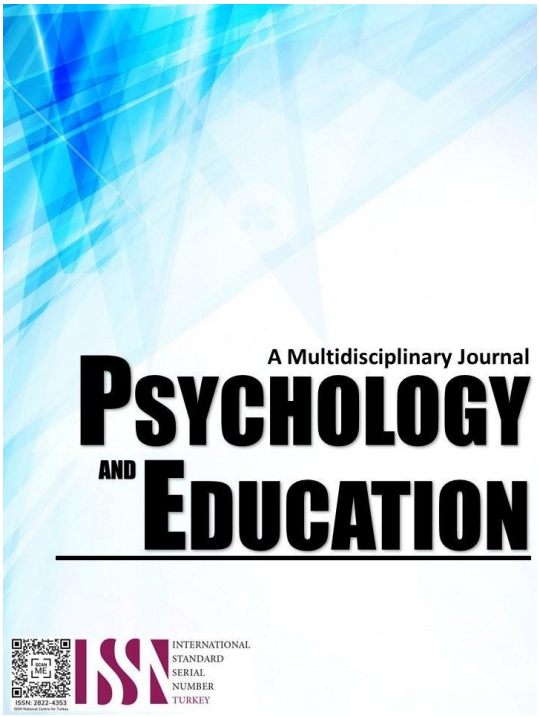
THE INFLUENCE OF THE K-12 CURRICULUM ON COLLEGE EDUCATION AND CAREER PATHWAYS OF PEÑARANDA NATIONAL HIGH SCHOOL'S 2018 SCIENCE TECHNOLOGY ENGINEERING MATHEMATICS (STEM) GRADUATES



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Research Article

The Influence of the K-12 Curriculum on College Education and Career Pathways of Peñaranda National High School's 2018 Science Technology Engineering and Mathematics (STEM) Graduates

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Abstract

This is an exploratory investigation of the STEM graduates' perceptions of their competence and their teachers in the different senior high school subjects including their college career decisions and success stories. Using quantitative and qualitative research methods, 73 STEM graduates of Peñaranda National High School in the academic year 2017-2018 who were already college graduates in SY 2022-2023 were followed up and profiled. Results revealed that they finished Bachelor of Science programs in Civil Engineering (27.4%), Nursing (16.44%), Electrical Engineering (13.69%), Agriculture (12.33%), and Mechanical Engineering (10.96%). Their GWA for general education is 89.58 major subjects are 84.56 and professional subjects are 88.79. 30.14% of them already have eligibilities, 2.7% were regular/permanent, 38.4% were contractual and most of them were preparing for their board/licensure exams. The students assessed the effectiveness of their teachers in delivering instruction on core, applied, and specialized subjects in Senior High School (SHS). The mean scores exhibited a range between 3.05 and 3.30, thereby classifying them inside the "Proficient in Teaching" group. Interestingly, suggestions for instructors to enhance their performance in each of these domains also aligned with the "Proficient in Teaching" classification. This finding demonstrates a correlation between the effectiveness of teachers in their instructional practices and the degree to which student feedback contributes to their pedagogical improvement. Upon examining academic achievement, it was discovered that a significant proportion of students attained grades categorized as "Outstanding" or "Very Satisfactory" over their high school and college years. Upon closer examination, it became evident that there existed a direct correlation between the academic performance of students and the effectiveness of their teachers in delivering instruction. The study substantiates the significance of effective instruction in fostering the academic achievement of students. It is posited that an average value of 4 is considered optimal, denoting a level of "Highly Proficient" for teacher performance and "Outstanding" for student academic performance. The findings of this study provide valuable insights into strategies for enhancing the quality of instruction and educational outcomes in secondary STEM curricula. The aforementioned findings demonstrate the significance of teachers possessing a comprehensive understanding of fundamental, practical, and specialized subjects concerning the scholastic achievements of the students.

Keywords: *K to 12 Program, employment, career trajectory, student career choices*

Introduction

There is an adage, "Education is the only legacy that no one can take away from you." Our elders have always emphasized the importance of education in life, regardless of the dire circumstances. In our country, people attach great importance to improving their quality of life. This adage has never been more true than when the COVID-19 pandemic hit the country. Education systems and institutions have been severely impacted by this issue as nationwide lockdowns have halted educational activities. The spread of the virus is expanding, and it is having a major impact on economic and educational activities. Students continued their studies despite the financial and physical setbacks caused by the Covid-19 pandemic. Continuing education is essential despite the additional challenges of the pandemic.

Context of Research in Basic Education

A study of basic education was introduced only during the approval of the legal basis for a further two-year extension in preparation for the higher education level. The Republic Act No. 10533 known as the Enhanced Basic Education Act of 2013, broadens the goals for college, vocational, and technical career opportunities. Under this law, the Department of Education (DepEd) released its Department Order (DO) number 43 (2013) implementing rules and regulations of the Republic Act No 10533 and DO No. 21 s. 2019, Policy Guidelines on K to 12 Basic Education Program, that support standardization of the Kto12 implementation. The facet of these amendments to the basic education program aligns with Sustainable Development Goal Four aiming to provide quality education across the country. Its principles of providing a curriculum that is inclusive, developmental, relevant, and appropriate adhere to the aims of SDG 4 (Quick Guide to SDG 4 and its Indicators, 2018).

The auxiliary postulate in tracking is a responsive, inquiry-based curriculum. This is a clear sign of inquiry-driven learner efforts ultimately aimed at producing new knowledge in a productive, inquiry-based academic community (Policy Guidelines on the K to 12 Basic Education Program, 2019). Enhanced basic education program: K to 12, number 18, the policy stipulated it aimed to produce graduates that are holistically developed, built with skills for lifelong learning, another facet that supports research in basic education. Skills definition under this section stipulates aimed skills for basic education and one particular stipulation is Learning and innovation skills, this has been described by the guidelines as the skills on creativity, curiosity, critical thinking, problem-solving, adaptability, managing complexity, self-direct, and sound reasoning skills, all which are needed for research, moreover, these aimed skills are the

clear foundation of research skills, its interaction produces student ability to observe, ask, plan, experiment, collect data, interpret data and arrive in a conclusion (Gauch et al., 2003; Kalinowski & Willoughby, 2019). However, these skills do not include dissemination skills, but the policy provided another set of aimed skills by the policy guideline, the communication skills, necessary for writing, publication, and dissemination of completed papers. Moreover, life and career skills were also included in the skills targeted by the program, another facet that needs research skills among the students, as research has been one of the rising academic skills needed by the industry (Policy Guidelines on the K to 12 Basic Education Program, 2019). Annexes of the policy guidelines inherently provide the curricular courses included in the two major divisions of basic education namely: Elementary and Secondary Education. Secondary education is divided into two phases the junior high school (JHS) phase which includes grades 7 to 10 and Senior High School (SHS) Grades 11 to 12.

In the JHS no particular learning area is specifically dedicated to research, particularly true across the four grade levels. It is in SHS that research courses are explicitly introduced to students. In SHS there are three groups of subjects; core, applied, and specialized. In the applied course of the SHS tracks, three courses are dedicated to research: Practical Research 1, which deals with qualitative research; Practical Research 2 which trains the student for quantitative research and inquiries, Investigations, and Immersion, in the practical application of research and integrative, scientific and creative academic manner. In the Science Technology, Engineering, and Mathematics (STEM) Strand, the students also have their final research commonly termed a Research capstone. These applied courses were set by the DepEd to require students are their outcome a well-written research report, thus, in translation research productivity both quantity and quality is the most appropriate measure of basic education institution if the learning outcomes of this course and ultimately the laid down target skills of the Enhanced Basic Education Program and curriculum are achieved.

