Students in Special Science Classes: Their Competency and Career Preferences

Cristina M. Cervantes
Polong National High School, Bugallon, Pangasinan
cristina.cervantes@deped.gov.ph

Abstract – *This study sought to determine the competency and career preferences of the fourth year high school students in special science classes in Pangasinan. The research-formulated questionnaire was utilized as the main data- gathering instrument. Different schools from the five (5) school divisions of public secondary schools in Pangasinan were involved where 251 samples were drawn. The descriptive- survey method was employed. Appropriate statistical tools were used to analyze the data of interest. Based on the findings, the following data were drawn: The fourth year high school students in special science classes are dominated by female, more than one- third resides in an urban area while the rest reside in the rural area. Likewise, more than one-third received honors/awards while the remaining are not recipients of any awards/honors. College level comprises the biggest percentage in the educational level of both parents, and one fourth of their total population is educator, engineer, architect, doctor, nurse and businessman. The average monthly family income shows that their socio-economic status varies and mostly receives 20,000 and below. Among the three science subjects, Advanced Physics may be considered as the most difficult than Advance Chemistry and Research II. The students regard themselves high in their characteristics and learning styles. The most preferred career of students in special science classes is Accountancy. The students are very highly preferred on the reasons of their course choice, that is to use the knowledge and skills they learned in special science classes, and they love surfing the internet. The students are adept in the use of computer technology and fare better in conducting research than in doing tasks that involve mathematical analysis and language proficiency. The performance of students is highly proficient but their grades in Research II and Advanced Chemistry does not affect their career preferences except for Automotive Mechanic. The performance based on their grades in Advanced Physics affect the student's career preferences such as nursing, elementary education, economics, medicine, chemical, and electronics and communication. The knowledge and skills of students signifies a relationship to their performance in Advanced Chemistry, Research II and Advanced Physics. And, the student's characteristics, learning styles and knowledge and skills in science do not influence most of their career preferences. The following recommendations are proposed for possible course of action: 1) Higher authorities must provide proper orientation on the main goal of Science Curriculum among teachers and students on why it was formulated; 2) The rules and policies of science curriculum should be considered by both administrators and teachers in order to realize the effectiveness of the goal of science curriculum; 3) Administrators should provide science seminars and trainings such as conducting research, manipulation of science equipments to further enhance their scientific ability, thus enhancing the scientific knowledge of their recipients; 4) Teachers must be inclined to sciences to be qualified to teach the science subjects such as Advanced Chemistry, Research and especially on Advanced Physics as the most difficult subject; 5) A follow up study must be done to trace the graduates of science curriculum; 6) Further studies are suggested to be conducted regarding the performance and the choice of career among students of regular classes; 7) Further studies should be conducted among other schools under science curriculum to make the research more reliable.*

Keywords - *Career, Career Preference, Competency Knowledge and Skills in Science, Characteristics, Learning Styles, Career Values*

INTRODUCTION

There is an old educator's saying that says "if you don't assess it, you won't get it." Help students understand what the different kinds of science skills are and they will play their important role in their future.

There is an urgency today that makes acquiring science skills even more important. The importance of these skills is to prepare students to make their way in the real world, a world in which problems abound—in the home, in the workplace, in the community and on the planet. In this technological age, knowing how to acquire and evaluate information and how to use it to understand and solve problems is a prerequisite for most jobs our students will have in the future.

Recognizing the importance of developing science skills and carefully defining and organizing those skills are necessary to build the future career of every student. A wide body of research suggests that learning to solve problems in a variety of contexts fosters the development of a general problem-solving ability that can be transferred to new contexts. Without practice in applying science skills in real problem-solving situations, transfer is unlikely to happen. This is one of the objectives of the public secondary high schools having the Science and Technology Oriented High School. The Program is under Engineering and Science Education Project (ESEP) as the flagship program for the development of Science, Mathematics and Research. It consists of additional science subjects such as Advanced Chemistry, Research II and Advanced Physics. The Basic Education Curriculum comprises the subject Basic Physics for the regular students.

The students who passed the entrance examination will belong to science school. The curriculum help build the scientific knowledge and skills of students which includes the conduct of investigatory projects in research, technology and computer applications and use of laboratory equipments and tools. This is to prepare them to achieve the goal of the Department of Science and Technology (DOST) to become a productive citizen inclined to science as the important vehicle in the development of our nation.

The students who wanted to pursue their studies in college and who prefer the science degree program are these kind of students because they gained already knowledge and experiences on what preferred course are suitable to their finished high school curriculum. And if not, the four years of learning the said curriculum will stagnate and poor choice of career will result to inappropriate job in the future.

The great numbers of failures in life can be attributed to poor career preference upon entering college, and as a result of discordance within oneself. Many graduates work without considering the suitable job as to their finished course. Some reason out that they do not like their chosen profession and it was their parent's choice of what career to pursue.

Career preferences have significant values. The best choice for one may be a poor choice for another. The kind of person that an individual wants to be in the future depends strongly on his career point of view and the values that he places on that career. Before entering college, a student must clearly formulate his realistic motives why he must enter and choose a profession. Early groundwork in career preference can prevent unnecessary waste in the future.

Only a few have the knowledge of what it means to graduate from special science high school prepared to succeed in college. In fact, such knowledge is mostly limited to students who know the goal of science curriculum. An, it is limited for those whose parents themselves graduated from college. Students whose parents have not graduated from college must rely on schools for information about college expectations. Taking into account other factors, such as academic preparation, parental choice, support from schools and family income, it is no wonder that many make bad decisions and fail on their career choice.

This study shots two birds in one bullet. It will help students to have clear motives of entering another level of studies and proper choice of career base from their curriculum

competencies during high school or other related factors. And, it serves as an eye opener to students who do not know what it takes to be successful after high school and do not see a need to get into college.

STATEMENT OF THE PROBLEM

The study determined the factors that affect the competencies and career preferences of fourth year high school students in special science classes of Pangasinan. Specifically, the study answered the following questions: 1) What is the profile of the fourth year high school students in special science classes in terms of: (a. Sex; b. Place of residence; c. Honors/ awards received; d. Educational attainment of the parents; e. Employment of the parents; and f. Average monthly family income)? 2) What is the performance of the fourth year high school students in special science classes based on their grades in the following subjects: (a. Advanced Chemistry; b. Research II; and c. Advanced Physics)? 3) What is the extent of manifestation of the fourth year high school students in special science classes as to: (a. Characteristics; and b. Learning styles)? 4) What are the proficiency levels of the high school students in terms of the following: (a. Scientific knowledge; and b. Scientific skills)? 5) What are the first three preferred courses of the fourth year high school students in special science classes? 6) What is the level of preference on the reasons of the preferred course of the fourth year high school students in special science classes? 7) Is there a significant relationship between the overall scientific knowledge and skills of students and their selected profile? 8) Is there a significant relationship in the career preferences of students in special science classes and the performance based on their grades in the following subjects: (a. Advanced Chemistry; b. Research II; and c. Advanced Physics)? 9) Is there a significant relationship between the scientific knowledge and skills of students along the following: (a. Profile of students; b. Academic subjects grade in Advanced Chemistry, Research II and Advanced

Physics; c. Characteristics, and d. Learning Styles)? 10) Is there a significant relationship in the career preferences of students in special science classes across their characteristics and learning styles as perceived by themselves? 11) Is there a significant relationship in the career preferences and the level of scientific knowledge and skills among the students in special science classes? 12) Is there any significant relationship in the level of preference on the reasons of the preferred course and the level of scientific knowledge of the fourth year high school students in special science classes?

MATERIALS AND METHODS

The descriptive survey method of research was employed in the study. This particular method was chosen because of its appropriateness to the problem. As defined by Remors et.al (1985) in their book" Educational Measurement and Evaluation", it allows qualitative and quantitative description of current status, traits nature and the characteristics of the subject. It attaches significant relationship that exists and do not exist. The particular descriptive method of research with questionnaire as the chief tool in gathering the necessary data was utilized relative to the student's career preferences. This method purports to know the characteristics of individuals and to know the typical conditions of situations. In this study, the method seeks to find the scientific knowledge and career preferences of the fourth year high school students in special science classes in Pangasinan.

DATA GATHERING PROCEDURE

The researcher asked permission from the higher authorities to distribute questionnaire to the respondents of the study. The student-participants were informed about the objective of the research. The questionnaire was handed out to the respondents personally and was picked up after a designated time, for the convenience of the researcher and student participants. This study utilized a researcher- made questionnaire as the

main tool in gathering the needed data. Personal Data Information Sheet and Questionnaire Checklist are also included to elicit important information about the respondent. The respondents of the study were the Fourth Year High School Students in Special Science Classes in the selected schools of the different divisions of Pangasinan having Science and Technology

Oriented High School- Engineering and Science Education Program. The numbers of respondents were taken using stratified sampling technique. Table 1 shows the research sampling adopted in the study.

