Strand preferences among grade 10 students of San Francisco National High School

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Abstract

This study aimed to identify the strand preference in Senior High School that is commonly encountered by Grade 10 students in terms of age, sex, favorite subject, preferred strand, and the factors that affect the respondent's choice in association in choosing a strand on senior high school curriculum in terms of personal interest; academic performance; and parental influence. The research tool was a survey questionnaire. The questionnaire is composed of the respondent's profile and 15 statements to be rated. The factors fairly influence the preferences of the senior high school. The results showed that strands ICT, SMAW, STEM, and HUMSS were the most chosen strand throughout the senior high school curriculum, as associated with their favorite subjects in relation to the factors affecting their strand choice. Therefore, as this study was conducted, it gave the students a reassessment of their thoughts and awareness, hence making them feel more assured throughout their decisions.

Keywords: senior high school track, decision-making, interest, influences, academic performance

Introduction

The K-12 program covers kindergarten and 12 years of basic education (six years of primary education, four years of junior high school, and two years of senior high school) to provide sufficient time for mastery of concepts and skills, develop lifelong learners, and prepare graduates for tertiary education. In the Senior High school curriculum, tracks are considered fields where students can gain sufficient contemplation in pursuing their college life. These strands will help narrow down their potential college and career options. The student's preferences may differ in a variety of aspects. Once students choose a strand they like, studying becomes more enjoyable. Their choice should match their interests and students are trained to venture with enough intelligence in coping and dealing with life and their strand preference which are determined by several factors.

Developing a good inclination must be a crucial task, as it will give impact an individual's disposition. Strand preferences are free opportunities to select the desired career. However, students' strand preferences are continuously challenged by different factors. Simply means, choice of career plays a major role in a student's future in the Senior High School curriculum. Strands on tracks at hand include Academic Track; STEM, HUMSS, ABM, GAS. TVL Track; ICT, SMAW, IA, HE, Agri-fishery Arts. In career selection, students must undergo an intricate process, where they should consider factors that would affect their overall decision such as the sociodemographic profile, parental influences, academic performance, personal interest, and many other aspects to forcefully be open-minded about the things they will encounter in the not-too-distant future (Moneva & Malbas, 2019; Santric-Milicevic *et al*., 2014) [1, 2].

Factors that influence students' choices are conclusively known. This denotes a positive and negative predisposition towards their choices. Students' strand preferences can be seen as a disposition toward learning, working with others, and functioning in a social institution. This perception should be looked at alongside academic performance, an important outcome of acquirement.

Oftentimes, students feel confused, uncertain, and undecided. They may be feeling pressured by the factors such as lack of guidance, fear of failure, not having the courage to try new things, and more. Misfit of choosing a strand may result in unemployment and underemployment. Professional life and future achievement are a result of the appropriate choice of strand among students. In relation to these, students' level of performance in school serves as a crucial contribution to determining the succession rate regarding their strand preferences.

It is for these reasons that this investigation is necessarily embarked on to critically study the strand preferences among grade 10 students of San Francisco National High school. As a way of seeking understanding and combating their confusion, uncertainties, and hesitations, this investigation is not only centered on determining the student's strand preferences. This is to find out the components that may contribute to their decisions such as personal interest, academic performance, and parental influences.

Materials and methods

This chapter described the study's research design, participants, data gathering tools, data gathering procedures, and data analysis. It covers the fundamental idea behind the use of research design, the prerequisites for sample selection, the validity and reliability of the data-gathering tools, the rationale behind using various statistical approaches to process data, as well as ethical considerations.

Research design

The study used a quantitative-descriptive research design to easily obtain information. The quantitative-descriptive research design is a quantitative design that attempts to collect quantifiable information for statistical analysis of the population sample. It is a popular market research tool that allows us to collect and describe the demographic segment's nature.

Respondents

The study took place at San Francisco National High School, San Francisco (Anao- aon) Surigao Del Norte. 188 students in Grade 10 in the school year 2022-2023. The sample needed in this research study is 127 out of 188 population with a 95% confidence level and 5% of margin error.

Sampling design

The researchers got valid results from the respondent through random sampling. Random sampling is a subset of individuality chosen from a larger set (a population). It is an unbiased surveying technique and a basic type of sampling since it can be a component of other more complex sampling methods. The principle of random sampling is that every object has the same probability of being chosen.

