this high level of student validation.

**Keywords:** Career Choice, Food Technology, Industrial Technology, Interpersonal Factors, Institutional Factors, Self-Efficacy, Socio-Economic Factors.

## INTRODUCTION

### Background of the Study

The global food sector is currently undergoing a major upheaval, fueled by the convergence of modern technology, stricter food safety laws, and a shift toward sustainable production. With the world's population expected to exceed approximately 10 billion by 2050, there has never been a greater demand for experienced individuals who understand food processing, quality control, and industrial efficiency (Simbulan, 2025). Within this framework, the Bachelor of Industrial Technology (BIT) program, with a focus on Food Technology, serves as a specialized pathway that connects pure science with applied industrial practice.

### The Problem in Context

Unlike a typical Bachelor of Science in Food Technology, the BIT degree emphasizes the "Industrial" component, which focuses on the operation, maintenance, and management of food production systems. Despite its economic importance, understanding why students pick this specific technological pathway over more traditional academic degrees remains a difficulty. According to current research, career decisions are no longer influenced by a single

factor, but rather by a complex interaction of "Social Cognitive Career Theory" (SCCT), in which self-efficacy, outcome expectations, and environmental supports shape a student's professional trajectory (Lent et al., 2020).

### Rationale for the Research

In recent years, institutional variables such as laboratory modernization and faculty knowledge have emerged as key "pull" factors for students (Lagrimas & Estrellado, 2023). Furthermore, the food industry's "recession-proof" status creates a sense of economic certainty that is especially appealing in post-pandemic labor markets (Ming, 2024,). External influences, including as parental expectations and peer influence, continue to serve as both facilitators and barriers to enrollment (Kazi & Akhlaq, 2017), (Barrera, 2024).

Understanding these aspects is critical for educational institutions seeking to improve their marketing tactics, enhance curricula, and better connect technical training with the actual motivations and objectives of their students. This study seeks to provide a complete analysis of the internal and external determinants related with the choice of BIT Food Technology, as well as a data-driven viewpoint on the future of industrial technical education.

## METHODOLOGY

### Research Design

The study employed a Descriptive-Correlational Research Design. This design was appropriate as it seeks to describe the existing factors (independent variables) and determine if a significant relationship exists between these factors and the students' choice of major (dependent variable). Creswell, J. W., & Creswell, J. D. (2023).

### Respondents and Sampling

The respondents of this study were students enrolled first year to third year BIT major in Food Technology Program from SY 2023-2025. The sampling technique used by the researcher were purposive sampling to ensure that the respondents have the first hand understanding in the decision making process in choosing the specific course and major. The Sample size was determine using the Slovins Formula to ensured statistical significance and valid number of respondents. (Etikan, I., Musa, S. A., & Alkassim, R. S. (2016)

### Research Instrument

The primary research instrument used was a structured survey questionnaire modified from other related study. It was divided into sections including demographic profile, influencing factors (personal, institutional and economic) rated using the 4 point Likert scale with the verbal interpretation from strongly agree to strongly disagree, level of influence/agreement from very high influence to very low influence and career choice assessment which include the questions regarding the certainty and the major reasons for choosing the program.

### Data Collection Procedure

Upon completing the approval to conduct as part of the ethical clearance, the respondents was informed and briefed with the study's purpose and their right such as confidentiality and right to withdraw as part of the consent. The administration of the questionnaire using digital form (google forms) followed administered by faculty of other program to avoid bias.

### Data Analysis

To describe the demographic profile of the respondents, frequency and percentage was used. Weighted mean was used to determined the most influential factors among the different categories. Product-Moment Correlation was used to test the relationship between specific factor and the final choice. ANOVA was use to see if there was a significant differences in the choices and demographic profiles.

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# RESULTS

## Demographic profile

### Age

**Table 1. Summary Table of Age Distribution**

| Age | Frequency (f) | Percentage | Rank |
|---|---|---|---|
| 20 | 29 | 33.7 | 1st |
| 19 | 16 | 18.6 | 2nd |
| 21 | 16 | 18.6 | 2nd |
| 18 | 11 | 12.8 | 3rd |
| 22 | 8 | 9.3 | 4th |
| 23-32 | 6 | 7.0 | 5th |
| Total | 86 | 100 | |

Table 1 shows the age distribution of 86 respondents enrolled in the Bachelor of Industrial Technology (BIT) majoring in Food Technology. The age range is 18 to 32 years old, reflecting a diversified student group that comprises both regular postsecondary students and non-traditional adult learners.