Learning Standards of Research Courses in Basic Education

The standard can be understood as definitions of what someone should know and be able to do to be considered competent in some field (professional or educational). The standard can be used to describe and communicate what is most valuable and desirable to achieve and what is considered quality learning or best practice. Standard can also be used as metrics or benchmarks to show the gap between actual performance and the minimum level of performance required to be considered competent and can be used to support decision-making. The standard can be understood as defining aspects or learning areas of achievement that are worthy of being evaluated and encouraged, but they can also be used to assess whether what is being evaluated is being achieved. A commitment to providing every student with the opportunity to develop the knowledge and skills necessary to participate in and contribute to society underpins the definition of standards (Storey, 2006).

United Nations Educational, Scientific, and Cultural Organization (UNESCO) Sustainable Development Goals (SDG) were formed. One of the vital is SDG Four (SDG 4) Quality Education, adhered to by the Philippines, is composed of ten (10) targets that encompass a wide range of education concerns, preceded by Millennium Development Goal (MDG) 2 & 3, which aims to progress the educational system and its product in consideration of attaining sustainability in all its aspect. One of the targets is target 4.1, which aims to 2030 ensure the provision of quality secondary education that results in relevant and effective learning outcomes, a goal that shouts drive to lessons that students can use in their life such as the ability to research and use the scientific method (Sandström & van den Besselaar, 2016; Mirnezami et al., 2016). Moreover, target 4.6 aims by 2030, for all youth of both genders to achieve literacy and numeracy, another target that screams fundamentals in using the scientific method and creating research, literacy when constructing and crafting the paper, reading, understanding, and organizing scientific information, and skills in numeracy for data analysis and proper interpretation (Guido & Orleans, 2020). Withal the abovementioned frameworks and goals Southeast Asian Ministers of Education Organization (SEAMEO) Strategic Plan for 2012-2030, has also given a share of aiming to harmonize research with educational institutions in the Education and Science's Seven (7) Priority Areas, setting the core competencies on research in the priority areas such as research on energy efficiency, security, and resilience; sea-China education research network; workshop on developing fundable research project proposals in basic education; policy research on women in STEAM Education (SEAMEO Strategic Plan, 2021).

Learning standards were divided into two major reiterations, content standards, and performance standards, which are detailed in the learning competencies provision of the curriculum. These standards were set as guidance for instruction and ultimately the education goal for each course to attain the ultimate holistic development ready students for higher education (Policy Guidelines on the K to 12 Basic Education Program, 2019, pg. 13). Each plotted course in every strand has a corresponding learning standard. In the STEM curriculum, research subjects were generally plotted with standards that aim for students to develop scientific research knowledge and skills necessary for them to create a scientific report or paper, especially in Research Capstone (Policy Guidelines on the K to 12 Basic Education Program, 2019, Annex 2, pg. 65-66; Clarifications and Additional Information to DepEd Order No. 30, 2018, Enclosure No. 3). The research of White (2021) stipulated that the shift to standards-based grading and assessment should be strengthened in such a way that all teacher's means of verification should be anchored to the intended learning, teaching, and leading standards prescribed by the authorities. Another crucial and contentious component of a genuine standards-based system is behavior grading. To understand how teachers determined students' final marks on report cards, Tierney et al. (2011) conducted a study and stated that they deducted points for unfinished work and concurred that a student's grade was determined by how well they ranked among their peers. Grading standards change depending on teacher experience and school contexts, according to (Gershenson's, 2020) study of how teacher evaluations affect content knowledge. Students must be taught the skill that is being scored to have correct grading systems; otherwise,

grades will be fundamentally faulty and no longer be a reliable indicator of student competency (Schimmer, 2016). Parents need to know that the marks they see for their students are an accurate depiction of their learning at that time because grades should indicate proficiency rather than reward actions (Schimmer, 2016). Thus, pieces of evidence of learning must be aligned with standards. Further, this implies revisitation of the means of verification guidelines of the department of education in which verifications still include ICT integration/utilizing technology resources in planning, designing, and delivery of the lesson, materials to be used are specified in the LP, and all parts are present. Several research has examined whether standards-based systems' skills link to greater test scores and achievement and have shown the correlation between test scores and standards-based grading systems (Lehman et al., 2018; U.S. Department of Education, 2017).

The implementation of the K – 12 Basic Education Program is considered to be one of the most significant educational reforms in the country. It introduces programs and projects that aim to expand and improve the delivery of basic education in the country. It seeks to provide Filipino learners with the necessary skills and competence to prepare them to take on the challenges of the 21st Century. It will make the Basic Education System in the Philippines at par with international standards by ensuring that it is appropriate, responsive, and relevant to the learners.

Teaching Standards Related to Research for Basic Education

Teaching standards were described as the demands placed on teachers' professional engagement, practice, and knowledge levels that also give teachers the freedom to apply their developing knowledge in a variety of more sophisticated teaching and learning scenarios (National Adoption and Implementation of Professional Standards for Teachers, 2017, pg. 4). The DepEd Order (DO) number 43, Implementing Rules and Regulation of the Republic Act 10533 (2013, pg. 3), under rule II, curriculum, explicitly stated that one of the principles of the K to 12 curricula is capable teachers' availability in implementing the guidelines. This means that all learning standards, both content and performance, of the curriculum shall be masterfully possessed by teachers implementing the respective courses, in this case, teachers teaching research courses should be capable of all the knowledge and skills of research, its process, and the writing of the report, to be able to completely implement the curriculum and produce the intended outcomes. Moreover, it has also been stipulated that the implementation of the curricula should be research-based (Policy Guidelines on the K to 12 Basic Education Program, 2019, pg. 4), implying that teachers who implement the respective learning standards prescribed by the national education governing body shall possess the necessary research skills needed. Moreover, it has also put a premium on pedagogical approaches that hone students' ability to question, investigate, prove, probe, explain, predict, and establish connections among information such as inquiry-based learning, reflective learning, and collaborative learning (Policy Guidelines on the K to 12 Basic Education Program, 2019, pg. 5). All which are covered entirely by the basic education research courses, starting from observation to questioning, to formulating a hypothesis, testing the hypothesis, concluding down to the actual writing of the report and the collaborative nature of how the courses groups student. In support, the DepEd provided a framework that entails training and developing teachers who are qualified to teach the curriculum (National Adoption and Implementation of Professional Standards for Teachers, 2017). It has been stated that through quality teachers the Philippines be able to produce holistic students with 21st-century learning skills that will help the aid development and progress of the Philippines (National Adoption and Implementation of Professional Standards for Teachers, 2017, pg. 3). Implications that teachers must possess the necessary skills to teach the subject aiming for the accomplishment of the learning standards, in context research teachers should have a masterful understanding of the knowledge, increasing student achievement, propelling quality of learning through the quality of teaching.