Table 1
**Population Size and Population Sample of the Selected Secondary Schools
in the Six School Divisions of Pangasinan**

Division	Name of High School	Population Size	Population Sample
Pangasinan I	Polong National High School	**39**	18
Pangasinan I	Pangasinan National High School	**119**	55
Pangasinan II	Mangaldan National High School	**63**	29
Pangasinan II	Juan Macaraeg National High School (Binalonan)	**61**	28
Dagupan City	Dagupan City National High School	**60**	28
Urdaneta City	Urdaneta City National High School	**89**	41
Alaminos City	Alaminos City National High School	**34**	16
Total		**465**	**215**

The table shows the five divisions of Pangasinan and the number of respondent of the nine selected schools. The schools are under the Science and Technology Oriented High School Curriculum who passed the criteria and requirements for having this kind of curriculum such as having functional library, performance of school in science academic and science activities and functional school laboratory.

The number of section of every school comprised one special science class, some are two sections and three sections as the maximum. The very reason of these are, students have to passed the curriculum requirement such as their average must not be less than 85, could passed the

entrance examination and must maintain final grades of not less than 85 especially in science subjects.

Treatment of Data

To determine the profile of the respondents in terms of sex, place of residence, honors/ awards received, educational attainment of parents, profession/occupation of parents, and average monthly family income, frequency counts, mean and percentage of distribution to the categories was used.

To determine the prominent characteristics and learning styles of students in

special science classes, the (5) Likert Value Scale in terms of Weighted Mean was used and was interpreted as the following scale:

Scale Mean	Descriptive Rating
4.21- 5.00	Very Highly Prominent
3.61- 4.20	Highly Prominent
2.41 -3.60	Moderately Prominent
1.81 -2.40	Less Prominent
1.00 -1.80	Least Prominent

To determine the level of proficiency in scientific knowledge of students in special science classes, the scale mean was used and was interpreted using the following scale:

Scale Mean	Descriptive Rating
4.21- 5.00	Very Highly Proficient
3.61- 4.20	Highly Proficient
2.41 -3.60	Moderately Proficient
1.81 -2.40	Less Proficient
1.00 -1.80	Least Proficient

To determine the first three choices of the preferred course, rank was used by the fourth year students.

The level of preference on the reasons of the preferred course was described using the mean scale range below:

Scale Mean	Descriptive Rating
4.21- 5.00	Very Much Preferred
3.61- 4.20	Much Preferred
2.41 -3.60	Moderately Preferred
1.81 -2.40	Slightly Preferred
1.00 -1.80	Very Slightly Preferred

The Spearman-rho Correlation-Coefficient (p) was also utilized to determine the relationship of career preferences and the student's performance based on their grades in the subjects such as advanced chemistry, research II and advanced physics.

To determine the relationship between the scientific knowledge of students and their profile and grades in science academic subjects such as Advanced physics, Advanced chemistry, and Research II; their prominent characteristics and learning styles, Spearman- rho correlation-coefficient was also used.

In the same manner, to determine the relationship of career preferences and the prominent characteristics and learning styles of students as perceived by themselves, the Spearman- rho (p) Correlation -Coefficient was used.

It was also used to determine the relationship in the career preferences and the level of scientific knowledge among students. Likewise, it was used to determine the relationship in the level of preference on the reasons of preferred course and the level of scientific knowledge of the fourth year high school students in special science classes.

RESULTS AND DISCUSSION

The gathered data were organized, tabulated, statistically treated, analyzed and interpreted to have an easier understanding and clear visualization of the findings and to answer the specific questions of the study.

Table 2
Profile of the Fourth Year High School Students in Special Science Classes with Respect to Sex, Place of Residence, Honors/Awards Received, Educational Attainment of Parents, Profession/Occupation of Parents and Average Monthly Family Income
(N=215)

Variable	Categories	Frequency	Percentage
Sex	Male	67	31.2
	Female	148	68.8
Place of Residence	Rural	138	64.2

	Urban	77	35.8
Honors/Awards Received	With Honors	78	36.3
	Without Honors	137	63.7
Educational Attainment of Father	Elementary	9	4.2
	High School	46	21.4
	College	153	71.2
	Masteral	5	2.3
	Doctoral	2	.9
Educational Attainment of Mother	Elementary	9	4.2
	High School	48	22.3
	College	146	67.9
	Masteral	8	3.7
	Doctoral	4	1.9
Profession/Occupation of Father	Educator	15	7.0
	Engineer	20	9.3
	Architect	0	0
	Doctor	4	1.9
	Nurse	2	0.9
	Pharmacist	0	0
	Businessman	21	9.8
	Others	153	71.2
Profession/Occupation of Mother	Educator	31	14.4
	Engineer	0	0
	Architect	1	.5
	Doctor	1	.5
	Nurse	8	3.7
	Pharmacist	0	0
	Businessman	17	7.9
	Others	157	73.0
Monthly Family Income	P50,001 and above	28	13.0
	40,001 to 50,000	7	3.3
	30,001 to 40,000	20	9.3
	20,001 to 30,000	33	15.3
	10,001 to 20,000	55	25.6
	10,000 and Below	72	33.5
Total		**215**	**100%**

The table 2 shows that the number of female fourth year high school students in special science classes is more than twice the number of male students. It also shows that more than one-third of the total number of respondents resides in an urban area while the rest reside in the rural area. Likewise, more than one-third of the respondents received honors/ awards while the remaining less than two-third are not recipients of any awards/honors. For the educational attainment of parents, college level comprises the biggest percentage with 71.2% and 67.9% of the number of both father and mother respectively. A small percentage at most 4% of most parents attended graduate and post- graduate studies while almost one-fourth, 21% and 22.3% for father and mother respectively, reached the high school level. The same percentage of both parents, 4.2%, are elementary graduates. More

than 25% of both parents are educator, engineer, architect, doctor, nurse and businessman combined. The remaining almost 75% belongs to profession/ occupation that are not mentioned above. The data on monthly family income of the fourth-year students in special science classes shows that their socio-economic status varies, ranging from the low- level (10,000 and below) to high- level income (50,000 and above). However, more than 50% receives 20,000 and below monthly family income. In general, table 2 reflects the diversity of the fourth-year students in special science classes in terms of their demographic profile and family background.

Performance of the Fourth Year Students in Special Science Classes in Science Subjects

It can be gleaned from the table 3 that the performance of the fourth year students in special science classes in Advanced Chemistry and Research II are almost the same with the latter having a slightly higher mean. This shows that Advanced Physics may be considered as the most difficult science subject of the fourth year students because the lowest grade of 80 falls on the said subject even though the highest grade of 96 is the same with that of Advanced Chemistry. From the researched made by the DepED-DOST, Physics is the most hated subject of fourth year students because of its theories, principles and applications.

Table 3
Performance of the Fourth Year High School Students in Special Science Classes Based on Their Grades

Subject	Minimum	Maximum	Mean
Advance Chemistry	83	96	89.20
Research II	83	97	90.24
Advance Physics	80	96	89.12
Overall Mean	**82.67**	**95.00**	**89.501**

Characteristics of the Fourth Year High School Students in Special Science Classes

The table 4 shows that the extent of manifestation of the characteristics of the fourth year students in special science classes as perceived by themselves range from 3.80 (high) to 4.47 (very high). Among the ten characteristics, only four are very high, to wit: the respondents see themselves as students who work hard to achieve something, who care for other persons, who love adventure and who are open to the ideas of others. The lowest extent is their perception that they rely on their selves in solving problems. This manifests the tendency of the students to seek help for others in solving problems. This may be attributed to the difficulty that problem solving entails.

However, the table shows in general that the students regard themselves high.

Table 4
Extent of Manifestation of the Characteristics of Fourth Year High School Students in Special Science Classes as Perceived by Themselves

I am the kind of student who…	Mean	Description
1. Works hard to achieve something.	4.29	Very High
2. Relies on myself in solving problems.	3.80	High
3. Always seeks something new.	3.92	High
4. Cares for other person.	4.47	Very High

5. Looks for other sources when it is not available.	4.07	High
6. Loves adventures.	4.47	Very High
7. Shows willingness to do the assigned tasks.	4.06	High
8. Arranges all the materials after being used.	4.00	High
9. Focuses on the tasks until it was done.	4.07	High
10. Is open to the ideas of others.	4.33	Very High
Overall Mean	**4.15**	**High**

Legend:
4.21 – 5.00   Very High
3.41 – 4.20   High
2.61 – 3.40   Moderate
1.81 – 2.60   Low
1.00 – 1.80   Very Low

Learning Styles of the Fourth Year High School Students in Special Science Classes

Table 5 shows that only two (2) learning styles are rated as very high in extent. These are the students something better after they have tried it out; and they prefer to learn by being creative and imaginative. The extent of the other seven (7) learning styles as perceived by the fourth year students in special science classes is high ranging from 3.81 to 4.08. The students do not perceive themselves as constantly fidgeting while learning. This learning style is slightly manifested as shown by the extent which is moderate (3.32).

