



The Perception and Assessment of SHS Students Toward Research: Basis for Research Special Program

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Abstract: This paper reports the perception and self-assessment rating of the senior high school students towards research course. Specifically, this encompasses the knowledge and competencies, traits developed and challenges considered significant among the Senior High School Students. For the purpose of this study, a questionnaire was administered to 148 Senior High School students which comprises 67 ABM students and 81 STEM students. The questionnaire includes open-ended questions and a self-assessment rating scale. Research-related concepts and skills and applying them in future academic endeavors, writing process/ revision, and the need to develop acquired research competencies to a large extent based are highlighted in the study.

Index Terms – Research, Perception, Senior High School, Assessment

I. INTRODUCTION

As the year opens with the new curriculum for Senior High Schools, is the adherence to the global market of honing competitive skills in all aspects, thus Department of Education is eager to heed this call as they aimed to make every student of the Philippines be holistically developed Filipino with the 21st-century skills. Along this line is the realization of the research course objective which is to develop critical thinking and problem-solving skills through qualitative research. Putting it in the context level, schools ignited their force towards the fulfillment of their vision-mission. With all these respective goals, the notable recipients who may eventually benefit are the students from different sectors.

As the school embarks on the new curriculum, it sees the skills that need to be enhanced among interested parties, the students in particular. Information, media, and technology skills, innovation skills, communication skills, and life and career skills have to be attained or at least developed. It is from this great dream of the DepEd and the institution that research being part of the curriculum, must be harnessed. Hence, at this early stage, monitoring and evaluation of research as a course must be done. Moving forward, the course commenced with the presentation of findings from respective research teams of the two (2) ABM classes and two (2) STEM classes of SHS. As the first research course Research in Daily Life 1 closes, its evaluation opens specifically, on skills acquisition. However, little is known about how Senior High School Students perceived research and how they see themselves applying the learned competencies in future research and personal underpinnings. In the pursuit of excellence is the name of the game, the researcher would like to further monitor, check and bring to greater heights what was acquired and learned in the course, thus, embracing them with the ideals of improving the research program, specifically among the senior high school students. This principle hopes to begin by tapping and honing the research skills of senior high school students. Seamlessly, through this noble work, a production of good research and studies will emerge from a workforce of committed, excellent and passionate students for research will nestle, thus realizing the thrust of nurturing wisdom, character, and passion for excellence. Likewise at the macro level, fulfilling the vision of holistic Filipino armed with 21st-century skills.

NEED OF THE STUDY.

The study titled "THE PERCEPTION AND ASSESSMENT OF SENIOR HIGH SCHOOL STUDENTS TOWARDS RESEARCH" aims to investigate the attitudes and beliefs of senior high school students regarding research. It seeks to understand how these students perceive the importance and relevance of research in their academic journey and beyond, as well as their own assessment of their research skills and abilities. Additionally, the study intends to identify factors that may influence their perception of research, such as prior exposure to research, support from teachers and mentors, and personal motivations. By exploring the extent of students' engagement in research activities and the obstacles they face, the study aims to inform educational interventions and strategies to enhance students' perception of research and improve their research skills. Ultimately, the findings of this study

will contribute to fostering academic success and career readiness, particularly in fields that value research skills and will help in designing effective research-oriented programs and curricula for senior high school students.

3.1 Population and Sample

In this study, a total of 148 senior high school students participated as respondents, with 67 students belonging to the ABM Track and 81 students from the STEM track. The research instrument utilized in this study consisted of a combination of 5-item open-ended questions and a one-item rating scale, encompassing 13 research competencies. The distribution of the questionnaire took place following the commencement of the research course, ensuring that students had relevant experiences to draw upon while responding to the survey.

3.2 Data and Sources of Data

The data for this study were collected from a total of 148 senior high school students who participated as respondents. Among them, 67 students were from the ABM Track, while 81 students belonged to the STEM track. The primary source of data was a research instrument specifically designed for this study. The instrument used a combination of two types of questions: 5-item open-ended questions and a one-item rating scale. These questions were carefully crafted to capture valuable insights into the students' perceptions and self-assessment of research competencies.