The Philippine Professional Standards for Teachers (PPST) provides seven distinct domains described according to four career stages, from beginner teacher to distinguished teacher, across the domains there are specific sections that are highly related to the possession of research skills (National Adoption and Implementation of Professional Standards for Teachers, 2017, pg. 4-8). First, Content Knowledge and Pedagogy, in which teachers are trained and expected to use masterful teaching of content knowledge in congruence with skills in applying the set content knowledge to principles of teaching theories and the teaching-learning process. Strand 1.1 of the domain, states that teachers must be able to expertly use content knowledge across the target learning standards and around curricular relations of the entire program, in the context of the research subject teachers must be able to demonstrate excellent usage of content knowledge in the teaching of quantitative and qualitative research and guidance to the student during the writing of the report. Strand 1.2, explicitly includes the research-based knowledge and principles of teaching and learning to be applied by the teachers, implying that any K to 12 teachers must possess the ability to research information and use the research process in the teaching and learning of their respective course, thus, in the context of teachers implementing basic education research courses, must possess masterful skills in researching. Under the domain, strand 1.4, teachers must use strategies that promote literacy and numeracy, across the three main research courses, literacy is developed through qualitative research and numeracy through quantitative research and cumulatively by research capstone, thus, teachers are expected to have the skills in reading, writing, computing, and inferencing, a skill that is fundamentally needed by researchers. Additionally, all the same strands 1.3, use of information and communications technology (ICT), 1.5 state, teachers are expected exemplary skills in using strategies that develop higher-order thinking skills, critical and creative thinking of students, and 1.6 and 1.7 state teacher ability to communicate effectively in the classroom (National Adoption and Implementation of Professional Standards for Teachers, 2017, pg. 10-11). Whether a learner learns anything or not is greatly influenced by the teacher and the following factors. One well-known factor is the teacher's instructional approach and performance effectiveness, which also includes teaching time management, content index, teacher instructional quality, variety of classroom setup, content and

cognitive mastery of concepts and skills to be taught, among other important components of successful learning (Yustina et al., 2018; Abu Siri et al., 2020). Knight and Cooper (2019) proved that standards-based grading increases the focus, effectiveness, and enjoyment of teaching and learning, and teachers believe it to be a workable reform. The learning environment is the canvas of teachers' instructional approaches, methods, activities, and theories (Sadera et al., 2014). Fisher (2005) provided several physical measures of an effective learning environment that include the learner and teacher's physical space, availability of learning resources, classroom physical arrangement, and characteristics, and classroom compatibility to teaching and learning activities, strategies, and methods. Balog (2018) added teaching materials, technical tools, curriculum, training, and instruction. The following five requirements must be met for standards to be effective: they must be flexible and developmental (Udvari-Solner, 1996), not one-size-fits-all (Bay, 1997); they must evaluate a range of competencies using guides for creating public policy and engaging learning environments for all students. They allow equitable access to meaningful content (Strong, Silver, & Perini, 1999); they involve the entire school and community in implementing standards (Cook & Friend, 1995); and they allow for a variety of assessment measures rather than high-stakes tests. This implies teaching standards must also cater to the diverse challenges of the students.

In the context of teaching research, this includes the ability of teachers to instruct and guide different learning abilities of students to accomplish the necessary learning standards for the research subject. The guidelines also include curriculum and planning under Domain 4 which focuses on the understanding and application of the local and national curricular standards by teachers. This domain covers their capacity to convert curriculum material into engaging learning activities that are founded on the fundamentals of successful teaching and learning. To plan and develop well-structured and sequential classes, either on their own or in conjunction with others, it is expected instructors to use their professional knowledge. These lesson plans and related materials encourage student engagement, knowledge, and achievement, learning programs should be contextually appropriate, responsive to learners' needs, and provide a variety of ways to communicate learning goals. This domain includes standards of planning and management of the teaching and learning process, implying a masterful formulation of teaching, and learning practices for the accomplishment of the intended learning standards and includes alignment of learning outcomes with learning competencies, in the context of research subjects. This includes the systematic creation of teaching and learning strategies, activities, and assessments to accomplish the learning standards. As per the DO 8 series of 2015, Classroom assessment is an ongoing process of identifying, gathering, organizing, and interpreting quantitative and qualitative information about what learners know and can do. Classroom assessment is part of every teacher's responsibility to improve student learning and motivation, record student performance, and report results for accountability. At the heart of this assessment, the framework is the recognition and deliberate consideration of the learners' zone of proximal development (Vygotsky 1978). The quality of education can be explicitly affected by the rules, regulations, and guidelines that govern the school and its human resources, thus, the implementors of these guidelines, the school heads, shall possess the necessary qualifications to shape the school environment (Organization for Economic Cooperation and Development, 2018, p. 20). The Philippine educational system has adopted this particular professional standard for school heads, defined as a set of quality measures that are K–12-aligned, globally comparable, and attentive to school principals' career objectives.

For more than years now, the Enhanced Basic Education Program otherwise known as the K – 12 Basic Education Program, has been introduced as the new curriculum to be implemented throughout the entire basic education system in the Philippines. As such its primordial goal is to create a functional basic education system that will produce productive and responsible citizens equipped with the essential competencies and skills for both lifelong learning and employment. The program will enhance the basic education system to full functionality to fulfill the basic learning needs of the students. By the time it was enacted into law which stipulates under Republic Act No. 10533, it envisions that the Filipino graduates from this education program will learn competencies and skills relevant to the job market. The program is designed to adjust and meet the fast-changing demands of society to prepare graduates with skills essential for the world of work. Preparation of Filipino students for the world of work as well as training them with the necessary skills for their higher learning is postulated in the spirit of the law thereby, instituting different subjects or disciplines that would help them realize the value of their learned skills and competencies. More so, along with this, graduates will be prepared for higher education. Due to an enhanced curriculum that will provide relevant content and be attuned to the changing needs of the time, basic education will ensure sufficient mastery of core subjects to its graduates such that graduates may opt to pursue higher education if they choose to. It is also evident from the program that graduates will be able to earn higher wages and/or be better prepared to start their businesses. Now, when schools have implemented the program it was a gradual change transpired shifting from one curriculum or educational program to the other. K-12 graduates have reached these recent years and these graduates are considered true-blooded K-12 graduates. The school year 2017-2018 forms part of the batches that received the full-blown implementation of the K12 program. Given this condition, secondary schools in Congressional District IV have not yet conducted any form of study that will validate and trace K12 graduates from the years mentioned herewith. It is in this line, that the researcher plunges her interests to administer a tracer study that will identify both the academic and employment profiles of the K12 STEM graduates from their schools last attended. The study by Padios Jr. et.al. (2021) revealed that the majority of the graduates are between the ages 19-21, a huge majority of the respondents belong to the lower income categories and the number of male graduates is at par with females. Sex, age, and monthly family income explained the respondents' chosen strand. Both sex and monthly family income explained the statehood. At present, Peñaranda National High School Senior High School Department has produced different batches of senior high school graduates from school years 2017-2018, 2018-2019- 2019-2020 whereas the school has not evenly conducted scientific studies which will track its graduates' employment status. Many of the senior high graduates from Peñaranda National High School have successfully surpassed their higher learning in

college and most of them can seek sustainable employment. However, no actual findings or data were administered.