Data gathering tools

The researchers utilized a researcher-made questionnaire as a primary tool to collect and described the data. The specific tool has two parts. Part 1 includes the demographic profile of the respondents such as their age, gender, and favorite subject. Part 2 includes the strand preferences among the grade 10 students of San Francisco National High School. And the last part includes the factors affecting the preferences among Grade 10 students.

Data gathering procedures

The researchers managed to reproduce the questionnaire that accords with the number of respondents. The researchers obtained permission from the advisers to administer the research instrument and to personally distributed the questionnaire with a hundred percent guarantee of returning the answered questionnaires. The respondent's information was classified as confidential and the data that was gathered are useful.

Data analysis

The following tools were utilized in analyzing the data:

Frequency count and percentage distribution: These tools were used to numerically represent and describe the demographic profile of the respondents.

Weighted mean and standard deviation: These tools were also utilized to determine the average of the respondents' decision and perceptions on choosing a strand in terms of a specific factor and how diverse their perceptions will be from the average.

Analysis of variance (ANOVA): This tool, as well, was used to determine the significant differences between student-preferred strands and the factors affecting their strand preferences.

Ethical considerations

Assuring the confidentiality of the respondents. The researchers made the Survey Questionnaire Optional to put the respondent's profile. The questionnaire was properly managed and in the best form necessary to gather all the required data. This gives proper credit to all the resources taken in any format.

Results and discussion

A total of 127 Grade 10 students were analyzed. They were encouraged to answer the survey questionnaire as it was for us to assess their preferred strand, determine the factors affecting their decision, and test if there is a significant difference between the strand and factors.

Table 1 showed the demographic profile of the respondents in terms of age, sex, and favorite subject.

Table 1.1: Age profile

Age level	Frequency count	Percentage
15 years old	84	66%
16 years old	31	24%
17 years old	7	6%
18 years old	3	2%
19 years old	2	2%
Total	127	100%

In terms of age, it can be noted that 66% of the respondents are aged 15 years old, 24% of the respondents are aged 16 years old, 6% of the respondents are aged 17 years old, and 4% of the respondents are aged 18 to 19 years old.

Table 1.2: Sex profile

Gender	Frequency count	Percentage
Male	63	50%
Female	64	50%
Total	127	100%

Profile among sex reveals that half of the incoming senior high school students are male, which comprises 63 (50%) of the total number of respondents, while there are also 64 (50%) Female respondents as shown in Table 1.1 above.

Table 1.3: Favorite subject profile

Subject	Frequency count	Percentage
English	19	15%
Mathematics	22	17%
Science	39	31%
Filipino	24	19%
Araling Panlipunan	8	6%
ESP	5	4%
MAPEH	2	2%
TLE	8	6%
Total	127	100%

Throughout the collection of data, it has been evaluated that most of the respondents' interest appertains to science subjects, with a total of 31% out of 100%, 19% of the respondents showed interest in Filipino subjects, 17% in Mathematics, 15% in English, 6% in both Araling Panlipunan and TLE subject, 4% in ESP, and 2% in MAPEH subject.

Table 2: Preferred strands of incoming senior high school

Subject	Frequency count	Percentage
STEM	27	21%
HUMSS	29	23%
GAS	5	4%
ABM	2	2%
ICT	35	27%
SMAW	27	21%
Agri- Fishery	1	1%
Industrial Arts	1	1%
Total	127	100%

In terms of the preferred strand of incoming senior high school students, ICT (Information Communication and Technology) strand resulted to be the most preferred strand of the respondents, next on the rank is HUMSS (Humanities and Social Sciences) with a percentage of 23%, STEM (Sciences Technology Engineering Mathematics) and SMAW (Shielded Metal Arc Welding) with 21%, GAS (General Academic Strand) with 4%, ABM (Accountancy Business and Management) with 2%, and 1% in both Agri-Fishery and IA (Industrial Arts) strand.