The 5-item open-ended questions allowed the students to provide detailed and qualitative responses, enabling the researchers to gain a deeper understanding of the students' experiences and perspectives regarding the research course. On the other hand, the one-item rating scale was utilized to quantify and assess the students' level of proficiency in 13 research competencies.

3.3 Conceptual framework

The conceptual framework of this study revolves around three main components: attitude, perceived competencies, and application of these competencies. The researchers aim to explore how these elements interrelate and ultimately influence the need to develop competencies for an improved research program.

Attitude: The first component of the conceptual framework is attitude. This refers to the senior high school students' beliefs, opinions, and feelings towards the research course. It encompasses their overall outlook on the importance and relevance of research in their academic journey and beyond. Positive attitudes towards research are likely to lead to increased motivation, engagement, and active participation in research-related activities.

Perceived Competencies: The second component focuses on the students' perceived competencies in research. This involves their self-assessment of their abilities and skills related to research. Students may assess themselves based on their knowledge of research concepts, methodologies, data analysis, and other relevant skills necessary for conducting research successfully. The perceived level of competency can influence students' confidence in their research capabilities and their willingness to engage in research activities.

Application of Attitude and Perceived Competencies: The third component examines how students apply their attitude and perceived competencies in practical terms. This involves observing how their positive attitudes towards research and perceived competencies translate into action. It includes their actual engagement in research projects, participation in academic endeavors that require research skills, and their commitment to improving their research-related abilities.

The researchers seek to understand the relationship between attitude, perceived competencies, and the application of these competencies. By analyzing this relationship, they can assess the extent of the need to develop competencies for an improved research program. If the study finds that students with positive attitudes and higher perceived competencies actively apply these skills in research-related activities, it suggests that the existing research program is effective in fostering research skills among students.

On the other hand, if the researchers identify gaps between attitude, perceived competencies, and application, it indicates a potential need to enhance the research program. In such cases, interventions and improvements can be designed to align the students' positive attitudes and perceived competencies with practical application, leading to a more effective and impactful research program.

RESEARCH METHODOLOGY

The methodology section outline the plan and method that how the study is conducted. This includes Universe of the study, sample of the study, Data and Sources of Data, study's variables and analytical framework. The details are as follows;

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3.2 Data and Sources of Data

As soon as the questionnaires were answered, the 5-item open-ended questions were encoded and then analyzed in order to make meanings and associations. The data were treated in a thematic manner, where the answers were grouped and placed in categorized themes depending on the behavioral indicators as to where they are most likely seen. For instance, learning gains were

classified into research concepts and behavioral attributes, while the application of these gains was themed as future academic endeavors and life actualization process. These categories were determined based on the descriptions of where they are best suited..

3.3 Theoretical framework

The study focuses on the attitudes SHS students get from research, their perceived competencies and on how they hoped to apply all these gains. As soon as these three (3) variables are gathered, the researcher evaluates how much the Senior High School students see the extent of the need to develop the competencies they acquired from the course. From that realization, the aim of improving the research program for Senior High School. Changes of steps, processes and system of implementation may be done.

3.4 Statistical tools

This section elaborates the proper statistical models which is being used to forward the study from data towards inferences. The detail of methodology is given as follows:

3.4.1 Descriptive Statistics

In analyzing the one-item rating for the extent of the need to develop the competencies, the answers were first tallied and then tabulated using the Likert Scale. This type of scale is also called the frequency scale which utilizes the static choice response formats in measuring attitudes or opinions. It is a method of ascribing quantitative value to qualitative data, to make it amenable to statistical analysis. (Bowling, 1997; Burns, & Grove, 1997). The typical Likert scale item was standardized for the purpose of the study as to Numerical Rating and its corresponding descriptive rating as follows:

Numerical Rating	Descriptive Rating
3.5 - 4	Strongly Needed to a Very Large Extent
2.5 - 3.4	Needed to a Large Extent
1.5 - 2.4	Needed to a Moderate Extent
1.0 - 1.4	Needed to a Small Extent

The mean of each individual competency was computed by multiplying the total number of respondents to their corresponding numerical rating. It is demonstrated through the following formula:

$$x \text{ competency} = \frac{(4 \times n) + (3 \times n) + (2 \times n) + (1 \times n)}{\text{total number of respondents}}$$

For in-depth data analysis, the researcher made use of graphical presentations to compare the collected data. In first pass the linear regression is used to estimate beta which is the systematic risk.