Odame et.al. (2019) in their study entitled "University Preparation and the Work Capabilities of Visually Impaired Graduated in Ghana: A Tracer Study" revealed that graduates acquired relevant work-related capabilities such as time management, interpersonal, and teamwork skills from their university education. However, they encountered considerable challenges during their transition period and were confronted with barriers such as a lack of assistive technologies and communication equipment at work. Dagli et.al. (2019) showed in their tracer study entitled "A Tracer Study of Baybayin National High School (Grade 7-12) Senior High School Graduates that the implementation of the K 12 curriculum signaled a milestone in the Philippine Education System. The findings of the study led to identifying the profile graduates in terms of sex, SHS strand, chosen exit, and their reasons for choosing that exit. Also, the study revealed that the curriculum's significance mainly lies in guiding the students on which exit to take. Liwanag (2021) in his tracer study entitled "Senior High School Graduates Traces Study (GTS): Basis For A Proposed Learners' Work Immersion Plan" revealed that students begin to study in SHS subjects have introduced them to their preferred path. Further, the study showed that students who belonged to the K12 generation but did not complete Grade 12 would be disadvantaged in that they would not be accepted into a college degree or technical-vocational certificate program without an SHS diploma. Gonzales (2019) in his study entitled "Tracer Study of Maritime Graduates of One Private Academic Institution in the Philippines from 2012-2017" showed that human relations and communication skills were the closest relevant skills acquired by the maritime graduates from the university. Further, it showed that there was a high level of school-related factors that contribute to present employment and are relevant to the job placement of maritime graduates. Orale (2016), Senior High School Curricula in the Philippines, Japan, and the USA showed that the SHS curriculum is intended to prepare students to enter college or university work in the industry or be an entrepreneurs. The SHS program is the last level in all basic education programs of the countries reviewed. The Philippines has a clearer model with at least four tracks (academics, tech-voc, sports, arts & design) and at least ten strands. Japan has two tracks in academics and tech-voc.

The US basic education system varies from state to state, similar to its SHS curriculum. There is no definite track as this is left to individual state and their school districts to decide. There are purely academic, tech-voc, and other types of schools. The majority of those who choose the academic track are students who plan to proceed to college. There is still a stigma in selecting tech-voc and other courses as these are seen by many as a course for poor-performing/problematic students. Enrollment in tech-voc schools in the US is declining despite the surge of demand for skilled workers. In the three countries, the availability of qualified teachers is still an issue. This situation is very real in the Philippines as it started the SHS program in June 2016. Other problems include the need to construct a huge number of classrooms and facilities. All of these are currently being addressed too by the government. Pentang et.al (2022) in their study entitled "Tracer Study of Teacher Education Graduates of Western Philippines University—Puerto Princesa Campus: Basis for Curriculum Review and Revision" showed that graduates took the teacher education program with a strong passion for the teaching profession. Further, more graduates received honors and awards, passed the licensure examinations for teachers, attended advanced studies for professional development, and are employable. In addition, the study showed that difficulties and problems encountered and recommendations to strengthen the teacher education program were noted. These findings may serve as a baseline for curriculum review and give suggestions for future tracer studies.

Tamayao et.al. (2020) in their study entitled "Design and Validation of the College Readiness Test (CRT) for Filipino K to 12 Graduates" revealed that the positive relationship between discrimination and difficulty indices as well as the distractor efficiency and difficulty index of the CRT items. Also, the CRT was reliable as it possessed inter-item consistency. Thus, it was a valid and reliable instrument to measure the college readiness of Filipino K to 12 graduates with its features of being contextualized, gender-fair, and criterion-referenced. Navida (2022) in his study entitled "Employability of the Bachelor of Secondary Education Graduates of Pangasinan State University Alaminos Campus revealed that human relations, communication, and critical thinking skills are the competencies that are useful for the jobs of most graduates. On the other hand, the common reasons graduates for not yet employed or never have been employed are family concerns, health reasons, no job opportunities, and the Licensure Examination for Teachers (LET) review. Padios Jr. et.al. (2021) in their study entitled "Strand and Statehood Predictors of Senior High School Graduates: A Tracer Study" revealed that the majority of the graduates are between the ages 19-21, a huge majority of the respondents belong to the lower income categories and that the number of male graduates is at par with females. Sex, age, and monthly family income explained the respondents' chosen strand. Both sex and monthly family income explained the statehood. Aclan et.al. (2022) in their study entitled "Tracer Study of AUP, BEED and BSED Graduates from 2012 to 2016" revealed that the majority of the teacher education graduates within the last 5 years found a job aligned to their specialization. The findings implied that AUP teacher education graduates were easily employed; teacher education was in demand nationally and internationally. It is recommended that future studies investigate the matching of competencies learned and their relevance in the workplace.

Implementing Rules and Regulation of the Republic Act 10533 (2013, pg. 4-6), under Teacher Education and Training, stipulates the principles of Training School Leadership. Superintendents, principals, subject area coordinators, and other instructional school leaders shall likewise undergo workshops and training to enhance their skills in their roles as academic, administrative, and community leaders. DepEd teachers who implement the enhanced basic education curriculum but have not undergone pre-service education aligned with the enhanced basic education curriculum shall be trained to meet the content and performance standards. Standards have been defined with the following purposes, for fostering commitments to equity (Barber and Mourshed, 2007), providing common criteria against which to assess students' progress (ACARA 2011, as cited in Organization for Economic Cooperation and Development, 2018, p. 18-

19), facilitating communication between the various groups interested in education and its quality, emphasizing the end goal of the school system, and focusing on learning outcomes for students are all ways to make learning expectations for students in schools clear and explicit (Sadler, 1987). Most often standards are created for all areas of learning, going beyond academic achievement and, in some cases, taking social and personal development competencies or the use of technologies into consideration. These standards describe the learning progress along a continuum from beginner to expert for the entire school cycle and in the end the entire education level.

Research Questions

The study aimed to describe and examine the college education of senior high school STEM graduates of Peñaranda National High School Batch 2018 to serve as the basis for an action plan. Specifically, it sought to answer the following:

1. What is the profile of the respondents in terms of:
    1.1. Socio-demographic profile
        1.1.1. Age
        1.1.2. Gender
        1.1.3. Civil Status
        1.1.4. Employment Status
        1.1.5. Eligibility
    1.2. College Education
        1.2.1. Course Taken / College Completion
2. How do the respondents rate their teachers' proficiency across various subjects?
    2.1. Evaluation of Teachers' Proficiency in Core, Applied, and Specialized Subjects.
    2.2. Suggestions from Students to Enhance Teachers' Performance.
3. What is the academic performance of the students in terms of?
    3.1. Final Grades in Various Subjects during Senior High School
        3.1.1. Core Subjects
        3.1.2. Applied Subjects
        3.1.3. Specialized Subjects
    3.2. College Academic Performance: Evaluation based on General Weighted Average (GWA)
        3.2.1. General Subjects
        3.2.2. Professional Subjects
        3.2.3. Major Subjects
4. To what extent does the demographic profile of survey participants influence their assessment of educators' performance across core, applied, and specialized fields of study?
5. What is the significant relationship between the respondent's demographic profile and their academic performance in SHS and College?
6. What action plan can be proposed to enhance the Senior High School program?

Methodology

Research Design

A quantitative research strategy was employed in the study, incorporating descriptive and correlational methods for data collection. A descriptive study was conducted to ascertain the college and career profiles of high school graduates who obtained degrees in STEM fields. The researcher employed a correlational research methodology to investigate the associations between variables, specifically the socio-demographic characteristics of participants and their self-assessments of teachers' performance in Core, Applied, and Specialized subjects.

Respondents

The respondents were seventy–three STEM graduates from School the in year 2017 - 2018.

Table 1. *Number of the Respondents*

School Year	*No. of College STEM Graduates*
2017-2018	73

This tracer study utilized the total population sampling. There were seventy-three Senior High School STEM graduates from Peñaranda National High School in the School Year 2017-2018. A list of the Senior High School graduates from this school year was requested from the school records and each was traced.

