

## Factors Associated with Career Track Choice of Senior High School Students

Allen L. Nazareno<sup>1</sup>, Marie Joy F. Lopez-Relente<sup>2</sup>, Geleena A. Gestiada<sup>1,3</sup>,  
Marisol P. Martinez<sup>1</sup>, Mark Lexter D. De Lara<sup>1</sup>,  
and Ranzivelle Marianne Roxas-Villanueva<sup>1\*</sup>

<sup>1</sup>Institute of Mathematical Sciences and Physics, College of Arts of Sciences  
University of the Philippines Los Baños, Laguna 4031 Philippines

<sup>2</sup>Institute of Statistics, College of Arts of Sciences

University of the Philippines Los Baños, Laguna 4031 Philippines

<sup>3</sup>Senior High School, Asia Pacific College, Makati City 1232 Philippines

Selecting a career track is crucial and must be thought of carefully because of its long-term impact on an individual's future career. With the implementation of the K to 12 program in the Philippines, students need to choose from four career tracks before entering senior high school (SHS). Knowing the factors that may influence students' career track choices can be helpful in the development of strategies that may help them make intelligent decisions. In this study, data from 3,813 Grade 11 students were analyzed to determine the variables associated with career track choice and the extent of influence of factors using descriptive, correlation, and correspondence analyses. Results showed that the intended course in college is strongly associated with SHS track/strand choice. Personal preference and parent's influence are shown to be important factors. Socio-demographic variables such as sex, age, birth order, number of siblings, and monthly family income have a moderate association with the SHS track/strand choice. Likewise, parents' highest educational attainment, the course taken in college, current occupation, and the student's academic performance in several subjects (*e.g.* Filipino, English, Math, and Science) have a moderate linear relationship with SHS track/strand choice.

Keywords: career choice, career influences, education, senior high school

### INTRODUCTION

With the K to 12 program implementation, students decide on their career track before entering SHS. Choosing a track in SHS is the first step that a student must take regarding his/her career path. This phase is crucial since this period serves as a preparatory ground for students. Career track choice must be planned carefully because of its long-term consequences to a person's professional development and future accomplishments.

Individuals undergo several stages of career development. In their career development process, several factors play a vital role in determining one's career path. Super (1990) introduced the archway model recognizing social learning experiences, personality development, needs, values, and abilities as factors influencing career development. Similarly, Lent *et al.* (1994) developed the social cognitive career theory (SCCT), defining three overlapping models in which one was aimed at explaining the career choice process (choice model). This model noted interest, learning experiences, values, and environmental factors as constructs affecting career development.

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\*Corresponding Author: rloxasvillanueva@up.edu.ph

Though theories in career development have already been established, only a few studies relate these theories to the career track choice of individuals at the early stage of their career development. Particularly in the Philippine context, factors associated with career track choice are still understudied. Hence, this study will seek to explore factors related to the career track choice of SHS students. Specifically, six major factors were hypothesized to influence the career track choice, as shown in Table 1.

Socio-demographic factors such as gender, age, and socioeconomic status are among the factors that influence the career track choice. In the study by Kim (2011), men and women may differ in their ways of thinking when making a choice; men are more liberal and progressive, while women engage more in hierarchical thinking. Age – alongside gender – is a significant predictor, especially in the students’ perceived career anchors (Schein 1978). Socioeconomic status, such as the family’s monthly income and parents’ educational attainment and occupation, motivates students’ career choices (Eccles 2009; Wang and Degol 2013). If financial resources are limited, students tend to choose a career requiring a short education period (Ngesi 2003). Moreover, students with lower family income resort to career decisions requiring

minimal investments but resulting in an immediate reward. Students belonging to the high-income class, on the other hand, tend to seek careers needing relatively bigger investments but with better returns (Sanz *et al.* 2007).

Academic performance is also one of the factors deemed significant in choosing a career path. In the study of Fizer (2013), students have shown to possess the ability to perform well in the field, as shown by their good high school grade point averages. They also suggested that students with the ability to manage heavy academic workloads tend to choose a career path that would lead to a career demanding long years of education. Meanwhile, students who lack sufficient intellectual aptitude may be more suitable for career fields requiring less extensive and challenging academic work.

Interest is one of the personality factors playing a significant role in career decision-making. Individuals who choose a career that matches his/her interests are likely to feel more satisfied and motivated. Interests promote career choice goals, such as having career intentions, developing career plans, and choosing a career direction to engage in (Lent *et al.* 1994). Spokane (1985) showed that congruence between an individual’s

**Table 1.** Potential factors that may influence career track choice.

Potential factors	Variables
Socio-demographic characteristics	Sex
	Age
	Birth order
	Number of siblings
	Monthly income
Academic performance	Grades in core subjects (Math, Science, English, Filipino)
	Grades in MAPEH, TLE, and Social Studies
Personal interest	Preferred college degree
	Stage when the individual thought of the career to pursue
	Level of career aspiration
Parent’s influence	Parent’s educational attainment
	Parent’s degree program
	Parent’s occupation
	Level of parental influence
Other support systems	Influence of friends
	Influence of school personnel
	Influence of relatives
	Opportunities ( <i>e.g.</i> scholarship, opportunity to work abroad)
	Track popularity
	School’s proximity to the residence
	Availability of job

interests and chosen career or major is positively related to academic performance, academic persistence, satisfaction, and ego strength. On the contrary, students who are forced to take a specific career showed low self-esteem and poor performance.

Parents play an essential role in shaping their children's personalities as they grow. As students' primary support system, they can influence their educational aspirations, work ethics and values, and motivation (Alphones 2016). Udoh and Sanni (2012) have shown that parents' educational attainment influences secondary students' career choices. On the contrary, Alphones (2016) mentioned that children whose parents complain about the struggle to support the family with their income are likely to take a career field that could lead to a job with higher earnings.

Social influences are environmental factors considered by students before making a career decision (Johnson and Mortimer 2002). These include the impact of family members, school friends, teachers, and the community. Family and friends play a crucial role in influencing an individual in choosing a career. In the study of Wildman and Torres (2002), they found out that a student's family is influential in selecting a specialization. Pimpa (2003) examined the influence of family, peer, and student recruitments on Thai students' international education choices. The analyses showed that these people could provide psychological support to students in the career selection process. Additionally, the family's cultural and social context and the community play a significant role in informing and influencing students about choosing a career (Ferry 2006).