Table 5
Extent of Manifestation of the Learning Styles of the Fourth Year High School Students in Special Science Classes as Perceived by Themselves

With regards to my style in learning, I:	Mean	Description
1. Understand something better after trying it out.	4.52	Very High
2. Often would rather listen to a lecture than read the material in a textbook.	4.06	High
3. Prefer to learn by being creative and imaginative.	4.21	Very High
4. Tend to take notes during verbal discussions/ lectures to review later.	4.08	High
5. Prefer to learn by studying about things that directly affect people's lives rather than impersonal facts or theories.	3.91	High
6. Make a list, organize the steps, and check them off as they are done in solving a problem	3.81	High
7. Need to watch a speaker's facial expressions and body language to fully understand what they mean	3.99	High
8. Think of possible consequences or applications of the solution in a wide range of areas in solving scientific problems.	3.95	High
9. Am constantly fidgeting (e.g. tapping pen, playing with keys in my pocket) while learning.	3.32	Moderate
10. Remember best by writing things down several times or drawing pictures and diagrams.	3.86	High

Overall Mean	**3.97**	**High**

KNOWLEDGE AND SKILLS OF THE FOURTH YEAR HIGH SCHOOL STUDENTS IN SPECIAL SCIENCE CLASSES

Table 6 shows that the extent of proficiency levels of the fourth year students in special science classes in terms of knowledge and skills in science range from 3.75 (highly proficient) to 4.38 (very highly proficient).

Table 6
Proficiency Levels of the Fourth Year High School Students in Special Science Classes in Terms of Their Knowledge and Skills

With regards to scientific knowledge:	Mean	Description
1. I acquire understanding on the theories, principles and laws of science during experimentation.	4.00	Highly Proficient
2. Conduct science investigatory project (SIP) in small group.	4.22	Very Highly Proficient
3. I can define and present ideas clearly and in logical order.	3.89	Highly Proficient
4. I recognize the significance of science to real-life situation.	4.24	Very Highly Proficient
5. I can draw a conclusion about a specific event based on observations and data that may include cause and effect relationships.	4.10	Highly Proficient
6. I properly use the science laboratory equipments and tools.	4.20	Highly Proficient
7. I accurately interpret pictures, graph and diagrams.	4.01	Highly Proficient
8. I can derive formula to solve mathematical and scientific problems.	3.80	Highly Proficient
9. I estimate and measure objects in a manipulative manner.	3.75	Highly Proficient
10. I apply my knowledge in computer to make my school activities easier.	4.38	Very Highly Proficient
Overall Mean	**4.06**	**Highly Proficient**

Legend:
4.21 – 5.00   Very Highly Proficient
3.41 – 4.20   Highly Proficient
2.61 – 3.40   Moderately Proficient
1.81 – 2.60   Less Proficient
1.00 – 1.80   Least Proficient

They perceived themselves as very highly proficient in conducting science investigatory project, recognizing the significance of science to real- life situation and applying knowledge in computer to make their activities easier. Whereas, scientific knowledge on estimating and measuring objects in a manipulative manner, deriving formula to solve mathematical and scientific problems, and defining and presenting ideas clearly and in logical order, have the lowest rating of extent of proficiency, among the seven (7) scientific knowledge where the students rate themselves as highly proficient. It can be discerned that the students are adept in the use of computer technology and fare better in conducting research than in doing tasks that involve mathematical analysis and language proficiency.

Top Sixteen Preferred Courses of Students in Special Science Classes

Table 7 show the top sixteen preferred courses of the fourth year students in special science classes according to rank are: 1.) Accountancy, 2.) Business/ Public Administration, 3.) Civil Engineering, 4.) Pharmacy, 5.) Information Technology, 6.) Medicine, 7.) Secondary Education, 8.) Mathematics, 9.) Law, 10.) Biology, 11.) Computer Technology, 12.) Psychology, 13.) Electronics and Communication Engineering, 14.) Nursing, 15.) Criminology/ Military, and 16.) Chemical Engineering.

Table 7
Preferred Courses of Students in Special Science Classes

Career Preferences	Sum	Rank
A1. Nursing	32	14
A2. Medicine	71	6
A3. Therapy	24	21
A4. Pharmacy	**83**	**4**
A5. Others	28	18
B1. Chemical	30	16

	Sum	Rank
B2. Mechanical	25	20
B3. Civil Engineering	**97**	**3**
B4. Electrical	14	26
B5. Electronics and Communication	33	13
B6. Information Technology	**81**	**5**
B7. Computer	35	11
B8. Industrial	4	36
B9. Others	23	22.5
C1. Chemistry	18	25
C2. Physics	12	27
C3. Biology	37	10
C4. Home Economics	9	30
C5. Mathematics	39	8
C6. Statistics	10	28.5
C7. Others	6	31.5
D1. Political Science	23	22.5
D2. Laws	39	9
D3. History	5	33.5
D4. Secondary Education	44	7
D5. Elementary Education	22	24
D6. Accountancy	**193**	**1**
D7. Hotel and Restaurant Management	26	19
D8. Psychology	33	12
D9. Business/Public Administration	**107**	**2**
D10. Economics	6	31.5
D11. Criminology/Military	32	15
D12. Others	29	17
E1. Dressmaking	5	33.5
E2. Cosmetology	10	28.5
E3. Refrigeration and Airconditioning	0	38.5
E4. Automotive Mechanic	4	36
E5. Carpentry	4	36
E6. Electronics	0	38.5

Level of Preferences on the Reasons of the Students' Preferred Course

As shown in the table 8, the levels of preference on the reasons of the preferred course of the fourth year students in special science classes range from 3.62 (highly preferred) to 4.73(very highly preferred). The reason with the lowest level of preference, but still highly preferred, is having high performance in high school. On the other hand, the students desire to apply the knowledge and skills they learned in special science classes, is the most prevalent reason that makes their chosen course the most highly preferred. The other two reasons why the students very highly preferred their courses are: the students love to apply sophisticated technology such as surfing the internet, and they are challenge with the level of difficulty of subjects in high school.

Table 8
Level of Preference on the Reasons of the Preferred Course of the Fourth Year High School Students in Special Science Classes as Perceived by Themselves

I prefer the course because:	Mean	Description
1. I always involve myself in different activities in high school.	3.81	Highly Preferred
2. I enjoy doing/ performing experiments.	4.20	Highly Preferred
3. I have high performance in high school	3.62	Highly Preferred
4. I love the application of sophisticated technology such as surfing the internet	4.41	Very Highly Preferred
5. I perceive the security of the job.	4.04	Highly Preferred
6. I obey my parent's choice	3.88	Highly Preferred
7. I am encourage by my relatives and friends	3.70	Highly Preferred
8. I can use the knowledge and skills I learned in special science classes.	4.73	Very Highly Preferred
9. I find admission to courses easy.	3.83	Highly Preferred
10. I am challenge with the level of difficulty of subjects in high school.	4.34	Very Highly Preferred
Overall Mean	**4.06**	**Very Highly Preferred**

Legend:
4.21 – 5.00   Very Much Preferred
3.41 – 4.20   Highly Preferred
2.61 – 3.40   Moderately Preferred
1.81 – 2.60   Slightly Preferred
1.00 – 1.80   Very Slightly Preferred

Career Preferences of Students in Special Science Classes Based on Their Performance in Advanced Chemistry

Table 9 shows the correlation coefficient and its p-value of the career preferences of students in special science classes and the performance based on their grades in Advanced Chemistry. It also shows the conclusion in every career preferences. It can be concluded that there is significant relationship in the automotive mechanic career preference of students in special science classes and the performance based on their grades in Advanced Chemistry at 0.05 level of significance. It had inverse relationship because of correlation coefficient -0.138.

The other career preferences manifest either negligible positive or negative correlation to their performance based on their grades in

Advanced Chemistry but the correlations were found to be not significant.

As a whole, it can be discerned that the course preferences of the students do not have significant relationship with their performance based on their grades in Chemistry except for Automotive Mechanic.