The researcher used primary and secondary data sources for this study. Primary data was gathered through survey methods using secondary data sources such as SF1, a school report on promotion or SF5, and other pertinent school records that identified the Senior High School STEM graduates from the school year 2017-2018.

Instrument

The survey questionnaire was used as the main research instrument. The same was created by the researcher. The first part of the questionnaire in general information about the respondents while the second part consists of questions regarding the educational background of Senior High School graduates. A third part of the questionnaire pertains to the college profile and employment profile of the respondents. The interview was also utilized to substantiate or clarify some of the responses from the survey as well as gather additional information.

Procedure

The researcher derived the results from the data gathered from the questionnaires. As such, different methods were used by the researcher to reach out to Senior High School STEM graduates. The researcher sought the assistance of other Senior High School advisers from the school years indicated in this study. The researcher sent the copy of the questionnaires to the respondents through their emails, Facebook Messenger, and other forms of online communication.

Data Analysis

The researcher was guided by the following course of action.

To quantify RQ 1, 2, and 3, the researcher used frequency, percentage, mean, and standard deviation to determine their age, gender, civil status, eligibility, and the course taken in college.

To describe and examine the assessment of the respondents to their SHS teachers and the student's academic performance in SHS and college.

To analyze RQ 4 and RQ 5, the researcher used the Chi-Square Correlation Analysis, Pearson Correlation Coefficient, Contingency Coefficient, and Somer's d Statistic to identify the correlation between the demographic profiles of the respondents to their self-reports on teachers' performance in Core, Applied, and Specialized subjects and academic performance in SHS and College exists.

Results and Discussion

This section deals with the presentation, interpretation, and analysis of the findings of the data gathered. It contains the findings of the study that are presumed to have responded to the research problems identified in Chapter 1.

Characteristics of Data

The study presents the demographic characteristics of the participants, consisting of 73 initial graduates of the STEM Senior High School program from Peñaranda National High School. The findings provide significant insights into the profile of the respondents.

Table 1.1. *Socio-Demographic Profile of the Respondents*

Profile	*Category*	*Frequency*	*Percentage*
Age	22 years old	9	12.3
	23 years old	64	87.7
Gender	Male	49	67.1
	Female	24	32.9
Civil Status	Single	71	97.26
	Married	2	2.74
Employment Status	Regular/Permanent	2	2.7
	Contractual	28	38.4
	Unemployed	40	54.8
	Self-employed	3	4.1
Eligibility	Board passer	22	30.14
	Ineligible	51	69.86

Table 1.1 presents a comprehensive overview of the social and demographic characteristics of the initial cohort of 73 individuals who completed the STEM Senior High School program at Peñaranda National High School. In this study, age, gender, civil status, job status, and eligibility status were employed as variables. This analysis provided a comprehensive examination of the distribution of demographics within this particular group.

According to the age distribution, a significant majority of the participants, specifically 87.7% or 64 individuals, are recorded as being 23 years old. According to the data, a mere 12.3% of the graduates, specifically 9 individuals, are reported to be 22 years of age.

Regarding the gender composition of the population, the data reveals that males constitute 67.1% (49 individuals) of the sample, whereas females account for 32.9% (24 individuals).

Regarding their marital status, it is observed that the majority of the graduates, specifically 97.26% or 71 individuals, are unmarried.

According to the available data, the percentage of individuals who are reported to be married is a mere 2.74 percent, which corresponds to a total of two individuals. Upon examining the employment status of the graduates, the data reveals that 54.8% (40 individuals) are currently without employment, whereas 38.4% (28 individuals) are engaged in contractual employment. The group consists of a minority of individuals who are either regular or permanent workers, comprising 2.7% (2 participants), or self-employed individuals, accounting for 4.1% (3 participants) of the population.

Finally, concerning eligibility, it is evident that a majority of the individuals who registered (51 individuals, constituting 69.86% of the total) do not meet the necessary criteria. Out of the total number of participants, 30.14 percent (22 individuals) have completed the board tests, thereby meeting the criteria for eligibility. The table provides comprehensive insights into the social and demographic composition of this particular group, thereby offering valuable information for potential research endeavors and policy formulation.

Table 1.2. *Demographic Profile of the Respondents in Terms of College Education*

Category	*Frequency*	*Percent*
BS Agriculture	9	12.33
BS Civil Engineering	20	27.4
BS Marine Transportation	5	6.85
BS Nursing	12	16.44
BS Business Administration	4	5.48
BS Architecture	1	1.37
BS Electrical Engineering	10	13.69
BSE Major in English	1	1.37
BS Computer Science	1	1.37
BS Agricultural Engineering	1	1.37
BS Mechanical Engineering	8	10.96
BS Information Technology	1	1.37
Total	73	100

Table 1.2 provides supplementary details about the demographic profile of the initial cohort of 73 graduates from Peñaranda National High School's STEM Senior High School program. The current inquiry centers around the educational institutions attended by the participants. The information is categorized based on the classifications of degrees obtained by the graduates.

Commencing with the degrees that exhibited the highest number of graduates, it is observed that the most prevalent degree was Bachelor of Science in Civil Engineering, with a total of 20 graduates, constituting approximately 27.4% of the overall population.

The Bachelor of Science in Nursing program emerged as the second most favored field of study, attracting 12 graduates, constituting approximately 16.44% of the total. Following closely, a total of ten individuals pursued a Bachelor of Science degree in electrical engineering, constituting approximately 13.69% of the entire cohort.

The course that ranked fourth in terms of popularity among the graduates was BS Agriculture, with a selection rate of 9 individuals, accounting for 12.33% of the total. The subsequent course with the highest level of popularity among the graduates was Bachelor of Science in Mechanical Engineering, selected by a total of 8 individuals, representing 10.96% of the respondents.

A total of five graduates, representing 6.85% of the cohort, obtained a Bachelor of Science degree in Marine Transportation. Similarly, four graduates, accounting for 5.48% of the cohort, earned a Bachelor of Science degree in Business Administration.

The remaining degree programs, namely BS Architecture, BSE Major in English, BS Computer Science, BS Agricultural Engineering, and BS Information Technology, were each represented by a solitary graduate, accounting for a proportion of 1.37 percent individually concerning the overall total. It is noteworthy that the table presented herein provides significant insights into the academic interests and career aspirations of the respondents after they complete high school. The data indicate that the interviewees exhibit a strong preference for pursuing degrees in engineering and nursing.

Table 2.1.1 provides a comprehensive examination of the mean responses about the performance of teachers across various key subjects in Senior High School. The criteria utilized to assess an individual's level of knowledge are categorized as Not Proficient (NP), Almost Proficient (NeP), Proficient (P), and Highly Proficient (HP). The average weighted mean (AWM), standard deviation (SD), and descriptive equivalent (DE) are all examples of data types.

Upon careful examination of the data, it becomes evident that all the instructors for the mentioned courses have been evaluated and received a rating of "Proficient in Teaching," as indicated in the DE column.

The mean score for Philosophy, when weighted, was found to be 3.34, with a corresponding standard deviation of 0.4778. This indicates a higher degree of variability in the scores. Within this particular region, none of the students expressed dissatisfaction with the quality of teaching, nor did they deem it to be marginally satisfactory. Instead, 48 students regarded the teaching as satisfactory, while 25 students perceived it to be highly satisfactory.