Other external factors may also be considered in choosing one's career track. Opportunities such as scholarships, aid from various networks to pursue studies, and family with high financial capability affect how a student decides which career path to take. Students with these opportunities have more freedom to choose which path they want, whereas students who do not possess these favorable circumstances have limited options (Cross and Slater 1997). Students may also tend to select popular career fields. When students aspire for a career path, they look for fields that could lead them to employment to provide financial security and career advancement (Wildman and Torres 2002).

Recognizing the factors that may affect students' career decisions is essential in developing strategies that may help them make intelligent career choices. Identifying these factors was beneficial in developing a career decision-making tool (Gestiada *et al.* 2017) and predicting the career strand of incoming SHS students (Nazareno *et al.* 2019). Individuals whom the students trust the most

can play a vital role in guiding them in career-decision planning. Hence, career selection and development programs that target these key individuals (parents and the community) should be encouraged to guide students to make sound decisions. Moreover, the insights that can be obtained can be helpful to education institutions in facilitating students' success in the chosen career track. For instance, it can enable educators to align their teaching materials and pedagogical strategies with their characteristics and interests.

Appropriate career choice does not only impact a person's life but society in general. Several studies about K to 12 have been published in recent years. In the Philippines, studies were mainly on the assessment of the program and its challenges. Few studies have been published about factors affecting career track choice. An investigation of this aspect may be useful in facilitating the success of this educational reform. In this study, the factors that might be associated with the career track choice of Grade 11 students and the extent of influence of some factors in deciding which track to pursue were examined. Specifically, the study aimed to investigate the relationship of several variables – namely, socio-demographic profile, parent's profile, and academic performance in various subject areas – to the student's choice of a career track in SHS. Moreover, the study intended to determine the level of influence of students' support systems and other external factors in the students' decisions about career tracks.

## MATERIALS AND METHODS

This study utilized quantitative descriptive-exploratory methods to determine factors related to SHS students' career track choice. A questionnaire was developed consisting of four sections: personal information, family information, educational background, and additional information essential in the study (see Appendix A). Before the actual implementation, the questionnaire was pilot tested on 30 students and modified according to the students' reliability test results and feedback.

The questionnaires were mailed to school principals of 35 public and eight private schools in a division in Region IV-B and distributed to homeroom advisers of Grade 11 students. They were then administered to the students, and parents' consent was asked before answering the questionnaire.

Responses were encoded and pre-processed before the conduct of the analysis. The pre-processing includes verifying some anomalous and missing entries, clustering responses, and statistical coding to perform various statistical analyses. In particular, grades were categorized

first using the Department of Education (DepEd) grading scale (DepEd 2015). A total of 3,813 respondents were included in the analysis.

Correlation analysis was applied to socio-demographic, academic, and parents' profiles plus intended course in college of the students to determine their relationship to a career track/strand choice. Several measures – including Cramer's V coefficient, Eta coefficient, Pearson's product-moment correlation coefficient, and Spearman rank correlation coefficient – were calculated to obtain the strength and direction of these variables' relationship to the variable of interest. Measures vary depending on the type of data, level of measurements, and distribution of the variables. The statistical methods used were discussed in Appendix B. Correspondence analysis was performed to visually show the relationships among the considered factors and the career track choice.

Factors such as the influence of self and other key individuals, availability of scholarship, the school's proximity to the residence, popularity of the school, and the popularity of the track/strand were also analyzed by comparing the median ratings across tracks/strands.

## RESULTS AND DISCUSSION

### Respondents' Profile

The study considered responses from 3,813 Grade 11 students, of which 2,201 were females and 1,562 were males. The average age was 17 yr old, and about 86% belong to public schools. Presented in Appendix C is the number of students for each track/strand and the students' distribution based on school type, sex, and age.

A high percentage of students were in the Academic track whereas few students were in the Sports and Arts and Design track. This discrepancy in number can be attributed to the fact that most SHSs in the division offer Academic tracks (mainly GAS or General Academic Strand). Sports and Arts and Design are offered only in designated schools, most of which are public schools.

Moreover, there was a wide variation in students' distribution based on sex and age classification across tracks/strands. In most tracks/strands, females' proportion was higher than males', except for the TVL (Technical, Vocational, and Livelihood) and Sports tracks. There was also an unequal distribution of the chosen career track for each age group. The majority of the STEM (Science, Technology, Engineering, and Mathematics) students were below 17 yr old, implying that those who chose this career track were relatively young. In other tracks, it can be observed that the proportion of students who were 17 yr

old and above was higher than the proportion of students who were below 17 yr old. The lowest recorded age was 12 yr old in the GAS strand, while the highest recorded age was 54 in the TVL track.

### Factors Associated with Career Track of Choice

Several factors concerning students' choice of a career track were investigated. These factors include socio-demographic profile, students' academic performance, personal interest, parents' profile, other support systems, and external factors. The factors found with moderate association to career track choice are summarized below.

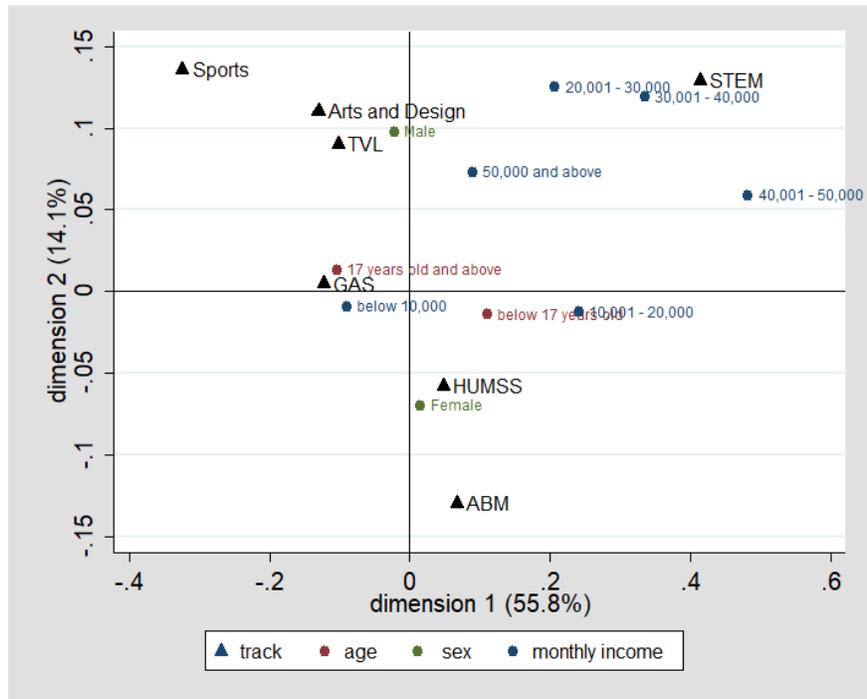
### Relationship of the Socio-demographic Factors to the Career Track Choice

The degree of association of the students' socio-demographic profile and career track/strand choice was determined. Among the identified socio-demographic variables, sex ( $V = 0.1795$ ), age ( $V = 0.1688$ ), birth order ( $V = 0.1011$ ), number of siblings ( $Eta = 0.1617$ ), and monthly income ( $V = 0.1333$ ) have a moderate association with the career track/strand choice.