The largest frequency was seen at 20 years old, with 29 responses (33.7%). This shows that a sizable proportion of the student body was in their second or junior year of technical education. When combined with those aged 19 and 21 (both at 18.6%), the figures suggest that 70.9% of respondents are in the traditional college age range of 19-21. According to Villanueva (2024), students in this age group are frequently in a vital "refining stage" of their career development, with the technical demands of laboratory work substantially influencing their major choice.

While the majority are young people, the presence of students aged 24 to 32 (about 7%) demonstrates the program's attractiveness to "second-career" or "re-entry" participants. Lagrimas and Estrellado (2023) observe that older students in Industrial Technology programs are usually driven by a need for specialized technical skills that provide rapid industrial employability, rather than comprehensive academic degrees.

### b. Sex

**Table 2. Sex Distribution of the Respondents**

| Sex | Frequency | Percentage | Rank |
|---|---|---|---|
| Female | 64 | 74.4 | 1st |
| Male | 21 | 24.4 | 2nd |
| Prefer not to say | 1 | 1.2 | 3rd |
| Total | 86 | 100 | |

The data presented in Table 2 was the sex distribution of 86 respondents enrolled in the BIT Food Technology program. The distribution showed a significant difference between male and female enrollment.

The bulk of responses were female, with 64 (74.4%). This high percentage indicated that the Food Technology major was viewed as a female-dominated profession within the industrial technology spectrum. According to Simbulan (2025), while "Industrial Technology" as a whole has traditionally leaned male due to its association with heavy machinery, the "Food Technology" major specifically attracts females due to its perceived intersection with chemistry, nutrition, and quality control—areas where women have increasingly established a strong professional presence.

Male respondents account for 21 people (24.4%). While they were in the minority, their presence demonstrates a keen interest in the food industry's industrial and manufacturing sectors. Tukiran et al. (2021) observed that

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male students in vocational food courses are frequently driven by the degree's "Industrial" management and large-scale processing parts, rather than the culinary or domestic science aspects.

The inclusion of one respondent (1.2%) who "prefers not to say" exemplifies modern research ethics that recognize gender variation beyond binary. Hussain and Malik (2020) support this trend in demographic reporting, arguing that as the workforce grows more diverse, the barriers to entry into technical sectors become less about gender and more about specialized skill sets and economic reasons.

**Senior High School Tract**

**Table 3**. **Respondents Senior High School Track/Strand Distribution**

| SHS Track/ Strand | Frequency | Percentage | Rank |
|---|---|---|---|
| HUMSS | 33 | 38.37 | 1st |
| TVL | 32 | 37.21 | 2nd |
| ABM | 10 | 11.63 | 3rd |
| GAS | 6 | 6.98 | 4th |
| STEM | 5 | 5.81 | 5th |
| Total | 86 | 100 | |

The data presented in Table 3 shown a diverse academic background among the 86 respondents, with a notable concentration in two specific strands.

The Humanities and Social Sciences (HUMSS) strand has the highest frequency of students, with 33 (38.37%), followed closely by the Technical-Vocational-Livelihood (TVL) track, which has 32 (37.21%). The large percentage of TVL graduates was expected to have a significant impact, as the BIT program was a natural development for students who were already familiar with technical-vocational abilities. According to Lagrimas and Estrellado (2023), TVL students frequently seek BIT degrees to advance from basic skills to industrial management positions. On the other hand, the large number of HUMSS students was an important result. It appears that many students with a "soft sciences" background are turning to "hard" industrial technology. Villanueva (2024) noted that this shift were often driven by a realization of the high employability and tangible career outcomes in the food manufacturing sector

Interestingly, the Science, Technology, Engineering, and Mathematics (STEM) strand accounts for only 5.81% of the population. This could indicate that STEM graduates are frequently directed toward traditional Engineering or Pure Science degrees, whereas BIT Food Technology is regarded as a more "applied" and "industrial" option. ABM (11.63%) and GAS (6.98%) students make up a smaller proportion, presumably choosing the program as a bridge between business-oriented or general education and technical specialization (Ming, 2024).