Table 3.1: Factors affecting the strand preferences in terms of personal interest

Indicators	Mean	Standard Deviation	Verbal Interpretation	Qualitative Description
I choose this strand because it has subjects where I could get good academic grades.	3	0.71	Agree	Moderately Preferred
I choose this strand because it associates with my dream career.	3.16	0.82	Agree	Moderately Preferred
I choose this strand because the subjects are interesting.	2.91	0.83	Agree	Moderately Preferred
I am personally interested in this strand.	3.04	0.82	Agree	Moderately Preferred
I choose this strand because I have skills that are associated with this learning environment.	3.07	0.73	Agree	Moderately Preferred
Total	3.03	0.79	Agree	Moderately Preferred

Legend:

Scale	Parameter	Verbal Interpretation	Qualitative Description
4	3.25 – 4.00	Strongly Agree (SA)	Highly Preferred
3	2.50 – 3.24	Agree (A)	Moderately Preferred
2	1.75 – 2.49	Disagree (D)	Slightly Preferred
1	1.00 – 1.74	Strongly Disagree (SD)	Not Preferred

The table above shows the personal interest factors affecting the Grade 10 students' strand preference. The majority of students' chosen strand is associated with their dream career (M= 3.16, SD= 0.82) which is verbally interpreted as agree and qualitatively described as moderately preferred. Followed by having the skills associated with its learning environment (M= 3.07, SD= 0.73) which is verbally interpreted as agree and qualitatively described as moderately preferred. Next is being personally interested in their chosen strand (M=3.04, SD=0.82) verbally interpreted agree and was qualitatively described as moderately preferred. While some respondents chose a strand where they believed they could get good academic grades (M=3, SD =.71), verbally interpreted agree and qualitatively described as moderately preferred. Lastly is having an interesting subject with their preferred strand which scored the lowest (M= 2.91, SD= 0.83) that is verbally interpreted as agree and qualitatively described as moderately preferred.

Brown (2002) points out that in psychologically focused studies of career choice, personality factors that incline a person to pursue a certain sort of work are highly highlighted. This component has an overall (M= 3.03, SD= 0.79), a complete interpretation of agree, and is qualitatively described as moderately preferred.

Table 3.2: Factors affecting the strand preferences in terms of academic performance

Indicators	Mean	Standard Deviation	Verbal Interpretation	Qualitative Description
I consider my grades as the bases for my future strand.	2.87	0.79	Agree	Moderately Preferred
My grades are important in determining my future strand.	2.96	0.83	Agree	Moderately Preferred
I go for something that acquires my academic strengths.	2.84	0.85	Agree	Moderately Preferred
I challenge myself by choosing a strand I am not good at.	2.75	0.84	Agree	Moderately Preferred
I relate my academic performance to anything I do.	2.89	0.78	Agree	Moderately Preferred
Total	2.86	0.82	Agree	Moderately Preferred

Legend:

Scale	Parameter	Verbal interpretation	Qualitative description
4	3.25 – 4.00	Strongly Agree (SA)	Highly Preferred
3	2.50 – 3.24	Agree (A)	Moderately Preferred
2	1.75 – 2.49	Disagree (D)	Slightly Preferred
1	1.00 – 1.74	Strongly Disagree (SD)	Not Preferred

Table 3.2 shows the academic performance factors on the senior high school strand preference of the Grade 10 students. It is reflected that students chose their strand which signifies that grades are important in determining the students' future strand, garnering the highest (M= 2.96, SD= 0.83) which is verbally interpreted as agree and qualitatively described as moderately preferred. Followed by the statement in which students relate their academic performance to anything they do (M= 2.89, SD=0.78), verbally interpreted as agree and qualitatively descriptive as moderately preferred. Considering

the students' grades as the basis for their future got the (M= 2.87, SD= 0.79) verbally interpreted agree and was qualitatively descriptive as moderately preferred. Students choose their strand based on their academic strength got (M= 2.84, SD=0.85) verbally interpreted, agree, and qualitatively describe as moderately preferred. As students challenged themselves by choosing a strand, they are not good at and had the lowest computed mean (2.75) with the standard deviation (0.84), which was verbally interpreted as agree and qualitatively described as moderately preferred.

Academic performance across grades is said to be important in terms of data basis in determining the professional strength of each student because this information gives the students, teachers, and parents the idea of where the students perform above and average levels in various areas to help them choose the right career strand suitable for them (Sugano & Mamolo, 2021). The total mean of 2.86 and strand deviation of 0.797, which is verbally interpreted as agree, means that the students-respondents are moderately preferred to pursue a strand that aligns with their academic performance.