The multiple correspondence plot in Figure 1 shows the association of these factors to choosing a career track/strand. The two dimensions accounted for about 70% of the total variation in the data set. Dimension 1 separated those who were 17 yr old and above from those who were below 17 yr old. It also differentiated those who chose GAS, Arts and Design, Sports, and TVL from STEM, HUMSS (Humanities and Social Sciences), and ABM (Accountancy, Business, and Management). Meanwhile, dimension 2 separated males from females and those with high and low income.

Females often chose HUMSS and ABM based on the plot, while males chose Arts and Design and TVL. This is similar to the findings of Wang and Degol (2013), wherein females were more likely to possess stronger verbal skills than males. This skill allows females to have greater flexibility in their career choices (Ceci and Williams 2010). Hence, as this study shows, fields related to social sciences, accounting, and business management are also among the career choices of females. Although this study could not observe the overrepresentation of males in math-intensive fields (Ceci and Williams 2010), this can be explained by a similar study by Su *et al.* (2009) wherein males were found to prefer working with machines and tools. Gender stereotypes, as still evident in the Filipino culture, may also explain this finding as these types of careers portray strength.

Meanwhile, it can also be observed that those with higher family income tend to choose STEM. Cooper and Berry (2020) found that socioeconomic status is one of the



**Figure 1.** Multiple correspondence plot of the socio-demographic factors and choice of a career track/strand ( $N = 3182$ ). Dimension 1 accounts for the age and SHS track choice, while dimension 2 accounts for sex and monthly income. Females often choose HUMSS.

most significant barriers to pursuing STEM studies for secondary school students. Students whose parents have higher income may be more likely to choose STEM since their parents can provide more learning opportunities and educational resources necessary when pursuing this strand. This finding also implies that career tracks are not intended to be chosen equally by an individual since there is a corresponding financial requirement when pursuing a particular career track. This is what has been observed in a study by Sanz *et al.* (2007), wherein students from a family with lower income often choose a career requiring minimal investments but resulting in an immediate reward.

### Relationship of the Academic Performance to the Choice of a Career Track

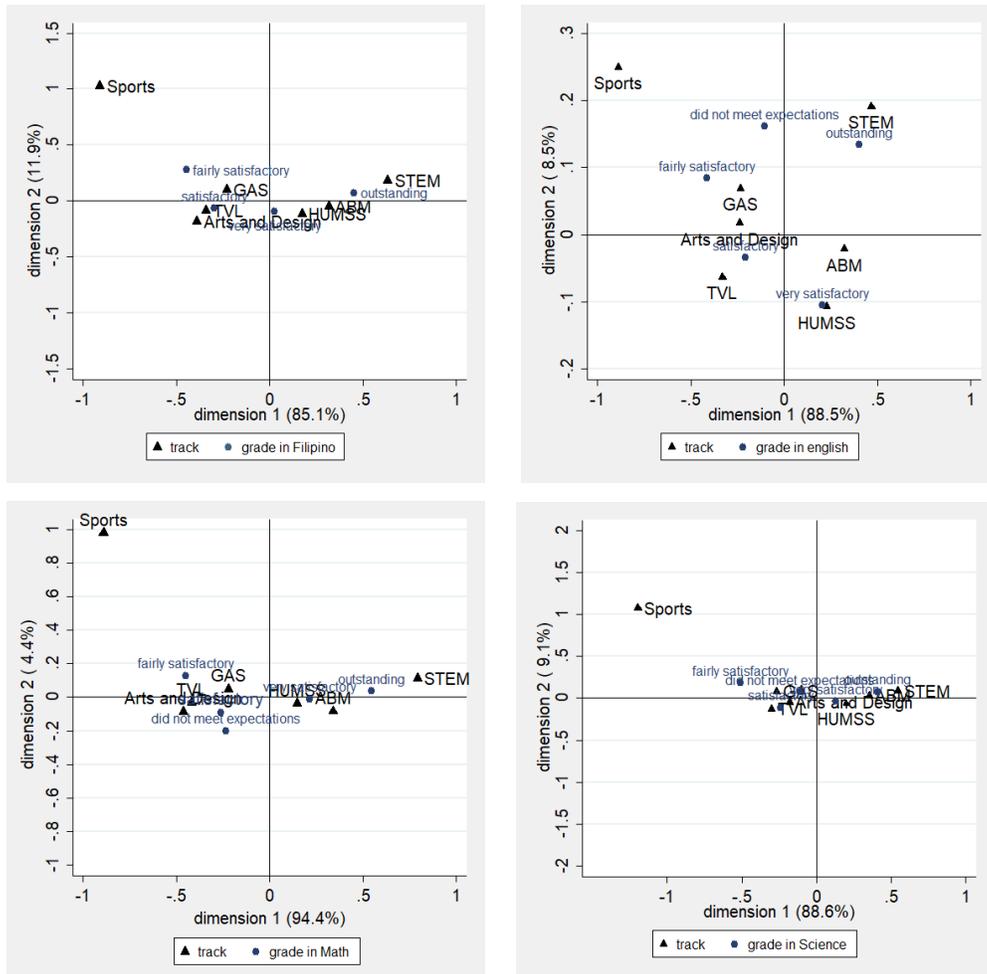
Based on the calculated coefficients, all the core subjects' grades revealed a moderate association with the career track/strand choice:  $V = 0.1747$  for Filipino,  $V = 0.1589$  for English,  $V = 0.1884$  for Math, and  $V = 0.1678$  for Science.