**Year Level**

**Table 4**. **Distribution of Respondents by Year Level**

| Year Level | Frequency | Percentage | Rank |
|---|---|---|---|
| Second Year | 48 | 55.8 | 1st |
| First Year | 24 | 27.9 | 2nd |
| Third Year | 14 | 16.3 | 3rd |
| Total | 86 | 100 | |

Table 4 shows the data of the academic standing of the 86 respondents, showing a concentrated distribution within the middle phase of the degree program.

The bulk of the respondents, 48 in total (55.8%), were in their second year. This overwhelming representation implies that the data significantly represents the viewpoints of students who have progressed beyond the

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introductory portion of the program but have yet to begin their final specialized internships. According to Lagrimas and Estrellado (2023), the second year is frequently the "pivotal stage" in industrial technology programs, during which students meet their first set of hard main laboratory subjects, cementing their career commitment.

First-year students account for 24 responders (27.9%). These students share a perspective based on recent career decisions and first impressions of the school. According to Villanueva (2024), first-year students in Food Technology are frequently driven by the industry's "novelty" and strong initial aspirations for future employment.

Third-year students were the smallest group, with 14 replies (16.3%). While they were a minority in this group, their contribution was critical since it represented a more "matured" understanding of the variables influencing their decision. By the third year, students have often received more intensive technical training. According to Simbulan (2025), upperclassmen's motives change away from simply personal interests and toward a more pragmatic focus on industry preparedness and employment participation.

**Influential factors In the Career Choice of the Respondents**

**Table 5. Summary of Influential Factors among First Year Respondents Career Choice**

| Factors | Mean | Verbal Interpretation | Level of Influence/ Agreement |
|---|---|---|---|
| Personal/Interpersonal Factors | 3.32 | Strongly Agree | Very high Influence |
| Institutional Factor | 3.15 | Agree | High Influence |
| Socio Economic Factor | 3.1 | Agree | High Influence |
| Grand mean | 3.19 | Agree | High Influence |

Table 5 shows that among the influential factors, personal/interpersonal factors with the mean of 3.32 with the verbal interpretation of “Strongly Agree” and “Very High Influence” on the level of influence specifically on the strong personal interest in food innovation and processing. Both institutional and socio economic factors got the mean of 3.15 and 3.0 both with the verbal interpretation of “Agree” and “High Influence” on the level of influence. The aggregate data shows a Grand Mean of 3.19, which is interpreted as "High Influence." This indicates that the decision to pursue this specific technical major is the consequence of a combination of personal, academic, and economic factors.

The respondents' principal drivers are personal and interpersonal issues, with the highest mean of 3.32 (Very High Influence). This suggests that personal motivation, self-efficacy, and the influence of intimate social circles (family and peers) are the most important determinants of enrollment. According to Bandura (2021), "self-efficacy" is the strongest predictor of job choice in technical subjects; students who believe they have the ability for laboratory work and food science are more likely to pursue this path. This finding is consistent with Villanueva's (2024) observation that students in Food Technology frequently claim a "natural affinity" for the combination of science and creativity inherent in the curriculum.

Personal and interpersonal variables are the key motivators for responders, with the greatest mean of 3.32 (Very High Influence). This suggests that personal motivation, self-efficacy, and the impact of intimate social circles (family and peers) are the most powerful predictors of enrollment. According to Bandura (2021), "self-efficacy" is the most powerful predictor of job choice in technical subjects; students who believe they are qualified for laboratory work and food science are more likely to choose this path. This conclusion is consistent with Villanueva's (2024) observation that students in Food Technology frequently claim a "natural affinity" for the discipline's unique blend of science and creativity.

Socio-Economic Factors received a mean of 3.10 (High Influence). While this is the lowest of the three categories, it remains a strong incentive. Considerations include future compensation, employment security, and the labor market need for Food Technology graduates. According to Simbulan (2025), the food manufacturing sector is frequently seen as "recession-proof," which leads students and their parents to see this major as a prudent economic investment. Though influence of parents or guardians has the lowest mean of 2.88 with the verbal interpretation of “ agree “ and a “High Influence”, peer recommendation and success of alumni greatly influence the students career choice with the highest mean of 3.25 with the same verbal interpretation and influence level.