Table 2.1.1. *Mean Response on the Evaluation of Teacher's Performance in Core Subjects for Senior High School*

Different Subjects In SHS	*NP*	*NeP*	*P*	*HP*	*AWM*	*SD*	*DE*
Oral Communication	0	0	68	5	3.07	0.2543	Proficient in Teaching
Komunikasyon at Pananaliksik	0	0	70	3	3.04	0.1999	Proficient in Teaching
Earth Science	0	0	68	5	3.07	0.2543	Proficient in Teaching
General Mathematics	0	0	67	6	3.08	0.2766	Proficient in Teaching
Understanding Culture Society & Politics	0	0	70	3	3.04	0.1999	Proficient in Teaching
Physical Education	0	1	65	7	3.08	0.3229	Proficient in Teaching
Reading & Writing	0	0	69	4	3.05	0.2292	Proficient in Teaching
Pagbasa at Pagsusuri	0	0	67	6	3.08	0.2766	Proficient in Teaching
Disaster Risk Reduction Readiness	0	0	67	6	3.08	0.2766	Proficient in Teaching
Statistics & Probability	0	0	66	7	3.10	0.2965	Proficient in Teaching
Earth & Life Science	0	0	65	8	3.11	0.3145	Proficient in Teaching
Personal Development	0	0	67	6	3.08	0.2766	Proficient in Teaching
21st Century Literature	0	0	69	4	3.05	0.2292	Proficient in Teaching
Media & Information Literature	0	0	66	7	3.10	0.2965	Proficient in Teaching
Contemporary Arts	0	0	68	5	3.07	0.2543	Proficient in Teaching
Introduction to Philosophy	0	0	48	25	3.34	0.4778	Proficient in Teaching
Physical Science	0	0	61	12	3.16	0.3732	Proficient in Teaching
Overall Mean Value					3.10	0.2829	Proficient in Teaching

Legend: NP:(1.00–1.49)-Not Proficient, NeP:(1.50-2.49)-Nearly Proficient, P:(2.50–3.49)-Proficient, HP:(3.50-4.00)-Highly Proficient, AWM-Average Weighted Mean, SD-Standard Deviation, Descriptive Equivalent

The discipline exhibiting the second-highest Average Weighted Mean (AWM) score is Earth and Life Science, with a value of 3.11 and a standard deviation of 0.3145. This observation indicates that the numerical values exhibit a lesser degree of dispersion compared to the field of Philosophy. There were no students who assessed the teaching in this field as not proficient or almost proficient. However, a total of 65 students rated it as proficient, while 8 students rated it as highly proficient. The subsequent subject under consideration is Physical Science, characterized by an average weighted mean (AWM) of 3.16 and a relatively high standard deviation of 0.3732. This indicates a greater degree of dispersion among the individual grades. Subjects such as Oral Communication, Earth Science, General Mathematics, Reading and Writing, Pagbasa at Pagsusuri, Disaster Readiness and Risk Reduction, 21st Century, and Contemporary all exhibited an identical average weighted mean (AWM) of 3.07. The standard small disparity, indicating a comparable degree of variability in individual scores. deviations of these subjects exhibit a relatively.

Finally, the mean of the ratings is calculated to be 3.10, with a standard deviation of 0.2829. The overall score achieved falls within the category of "Proficient in Teaching". Based on the feedback provided by the students regarding their teachers, the presented table demonstrates a commendable performance in the fundamental domains of Senior High School education. Assessing the proficiency of teachers in teaching various subjects is a crucial method for enhancing school administration, refining pedagogical practices, and formulating informed educational policies.

Table 2.1.2. *Mean Response on the Evaluation of Teacher's Performance in Applied Subjects for Senior High School*

Indicators	*NP*	*NeP*	*P*	*HP*	*AWM*	*SD*	*DE*
Empowerment and Technology	0	0	70	3	3.04	0.1999	Proficient in Teaching
Practical Research 1	0	0	69	4	3.05	0.2292	Proficient in Teaching
Practical Research 2	0	0	67	6	3.08	0.2766	Proficient in Teaching
Filipino sa Piling Larang	0	0	68	5	3.07	0.2543	Proficient in Teaching
English for Academic & Professional Purposes	0	0	70	3	3.04	0.1999	Proficient in Teaching
Entrepreneurship	0	0	70	3	3.04	0.1999	Proficient in Teaching
Work Immersion	0	0	70	3	3.04	0.1999	Proficient in Teaching
Overall Mean Value					3.05	0.2228	Proficient in Teaching

Legend: NP:(1.00–1.49)-Not Proficient, NeP:(1.50-2.49)-Nearly Proficient, P:(2.50–3.49)-Proficient, HP:(3.50-4.00)-Highly Proficient, AWM-Average Weighted Mean, SD-Standard Deviation, Descriptive Equivalent

Table 2.1.2 presents the mean responses regarding the performance of teachers across various subject areas in Senior High School. The evaluation criteria align with the ones presented in Table 2.1.1, which include the following categories: not proficient (NP), almost proficient (NeP), proficient (P), and highly proficient (HP). The table also presents the average weighted mean (AWM), standard deviation (SD), and a description equivalent (DE).

Upon examination of the data, it becomes evident that teachers in all of the applied areas received a rating of "Proficient in Teaching," as indicated by the DE column. The field labeled 'Practical Research 2' exhibits the highest average weighted mean (AWM) of 3.08, accompanied by a standard deviation of 0.2766, indicating a notable degree of variability in the scores. None of the students expressed dissatisfaction with the quality of instruction in this particular subject, while 67 students regarded it as good and 6 students regarded it as very good.

The subsequent component is referred to as "Filipino sa Piling Larang," possessing an average weighted mean (AWM) of 3.07 and a

standard deviation of 0.2543. In this study, it was observed that none of the students evaluated the teaching as either not proficient or almost proficient. However, a total of 68 students rated the teaching as proficient, while 5 students rated it as highly proficient.

The subsequent numerical value is denoted as "Practical Research 1," possessing an arithmetic weighted mean (AWM) of 3.05 and a standard deviation of 0.2292. In this study, it was observed that none of the students evaluated the training as either not proficient or almost proficient. However, a total of 69 students rated it as proficient, while 4 students rated it as highly proficient.

The average weighted mean (AWM) for subjects such as Empowerment & Technologies, English for Academic & Professional Purposes, Entrepreneurship, and Immersion is calculated to be 3.04, with a corresponding standard deviation of 0.1999.

The average value of all the assessments is 3.05, with a standard deviation of 0.2228. This implies that the teacher's overall performance is also highly competent.

Similar to the previous table, the present table illustrates that the level of teaching performance across various applied domains is consistent. These insights possess the potential to inform decision-making processes about teacher training, performance evaluation, and long-term educational planning.