Table 9
Career Preferences of Students in Special Science Classes and the Performance Based on their Grades in Advanced Chemistry

Career Preferences	Correlation Coefficient (Spearman-rho)	Significance	Description
A1. Nursing	-0.096^{ns}	0.163	Negligible Negative Correlation
A2. Medicine	-0.078^{ns}	0.254	Negligible Negative Correlation
A3. Therapy	0.010^{ns}	0.886	Negligible Positive Correlation
A4. Pharmacy	0.011^{ns}	0.876	Negligible Positive Correlation
A5. Others	0.003^{ns}	0.969	No Correlation
B1. Chemical	0.092^{ns}	0.180	Negligible Positive Correlation
B2. Mechanical	-0.064^{ns}	0.347	Negligible Negative Correlation
B3. Civil	-0.003^{ns}	0.968	No Correlation
B4. Electrical	0.033^{ns}	0.631	Negligible Positive Correlation
B5. Electronics and Communication	0.009^{ns}	0.897	No Correlation
B6. Information Technology	-0.045^{ns}	0.511	Negligible Negative Correlation
B7. Computer	-0.061^{ns}	0.376	Negligible Negative Correlation
B8. Industrial	0.065^{ns}	0.343	Negligible Positive Correlation
B9. Others	0.068^{ns}	0.318	Negligible Positive Correlation
C1. Chemistry	0.072^{ns}	0.293	Negligible Positive Correlation
C2. Physics	-0.006^{ns}	0.926	No Correlation
C3. Biology	-0.100^{ns}	0.144	Negligible Negative Correlation
C4. Home Economics	-0.015^{ns}	0.832	Negligible Negative Correlation
C5. Mathematics	0.112^{ns}	0.103	Negligible Positive Correlation

C6. Statistics	0.029 ^{ns}	0.673	Negligible Positive Correlation
C7. Others	0.056 ^{ns}	0.415	Negligible Positive Correlation
D1. Political Science	0.011 ^{ns}	0.877	Negligible Positive Correlation
D2. Laws	-0.024 ^{ns}	0.724	Negligible Negative Correlation
D3. History	0.053 ^{ns}	0.436	Negligible Positive Correlation
D4. Secondary Education	-0.050 ^{ns}	0.465	Negligible Negative Correlation
D5. Elementary Education	-0.022 ^{ns}	0.753	Negligible Negative Correlation
D6. Accountancy	0.038 ^{ns}	0.583	Negligible Positive Correlation
D7. Hotel and Restaurant Management	0.032 ^{ns}	0.636	Negligible Positive Correlation
D8. Psychology	-0.068 ^{ns}	0.323	Negligible Negative Correlation
D9. Business/Public Administration	-0.008 ^{ns}	0.913	No Correlation
D10. Economics	-0.015 ^{ns}	0.822	Negligible Negative Correlation
D11. Criminology/Military	0.048 ^{ns}	0.486	Negligible Positive Correlation
D12. Others	0.022 ^{ns}	0.746	Negligible Positive Correlation
E1. Dressmaking	0.042 ^{ns}	0.540	Negligible Positive Correlation
E2. Cosmetology	0.025 ^{ns}	0.720	Negligible Positive Correlation
E3. Refrigeration and Airconditioning	.	.	No Linear Relationship
E4. Automotive Mechanic	-0.138*	0.043	Negligible Negative Correlation
E5. Carpentry	-0.022 ^{ns}	0.752	Negligible Negative Correlation
E6. Electronics	.	.	No Linear Relationship
E7. Others	.	.	No Linear Relationship

* Correlation is significant at the 0.05 level (2-tailed). ns – not significant

Career Preferences of Students in Special Science Classes Based on Their Performance in Research II

The table 10 shows the correlation coefficient and its p-value of the career preferences of students in special science classes and the performance based on their grades in Research II. It also shows the conclusion in every career preferences. It can be concluded that there is no significant relationship in all career

preferences of students in special science classes and the performance based on their grades in Research II at 0.05 level of significance.

The correlation varies from either negligible positive correlation to negligible negative correlation. Some career preferences have no correlation with the performance of students base on their grades in Research II.

Table 10
Career Preferences of Students in Special Science Classes and the Performance Based on Their Grades in Research II

Career Preferences	Correlation Coefficient (Spearman-Rho)	Significance	Description
A1. Nursing	-0.109 [ns]	0.112	Negligible Negative Correlation
A2. Medicine	0.029 [ns]	0.673	Negligible Positive Correlation
A3. Therapy	-0.010 [ns]	0.883	Negligible Negative Correlation
A4. Pharmacy	0.055 [ns]	0.421	Negligible Positive Correlation
A5. Others	-0.060 [ns]	0.385	Negligible Negative Correlation
B1. Chemical	0.131 [ns]	0.056	Negligible Positive Correlation
B2. Mechanical	-0.082 [ns]	0.230	Negligible Negative Correlation
B3. Civil	-0.001 [ns]	0.989	No Correlation
B4. Electrical	-0.018 [ns]	0.791	Negligible Negative Correlation
B5. Electronics and Communication	0.032 [ns]	0.637	Negligible Positive Correlation
B6. Information Technology	-0.115 [ns]	0.093	Negligible Negative Correlation
B7. Computer	-0.034 [ns]	0.619	Negligible Negative Correlation
B8. Industrial	0.130 [ns]	0.057	Negligible Positive Correlation
B9. Others	0.112 [ns]	0.102	Negligible Positive Correlation

C1. Chemistry	0.033^{ns}	0.631	Negligible Positive Correlation
C2. Physics	-0.015^{ns}	0.825	Negligible Negative Correlation
C3. Biology	-0.006^{ns}	0.925	No Correlation
C4. Home Economics	-0.015^{ns}	0.822	Negligible Positive Correlation
C5. Mathematics	-0.003^{ns}	0.970	No Correlation
C6. Statistics	0.059^{ns}	0.390	Negligible Positive Correlation
C7. Others	0.069^{ns}	0.313	Negligible Positive Correlation
D1. Political Science	0.121^{ns}	0.076	Negligible Positive Correlation
D2. Laws	-0.010^{ns}	0.883	Negligible Negative Correlation
D3. History	0.078^{ns}	0.258	Negligible Positive Correlation
D4. Secondary Education	-0.033^{ns}	0.630	Negligible Negative Correlation
D5. Elementary Education	0.075^{ns}	0.275	Negligible Positive Correlation
D6. Accountancy	-0.063^{ns}	0.355	Negligible Negative Correlation
D7. Hotel and Restaurant Management	-0.111^{ns}	0.104	Negligible Negative Correlation
D8. Psychology	-0.003^{ns}	0.963	No Correlation
D9. Business/Public Administration	0.045^{ns}	0.512	Negligible Positive Correlation
D10. Economics	0.083^{ns}	0.227	Negligible Positive Correlation
D11. Criminology/Military	0.011^{ns}	0.876	Negligible Positive Correlation
D12. Others	0.021^{ns}	0.758	Negligible Positive Correlation
E1. Dressmaking	-0.045^{ns}	0.513	Negligible Negative Correlation
E2. Cosmetology	-0.087^{ns}	0.202	Negligible Negative Correlation
E3. Refrigeration and Airconditioning	.	.	No Linear Relationship

E4. Automotive Mechanic	-0.023 ^{ns}	0.742	Negligible Negative Correlation
E5. Carpentry	-0.051 ^{ns}	0.458	Negligible Negative Correlation
E6. Electronics	.	.	No Linear Relationship
E7. Others	.	.	No Linear Relationship

* Correlation is significant at the 0.05 level (2-tailed).
ns – not significant

Career Preferences of Students in Special Science Classes Based on Their Performance in Advanced Physics

The table 11 shows the correlation coefficient and its p-value of the career preferences of students in special science classes and the performance based on their grades in Advanced Physics. It also shows the conclusion in every career preferences. It can be conclude that there is significant relationship in the nursing, medicine, chemical, electronics and communication, elementary education, and economics career preferences of students in special science classes and the performance based on their grades in Advanced Physics at 0.05 level of significance. Nursing, elementary education, and economics career preferences of students in special science classes had inverse relationship in the performance based on their grades in Advanced Physics, since they had negative value of coefficient correlation (nursing = -0.166; elementary education = -0.139; and economics = -0.139). Medicine, chemical, and electronics and communication career preferences of students in special science classes had direct relationship in the performance based on their grades in Advanced Physics, since they had positive value of coefficient correlation (medicine = 0.151; chemical = 0.151; and electronics and communication = 0.139). It can also be concluded that there is significant relationship in physics career preferences of students in special science classes and the performance based on their grades in Advanced Physics at 0.05 and 0.01 level of significance. Since the correlation coefficient was 0.183, it had direct relationship in the performance based on their grades in Advanced Physics.