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**Table 6. Summary of Influential Factors among Second Year Respondents Career Choice**

| Factors | Mean | Verbal Interpretation | Level of Influence/ Agreement |
|---|---|---|---|
| Personal/Interpersonal Factors | 3.21 | Agree | High Influence |
| Institutional Factor | 3.14 | Agree | High Influence |
| Socio Economic Factor | 3.05 | Agree | High Influence |
| Grand mean | 3.13 | Agree | High Influence |

As shown in table 6, the data yields a Grand Mean of 3.13, which corresponds to a verbal interpretation of "Agree" and a "High Influence" level. This indicates that the respondents' decision-making process was multifaceted, involving internal desires, school-related attributes, and external economic conditions.

Personal and interpersonal variables continue to be the most powerful motivator for second-year students, with a mean score of 3.21. This shows that students' intrinsic interest in food science, as well as support from their immediate social circles, remain the primary reasons for their enrollment. According to Bandura (2021), self-efficacy—the belief in one's ability to succeed in given situations—is an important factor in profession choice. In the context of industrial technology, students who believe they are capable of understanding complex food processes are more likely to stay with the program.

The Institutional Factor scored an average of 3.14. This high level of influence emphasizes the importance of the university's image, the quality of its laboratory equipment, and the curriculum's relevancy. The availability of institutional resources is critical for second-year students, who frequently begin their major technical topics. Ming (2024) contends that for technical-vocational tracks, the "tangibility" of the school's facilities serves as a form of validation for the student, strengthening their view that the institution can successfully bridge the divide between education and industrial work.

Socioeconomic factors had a mean of 3.05. While still classified as having "High Influence," this is the lowest average of the three groups. Specifically, parents and guardians influence in the decision making got the lowest mean of 2.92 followed by the peer recommendation and success stories of alumni with the mean of 2.98 with both “agree” verbal interpretation and “High influence” level. This shows that, while future compensation and job stability are essential, they have a slightly lower influence on this group than personal interest and institutional excellence. Simbulan (2025) observes that, while the "recession-proof" nature of the food business provides a foundation of security, day-to-day engagement with the subject matter (Personal Factors) is what normally sustains a student through the rigors of an industrial technology degree.

**Table 7. Summary of Influential Factors among Third Year Respondents Career Choice**

| Factors | Mean | Verbal Interpretation | Level of Influence/ Agreement |
|---|---|---|---|
| Personal/Interpersonal Factors | 3.54 | Strongly Agree | Very high Influence |
| Institutional Factor | 3.43 | Strongly Agree | Very high Influence |
| Socio Economic Factor | 3.36 | Strongly Agree | Very high Influence |
| Grand mean | 3.44 | Strongly Agree | Very high Influence |

As shown in Table 7, the data yields a Grand Mean of 3.44, which corresponds to a verbal interpretation of "Strongly Agree" and a "Very High Influence" level. This score is notably higher than those of the lower year levels, suggesting that as students approach the completion of their degree, their conviction regarding the factors that led them to this path has strengthened.

The most significant drivers for third-year students are personal and interpersonal elements, which have a mean of 3.54 (Very High Influence). At this point, most students have finished their major technical laboratory disciplines, which increases their internal motivation and self-belief. According to Bandura (2021), "mastery experiences"—actually performing professional tasks—are the most potent source of self-efficacy. For these people, the successful implementation of food technology concepts has most likely transformed their initial curiosity into a strong professional identity.

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The Institutional Factor has a mean of 3.43. This implies that the university's reputation and facilities continue to have a significant impact on student happiness. By their third year, many students are preparing for internships or industry immersion. According to Ming (2024), the "technological capital" offered by an institution—such as contemporary processing equipment and industry-aligned curricula—is what students rely on as they go from the classroom to the workplace. The high mean indicates that students believe the college has adequately prepared them for the industry.

Socioeconomic factors received an average of 3.36. While this is the lowest mean in the set, it still qualifies as "Very High Influence." Specifically, potential high salary in food manufacturing sector got the highest mean of 3.57 and the offering of high job security in the food industry followed with the mean score of 3.5 both with the verbal interpretation of " strongly agree" and "very high influence" level. This shows students' understanding of the economic value of their degree. As they approach graduation, the "recession-proof" aspect of the food manufacturing business becomes an increasingly palpable inducement. According to Simbulan (2025), the ASEAN region's desire for quality control and research and development specialists ensures that food technology remains a high-value career path, which third-year students are well aware of.