IV. RESULTS AND DISCUSSION

4.1 Results of Descriptive Statics of Study Variables

The gathered data were organized in a manner that can be easily grasped and interpreted. These were from the answers to the questionnaire administered to the Senior High School Students.

Graphical presentations comprise the frequency of responses and the percentage distribution of each presented variable.

Figure 1. SHS Senior High School Prior Knowledge

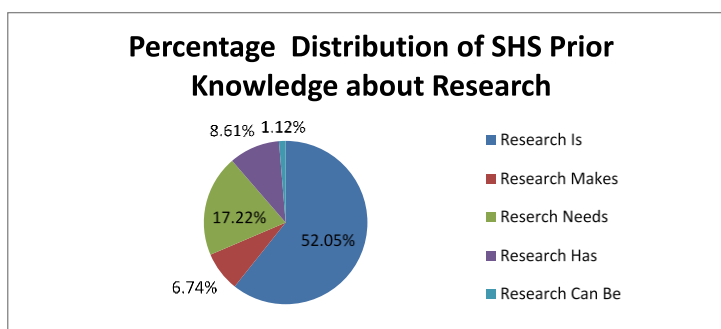


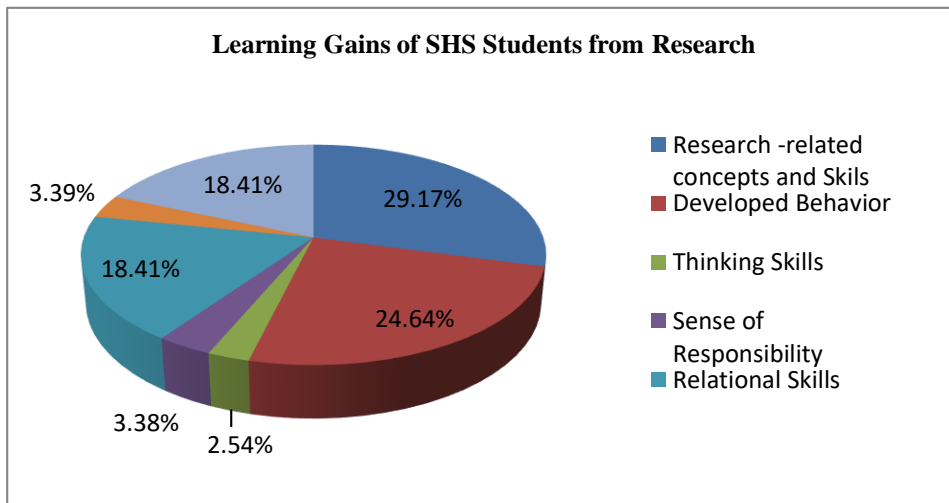
Figure 1 was obtained from the prior knowledge of the SHS students about research. Varied answers surfaced, so there is a need to cluster these answers for a clear and thorough presentation. They were clustered as to how the researcher described, identified, and made meaning of the varieties of answers. These identified clusters also guide her in the proper placement of answers and for the purpose of a clear and comprehensive presentation.

- A. Research Is: a deliberate description that directly uses descriptive words or adjectives, or a direct statement of what SHS thinks about research
- B. Research Makes: SHS think about what they can get or benefit from research
- C. Research Needs: SHS think research must-have and requires them to possess
- D. Research Has: SHS perceived as added feature of research
- E. Research Can Be: SHS think as alterations that can be done in research