Table 11
Career Preferences of Students in Special Science Classes
and the Performance based on their grades in Advanced Physics

Career Preferences	Correlation Coefficient (Spearman-Rho)	Significance	Description
A1. Nursing	-0.166*	0.015	Negligible Negative Correlation
A2. Medicine	0.151*	0.027	Negligible Positive Correlation
A3. Therapy	-0.043 ^{ns}	0.527	Negligible Negative Correlation

A4. Pharmacy	0.049^{ns}	0.477	Negligible Positive Correlation
A5. Others	0.061^{ns}	0.372	Negligible Positive Correlation
B1. Chemical	0.151^{*}	0.027	Negligible Positive Correlation
B2. Mechanical	0.075^{ns}	0.271	Negligible Positive Correlation
B3. Civil	0.066^{ns}	0.337	Negligible Positive Correlation
B4. Electrical	-0.024^{ns}	0.725	Negligible Negative Correlation
B5. Electronics and Communication	0.139^{*}	0.041	Negligible Positive Correlation
B6. Information Technology	-0.024^{ns}	0.727	Negligible Negative Correlation
B7. Computer	0.006^{ns}	0.928	No Correlation
B8. Industrial	0.048^{ns}	0.488	Negligible Positive Correlation
B9. Others	0.114^{ns}	0.095	Negligible Positive Correlation
C1. Chemistry	-0.007^{ns}	0.915	No Correlation
C2. Physics	0.183^{*}	0.007	Negligible Positive Correlation
C3. Biology	-0.019^{ns}	0.784	Negligible Negative Correlation
C4. Home Economics	0.048^{ns}	0.488	Negligible Positive Correlation
C5. Mathematics	-0.076^{ns}	0.264	Negligible Negative Correlation
C6. Statistics	0.094^{ns}	0.169	Negligible Positive Correlation
C7. Others	0.028^{ns}	0.686	Negligible Positive Correlation
D1. Political Science	-0.041^{ns}	0.549	Negligible Negative Correlation
D2. Laws	-0.026^{ns}	0.704	Negligible Negative Correlation
D3. History	0.007^{ns}	0.916	No Correlation
D4. Secondary Education	-0.011^{ns}	0.873	Negligible Negative Correlation
D5. Elementary Education	-0.139^{*}	0.042	Negligible Negative Correlation
D6. Accountancy	-0.067^{ns}	0.327	Negligible Negative Correlation
D7. Hotel and Restaurant Management	0.017^{ns}	0.805	Negligible Positive Correlation

D8. Psychology	-0.093 ns	0.175	Negligible Negative Correlation
D9. Business/Public Administration	-0.074 ns	0.280	Negligible Negative Correlation
D10. Economics	-0.139*	0.041	Negligible Negative Correlation
D11. Criminology/Military	-0.061 ns	0.373	Negligible Negative Correlation
D12. Others	-0.043 ns	0.533	Negligible Negative Correlation
E1. Dressmaking	-0.117 ns	0.088	Negligible Negative Correlation
E2. Cosmetology	-0.004 ns	0.954	No Correlation
E3. Refrigeration and Airconditioning	.	.	No Linear Relationship
E4. Automotive Mechanic	0.017 ns	0.805	Negligible Positive Correlation
E5. Carpentry	-0.019 ns	0.777	Negligible Negative Correlation
E6. Electronics	.	.	No Linear Relationship
E7. Others	.	.	No Linear Relationship

* Correlation is significant at the 0.05 level (2-tailed).

ns – not significant

Knowledge and Skills of Students in Advanced Chemistry

The table 12 shows the correlation coefficient and its p-value of the knowledge and skills of students and their grades in Advanced Chemistry. It also shows the conclusion. It can be concluded that there is significant relationship in the first knowledge and skills of students and their grades in Advanced Chemistry at 0.05 level of significance. It had direct relationship because of positive correlation coefficient 0.149.

Table 12
Knowledge and Skills of Students and Their Grades
in Advanced Chemistry

Knowledge and Skills in Science	Correlation Coefficient (Spearman-Rho)	Significance	Description
1. I acquire understanding on the theories, principles and laws of science during experimentation.	0.149*	0.029	Negligible Positive Correlation
2. Conduct science investigatory project (SIP) in small group.	0.119 ns	0.082	Negligible Positive Correlation
3. I can define and present ideas clearly and in logical order.	0.060 ns	0.382	Negligible Positive Correlation

4. I recognize the significance of science to real-life situation.	0.055^{ns}	0.418	Negligible Positive Correlation
5. I can draw a conclusion about a specific event based on observations and data that may include cause and effect relationships.	0.124^{ns}	0.070	Negligible Positive Correlation
6. I properly use the science laboratory equipments and tools.	0.111^{ns}	0.105	Negligible Positive Correlation
7. I accurately interpret pictures, graph and diagrams.	0.051^{ns}	0.458	Negligible Positive Correlation
8. I can derive formula to solve mathematical and scientific problems.	0.121^{ns}	0.075	Negligible Positive Correlation
9. I estimate and measure objects in a manipulative manner.	0.123^{ns}	0.073	Negligible Positive Correlation
10. I apply my knowledge in computer to make my school activities easier.	0.047^{ns}	0.497	Negligible Positive Correlation
Overall Knowledge and Skills in Science	$\mathbf{0.142^{*}}$	**0.037**	**Negligible Positive Correlation**

* Correlation is significant at the 0.05 level (2-tailed).
Ns – not significant

Knowledge and Skills of Students in Research II

The table above shows the correlation coefficient and its p-value of the knowledge and skills of students and their grades in Research II . It also shows the conclusion. It can be concluded that there is significant relationship in the second, sixth, and ninth knowledge and skills of students and their grades in Research II at 0.05 level of

significance. It had direct relationship because of positive correlation coefficients (second knowledge and skills = 0.156; sixth knowledge and skills = 0.168; and ninth knowledge and skills = 0.145). It can also be concluded that there is significant relationship in the fifth knowledge and skills of students and their grades in Research II at 0.05 and 0.01 level of significance. It had direct relationship, since it had 0.182 correlation coefficient.

Table 13
Knowledge and Skills of Students and Their Grades in Research II

Scientific Knowledge	Correlation Coefficient (Spearman-Rho)	Significance	Description
1. I acquire understanding on the theories, principles and laws of science during experimentation.	0.041^{ns}	0.554	Negligible Positive Correlation
2. Conduct science investigatory project (SIP) in small group.	0.156^{*}	0.022	Negligible Positive Correlation
3. I can define and present ideas clearly and in logical order.	0.100^{ns}	0.145	Negligible Positive Correlation

4. I recognize the significance of science to real-life situation.	0.068 [ns]	0.320	Negligible Positive Correlation
5. I can draw a conclusion about a specific event based on observations and data that may include cause and effect relationships.	0.182[*]	0.007	Negligible Positive Correlation
6. I properly use the science laboratory equipments and tools.	0.168[*]	0.014	Negligible Positive Correlation
7. I accurately interpret pictures, graph and diagrams.	0.031 [ns]	0.649	Negligible Positive Correlation
8. I can derive formula to solve mathematical and scientific problems.	0.097 [ns]	0.157	Negligible Positive Correlation
9. I estimate and measure objects in a manipulative manner.	0.145[*]	0.034	Negligible Positive Correlation
10. I apply my knowledge in computer to make my school activities easier.	0.030 [ns]	0.665	Negligible Positive Correlation
Overall Knowledge and Skills in Science	**0.153[*]**	**0.025**	**Negligible Positive Correlation**

* Correlation is significant at the 0.05 level (2-tailed).
ns – not significant

Knowledge and Skills of Students in Advanced Physics

Table 14 shows the correlation coefficient and its p-value of the knowledge and skills of students and their grades in Advanced Physics. It also shows the conclusion. We can conclude that there is significant relationship in the fourth, sixth, and eighth knowledge and skills of students and their grades in Advanced Physics at 0.05 level of significance. It had direct relationship because of positive correlation coefficients (fourth knowledge and skills = 0.137; sixth knowledge and skills = 0.134; and eighth knowledge and skills= 0.144). We can also conclude that there is significant relationship in the fifth knowledge and skills of students and their grades in Advanced Physics at 0.05 and 0.01 level of significance. It had direct relationship, since it had 0.226 correlation -coefficient.

Table 14
Knowledge and Skills of Students and Their Grades in Advanced Physics

Knowledge and Skills In Science	Correlation Coefficient (Spearman-Rho)	Significance	Description
1. I acquire understanding on the theories, principles and laws of science during experimentation.	0.111 [ns]	0.104	Negligible Positive Correlation
2. Conduct science investigatory project (SIP) in small group.	0.097 [ns]	0.157	Negligible Positive Correlation
3. I can define and present ideas clearly and in logical order.	0.118 [ns]	0.085	Negligible Positive Correlation

4. I recognize the significance of science to real-life situation.	0.137^{*}	0.044	Negligible Positive Correlation
5. I can draw a conclusion about a specific event based on observations and data that may include cause and effect relationships.	0.226^{*}	0.001	Negligible Positive Correlation
6. I properly use the science laboratory equipments and tools.	0.134^{*}	0.049	Negligible Positive Correlation
7. I accurately interpret pictures, graph and diagrams.	0.086^{ns}	0.212	Negligible Positive Correlation
8. I can derive formula to solve mathematical and scientific problems.	0.144^{*}	0.035	Negligible Positive Correlation
9. I estimate and measure objects in a manipulative manner.	0.132^{ns}	0.054	Negligible Positive Correlation
10. I apply my knowledge in computer to make my school activities easier.	0.090^{ns}	0.188	Negligible Positive Correlation
Overall Knowledge and Skills	$\textbf{0.190}^{*}$	**0.005**	**Negligible Positive Correlation**

* Correlation is significant at the 0.05 level (2-tailed).
ns – not significant

Knowledge and Skills of Students in Science and Their Characteristics

Table 15 shows the correlation coefficient or the *p-* values of the overall knowledge and skills of students in science and their characteristics. It also shows the descriptions of the said values. Whether or not the correlation is significant is also reflected on the table as indicated by the legend. As shown, the correlation between each of the characteristics and the overall knowledge and skills of students in science are significant at 0.05 level.