**Table 8 Summary of Influential Factors among All the Respondents Career Choice**

| Factors | Mean/ Verbal Interpretation/Level of Influence | | |
|---|---|---|---|
| | **First Year** | **Second Year** | **Third Year** |
| Personal/Interpersonal Factors in food | 3.32<br>Strongly Agree<br>Very High Influence | 3.21<br>Agree<br>High Influence | 3.54<br>Strongly Agree<br>Very High Influence |
| Institutional Factor | 3.15<br>Agree<br>High Influence | 3.14<br>Agree<br>High Influence | 3.43<br>Strongly Agree<br>Very High Influence |
| Socio Economic Factor | 3.1<br>Agree<br>High Influence | 3.05<br>Agree<br>High Influence | 3.36<br>Strongly Agree<br>Very High Influence |
| Grand mean | 3.19<br>Agree<br>High Influence | 3.13<br>Agree<br>High Influence | 3.44<br>Strongly Agree<br>Very High Influence |

**Table 9. ANOVA Result of the Influential Factors Across Year Level of the Respondents**

| **Source of Variation** | ***SS* (Sum of Squares)** | ***df* (Deg. of Freedom)** | ***MS* (Mean Square)** | ***F-value*** | ***p*-value** | **Decision** |
|---|---|---|---|---|---|---|
| Between Groups | 0.165 | 2 | 0.0825 | 7.14 | 0.026* | Significant |
| Within Groups | 0.069 | 6 | 0.0115 | | | |
| Total | 0.234 | 8 | | | | |

*significant at 0.05 level of significance

The ANOVA results in Table 9 demonstrate a significant difference ($p<0.05$) between the three year levels. Specifically, Third Year students (M=3.44) have a considerably higher impression of impact than Second Year (M=3.13) and First Year (M=3.19). This shows that as students continue through the BIT Food Technology program, their appreciation for the institutional and personal aspects of the course grows. Because a significant difference was discovered, a Tukey HSD (Honestly Significant Difference) test was performed to determine which groups differed. It found no significant difference between the first and second years (means are quite near). A significant difference was detected between the third and first/second years. It imply that the 3rd Year students have a stronger association with the factors, likely due to increased exposure to specialized major subjects and laboratory facilities

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**ANOVA Result On The Significant Differences on the Demographic Profile And The Career Choice.**

**a. age**

**Table 10. ANOVA result Between Choice Factors and Age**

| Source of Variation | Sum of Squares (*SS*) | Degrees of Freedom (*df*) | Mean Square (*MS*) | *F*-value | *p*-value | Decision |
|---|---|---|---|---|---|---|
| Between Groups | 0.412 | 2 | 0.206 | 1.84 | 0.165 | Accept *H*0 |
| Within Groups | 9.296 | 83 | 0.112 | | | |
| Total | 9.708 | 85 | | | | |

The ANOVA results in Table 10 shows that there is no significant difference in the factors influencing major decision when grouped by age (p=0.165>0.05). This means that whether a student is 18 or 32, the primary drivers—personal, institutional, and socioeconomic—are relatively consistent across the board.

The lack of a substantial difference shows that the Bachelor of Industrial Technology program targets a distinct "technical-minded" demographic whose objectives remain consistent across life stages. According to Lagrimas and Estrellado (2023), pupils in industrial paths are frequently united by a shared "technological interest" that goes beyond age-related maturity levels. Whether a student attends the program immediately from Senior High School or as a re-entry student at the age of 32, the university's laboratory reputation and the perceived security of the food business have equal importance.

This finding is consistent with Social Cognitive profession Theory (Lent et al., 2020), which holds that, while age can alter one's life context, the basic "person-environment" interaction remains the most important predictor of profession choice. Older students (22-32) may place a higher importance on employment stability than younger students (18-19), although these variations do not achieve statistical significance within the BIT Food Technology cohort (Villanueva, 2024).

**b. Sex**

**Table 11. ANOVA result Between Choice Factors and Sex**

| **Source of Variation** | **Sum of Squares (*SS*)** | **Degrees of Freedom (*df*)** | **Mean Square (*MS*)** | ***F*-value** | ***p*-value** | **Decision** |
|---|---|---|---|---|---|---|
| Between Groups | 0.084 | 2 | 0.042 | 0.385 | 0.682 | Accept *H*0 |
| Within Groups | 9.047 | 83 | 0.109 | | | |
| Total | 9.131 | 85 | | | | |

The ANOVA results shown in Table 11 revealed a p-value of 0.682, which is significantly higher than the 0.05 threshold. Therefore, the null hypothesis is accepted, indicating that there is no significant difference in the factors affecting the choice of major between male and female students.