The biplots of the grades in the four core subjects (Figure 2) show fairly similar relationships. The students in the STEM strand were found to have outstanding performance in all the core subjects. Similarly, those in the ABM strand displayed an outstanding to very satisfactory performance. On the other hand, students in the HUMSS strand had very satisfactory performance in all subjects. At the same

time, those in GAS, Arts and Design, and TVL showed satisfactory to fairly satisfactory performance. The choice of Sports track did not show any clear association on the grades in the four core subjects.

For the other subjects, performance in MAPEH (Music, Arts, Physical Education, and Health), TLE (Technology and Livelihood Education), and Social Studies were moderately associated with the career track/strand choice. Students in the STEM and ABM strands were found to have outstanding performance in all these subjects, while students in TVL, Arts and Design, and HUMSS showed very satisfactory performance. Lastly, the students in the GAS strand had fairly satisfactory to satisfactory performance in these subjects.

Academic performance is linked to students' perception of their capabilities (Lent *et al.* 1994), which indicates that students with good academic performance have high career self-efficacy. Hence, the results suggest that individuals who feel confident that they can learn and perform well in a subject tend to choose career tracks closely associated with the subject. This may explain why students with high aptitude in the core subjects that include Math and Science appeared to pursue a STEM career track. This agrees with the finding of Eccles (2009), which suggested that career aspirations and choices can be directly affected by their perceived competence. In the recent study by Nazareno *et al.* (2019), they found that



**Figure 2.** Multiple correspondence plot of the student’s grade in core subjects and the choice of a career track/strand: a) Filipino, b) English, c) Math, and d) Science. Students who chose the STEM strand have outstanding academic performance in all the core subjects. Those who chose the ABM strand have outstanding to very satisfactory academic performance. Those in the GAS, Arts and Design, and TVL have satisfactory to fairly satisfactory performance.

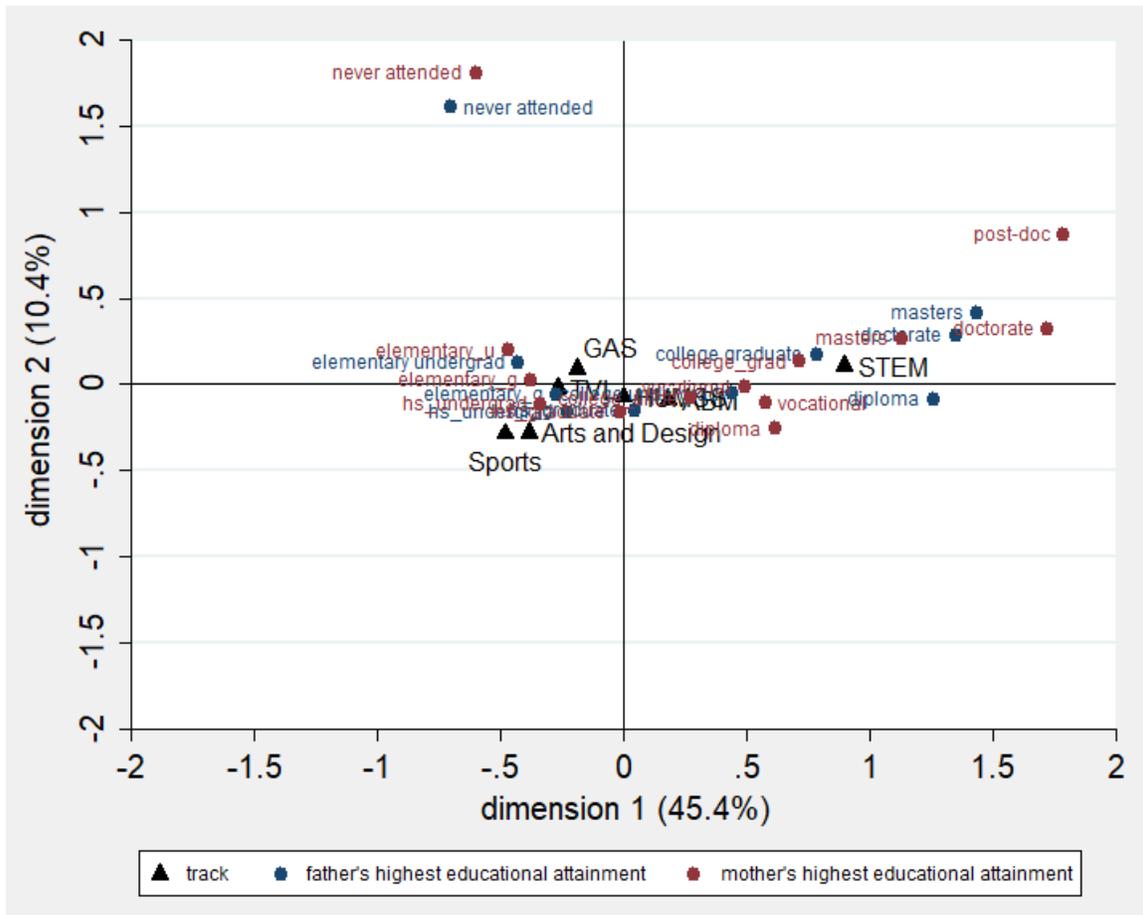
students’ grades have a moderate to a strong association with the choice of career strand in SHS in the Philippines. They used grades as predictors to develop a model that could determine the career track the student would pursue in SHS. Further, they have indicated that students who have high grades in most subject areas tend to choose STEM, while low to average grades are associated with the choice of the GAS strand, which are in line with what this study established.