Table 15
Relationship between the Overall Knowledge and Skills of Students
and Their Characteristics

Characteristics	Correlation Coefficient (Spearman-Rho)	Significance	Description
1. Works hard to achieve something.	0.423^{*}	0.000	Low Positive Correlation
2. Relies on myself in solving problems.	0.523^{*}	0.000	Moderately Positive Correlation
3. Always seeks something new.	0.308^{*}	0.000	Low Positive Correlation
4. Cares for other person.	0.277^{*}	0.000	Negligible Positive Correlation
5. Looks for other sources when it is not available.	0.461^{*}	0.000	Low Positive Correlation

6. Loves adventures.	0.250^*	0.000	Negligible Positive Correlation
7. Shows willingness to do the assigned tasks.	0.497^*	0.000	Low Positive Correlation
8. Arranges all the materials after being used.	0.364^*	0.000	Low Positive Correlation
9. Focuses on the tasks until it was done.	0.485^*	0.000	Low Positive Correlation
10. Is open to the ideas of others.	0.364^*	0.000	Low Positive Correlation
Overall Prominent Characteristics	**0.634^***	**0.000**	**Moderately Positive Correlation**

* Correlation is significant at the 0.05 level (2-tailed). ns – not significant

Knowledge and Skills of Students and Their Learning Styles

Table 16 shows the correlation-coefficient or the p- value to signify the relationship between the overall scientific knowledge of students and their learning styles.

The values are described as negligible positive correlation, low positive correlation, and moderately positive correlation. The table also shows the conclusion on the significance of the correlation as indicated by the legend. It can be discerned from the table that the correlation between each of the learning style and the overall scientific knowledge is significant at 0.05 level.

Table 16
Relationship Between the Overall Knowledge and Skills Of Students
in Science and Their Learning Styles

Learning Styles	Correlation Coefficient (Spearman-Rho)	Significance	Description
1. I understand something better after i try it out.	0.419^*	0.000	Low Positive Correlation
2. I often would rather listen to a lecture than read the material in a textbook.	0.339^*	0.000	Low Positive Correlation
3. I prefer to learn by being creative and imaginative.	0.328^*	0.000	Low Positive Correlation
4. I tend to take notes during verbal discussions/ lectures to review later.	0.427^*	0.000	Low Positive Correlation
5. I prefer to learn by studying about things that directly affect people's lives rather than impersonal facts or theories.	0.450^*	0.000	Low Positive Correlation
6. I make a list, organize the steps, and check them off as they are done in solving a problem	0.512^*	0.000	Moderately Positive Correlation

7. I need to watch a speaker's facial expressions and body language to fully understand what they mean.	0.438*	0.000	Low Positive Correlation
8. I think of possible consequences or applications of the solution in a wide range of areas in solving scientific problems.	0.517*	0.000	Moderately Positive Correlation
9. I am constantly fidgeting (e.g. tapping pen, playing with keys in my pocket) while learning.	0.144*	0.035	Negligible Positive Correlation
10. I remember best by writing things down several times or drawing pictures and diagrams.	0.293*	0.000	Negligible Positive Correlation
Overall Learning Styles	**0.669***	**0.000**	**Moderately Positive Correlation**

* Correlation is significant at the 0.05 level (2-tailed).
ns – not significant

The table 17 shows the correlation-coefficient or *p*-values, and their corresponding description which range from no correlation to negligible negative correlation and to negligible positive correlation. The conclusions as to the significance of the correlations are also shown. It can be gleaned that there is no significant correlation between the overall knowledge and skills of students in science and their selected profile. This means that their selected profile such as sex, residence, awards, educational attainment of parents, their occupation and compensation do not affect the scientific knowledge among students. They don't consider it as a major factor to study science.

Table 17
Relationship between the Overall Knowledge and Skills of Students
and Their Selected Profile

Selected Profile	Correlation Coefficient (Spearman-Rho)	Significance	Description
Sex	0.001^{ns}	0.990	No Correlation
Residence	0.071 ^{ns}	0.303	Negligible Positive Correlation
Awards	-0.042 ^{ns}	0.538	Negligible Negative Correlation
Educational Attainment of Father	-0.019 ^{ns}	0.778	Negligible Negative Correlation
Educational Attainment of Mother	-0.096 ^{ns}	0.162	Negligible Negative Correlation
Occupation of Father	-0.058 ^{ns}	0.400	Negligible Negative Correlation
Occupation of Mother	0.008 ^{ns}	0.907	No Correlation

Income	-0.057^{ns}	0.402	Negligible Negative Correlation

* Correlation is significant at the 0.05 level (2-tailed).
ns – not significant

Relationship in the Career Preferences of Students in Special Science Classes and Their Characteristics

Table 18 shows the relationship in the career preferences of students in special science classes across their overall characteristics. The correlation coefficient or p- values are described as negligible positive correlation and no correlation. The most preferred course has a correlation- coefficient of 0.124 which is described as negligible positive correlation but it is not significant. Nursing, medicine, pharmacy, chemical engineering, and mechanical engineering are inversely correlated to the overall prominent characteristics as implied by the negligible negative correlation but their correlations are significant at 0.05 level. Other preferred courses exhibit no significant correlation except Home Economics and Cosmetology whose negligible positive correlations show a significant relationship at 0.05 level.

The not significant correlation implies that the overall prominent characteristics of the students do not influence most of their career preferences.

Table 18
Relationship in the Career Preferences of Students in Special Science Classes Across Their Overall Characteristics

Career Preferences	Correlation Coefficient (Spearman-Rho)	Significance	Description
A1. Nursing	-0.194*	0.004	Negligible Negative Correlation
A2. Medicine	-0.214*	0.002	Negligible Negative Correlation
A3. Therapy	-0.112^{ns}	0.101	Negligible Negative Correlation
A4. Pharmacy	-0.205*	0.002	Negligible Negative Correlation
A5. Others	-0.036^{ns}	0.602	Negligible Negative Correlation
B1. Chemical	0.141*	0.038	Negligible Positive Correlation
B2. Mechanical	-0.140*	0.041	Negligible Negative Correlation
B3. Civil	-0.082^{ns}	0.229	Negligible Negative Correlation
B4. Electrical	-0.072^{ns}	0.291	Negligible Negative Correlation
B5. Electronics and Communication	-0.073^{ns}	0.289	Negligible Negative Correlation

B6. Information Technology	0.079^{ns}	0.248	Negligible Positive Correlation
B7. Computer	0.034^{ns}	0.624	Negligible Positive Correlation
B8. Industrial	-0.066^{ns}	0.333	Negligible Negative Correlation
B9. Others	0.009^{ns}	0.895	No Correlation
C1. Chemistry	0.148^{*}	0.030	Negligible Positive Correlation
C2. Physics	0.027^{ns}	0.691	Negligible Positive Correlation
C3. Biology	-0.017^{ns}	0.807	Negligible Negative Correlation
C4. Home Economics	0.177^{*}	0.009	Negligible Positive Correlation
C5. Mathematics	0.081^{ns}	0.234	Negligible Positive Correlation
C6. Statistics	0.014^{ns}	0.839	Negligible Positive Correlation
C7. Others	0.155^{*}	0.023	Negligible Positive Correlation
D1. Political Science	0.035^{ns}	0.609	Negligible Positive Correlation
D2. Laws	0.079^{ns}	0.252	Negligible Positive Correlation
D3. History	0.056^{ns}	0.417	Negligible Positive Correlation
D4. Secondary Education	0.080^{ns}	0.241	Negligible Positive Correlation
D5. Elementary Education	0.007^{ns}	0.915	Negligible Positive Correlation
D6. Accountancy	0.124^{ns}	0.070	Negligible Positive Correlation
D7. Hotel and Restaurant Management	0.098^{ns}	0.151	Negligible Positive Correlation
D8. Psychology	-0.076^{ns}	0.266	Negligible Negative Correlation
D9. Business/Public Administration	0.084^{ns}	0.222	Negligible Positive Correlation
D10. Economics	-0.055^{ns}	0.426	Negligible Negative Correlation
D11. Criminology/Military	0.048^{ns}	0.486	Negligible Positive Correlation
D12. Others	0.006^{ns}	0.926	Negligible Positive Correlation
E1. Dressmaking	0.032^{ns}	0.645	Negligible Positive Correlation
E2. Cosmetology	0.152^{*}	0.026	Negligible Positive Correlation
E3. Refrigeration and Airconditioning	.	.	No Linear Relationship
E4. Automotive Mechanic	0.021^{ns}	0.762	Negligible Positive Correlation
E5. Carpentry	-0.002^{ns}	0.981	No Correlation
E6. Electronics	.	.	No Linear Relationship
E7. Others	.	.	No Linear Relationship