F. Research Includes: SHS other notions/ effort research composes

Figure 2

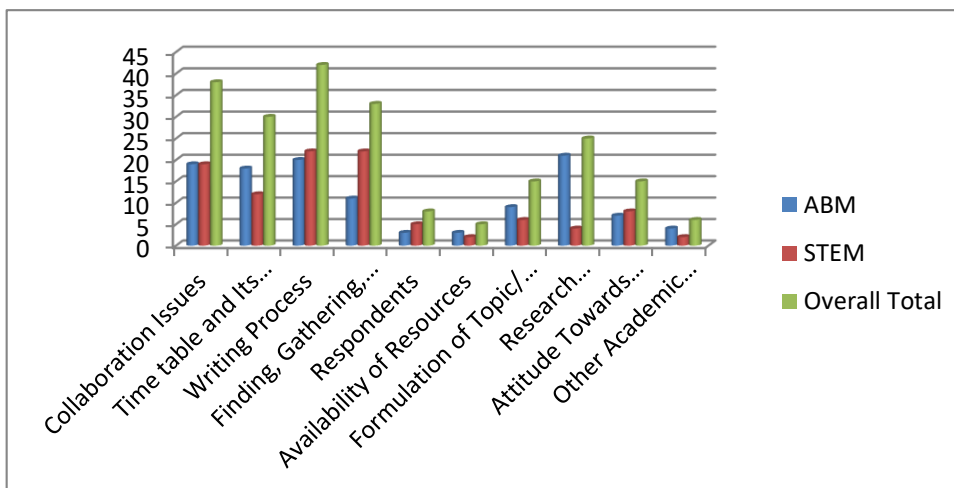
Percentage Distribution of the Learning Gains of the SHS Students from Research



Figures 2 are the responses of the SHS students when asked to name three (3) things they can get from research as stated in item number one (1) of the questionnaire. The learning which SHS students believe they gained from research were grouped thematically according to the most number of occurrence of observed indicators that the researcher has described meaningfully.

Figure 3

Frequency Distribution of the Significant Challenges Encountered by SHS Research Students



Figures 3 was drawn from the suggestions of the respondents about two (2) significant challenges they encountered in research. The answers were thematically clustered as to general ideas where the responses deemed appropriate as described in the said figures.

Figure 4

Frequency Distribution of How SHS Students Will Apply What was Learned from Research

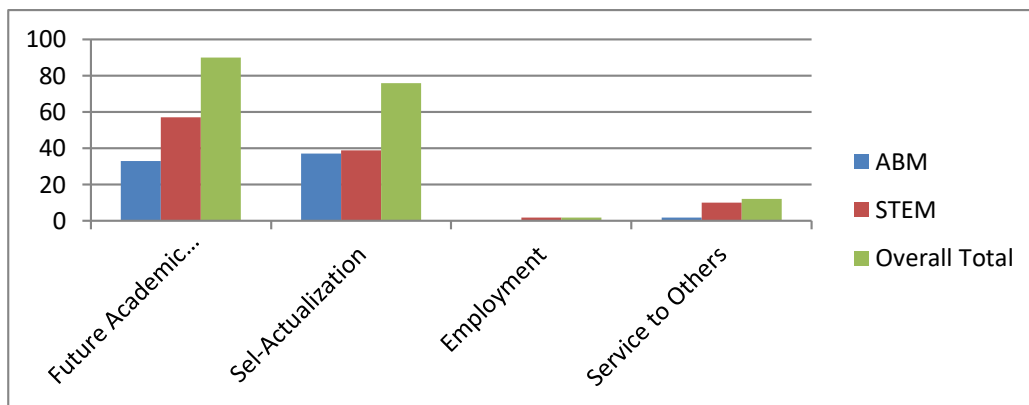
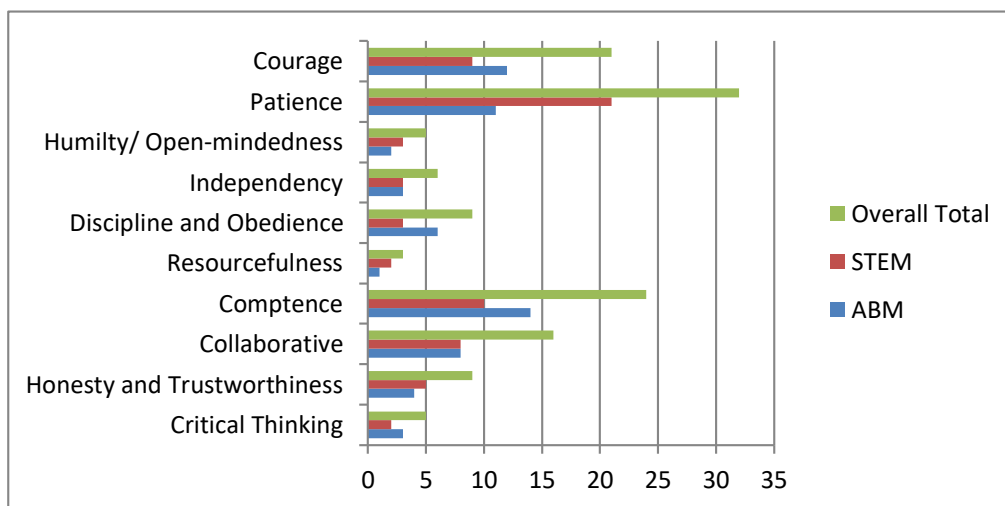