This absence of major variation points to a "convergence of motivations" within the Food Technology discipline. While previous data often suggested that technical professions were male-dominated, modern industrial technology programs demonstrate that once students commit to a specialized track like Food Technology, their motivators—such as personal passion and institutional reputation—are gender-neutral. According to Hussain and Malik (2020), gender-based inequalities in career choice are decreasing in technical subjects where "outcome expectations" (job security and industrial application) are explicitly established for all students, independent of gender.

The findings show that the Personal/Interpersonal Factors (interest and self-efficacy) that attract female students to the BIT program are statistically identical to those of their male counterparts. Simbulan (2025) observes that in the ASEAN food manufacturing sector, the need for technical skills in quality assurance and processing management is so great that enrollees have a consistent motivating profile. The "recession-proof" character of

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the food business and the excellence of the university's laboratory facilities appeal to both sexes equally (Villanueva, 2024).

**Senior High School Tract**

**Table 12. ANOVA result Between Choice Factors and High School Tract**

| Source of Variation | Sum of Squares (*SS*) | Degrees of Freedom (*df*) | Mean Square (*MS*) | *F*-value | *p*-value | Decision |
|---|---|---|---|---|---|---|
| Between Groups | 0.542 | 4 | 0.135 | 1.21 | 0.314 | Accept *H*0 |
| Within Groups | 9.066 | 81 | 0.112 | | | |
| Total | 9.608 | 85 | | | | |

The ANOVA results shown in Table 12 yield a p-value of 0.314, which is greater than the alpha level of 0.05. Consequently, the null hypothesis is accepted, indicating that there is no significant difference in the factors affecting the choice of major among students from different Senior High School tracks.

The data demonstrates a distinct distribution, with HUMSS (38.37%) and TVL (37.21%) as the dominating strands. Regardless of the academic foundations—ranging from the social science focus of HUMSS to the technological focus of TVL—students are motivated by the same fundamental causes. According to Lagrimas and Estrellado (2023), enrolling in a specialized program such as BIT Food Technology is frequently a "reset" point in which the student's present interest in industry applications overcomes their former academic trajectory.

The absence of a substantial difference shows that Institutional Factors (e.g., educational facilities) and Socio-Economic Factors (e.g., job stability in the food industry) are universal "pull" factors. Whether a student studied accounting (ABM) or science (STEM) in high school, they are both drawn to the "recession-proof" characteristics of food technology. As Villanueva (2024) points out, the BIT program's emphasis on industrial practice serves as a bridge, making it an appealing option for students from both academic and vocational backgrounds looking for concrete professional objectives.

According to the concept of Social Cognitive Career Theory (Lent et al., 2020), these findings show that "learning experiences" in SHS did not result in divergent "outcome expectations" for the BIT program. Students in all strands place the same emphasis on the program's technical training and employability, resulting in a uniform motivational profile within the cohort.

**Relationship Between Influencing Factors and the Final Choice by Year level**

**First Year**

**Table 13. Pearson Correlation Analysis Results on the Influencing Factor and Final Choice by First Year Students**

| Variables Correlated | Pearson *r* | *p*-value | Interpretation |
|---|---|---|---|
| Personal Factors vs. Final Choice | 0.875 | < 0.001 | Very Strong Positive Correlation |
| Institutional Factors vs. Final Choice | 0.792 | < 0.001 | Strong Positive Correlation |
| Socio-Economic Factors vs. Final Choice | 0.684 | 0.005 | Moderate to Strong Positive Correlation |

The analysis shown in Table 13 reveals that Personal Factors have the highest correlation coefficient (r=0.875), indicating a very strong association with the decision to enroll. This shows that individuals who consider themselves to have strong technical competence and a genuine interest in food science are more likely to pursue this subject. According to Bandura (2021), "self-efficacy" is the most powerful predictor of career choice since it decides whether a person will seek to enter a difficult technical profession. This finding is consistent with Villanueva's (2024) discovery that intrinsic passion is the key "anchor" for BIT Food Technology students.

Institutional Factors (r=0.792) show a strong positive association. This suggests that as the perceived quality of the university's laboratories and curriculum improves, students' commitment to their majors grows. Ming (2024)

emphasizes that for industrial technology programs, the "tangibility" of school facilities is an important validation point for students, changing initial curiosity into a final enrollment choice.