* Correlation is significant at the 0.05 level (2-tailed).

ns – not significant

Relationship in Career Preferences of Students in Special Science Classes and Their Learning Styles

The table 19 shows the correlation – coefficient or the p- values of career preferences of students in special science classes across their overall learning styles. The p- values are described as negligible negative correlation, negligible positive correlation and no correlation. Fifteen (15) among the career preferences are inversely correlated to the overall learning styles but only the correlation- coefficients of medicine, therapy and civil engineering are significant at 0.05 level. Whereas, Chemical engineering, Chemistry AND Home Economics have negligible positive correlations that are significant at 0.05 level.

The overall learning styles do not significantly influence most of the career preferences of the fourth year students in special science classes.

Table 19
Relationship in the Career Preferences of Students in Special Science Classes across Their Overall Learning Styles

Career Preferences	Correlation Coefficient (Spearman-Rho)	Significance	Description
A1. Nursing	-0.023^{ns}	0.734	Negligible Negative Correlation
A2. Medicine	-0.161^{*}	0.018	Negligible Negative Correlation
A3. Therapy	-0.137^{*}	0.045	Negligible Negative Correlation
A4. Pharmacy	-0.003^{ns}	0.960	No Correlation
A5. Others	0.017^{ns}	0.807	Negligible Positive Correlation
B1. Chemical	0.138^{*}	0.044	Negligible Positive Correlation
B2. Mechanical	-0.130^{ns}	0.057	Negligible Negative Correlation
B3. Civil	-0.135^{*}	0.049	Negligible Negative Correlation
B4. Electrical	-0.023^{ns}	0.742	Negligible Negative Correlation
B5. Electronics and Communication	-0.084^{ns}	0.222	Negligible Negative Correlation
B6. Information Technology	-0.007^{ns}	0.916	No Correlation
B7. Computer	0.011^{ns}	0.874	Negligible Positive Correlation
B8. Industrial	-0.027^{ns}	0.699	Negligible Negative Correlation
B9. Others	0.062^{ns}	0.368	Negligible Positive Correlation
C1. Chemistry	0.158^{*}	0.020	Negligible Positive Correlation
C2. Physics	-0.027^{ns}	0.692	Negligible Negative Correlation
C3. Biology	0.078^{ns}	0.255	Negligible Positive Correlation
C4. Home Economics	0.135^{*}	0.048	Negligible Positive Correlation
C5. Mathematics	-0.037^{ns}	0.589	Negligible Negative Correlation
C6. Statistics	0.062^{ns}	0.367	Negligible Positive Correlation
C7. Others	0.146^{*}	0.032	Negligible Positive Correlation
D1. Political Science	0.053^{ns}	0.442	Negligible Positive Correlation
D2. Laws	0.117^{ns}	0.088	Negligible Positive Correlation
D3. History	0.060^{ns}	0.383	Negligible Positive Correlation
D4. Secondary Education	0.094^{ns}	0.170	Negligible Positive Correlation
D5. Elementary Education	-0.028^{ns}	0.688	Negligible Negative Correlation

D6. Accountancy	-0.030^{ns}	0.665	Negligible Negative Correlation
D7. Hotel and Restaurant Management	0.096^{ns}	0.162	Negligible Positive Correlation
D8. Psychology	-0.008^{ns}	0.911	No Correlation
D9. Business/Public Administration	0.049^{ns}	0.471	Negligible Positive Correlation
D10. Economics	0.079^{ns}	0.250	Negligible Positive Correlation
D11. Criminology/Military	-0.027^{ns}	0.693	Negligible Negative Correlation
D12. Others	-0.088^{ns}	0.198	Negligible Negative Correlation
E1. Dressmaking	0.080^{ns}	0.241	Negligible Positive Correlation
E2. Cosmetology	0.118^{ns}	0.085	Negligible Positive Correlation
E3. Refrigeration and Airconditioning	.	.	No Linear Relationship
E4. Automotive Mechanic	-0.065^{ns}	0.340	Negligible Negative Correlation
E5. Carpentry	0.035^{ns}	0.607	Negligible Positive Correlation
E6. Electronics	.	.	No Linear Relationship
E7. Others	.	.	No Linear Relationship

* Correlation is significant at the 0.05 level (2-tailed).

ns – not significant

Relationship in the Career Preferences of Students in Special Science Classes and Their Knowledge And Skills

The table 20 shows the correlation-coefficients or *p*- values of the career preferences of the fourth year students in special science classes across their overall scientific knowledge. The correlation- coefficients are either negligible positive correlation or negligible negative correlation. The table also shows the conclusion as regards to the significance of the correlation.

Nursing and Therapy show an inverse relationship with the overall scientific knowledge which is significant at 0.05 level. On the other hand, Chemical Engineering and Chemistry, each has direct relationship with the overall scientific knowledge that is found to be significant at 0.5 level. Most of the career preferences manifest a not significant relationship, positive or negative, with the overall scientific knowledge.

Table 20
Relationship in the Career Preferences of Students in Special Science Classes across Their Overall Knowledge and Skills

Career Preferences	Correlation Coefficient (Spearman-Rho)	Significance	Description
A1. Nursing	-0.265^{*}	0.000	Negligible Negative Correlation
A2. Medicine	-0.124^{ns}	0.070	Negligible Negative Correlation
A3. Therapy	-0.162^{*}	0.018	Negligible Negative Correlation
A4. Pharmacy	-0.080^{ns}	0.241	Negligible Negative Correlation
A5. Others	0.037^{ns}	0.586	Negligible Positive Correlation
B1. Chemical	0.221^{*}	0.001	Negligible Positive Correlation
B2. Mechanical	0.019^{ns}	0.786	Negligible Positive Correlation

B3. Civil	-0.042 ns	0.540	Negligible Negative Correlation
B4. Electrical	-0.002 ns	0.974	No Correlation
B5. Electronics and Communication	-0.073 ns	0.287	Negligible Negative Correlation
B6. Information Technology	0.001 ns	0.984	No Correlation
B7. Computer	-0.045 ns	0.508	Negligible Negative Correlation
B8. Industrial	-0.119 ns	0.081	Negligible Negative Correlation
B9. Others	-0.014 ns	0.840	Negligible Negative Correlation
C1. Chemistry	0.142*	0.038	Negligible Positive Correlation
C2. Physics	0.013 ns	0.850	Negligible Positive Correlation
C3. Biology	-0.037 ns	0.585	Negligible Negative Correlation
C4. Home Economics	0.044 ns	0.517	Negligible Positive Correlation
C5. Mathematics	0.096 ns	0.162	Negligible Positive Correlation
C6. Statistics	0.037 ns	0.587	Negligible Positive Correlation
C7. Others	0.141*	0.039	Negligible Positive Correlation
D1. Political Science	0.069 ns	0.316	Negligible Positive Correlation
D2. Laws	0.166*	0.015	Negligible Positive Correlation
D3. History	0.030 ns	0.662	Negligible Positive Correlation
D4. Secondary Education	0.039 ns	0.570	Negligible Positive Correlation
D5. Elementary Education	-0.052 ns	0.449	Negligible Negative Correlation
D6. Accountancy	0.090 ns	0.191	Negligible Positive Correlation
D7. Hotel and Restaurant Management	-0.033 ns	0.627	Negligible Negative Correlation
D8. Psychology	-0.071 ns	0.301	Negligible Negative Correlation
D9. Business/Public Administration	0.069 ns	0.317	Negligible Positive Correlation
D10. Economics	-0.032 ns	0.640	Negligible Negative Correlation
D11. Criminology/Military	0.062 ns	0.366	Negligible Positive Correlation
D12. Others	-0.037 ns	0.587	Negligible Negative Correlation
E1. Dressmaking	-0.007 ns	0.916	No Correlation
E2. Cosmetology	0.066 ns	0.333	Negligible Positive Correlation
E3. Refrigeration and Airconditioning	.	.	No Linear Relationship
E4. Automotive Mechanic	-0.060 ns	0.379	Negligible Negative Correlation
E5. Carpentry	-0.015 ns	0.828	Negligible Negative Correlation
E6. Electronics	.	.	No Linear Relationship
E7. Others	.	.	No Linear Relationship

* Correlation is significant at the 0.05 level (2-tailed).

ns – not significant

Level of Preference on the Reasons of the Preferred Course of the Fourth Year High School Students in Special Science Classes and Their Knowledge and Skills

It can be discerned from the table 21 that the relationship between each of the level of preference on the reasons of the preferred course of the fourth year high school students in special science classes and their overall knowledge and skills in science are all significant at 0.05 level. All the correlation coefficients are positive, they are described as negligible, low or moderate positive correlation. These connotes that their overall knowledge and skills has direct influence on the level of preference of the reasons of their preferred course.