Figure 4 presents the result of the data when SHS students were asked on how will they apply what was learned from research as seen in item number two (2) of the questionnaire. Several responses surfaced since, limit was not set for the said question. The answers were thematically clustered into the general ideas as shown in the table below.

Figure 5

Notable Traits SHS Developed from Research



The data illustrated in Figures 4 was taken from the answers of the SHS students based on how they assessed themselves on the possession of the notable traits asked in the questionnaire. These answers were clustered and classified then tallied as to the number of occurrences the response appears. In this case, only one answer was requested from the students, however, they have the option either to respond to the question or not. Consequently, one cannot infer that the non-appearance of the answer of a student equates to lack of notable traits, for there can be other factors that may hinder along the process.

Table 1
THE EXTENT OF THE NEED TO DEVELOP RESEARCH COMPETENCIES AMONG

COMPETENCIES	4	3	2	1	Weighted Mean	Description	SHS
1. Problem Identification/ Stating the Problem Statements	36	63	32	10	2.75	Needed to a Large Extent	
2. Formulation of Research Title	36	72	30	8	2.89	Needed to a Large Extent	
3. Literature Review and Synthesis	45	61	30	4	2.89	Needed to a Large Extent	
4. Conceptual Framework Formation	28	72	38	3	2.75	Needed to a Large Extent	
5. Identifying Scope and Delimitation of the Study	23	73	36	13	2.68	Needed to a Large Extent	
6. Tool/Measurement Construction	25	68	35	12	2.61	Needed to a Large Extent	
7. Presentation of Data	33	74	28	10	2.84	Needed to a Large Extent	
8. Analyzing Data	47	67	25	7	3.01	Needed to a Large Extent	
9. Interpreting Data	40	73	23	8	2.93	Needed to a Large Extent	
10. Discussion of Data	41	63	31	8	2.86	Needed to a Large Extent	
11. Formulation of Conclusion	37	62	40	5	2.83	Needed to a Large Extent	
12. Writing Recommendations	31	58	32	12	2.53	Needed to a Large Extent	
13. Formulation of Research Title	40	54	35	12	2.73	Needed to a Large Extent	
GENERAL WEIGHTED MEAN	2.74- Needed to Large Extent						

STUDENTS

Table 1 shows the self-assessment of the senior high school students toward the competencies they have acquired from research. After tallying the frequency of the rating in each competency, the Likert Scale was used to treat the data.

The study seeks to improve the research program of the senior high school which in particular describes how the recipients of the course assess both the course and themselves. The study is qualitative in nature but ascribes quantitative value in order to make statistical analysis. Furthermore, quantitative value as presented in the study is based on the actual responses of the research students, not from the total population. This is done in that manner, since there were questions that require more than one answers, items number 1, 3, and 4 in particular. Besides, in every question suggests no numerical limit, except for item number 6 (please see appendix 1). Also, in most cases, it is expected that STEM students get the most number of responses, since they are greater in population, 81 than 67 in ABM. More importantly, the graphical presentations pronounced the offered tracks ABM (Accounting, Business and Management) and STEM (Science, Technology and Mathematics) track to clearly trace the answers thus, ease of treatment, root cause analysis, remedy or enhancement that may be done can be immediately identified as to for whom and under what circumstances.