Table 3.3: Factors Affecting the Strand Preferences in terms of Parental Influences

Indicators	Weighted mean	Standard deviation	Verbal interpretation	Qualitative description
My parents' opinions about my career decisions matter.	2.88	0.77	Agree	Moderately Preferred
I seek my parents' advice when deciding on something.	2.98	0.83	Agree	Moderately Preferred
My final senior high strand decision depends on my parents.	2.59	0.89	Agree	Moderately Preferred
My parents give me the freedom to decide on my senior high school strand.	3.17	0.82	Agree	Moderately Preferred
My parents support me in anything I do or choose.	3.15	0.86	Agree	Moderately Preferred
Total	2.95	0.86	Agree	Moderately Preferred

Legend:

Scale	Parameter	Verbal Interpretation	Qualitative Description
4	3.25 – 4.00	Strongly Agree (SA)	Highly Preferred
3	2.50 – 3.24	Agree (A)	Moderately Preferred
2	1.75 – 2.49	Disagree (D)	Slightly Preferred
1	1.00 – 1.74	Strongly Disagree (SD)	Not Preferred

Table 3.3 shows the total mean of 2.95 with a standard deviation of 0.86 which the respondents agree with and qualitatively described as moderately preferred. Most parents give the students the freedom to decide about their senior high strand. This indicator gained the highest (M= 3.17, SD= 0.82), the respondents agree, qualitatively described as moderately preferred. Followed by the parents' supporting their child in anything they do or choose (M=3.15, SD=0.86), verbally interpreted agree and qualitatively described as moderately preferred. The students' seeking parental advice when deciding something (M=2.98, SD=0.83), verbally interpreted agree, qualitatively described as moderately preferred. And how their parents' opinion matters about the career they want to pursue (M=2.88, SD=77), verbally interpreted agree, and qualitatively described as moderately preferred. The final senior high strand decision of the respondents depends on whether their parents had the least (M=2.59, SD=0.89), verbally interpreted agree and qualitatively described as moderately preferred.

When parents give their children the freedom to choose for themselves, it signifies that the students will make the final decision, not their parents. The connection was discovered between the students and their parents in terms of decision-making. According to Hashim *et al*, (2015), as students are invariably impressionable, their decisions could be very influenced by their parents. However, in this study, the total mean of the factor in terms of parental influences is interpreted as moderately preferred not highly preferred.

Table 4: Factors affecting the Strand Preferences and their corresponding ranks

Factors	Mean	Standard deviation	Verbal interpretation	Qualitative description	Rank
Personal interest	3.03	0.76	Agree	Moderately preferred	1st
Academic performances	2.86	0.82	Agree	Moderately preferred	3rd
Parental influence	2.95	0.86	Agree	Moderately preferred	2nd
Total	2.95	0.82	Agree	Moderately preferred	

Table 4.0 presented the factors affecting the strand preferences among grade 10 students and their corresponding ranks. On average, it is clearly shown that personal interest ranked first (M=3.03, SD= 0.7). It is followed by parental influences which ranked second (M=2.95, SD=0.86). And academic performance (M=2.86, SD=0.82) ranked the last.

Table 5: The significant relationship between the student-preferred strand and the factors affecting their strand preferences

Variable	Dependent variables (factors)	SS	df	MS	F	*p*-value	Decision
Strand	Personal Interest	3.72011	7	0.53144	1.78209	0.09703	Accept
		5888		5127	4297	7084	Ho
	Academic Performance	3.25286	7	0.46469	1.89558	0.07609	Accept
		1875		4554	5387	3573	Ho
	Parental Influence	3.19552	7	0.45650	1.75205	0.10322	Accept
		5389		3627	4344	6322	Ho

Table 5 showed that there is no significant difference between their preferred strands and the factors affecting their decisions toward their strand preferences. A *p*-value of 0.05 was required for significance. As for the significant difference level, they rate personal interest (*p*-value=0.097), academic performance (*p*-value=0.076), and parental influence (*p*-value=0.103) factors respectively. In other words, since there is no statistical difference existed, the null hypothesis failed to reject. The present results are relevant to the study as it has accomplished the true purpose of the research to evaluate if there is or there is no significant difference between their strand preference and the factors affecting their choice. A Grade 10 varies greatly in strand choice preference, in their tendency to anticipate choices that they will have to make in their exploration of alternatives, and in their tendency to acquire relevant information. This suggests that educators need relevant data on these characteristics when planning curriculum; researchers need them in evaluating programs and counselors need them as a means of assessing their characteristics as a preliminary to education counseling.