### Relationship of the Parents’ Profile to the Choice of a Career Track

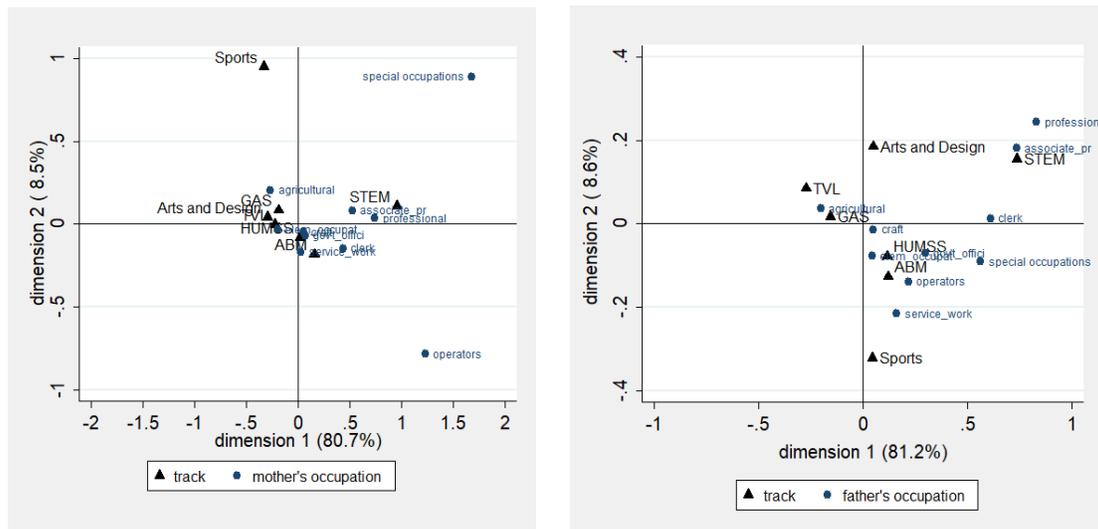
Another factor that may affect a student’s career track choice is his/her parents’ undergraduate degree, educational attainment, and occupation. Results showed that the father’s highest educational attainment ( $V = 0.1388$ ), mother’s highest educational attainment ( $V =$

$0.1394$ ), father’s undergraduate degree ( $V = 0.1856$ ), mother’s undergraduate degree ( $V = 0.1749$ ), father’s occupation ( $V = 0.1250$ ), and mother’s occupation ( $V = 0.1555$ ) have a moderate association with the choice of a career track/strand. The results of the correspondence analysis in Figures 3 and 4 also illustrate the associations observed.

Figure 3 shows the multiple correspondence plot of the students’ chosen career track and his/her parent’s highest educational attainment. The two chosen dimensions accounted for about 53.5% of the total variation in the data set. It can be observed that the two dimensions separated the STEM from the other tracks/strands and those with high educational attainment from those with low educational attainment. Students who chose STEM have parents who at least have an undergraduate degree. This may be because parents with high educational attainment can



**Figure 3.** Multiple correspondence plot of the parents' highest educational attainment and the student's choice of a career track/strand ( $N = 3536$ ). The two dimensions account for about 53.5% of the total variation in the data set and separate the STEM from the other tracks/strands and those with high educational attainment from those with low educational attainment.



**Figure 4.** Biplot of the a) mother's occupation ( $N = 1746$ ) and b) father's occupation ( $N = 3105$ ) and choice of a career track/strand of the students. Students choose an SHS track/strand that is related to their parents' occupation.

encourage quality educational interactions and intellectual discussions at home. Those who are more competent in academics (*e.g.* mathematics and science) can guide their children in studying and encourage academic success. They can communicate with teachers and monitor their children's educational needs. This result is supported by studies that have shown that socioeconomic status – which includes parents' educational attainment – influences students' achievement (Wang and Degol 2013), affecting student career aspirations (Eccles 2009).

Figure 4 shows the biplots of the parents' occupation and the students' chosen career track/strand. Both biplots present an apparent association between the parents' occupation and the career track/strand choice. This is expected as parents may discuss their day-to-day experience at work with their family, inspiring their children to pursue similar career choices. As shown in Figure 4a, those students whose mothers work as professionals or technical associate professionals (classification is based on the Philippine Standard Occupation Code) (PSA 2012) chose the STEM strand. The relationship observed is also evident in Figure 4b, where those students who chose STEM have fathers who also work as professionals or technical associate professionals. Some visible associations can be observed in Figure 4b, where students who chose TVL and GAS have fathers working in agricultural fields. Further, those who chose ABM and HUMSS have fathers with elementary occupations or work as operators or government officials.

### Relationship of the Intended Course in College and Choice of a Career Track

Among the variables considered, the student's intended course in college has the strongest association with their career track/strand choice ( $V = 0.4282$ ). The result of the multiple correspondence analysis in Figure 5 shows that those students who chose STEM intend to take engineering, science and technology, and medicine courses. Those who decided to pursue ABM intend to take management courses. Further, those who chose the HUMSS strand plan to take a law degree, social science, communication, and theology courses. Those who decided to take TVL, Arts and Design, and GAS intend to take vocational, computer-related, hotel resource management, and agriculture courses. This strong association suggests that the study respondents give more thoughts on their plan when choosing a career track or strand in SHS. The respondents considered their preferences or interests in decision-making. Some evidence suggests that personal preferences and interests are critical factors in deciding one's career paths. This is supported by the study of Lent *et al.* (1994) on the analysis of the links between interests, career choice, and behaviors of individuals. They posited that the students' interests promote their intentions, career plans, and choice of career directions.

Almeida *et al.* (2014) showed a link between vocational interests and career choice and persistence. Their study revealed that vocational interests affect a person's vocational choices or entrepreneurship actions. Similarly, Robertson *et al.* (2010) found that vocational interests and lifestyle preferences add value to career persistence and forecasting. Su (2012) examined the predictive validity of vocational interests and showed that it could be a predictor of academic achievement, career persistence, and career success.

Although not required, choosing a track/strand aligned to the students' target degree program in college will help them gain the skills and experience needed for their future courses or subjects. Based on SCCT (Lent *et al.* 1994), aptitude, skills, and experiences affect an individual's self-efficacy. In connection to this, having enough aptitude, skills, and experience for one's career choice will increase one's career self-efficacy. Restubog *et al.* (2010) defined career self-efficacy as one's beliefs to succeed in an academic program aimed towards a particular career. Students may have already decided what career to pursue to maximize the skills and experience they gain over time, from SHS to college, which may help them flourish in their chosen career path.

### Influence of Individuals on the Choice of Career Track

There are various individuals in the students' social sphere or support system that could potentially influence their choice of career (Lent *et al.* 1994). Based on the students' ratings (0 if non-influential to 10 being the most influential), the personal preference achieved the highest rating across tracks/strands, followed by parents' influence. As indicated in Table 2, the median rating for self is 10 for all tracks/strands except for Sports, which was 8.5. This suggests that students regarded their preferences first, followed by parents' influence, before considering the influences from the other people around them. Eccles' expectancy-value theory (2009) suggests that career aspirations are directly influenced psychologically by an individual's ability, expectations for success, enjoyment, personal goals, sense of self and identity, and anticipated cost, *i.e.* psychological, economic, and social costs of tasks involved in their choice. The result is similar to other studies, which showed that parents have a strong impact on students' career planning (Alphones 2016).