Socioeconomic Factors (r=0.684) have a substantial positive association, but it is lower than the other two variables. This suggests that, while job stability and parental counsel are significant, they serve as "supporting" variables rather than the major motivator for the decision. According to the Social Cognitive Career Theory (Lent et al., 2020), external factors such as family and economic prospects supply the "outcome expectations" that legitimize a student's investment in a technical degree, but the individual's interest remains the primary motivator.

**Second Year**

**Table 14. Pearson Correlation Analysis Results on the Influencing Factor and Final Choice by Second Year Students**

| Variables Correlated | Pearson *r* | *p*-value | Interpretation |
|---|---|---|---|
| Personal Factors vs. Final Choice | 0.82 | 0.002 | Strong Positive Correlation |
| Institutional Factors vs. Final Choice | 0.78 | 0.004 | Strong Positive Correlation |
| Socio-Economic Factors vs. Final Choice | 0.65 | 0.015 | Moderate Positive Correlation |

As shown in Table 14, the Personal/Interpersonal Factors are strongly correlated (r=0.82). For second-year students, this suggests that their internal motivation remains strong. According to Bandura (2021), the "middle" portion of a degree is when self-efficacy is most tested; the substantial link shows that students who have a strong personal connection to food technology are more likely to stay in the program.

Institutional factors (r=0.78) also have a substantial correlation with the ultimate decision. This demonstrates that as students spend more time in the university's laboratories, the quality of these facilities further strengthens their choice to enroll. Ming (2024) believes that institutional support serves as a "secondary anchor," ensuring that the student's environmental experience corresponds to their initial academic expectations.

Socioeconomic factors (r=0.65) exhibit a moderate association. This lower value when compared to personal and institutional characteristics indicates that by the second year, students are becoming more independent in their career commitment. While career stability and family influence are still important, they are secondary to the student's personal satisfaction with the curriculum (Lent et al., 2020).

**Third Year**

**Table 15. Pearson Correlation Analysis Results on the Influencing Factor and Final Choice by Third Year Students**

| Variables Correlated | Pearson *r* | *p*-value | Interpretation |
|---|---|---|---|
| Personal Factors vs. Final Choice | 0.91 | < 0.001 | Very Strong Positive Correlation |
| Institutional Factors vs. Final Choice | 0.88 | < 0.001 | Strong Positive Correlation |
| Socio-Economic Factors vs. Final Choice | 0.82 | < 0.001 | Strong Positive Correlation |

The Third-Year respondents exhibit a "Very High Influence" across all factors, suggesting that as students approach graduation, their realization of the factors that led them to the program becomes more pronounced and validated.

As shown in Table 15, the Personal/Interpersonal Factors exhibit the strongest association (r=0.91). By the third year, most students have finished specialized laboratory subjects. According to Bandura (2021), this "mastery experience" considerably increases self-efficacy. The extremely strong correlation suggests that their own love for food technology is the most important factor in maintaining their commitment as they move into increasingly complicated technical applications.

Institutional factors (r=0.88) also show a strong association. Third-year students use modern food processing equipment more often. Ming (2024) notes that for industrial technology students, continual exposure to modern

facilities strengthens the student's perception that their decision was proper, because they believe the university is providing the essential "technological capital" for their future professions.

Socio-economic factors (r=0.82) show a larger association here than in prior years. As students approach their internships and graduation, the realities of the work market become increasingly important. According to Simbulan (2025), third-year students are more aware of the high need for quality control and R&D jobs in the ASEAN food sector, which aligns their final choice with tangible economic outcome expectations indicated by Social Cognitive Career Theory (Lent et al., 2020).

# IMPLICATIONS OF THE STUDY

### Implications for Curriculum Design

With roughly 75% of students coming from HUMSS and TVL, the institution must strike a balance between enhancing science foundations (for HUMSS students) and developing technical laboratory abilities (for TVL students). As Lent et al. (2020) argue in Social Cognitive Career Theory, regardless of their high school course, these students are united by their "outcome expectations"—the conviction that this degree will lead to steady employment in the food sector.

### Implications for Research Stability

The use of all three year levels guarantees that the study provides a longitudinal snapshot of student motivations. The high percentage of second-year responders offers a consistent data set from students who are neither fresh to the program nor concerned about their impending graduation, allowing for a fair assessment of institutional and socioeconomic impacts.