Summary, findings, conclusion, and recommendation

Summary

This study aimed to find out the factors affecting the strand preferences of Grade 10 students in San Francisco National High School. It described the profile of the participants such as their age, sex, and favorite subject. Available tracks and strand lists were included in the questionnaire in order for them to have options and clues in making their decisions. The factors were grouped according to three variables, personal interest, academic performance, and parental influence. The researchers used the descriptive research design using a survey technique. The participants of the study were the Grade 10 students of San Francisco National High School. This study used a researcher-made questionnaire as the primary tool for gathering data, which consists of two parts, and the data were treated using the sample percentage, frequency count, mean, standard deviation, and analysis of variance (ANOVA).

Findings

The following findings were summarized data that has been collected in this study;

1. Majority of the respondents were in the appropriate and ideal age range for their grade level, as it was necessary for them to make decisions in choosing a track with a strand that fits their capabilities in the next school year as they enter the senior high school curriculum. Subsequently, only 10% of the respondents are aged 17 years old and above, which was then evaluates that they are trying to catch up for the years they skipped schooling. Therefore, the majority of the respondents were in the appropriate and ideal age range of a Grade 10 student. The result also shows that male and female respondents both have the same percentage of 50% with a frequency count of 63 males and 64 females. As to their favorite subjects, the results implied that the majority of the respondents love Science, Filipino, and Mathematics. As this was being emphasized, this sector may have an impact on the data collected.
2. In terms of their preferred strands, the respondents' majority choice was ICT (Information Communication and Technology) with a percentage of 27%. SMAW, STEM, and HUMSS strands were next on the rank, as it justifies their chosen favorite subjects. Hence, this clearly states that evaluating their favorite subject truly does contribute to their strand choice.
3. The factors affecting the strand preferences in terms of personal interest showed that the respondents got an average mean of 3.03 with an average standard deviation of 0.79, a complete interpretation of agree, and were qualitatively described as moderately preferred. This implied that throughout their journey in school, personal interest was considered appropriate in evaluating their strand choice, hence giving them a reassessment in order to have a clear and concise decision.

For their academic performance, the respondents got an average mean of 2.86 and an average standard deviation of 0.797, which is verbally interpreted as agree, which means that the respondents moderately preferred to pursue a strand in line with their academic performance.

In terms of parental influence, it got an average mean of 2.95 and an average standard deviation of 0.86, which implied that the respondents agreed to that factor as it affected their choice of the strand in the senior high school curriculum and were `personal interest, 0.076 in academic performance, and 0.103 in parental influence. Therefore, the null hypothesis was accepted.

There are several recommendations that were addressed to the grade 10 students, one of those was to assist them in choosing their preferred strand.

Conclusions

In light of the aforementioned findings, the following conclusions were drawn from the study:

1. Researchers have found that the respondents' favorite subjects were mainly, Science, Filipino, Mathematics, and English.
2. The researchers arrived at the conclusion that the factors affecting their decision entail great contribution. This study enabled grade 10 students to reassess their thoughts toward their strand preferences.
3. In addition, this study may assist the school in preparing its curriculum for the upcoming senior high school students.
4. The researchers concluded that the precise choices of the respondents were settled upon the factors namely, personal interest, academic performance, and parental influence. This study helps identify and clarify the main reason for the upcoming senior high school students in regard to their strand choice. This also helps indecisive students to decide amidst their last year in the junior high school curriculum in order to feel assured in entering the senior high school curriculum.

Recommendations

Based on the summary of findings and conclusion drawn, the researchers recommend the following:

- Strand options are to be provided to the students as early as possible so that they will not be misled with information that they will acquire in choosing their future careers.
- Parents should be supportive of their child's preferred strand.

- The guide prepared by the researchers should be considered in schools in choosing a strand before enrollment.
- Other studies should be conducted to verify the results of this study.

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