Table 2.1.3. *Mean Response on the Evaluation of Teacher's Performance in Specialized Subjects for Senior High School*

Indicators	*1*	*2*	*3*	*4*	*AWM*	*SD*	*DE*
Pre-Calculus	0	0	68	5	3.07	0.2543	Proficient in Teaching
Basic Calculus	0	0	68	5	3.07	0.2543	Proficient in Teaching
General Biology 1	0	0	43	30	3.41	0.4954	Proficient in Teaching
General Biology 2	0	0	53	20	3.27	0.4491	Proficient in Teaching
General Chemistry 1	0	0	70	3	3.04	0.1999	Proficient in Teaching
General Chemistry 2	0	0	70	3	3.04	0.1999	Proficient in Teaching
General Physics 1	0	0	43	30	3.41	0.4954	Proficient in Teaching
General Physics 2	0	0	43	30	3.41	0.4954	Proficient in Teaching
Work Immersion / Business Simulation	0	0	70	3	3.04	0.1999	Proficient in Teaching
Overall Mean Value					3.23	0.3621	Proficient in Teaching

Legend: NP:(1.00–1.49)-Not Proficient, NeP:(1.50-2.49)-Nearly Proficient, P:(2.50–3.49)-Proficient, HP:(3.50-4.00)-Highly Proficient, AWM-Average Weighted Mean, SD-Standard Deviation, Descriptive Equivalent

Table 2.1.3 presents the mean responses about the performance of teachers in specialized domains at Senior High School. The rating system consists of four distinct levels, namely: not proficient (1), almost proficient (2), proficient (3), and highly proficient (4). Additionally, the dataset includes the average weighted mean (AWM), the standard deviation (SD), and a corresponding description equivalent (DE). Upon examination of the data, it is evident that the DE column indicates that the teachers' proficiency in teaching all specialized subjects was assessed as "Proficient in Teaching."

The highest AWM score achieved was 3.41, which was awarded to three courses: General Biology 1, General Physics 1, and General Physics 2. This demonstrates the high level of proficiency exhibited by all three teachers in their respective fields. The standard deviation for these subjects at 0.4954 was observed to be the highest, suggesting a significant divergence in the results. In the aforementioned regions, none of the students assessed the teaching as lacking proficiency or nearly proficient. Out of the total, 43 students rated it as proficient, while 30 students rated it as highly proficient.

The average weighted mean (AWM) for General Biology 2 was found to be 3.27, with a corresponding standard deviation of 0.4491. None of the students assessed the training as lacking proficiency or being nearly proficient. Fifty-three students perceived it as proficient, while twenty students regarded it as highly proficient.

The average weighted mean (AWM) for the courses Pre-Calculus, Basic Calculus, General Chemistry 1, General Chemistry 2, and Work Immersion/Business Simulation ranged between 3.07 and 3.04. Similarly, the standard deviation for these courses varied between 0.2543 and 0.1999.

In general, the average value of the assessments was 3.23, with a standard deviation of 0.3621. This implies that the overall performance of the teacher in these specific subjects was deemed to be proficient in terms of teaching abilities.

Table 2.1.3 presents an overview of the level of pedagogical proficiency among Senior High School teachers in instructing specialized subjects. The data serves to demonstrate the overall effectiveness of teaching, thereby establishing a foundation for future enhancements, focused teacher development, and insights into student satisfaction with particular subjects.

Table 2.1.4 presents a comprehensive compilation of the suggestions put forth by students to enhance the performance of teachers in the domains of Core, Applied, and Specialized subjects. The ratings were derived from the calculation of mean scores and standard deviations (SD), and subsequently subjected to interpretation.

The table's legend indicated that all subject categories fell within the domain of "Proficient in Teaching." The category labeled "Specialized" achieved the highest score, exhibiting a mean score of 3.20 and a standard deviation of 0.22. This indicates that the

students perceive the quality of instruction in these subjects as satisfactory, albeit with potential for enhancement, as the scores do not align with the "Highly Proficient in Teaching" category.

Table 2.1.4. *Suggestions from Students to Enhance Teachers' Performance*

Subjects In Shs	*Mean*	*SD*	*Result Interpretation*
Core	3.09	0.28	Proficient in Teaching
Applied	3.05	0.22	Proficient in Teaching
Specialized	3.2	0.22	Proficient in Teaching
Overall SHS Subjects	3.11	0.24	Proficient in Teaching

Legend: NP:(1.00–1.49)-Not Proficient, NeP:(1.50-2.49)-Nearly Proficient, P:(2.50–3.49)-Proficient, HP:(3.50-4.00)-Highly Proficient, AWM-Average Weighted Mean, SD-Standard Deviation, Descriptive Equivalent

Table 2.1.4 presents a comprehensive compilation of the suggestions put forth by students to enhance the performance of teachers in the domains of Core, Applied, and Specialized subjects. The ratings were derived from the calculation of mean scores and standard deviations (SD), and subsequently subjected to interpretation.

The table's legend indicated that all subject categories fell within the domain of "Proficient in Teaching." The category labeled "Specialized" achieved the highest score, exhibiting a mean score of 3.20 and a standard deviation of 0.22. This indicates that the students perceive the quality of instruction in these subjects as satisfactory, albeit with potential for enhancement, as the scores do not align with the "Highly Proficient in Teaching" category.

The Core subjects exhibited a second-place ranking, demonstrating a mean score of 3.09 and a standard deviation of 0.28. These statistical measures indicate that there was a slightly greater degree of variation in student ideas within the Core subjects compared to the other categories. The average score for the Applied subjects was found to be 3.05, with a standard deviation of 0.22. This finding indicates that the teacher possesses effective instructional skills, as evidenced by the reduced variability observed in the students' responses.

The mean score for all Senior High School (SHS) courses was 3.11, accompanied by a standard deviation of 0.24. This performance level falls within the "Proficient in Teaching" category.

The presented tabular representation encapsulates the feedback provided by students regarding potential areas of improvement for teachers across various academic disciplines. This assessment framework provides a distinct and quantifiable approach to evaluating teachers' performance, highlighting areas of strength as well as areas for improvement. Despite the overall quality of all the categories, the table illustrates the significance of continuous efforts to enhance teaching skills.

Table 2.2. *Student's Suggestions to Their Teachers*

Respondents'	*Suggestions To Improve Teachers' Performance*
Respondent 8	1. Hear students' voices. 2. Make an effort to get to know each student.
Respondent 24	1. Give more examples, especially in teaching difficult subject matters. 2. Use more technology in teaching.

Table 2.2 presents a compilation of specific suggestions put forth by students to enhance the performance of their teachers. Respondent 8 emphasizes the significance of effective communication and interpersonal relationships within an educational environment. It is often argued that educators should prioritize the act of "attending to students' voices," which entails actively engaging in the process of listening to students' perspectives, emotions, and opinions regarding various concepts and topics. This phenomenon not only contributes to the promotion of a healthier learning environment within the classroom, but it also facilitates pedagogical adaptations by teachers to enhance their instructional approaches to effectively cater to the diverse needs of their students. Furthermore, it is suggested that educators should exert themselves in establishing a personal connection with every student. This statement acknowledges the significance of establishing personal connections and understanding diverse learning styles as crucial elements for effective pedagogy. Acknowledging the individuality of each student, including their distinct strengths and weaknesses, can enhance the effectiveness of teaching strategies employed by educators.

Respondent 24, conversely, displays an interest in pedagogy. It has been suggested that educators ought to provide a greater number of illustrative instances, particularly when elucidating complex subject matter. The utilization of examples can facilitate students' comprehension of abstract concepts or complex information that may be challenging to grasp. Enhanced comprehension facilitated by improved clarity of information has the potential to optimize the process of learning. Furthermore, it has been suggested that educators ought to incorporate a greater amount of technological tools and resources into their instructional practices. The integration of technology within educational settings can facilitate student learning through the provision of diverse tools, increased student engagement, and accommodation of individual learning preferences.

These particular concepts exemplify the range of strategies that can be employed to enhance the efficacy of teachers in their professional roles. This observation highlights the intricate nature of the teaching profession and underscores the significance of effective communication, continuous learning, diverse instructional approaches, and the integration of technology.