### Implications for Career Choice

The concentration of students at age 20 (33.7%) may indicate a time when students are most impacted by socioeconomic factors such as job security and industry demand. As Lent et al. (2020) argue in Social Cognitive Career Theory, this age group is actively considering their "outcome expectations"—the notion that finishing a Food Technology degree will lead to stable, high-paying employment in the food manufacturing sector.

# DISCUSSION

### The Profile of the BIT Food Technology Student

The demographic data reveals a student body that is predominantly Female (74.4%) and within the 19–21 age bracket (70.9%). Interestingly, the respondents come from diverse academic backgrounds, with HUMSS (38.37%) and TVL (37.21%) being the most common Senior High School strands.

The significant proportion of female students implies that, whereas Industrial Technology is sometimes portrayed as a male-dominated area, the Food Technology major is gender-neutral or female-preferred. According to Simbulan (2025), the trend toward food science and quality assurance employment in the manufacturing sector has made the curriculum extremely appealing to women looking for technical careers. Furthermore, the different SHS backgrounds suggest that the BIT program is considered as a "career bridge" for students in both academic and vocational disciplines seeking practical industrial skills (Villanueva, 2024).

### Consistency of Motivations Across Demographics

The One-Way ANOVA results for Age ($p$=0.165), Sex ($p$=0.682), and SHS Track ($p$=0.314) all yielded non-significant results. This is a pivotal finding, as it indicates that the motivations for choosing BIT Food Technology are universal across this cohort.

Whether a student is a 32-year-old re-entry learner or an 18-year-old HUMSS graduate, they are all connected by the same "pull" factors. According to Lagrimas and Estrellado (2023), the Industrial Technology program

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provides a unique value proposition—applied skills and high employability—that attracts students with similar motivating profiles regardless of their background.

**The Power of Personal Interest and Institutional Validation**

The Pearson Product-Moment Correlation showed that Personal/Interpersonal Factors had the strongest relationship with the final choice ($r$=0.875 to 0.91 across year levels). This aligns with Social Cognitive Career Theory (Lent et al., 2020), which posits that self-efficacy and personal interest are the primary engines of career decision-making.

Institutional factors ($r \approx 0.80$) also played a significant influence. As students enter their third year, their perception of the program's impact grows (Grand Mean = 3.44). This implies that the university's laboratory resources and faculty experience provide "confirmatory evidence" for pupils. According to Ming (2024), for technical degrees, the institution's capacity to provide a "simulated industrial environment" is what converts a student's initial curiosity into a long-term commitment.

**Economic Security as a Stabilizing Factor**

While socioeconomic factors (e.g., family influence and job stability) had a moderate-to-strong connection (r=0.684 to 0.82), they were second to personal and institutional drivers. This suggests that, while students are aware of the food industry's "recession-proof" nature (Simbulan, 2025), they chose the major mostly because they enjoy the technical work and believe in the school's teaching.

## CONCLUSION

Based on the statistical analysis and discussion of the results, the following conclusions are drawn:

The study reveals that the incentives for enrolling in the BIT Food Technology program are largely similar across all demographic groups. The non-significant results from the ANOVA tests for age, gender, and Senior High School track demonstrate that the "pull" of industrial technology—specifically, its promise of technical mastery and employment security—extends across the students' different backgrounds. This shows that the program has a distinct identity that draws a specific sort of learner, regardless of their previous academic strand or life stage (Lagrimas & Estrellado, 2023).

Personal curiosity and self-efficacy are the most important factors of career choice in this sector. The very significant positive correlation (r=0.875 to 0.91) demonstrates that students choose this major because they see a good fit between their own strengths and the technical requirements of food processing and quality control. According to Social Cognitive Career Theory, internal drivers are the most reliable indicators of academic and professional perseverance (Lent et al., 2020).

The institution plays an important role in "validating" the student's decision. As students advance from first to third year, their appreciation for institutional factors grows dramatically. This leads to the conclusion that, while a student may attend the program out of curiosity, it is the quality of the laboratory facilities and the curriculum's industry applicability that ensures their long-term dedication and happiness (Ming, 2024).

Finally, the research suggests that students make extremely sensible decisions. The substantial association between socio-economic characteristics and final choice, particularly among third-year students, suggests that the food industry's "recession-proof" nature serves as a potent secondary motivator. Students are not simply selecting a course; they are selecting a perceived path to economic stability in the ASEAN job market (Simbulan, 2025).

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