The school counselor received the lowest median influence rating for all the tracks/strands. This is quite surprising since school counselors are the front liners in providing academic, career, and social support. The insufficient number of counselors and their heavy workload in the Philippines (Bustos 2016) is a potential reason for the low rating.

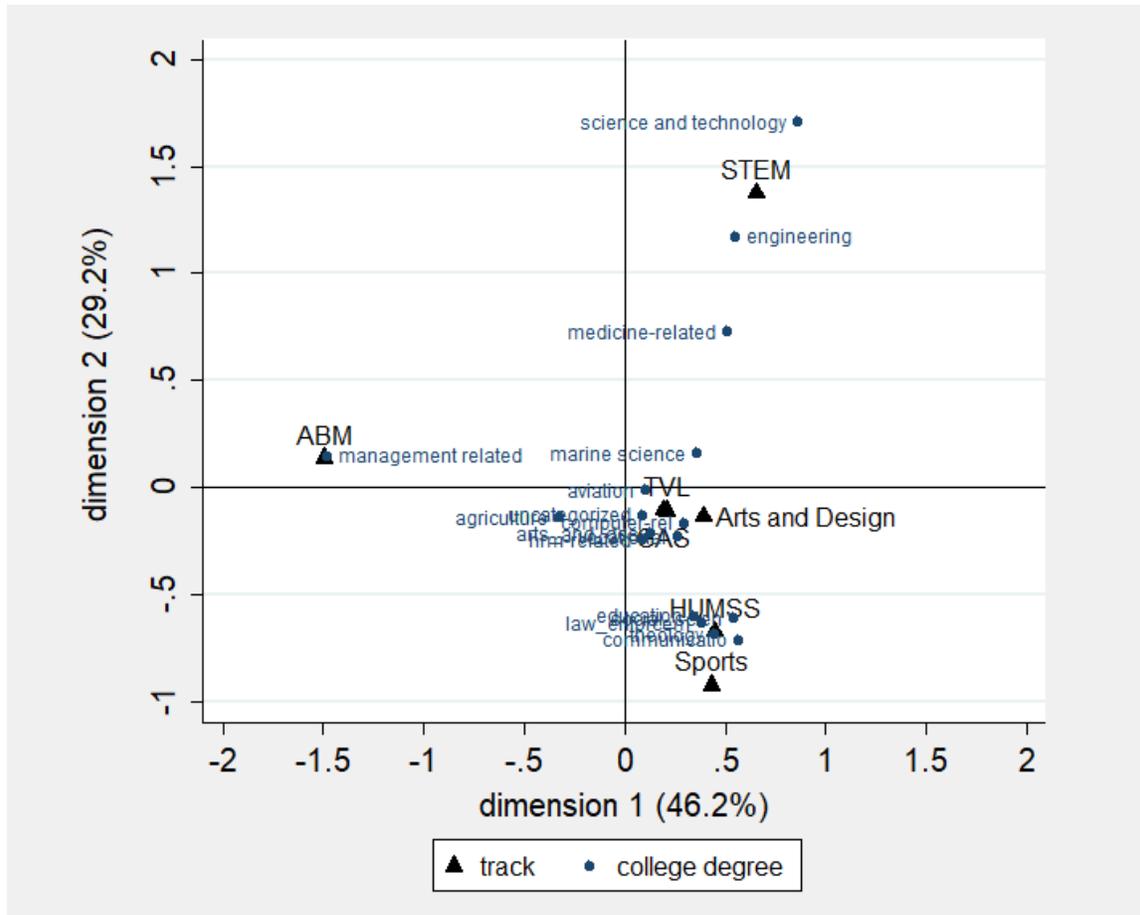


Figure 5. Multiple correspondence plot of the student’s choice of a career track/strand and his/her intended course in college ( $N = 2890$ ). Students choose the SHS track/strand related to their intended course in college.

Table 2. Median of the ratings on the influence of different individuals and other factors across tracks and strands.

Track/ strand	Median of influence rating											
	Parents	Siblings	School counselor	Teacher	Friends	Relatives	Field expert	Self	Availability of scholarship	Proximity of school to home	Popularity of school	Popularity of track/strand
STEM	8.0	5.0	1.0	5.0	6.0	5.0	4.0	10.0	5.0	3.0	5.0	5.0
ABM	7.0	4.0	0.0	4.0	5.0	4.0	4.0	10.0	0.0	4.0	2.0	4.0
HUMSS	9.0	5.0	0.0	5.0	6.0	4.0	5.0	10.0	2.0	5.0	5.0	5.0
GAS	8.0	5.0	2.0	5.0	5.0	4.0	3.0	10.0	2.0	6.0	4.0	5.0
Sports	6.0	4.0	3.5	3.5	4.0	4.0	5.0	8.5	0.0	6.0	5.0	4.0
Arts and Design	9.0	4.0	0.5	5.0	4.0	1.5	3.0	10.0	0.5	5.0	2.0	3.0
TVL	8.0	4.0	1.0	5.0	5.0	4.0	3.0	10.0	0.0	5.0	5.0	5.0

### Influence of External Factors on the Choice of a Career Track

External factors – such as availability of scholarship, the school’s proximity to the residence, popularity of the school, and popularity of the track/strand – were considered. As shown in Table 2, no factor predominated

since ratings differ for each track/strand. The highest median ratings of 6 recorded under the school’s proximity to residence indicates the students’ choice was based on accessibility and perceived cost. Students might be likely to choose a track/strand offered in a school close to the residence because of convenience and less financial

burden to the family. They might consider a track/strand that would require less time, effort, and resources.

Similarly, Kitsawad (2013) found that students tend to select a school situated conveniently and require low financial resources. Furthermore, the finding relates to the expectancy-value theory (Eccles 2009) that suggests perceived cost as an important factor related to choice. Results also showed that ABM, Sports, and TVL students did not consider the availability of scholarship as a factor in choosing a career track/strand (*i.e.* median rating is zero), which might be explained by the establishment of the K-12 DepEd voucher program that aims to provide students matriculation fee subsidy for SHS education.

## SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Different factors were shown to be related to the career choice of students. The impact of most of these factors was proven to vary in their extent of influence in choosing among different SHS tracks. Sex, age, birth order, and monthly income have moderate associations with the career track/strand choice. This study also confirms that intellectual aptitudes are potential predictors of career choice. All the grades in the core subjects have a moderate association with a career track/strand choice. The intended course in college has the strongest association with the chosen career track/strand, which agrees that students regarded their preferences first in selecting a career track in SHS. Besides personal preferences, individuals in the students' social circle influence their choice of a career track in SHS. There is an association between the parent's educational attainment and occupation and the student's choice of a career track. School counselors have the lowest influence on students' career choices. Lastly, students also consider perceived cost a relatively important factor related to track choice. They choose SHS tracks offered in schools near their residence since it is less costly and convenient for them and their families.

Knowing the factors that may influence students' career track choice can be useful in developing strategies that may assist them in making intelligent decisions. Results indicate that students realize the role of SHS education in preparing them for higher education. Higher education institutions can be of great help in providing information about the content and requirements of offered courses in college through educational training and seminars, not only for students but also for parents, so that students are well-guided about their choice of career. Career orientation activities may promote undersubscribed SHS tracks, especially Sports, and Arts and Design. As the result suggests that school guidance counselors have a low

influence on career choice, it is essential to strengthening their ties with students to guide them in career decision-making effectively. Moreover, as the socioeconomic status may dictate the students' career track choice, it is vital to provide support to students who would like to pursue career tracks/strands that require high financial resources. For instance, scholarship programs targeting underprivileged students may be offered.

This study may contribute to a more evidence-based approach to student choice of a career track. In addition, the findings may be useful to higher education institutions in developing an effective recruitment strategy directed towards convincing individuals or members of the students' social circle who are likely to play an influential role in their decision-making process. As the study focused on quantitative analysis, further research may be conducted to validate the results and better understand how the different factors influence decision-making and the critical periods of development when its impact is strongest in determining students' career values. This exploratory research may serve as a baseline to studies integrating the factors to explain students' career decision-making process. Whether results can be generalized in the national context remains to be clarified in future studies.

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## NOTES ON APPENDIX

The complete appendix section of the study is accessible at <http://philjournsci.dost.gov.ph>

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## APPENDICES

### Appendix A. Survey questionnaire.

Ctrl. No. \_\_\_\_\_

Dear Respondent,

Kami po ay mga guro mula sa University of the Philippines Los Baños na nagsasagawa ng pag-aaral tungkol sa pagtukoy sa "career choice" ng mga mag-aaral sa senior high school. Ang pag-aaral na ito ay makakatulong sa pagbatid sa mga mahahalagang salik o "factors" na makakaapekto sa pagpili ng "career track" na maaari ring maging gabay ng mga guro sa pagbuo ng "instructional materials" at "pedagogical strategies."

Sinisigurado naming na ang mga impormasyong makukuha ay para lamang sa pagaaaral na ito. Maraming salamat sa inyong oras at pakikiisa.

---

#### Pahintulot ng magulang:

\_\_\_\_\_

Pangalan ng magulang/ Lagda

\_\_\_\_\_

Petsa

---

**Sagutan lahat ng mga tanong.** Ilagay ang "NA" para sa mga tanong na hindi angkop. Lagyan ng "✓" ang kahon na tumutukoy sa inyong mga sagot.

#### A. Personal Information

Buong Pangalan (Apeyido, Pangalan, MI): \_\_\_\_\_

Edad: \_\_\_\_\_ Kasarian: Lalaki Babae Katayuang Sibil: Walang Asawa May Asawa

May mga anak ka ba? Meron Wala Kung mayroon, ilan? \_\_\_\_\_

Tirahan: Street no.: \_\_\_\_\_ Street: \_\_\_\_\_ Barangay: \_\_\_\_\_

City/Town: \_\_\_\_\_ Province: \_\_\_\_\_

Paaralan: \_\_\_\_\_ Uri ng Paaralan: Pribado Pampubliko

Lokasyon ng Paaralan: \_\_\_\_\_

#### B. Family Information

1. Bilang ng mga kapatid: \_\_\_\_\_ (Ilagay ang "0" kung walang kapatid.)

2. Pang-ilan ka sa inyong magkakapatid? (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>,...): \_\_\_\_\_ (Ilagay ang "1<sup>st</sup>" kung ikaw ay nag-iisang anak)

#### Father's Information

3. Ano ang pinakamataas na antas ng edukasyon ang natapos ng iyong ama?

Hindi Nakapag-aral

High School Graduate

Doctorate

Elementary Undergraduate

College Undergraduate

Post - Doctorate

Elementary Graduate

College Graduate

Vocational Course

<input type="checkbox"/> High School Undergraduate <input type="checkbox"/> Masters <input type="checkbox"/> Diploma Course <i>Kung ang iyong ama ay nagkolehiyo, isulat ang kinuha niyang <b>kurso</b>:</i> _____												
<p>4. Anong pangunahing pinagkukuhanang buwanang kita ng iyong ama?</p> <input type="checkbox"/> Trabaho (Isulat kung ano: _____) <input type="checkbox"/> Business <input type="checkbox"/> Others (Isulat kung ano: _____)												
<p><b>Mother's Information</b></p> <p>5. Ano ang pinakamataas na antas ng edukasyon ang natapos ng iyong ina?</p> <input type="checkbox"/> Hindi Nakapag-aral <input type="checkbox"/> High School Graduate <input type="checkbox"/> Doctorate <input type="checkbox"/> Elementary Undergraduate <input type="checkbox"/> College Undergraduate <input type="checkbox"/> Post - Doctorate <input type="checkbox"/> Elementary Graduate <input type="checkbox"/> College Graduate <input type="checkbox"/> Vocational Course <input type="checkbox"/> High School Undergraduate <input type="checkbox"/> Masters <input type="checkbox"/> Diploma Course <i>Kung ang iyong ina ay nagkolehiyo, isulat ang kinuha niyang <b>kurso</b>:</i> _____												
<p>6. Anong pangunahing pinagkukuhanan ng buwanang kita ng iyong ina?</p> <input type="checkbox"/> Trabaho (Isulat kung ano: _____) <input type="checkbox"/> Business <input type="checkbox"/> Others (Isulat kung ano: _____)												
<p>7. Buwanang kabuuang kita ng pamilya:</p> <input type="checkbox"/> Below Php 10,000 <input type="checkbox"/> Php 30,001 – Php 50,000 <input type="checkbox"/> Php 70,001 – Php 90,000 <input type="checkbox"/> Php 10,001 – Php 30,000 <input type="checkbox"/> Php 50,001 – Php 70,000 <input type="checkbox"/> Php 90,001 and above												
<p><b>C. Educational Background</b></p>												
<p>8. Anong “career track” ang iyong pinili?</p> <input type="checkbox"/> STEM <input type="checkbox"/> ABM <input type="checkbox"/> HUMSS <input type="checkbox"/> GAS <input type="checkbox"/> SPORTS <input type="checkbox"/> ARTS <input type="checkbox"/> TECHVOC <i>Kung ang pinili mo ay TECHVOC, anong “<b>strand</b>” ang iyong pinili?</i> _____												
<p>9. May katulad ka ba ng “track” sa iyong mga kapatid? <input type="checkbox"/> Meron    <input type="checkbox"/> Wala</p>												
<p>10. Ilagay ang iyong <b>final grade</b> noong nakaraang school year sa mga nakalistang subjects.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #cccccc;"> <th style="padding: 5px;">Subject</th> <th style="padding: 5px;">Grade</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Filipino</td> <td style="width: 100px;"></td> </tr> <tr> <td style="padding: 5px;">English</td> <td style="width: 100px;"></td> </tr> <tr> <td style="padding: 5px;">Math</td> <td style="width: 100px;"></td> </tr> <tr> <td style="padding: 5px;">Science</td> <td style="width: 100px;"></td> </tr> <tr> <td style="padding: 5px;">Music</td> <td style="width: 100px;"></td> </tr> </tbody> </table>	Subject	Grade	Filipino		English		Math		Science		Music	
Subject	Grade											
Filipino												
English												
Math												
Science												
Music												