Table 21
Relationship in the Level of Preference on the Reasons of the Preferred Course of the Fourth Year High School Students in Special Science Classes and Their Overall Knowledge and Skills

I prefer the course because:	Correlation Coefficient (Spearman-Rho)	Significance	Description
1. I always involve myself in different activities in high school.	0.397*	0.000	Low Positive Correlation
2. I enjoy doing/ performing experiments.	0.422*	0.000	Low Positive Correlation
3. I have high performance in high school	0.501*	0.000	Moderately Positive Correlation
4. I love the application of sophisticated technology such as surfing the internet	0.376*	0.000	Low Positive Correlation
5. I perceive the security of the job.	0.509*	0.000	Moderately Positive Correlation
6. I obey my parent's choice	0.247*	0.000	Negligible Positive Correlation
7. I am encourage by my relatives and friends	0.256*	0.000	Negligible Positive Correlation
8. I can use the knowledge and skills I learned in special science classes.	0.474*	0.000	Low Positive Correlation
9. I find admission to courses easy.	0.355*	0.000	Low Positive Correlation
10. I am challenge with the level of difficulty of subjects in high school.	0.312*	0.000	Low Positive Correlation
Overall Reasons for the Preferred Course	**0.601***	**0.000**	**Moderately Positive Correlation**

* Correlation is significant at the 0.05 level (2-tailed).
ns – not significant

CONCLUSIONS AND RECOMMENDATIONS

In consideration of the findings obtained, the following conclusions are drawn: 1) The fourth year high school students in special science classes are dominated by female, more than one-third resides in an urban area while the rest reside in the rural area. Likewise, more than one-third received honors/ awards while the remaining are not recipients of any awards/honors. College level comprises the biggest percentage in the educational level of both parents, and one fourth of their total population is educator, engineer, architect, doctor, nurse and businessman. The average monthly family income shows that their socio-economic status varies and mostly receives 20,000 and below; 2) Among the three science subjects, Advanced Physics may be considered as the most difficult than Advance Chemistry and Research II; 3) The students regard themselves highly in their prominent characteristics and learning styles; 4) The students are adept in the use of computer technology and fare better in conducting research than in doing tasks that involve mathematical analysis and language proficiency; 5) The performance of students is highly proficient but their grades in Research II and Advanced Chemistry does not affect their career preferences except for Automotive Mechanic; 6) The performance based on their grades in Advanced Physics affect the student's career preferences such as nursing, elementary education, economics, medicine, chemical, and electronics and communication; 7) The scientific knowledge of students signify a relationship to their performance in Advanced Chemistry, Research II and Advanced Physics; 8) The most preferred course of the respondents is Accountancy which is not the major course to pursue by students of special science classes; 9) The students are very highly preferred on the reasons of their course choice, that is to use the knowledge and skills they learned in special science classes and they love surfing the internet; and 10) The students' prominent characteristics, learning styles and scientific knowledge do not influence most of their career preferences.

RECOMMENDATIONS

Based on the findings, it is recommended that: 1) Higher authorities must provide proper orientation on the main goal of Science Curriculum among teachers and students on why it was formulated; 2) The rules and policies of science curriculum should be considered by both administrators and teachers in order to realize the effectiveness of the goal of science curriculum; 3) Administrators should provide science seminars and trainings such as conducting research, manipulation of science equipments to further enhance their scientific ability, thus enhancing the scientific knowledge of their recipients; 4) Teachers must be inclined to sciences to be qualified to teach the science subjects such as Advanced Chemistry, Research and especially on Advanced Physics as the most difficult subject; 5) A follow up study must be done to trace the graduates of science curriculum; 6) Further studies are suggested to be conducted regarding the performance and the choice of career among students of special science classes; and 7) Further studies should be conducted among other schools under science curriculum to make the research more reliable.

REFERENCES

Ettinger, Judith M, Ph.D., Improved Career Decision-Making in a Changing World. 2nd edition, Garett Park Press, 1996.

Bustos, Alicia S. and Espiritu, Socorro C. Psychological, Anthropological and Sociological Foundations of Education, Quezon City: Katha Publishing Company, Inc.1996.

Evangelista, Lourdes, Ed. D., Introduction to Psychology with Questions and Answers, 2000.

De Veyra, Jaime C. et.al., Filipino Civic Code, (Doctoral Class of First Semester. S.Y. 1993-1994)p.4

Barth, Patte, Kati Haycock, Sandra Huang, and Autumn Richardson (2001, January). Youth At the Crossroads: Facing High School and Beyond.

Blank, R. K. (1989). Educational Effects of Magnet Schools. Washington, DC: Council of Chief State School Officers.

Remors, H. A. et.al., Educational Measurement and Evaluation, (New York: Harper and Row Publishers,1985)

Webster. Webster's New World Dictionary of the American Language, College Ed. (New York: The World Publishing Co., 1958)

Isidro, Antonio. Trends and Issues in Philippine Education (Quezon City: Phoenix Publishers, 1984)

Fernandez, Belen. "The Relationship Of Course Courses of High School Seniors to their Parent's Educational and Occupational Attainment" (Unpublished Master's Thesis, University of the Philippines, Quezon City, 1987)

Rosa F. Diestro (2002), "Thesis On Relationship of Secretarial Students Academic Achievement To Some Related Factors" (Unpublished Master's Thesis, Rizal Technological University, Mandaluyong City, 2002)

Mercado, Amelia. "The Relationship of Socio-Economic Status to Intelligence Ratings and Scholastic Achievement of First Year high School Students Of The Secondary Schools of Plaridel, Misamis Oriental, S.Y. 1981- 82".

Valderama, Emaly. "Socio- Economic Condition Of The Philippine Christian University (Unpublished Master's Thesis, PCU, 1980)

Beltran, Renaida B., "Work Values and Satisfaction of Municipal Employees in Binmaley, Pangasinan, (Unpublished Master's Thesis. Pangasinan State University-OUS, Lingayen 2011).

Pontaoe, Alma R. , "Entry Skills of Grade V Pupils in Science", (Unpublished Master's Thesis. University of Pangasinan: Dagupan City , 2007).

Cortez, Maria Fanny R. "Competency in the Utilization of Science Processes in Teaching Elementary Science (Unpublished Master's Thesis.

Lingayen: Pangasinan State University-OUS, 2007).

Morondoz, Anthony A., "Learning Difficulties of Freshman Students in General Science, (Unpublished Master's Thesis. Lingayen: Pangasinan State University-OUS, 2005).

Felix, Lorena D., "A Follow-Up of the Graduates of Bachelor of Science in Environmental Studies of PSU-Binmaley Campus", (Unpublished Master's Thesis. Lingayen: Pangasinan State University-OUS, 2006).

Miner, Betty. Sociological Background Variables Affecting Achievement. "The Journal Of Educational Research" vol.61 (April, 1988)

Bernardino et., al.. TANGLAW, Journal of the College of Education De La Salle University – Manila, Volume 8, 2002.

The Education Trust, Inc. Education Trust (1996). *Thinking K-16,* Volume 2, Issue 1.

Geddes and Grosset, and Webster Universal Dictionary Thesaurus (Poland, OZ Graf S.A., 2002)

Bennett, Pam. Typewriting Dictionary (New York: Mc Graw- Hill Book Co..,1987)

Macarayan, G.T. " A Scale to Measure Family Level. " Philippine Sociological Review ,July 1995.

Sperling, Abraham, Ph.D. Assistant Professor, Psychology Made Simple, (The City College of New York, 1967)

Ed Watkins (1997), Preparing Liberal Arts Students For Careers, number 6, 1979

Institute for Labor Studies- Philippines. e.quality@work.15 November, 2011

Alexander, K., & Eckland, B. K., Contextual Effects in the High School Attainment Process. *American Sociological Review* , *40* (3), 402-416, 1975.

http://www.deped.gov.ph.December 13, 2011

http://www.dost.gov.ph.December 13, 2011

www.learningstyleson-line.com, December 26, 2011

http://www.bse.ph/index.ph/ease.html, December 26, 2011