As the senior high school students were given the freedom to write on what they know about research, there were immensely dense answers to the questions. Therefore, there is a need to cluster them into a generalized ideas suited for the data. It was seen that the students of research have variety of definitions and descriptions of what they think about research as manifested in the overall total of 139 responses or equivalent to 52.05 % of the total responses. It can be inferred that the students from STEM (Science, Technology and Mathematics) track has contributed more number of responses than those from the ABM (Accounting, Business and Management) track with a difference of 35 responses. To name a few the described research as time consuming, hard, tiring, surveying, and gathering related studies to name a few. Though slim in number, it is vital to underscore what research students thought about what research requires them to do which is labeled as “Research Needs”. Comments such as research must be systematic, information needs to be valid and accurate, typographical error must be corrected and research needs longer time are most of common answers that contribute to the overall total of 46 or 17.22% of the total number of responses. In this item, a difference of two (2) responses has left the ABM from STEM, given that the latter has 81 students while 67 in the former. Lastly, with the difference of eight (8) from the previously discussed, is the aspect that says “research includes” which exhibits the SHS other notions and effort research composed. Examples of these are research includes creating a problem, using the internet, problem identification, formulating relevant topics, and the like.

When they were asked to name three things from research, they suggested more of research related concepts and skills which earned 103 responses or 29.17 percent of responses from both tracks. This means that types and kinds of research, in-depth analysis of data, how to conduct research, new finding, and formulation of research problem were stated. This idea was followed with the behavior developed from research, which gained 87 responses or 24.64 %. Research students pointed out that they developed patience, diligence, resourcefulness, honesty, teamwork, perseverance and hard work along the process. Whereas, tied in the overall total are the relational skills and overall effect of the research process, where they both gained a consigned on the total response of 65 or 18.41% from the overall responses of 353 from both tracks.

As the research students embark on their research they believed that they met several challenges, where writing process and revision is the greatest challenge they have encountered with 42 or 19.35 % from the total responses of 217 in both tracks. Specifically, construction of

sentences, detailed in words, alignment of research questions and data, organizing ideas, and writing the review of related literature, revisions and recommendations are mentioned in this cluster. This is followed with 38 or 17.51% of the responses were attributed to collaboration issues like team leader does all the work, the need for teamwork and cooperation, misunderstanding and communication among teammates spelled this aspect. In tight number for this challenge is the finding, gathering, interpreting and retrieving of data placed third, with 33 responses or 15.20% of its total. Here, both tracks obtained the same number of responses, where they pointed out getting questionnaires, tallying, retrieving data of the respondents are the causes of the problem.

Consequently, SHS students declares that they have learned from research, then believed they can best apply these learning in their future academic endeavors, which notably gained 90 or 50% of the 180 total responses among them. They expressed that they can use research knowledge and skills in college, in G12 or in other research subjects. On the other hand, 76 or 42.22% of the total responses went to self actualization, such as resiliency at times of challenges, get things done immediately, hardworking in task, patience in doing assigned task, and trying to learn from experience are the instances.

As these students ought to learn, they were able to point out the notable trait they have developed in the research course. Highest in the row is patience with an overall total of 32 or 24.62% of the total responses which is 130 from both tracks. They elaborated that patience made them sustain effort in the long process of research. The same attitude was unconsciously formed when they have to deal with group mate whose wavelength is different from them and the same traits made them extend their graciousness in waiting for the results of the data or in waiting for the busy respondents to return the questionnaire. Next in such trait is competence which swept 24 responses or 18.46% of the 130 overall total. This encompasses putting the best effort of what ones does, the love to discover new knowledge, and the strive to get more ideas for better research. Lastly, they saw the importance of being collaborative to teammates as this was given 16 responses or 12.30% of the total responses, where both tracks gained the same number. They stated cooperation is vital to avoid misunderstanding. This they believed made them achieves objectives as a group and answered questions from panelists.

As for the extent of the need to develop research competencies among SHS students, analyzing data earned the most weighted mean of 3.0 which means, they feel the need to develop such competency to a large extent. It was followed with interpreting data which 2.93 in weighted mean. Whereas, formulation of research title and review of related literature and synthesis ranked third weighted the weighted mean of 2.89 for both. On the same ground, using the descriptors, all competencies indicated in the self-assessment indicated in item number six (6) of the questionnaire were tagged as largely needed to its highest extent of development, only that each competency differ in the number of points earned.

All these gathered information put forth meaningful answers to all the questions raised in the study.

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