iv.	Sikat ang track	<input type="radio"/>									
-----	-----------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

15. I-rate mula 0 – 10 kung gaano ka-importante ang mga sumusunod na “factors” sa pagconsider sa iyong pipiliing trabaho (0 kung hindi mahalaga hanggang 10 kung pinakamahalaga) sa pamamagitan ng pag-**shade** sa katumbas na numero na iyong napili.

	0	1	2	3	4	5	6	7	8	9	10
i.	Availability ng trabaho	<input type="radio"/>									
ii.	Sweldo	<input type="radio"/>									
iii.	Oras ng trabaho	<input type="radio"/>									
iv.	Lokasyon ng trabaho	<input type="radio"/>									
v.	Personal growth	<input type="radio"/>									
vi.	Oportunidad na makapagtrabaho abroad	<input type="radio"/>									

16. Kung ikaw ay papipiliin, saan mo gustong magtrabaho?

Sa inyong probinsya       Sa mga karatig na probinsya       Sa Maynila       Abroad

17. Alam mo ba ang mga benefits ng pagkuha ng TESDA courses? Oo      Hindi

18. Alam mo ba ang mga benefits ng pagkuha ng 4-year or 5-year course? Oo      Hindi

19. Kinakailangan mo bang magtrabaho para matustusan ang iyong pag-aaral sa senior high school?  
Oo      Hindi

20. Gaano ka kasigurado sa napili mong track? (I-rate mula **1 – Hindi Sigurado** hanggang **10 – Siguradong-sigurado**)

1	2	3	4	5	6	7	8	9	10
<input type="radio"/>									

21. Bukod sa mga itinanong, ano pa ang ibang dahilan mo sa pagpili ng iyong track? Isulat ang mga ito.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Maraming Salamat! 😊

## Appendix B. Statistical methods.

### Cramer's V Coefficient

This coefficient provides a measure of association between two categorical variables. Specifically, this measure is being used for variables with more than two categories. Cramer's V coefficient ranges from 0–1. A value of less than 0.1 indicates a weak association, and a value greater than 0.3 indicates a strong association. Values between 0.1–0.3 indicate a moderate association (Cohen 1960). The coefficient can be computed using the following formula:

$$V = \frac{\chi^2}{nt} \quad (1)$$

where  $\chi^2$  is the chi-squared test statistic and  $t = (r - 1, c - 1)$ .

### Eta Coefficient

This coefficient determines the strength of the relationship between a categorical variable and another variable, which is at least an interval in scale. The coefficient can be calculated using the information from ANOVA given as follows:

$$Eta = \frac{BetweenSS - (p-1)WithinMS}{TotalSS + WithinMS} \quad (2)$$

The Eta coefficient is interpreted in the same way as the Pearson's correlation coefficient (for linear relationships).

### Pearson's Product-Moment Correlation Coefficient

This method is used for quantitative variables, say  $X$  and  $Y$ , that are at least in the interval scale and bivariate normal. The Pearson product-moment correlation coefficient denoted as  $\rho$  can be computed using the following formula:

$$\rho = \frac{\sigma_{XY}}{\sqrt{\sigma_X^2 \cdot \sigma_Y^2}} \quad (3)$$

where  $\sigma_{XY}$  is the covariance between the two variables,

$\sigma_X^2$  is the variance of the variable  $X$ , and

$\sigma_Y^2$  is the variance of the variable  $Y$ .

### Spearman Rank Correlation Coefficient

The Spearman rank correlation coefficient was used for variables ( $X$  and  $Y$ ) in the ordinal level of measurement, and the assumption on normality was not satisfied. The Spearman rank correlation coefficient denoted as  $r_s$  was computed as:

$$r_s = 1 - \frac{6D}{n(n^2 - 1)} \quad (4)$$

where  $D = \sum_{i=1}^n [rank(X_i) - rank(Y_i)]^2$ .

### Correspondence Analysis

Correspondence analysis was performed to visually show the relationships among the row variables' categories, the categories of the column variables, and between the categories of the row and column variables. It is a graphical

representation of the contingency tables. It is being used to facilitate the interpretation of the data, which may be tedious to do in their original or percentage forms.

Factors such as the influence of self and other key individuals, availability of scholarship, the school's proximity to the residence, popularity of the school, and the popularity of the track/strand were also analyzed by comparing the median ratings across tracks/strands.

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## Appendix C. Respondents' profile.

**Table C1.** Frequency of students for each career track/strand and distribution of students according to school type, sex, and age per track or strand.

Track/strand	Frequency	School type		Sex		Age	
		Private	Public	Female	Male	Less than 17	At least 17
STEM	380	138	239	191	187	261	119
GAS	1213	86	499	433	151	264	324
ABM	588	35	794	526	296	443	390
HUMSS	833	207	996	674	516	499	714
TVL	763	0	14	6	8	5	9
Arts and Design	22	0	22	12	10	8	14
Sports	14	70	684	359	394	331	432
Total	3813	536	3248	2201	1562	1811	2002