Table 3.1.1. *Mean Response on the Evaluation of Students' Performanc*

Final Grades In Different Subjects	*f*	*%*	*AWM*	*SD*	*Result Interpretation*
Oral Communication	31	42.47	89.08	2.57	Very Satisfactory
Komunikasyon at Pananaliksik	26	35.61	88.42	3.19	Very Satisfactory
Earth Science	55	75.34	90.63	2.64	Outstanding
General Mathematics	25	34.24	89.08	3.05	Very Satisfactory
Understanding Culture Society & Politics	42	57.53	90.00	2.68	Outstanding
Physical Education	25	34.24	89.04	3.24	Very Satisfactory
Reading & Writing	31	42.47	89.15	2.71	Very Satisfactory
Pagbasa at Pagsusuri	28	38.36	89.10	2.69	Very Satisfactory
Disaster Readiness & Risk Reduction	42	57.53	90.00	2.96	Outstanding
Statistics & Probability	29	39.72	87.01	4.75	Very Satisfactory
Earth and Life Science	19	26.02	88.69	3.21	Very Satisfactory
Personal Development	49	67.12	90.06	2.63	Outstanding
21st Century Literature	32	43.83	89.00	2.79	Very Satisfactory
Media & Information Literacy	44	60.27	90.13	2.41	Outstanding
Contemporary Arts	53	72.60	90.71	2.08	Outstanding
Introduction to Philosophy	60	82.19	91.71	3.56	Outstanding
Physical Science	53	72.60	90.71	3.68	Outstanding
Overall Mean Value			89.56	2.99	Outstanding

Legend: 90 – 100 (Outstanding), 85 – 89 (Very Satisfactory), 80 – 84 (Satisfactory), 75 – 79 (Fairly Satisfactory), and Below 75 (Did Not Meet Expectations), AWM - Average Weighted Mean, SD - Standard Deviation

Table 3.1.1 presents an overview of the academic performance of students in Senior High School (SHS) classes, as indicated by their final grades in different Core subjects. The frequency and percentage are used to display the number and proportion of students who achieved the grade level indicated by the average weighted mean (AWM). The standard deviation (SD) quantifies the extent to which grades deviate from the mean, indicating the degree of dispersion.

The mean score for Introduction to Philosophy, when weighted, was found to be 91.71, with a corresponding standard deviation of 3.56. This indicates a higher degree of variability in the scores and 60 students got an Outstanding performance in this subject.

The discipline exhibiting the second-highest Average Weighted Mean (AWM) score is Contemporary Arts and Physical Science, with a value of 90.71 and a standard deviation of 2.08 and 3.68 respectively. This observation indicates that the numerical values exhibit a lesser degree of dispersion compared to the field of Philosophy. A total of 53 students rated as Outstanding. The subsequent subjects under consideration are Earth Science, Understanding Culture Society, and Politics, Disaster Readiness and Risk Reduction, Personal Development, and Media and Information Literacy characterized by an average weighted mean (AWM) of 90.00 and a standard deviation of 2.66. This indicates a greater degree of dispersion among the individual grades.

Subjects such as Oral Communication, Earth and Life Science, General Mathematics, Reading and Writing, 21st Century, and Physical Education all exhibited an average weighted mean (AWM) of 89.00. Komunikasyon at Pananaliksik and Statistics and Probability revealed an average weighted mean of 88.42 and 87.01. The standard deviations of these subjects exhibit a relatively small disparity, indicating a comparable degree of variability in individual scores.

Finally, the mean of the ratings is calculated to be 89.56, with a standard deviation of 2.99. The overall score achieved falls within the category of "Outstanding."

Table 3.1.2. *Mean Response on the Evaluation of Students' Performance in Applied Subjects for Senior High School*

Final Grades In Different Subjects	*f*	*%*	*AWM*	*SD*	*Result Interpretation*
Empowerment Technologies	44	60.27	90.00	3.66	Outstanding
Practical Research 1	23	31.50	89.15	3.61	Very Satisfactory
Practical Research 2	44	60.27	90.72	3.66	Outstanding
Filipino sa Piling Larang	45	61.64	90.00	3.2	Outstanding
English for Academic & Professional Purposes	45	61.64	90.01	2.6	Outstanding
Entrepreneurship	44	60.27	90.00	3.44	Outstanding
Inquiries, Investigations, and Immersion	61	83.56	91.84	2.83	Outstanding
Overall Mean Value			90.24	3.28	Outstanding

Legend: 90 – 100 (Outstanding), 85 – 89 (Very Satisfactory), 80 – 84 (Satisfactory), 75 – 79 (Fairly Satisfactory), and Below 75 (Did Not Meet Expectations), AWM - Average Weighted Mean, SD - Standard Deviation

Table 3.1.2 presents the mean response of the student's academic performance in different Applied subjects. Upon examination of the data, it becomes evident that students' performance in almost all of the applied subjects is Outstanding.

The field labeled 'Inquiries, Investigations and Immersion' exhibits the highest average weighted mean (AWM) of 91.84, accompanied by a standard deviation of 2.83, indicating a notable degree of variability in the scores and interpreted as Outstanding.

The subsequent components are referred to as Empowerment Technologies, Practical Research 2, Filipino sa Piling Larang, English

for Academic and Professional Purposes, and Entrepreneurship possessing an average weighted mean (AWM) of 90.00. The standard deviations of these subjects exhibit a small disparity, indicating a comparable degree of variability in individual scores. In this study, it was observed that the students got Outstanding performance in the said Applied areas.

The subsequent numerical value is denoted as "Practical Research 1," possessing an arithmetic weighted mean (AWM) of 89.15 and a standard deviation of 3.61. In this study, it was observed and interpreted the student's performance was Very Satisfactory. The average value of all the assessments is 90.24, with a standard deviation of 3.28. This implies that the student's overall performance is also Outstanding.

Table 3.1.3. *Mean Response on the Evaluation of Students' Performance in Specialized Subjects for Senior High School*

Final Grades In Different Subjects	*f*	*%*	*AWM*	*SD*	*Result Interpretation*
Pre – Calculus	27	36.98	85.00	4.71	Very Satisfactory
Basic Calculus	15	20.54	85.58	5.88	Very Satisfactory
General Biology 1	28	38.36	84.31	3.4	Satisfactory
General Biology 2	23	31.50	86.30	3.76	Very Satisfactory
General Chemistry 1	38	52.05	87.15	5.4	Very Satisfactory
General Chemistry 2	27	36.99	88.52	4.52	Very Satisfactory
General Physics 1	33	45.20	86.04	3.52	Very Satisfactory
General Physics 2	34	46.58	85.05	4.49	Very Satisfactory
Work Immersion/Business Simulation	73	100	92.72	1.68	Outstanding
Overall Mean Value			86.74	4.15	Very Satisfactory

Legend: 90 – 100 (Outstanding), 85 – 89 (Very Satisfactory), 80 – 84 (Satisfactory), 75 – 79 (Fairly Satisfactory), and Below 75 (Did Not Meet Expectations), AWM - Average Weighted Mean, SD - Standard Deviation

Table 3.1.3 presents an overview of the academic performance of students in Senior High School (SHS) classes, as indicated by their final grades in different Specialized subjects. The frequency and percentage are used to display the number and proportion of students who achieved the grade level indicated by the average weighted mean (AWM). The standard deviation (SD) quantifies the extent to which grades deviate from the mean, indicating the degree of dispersion.

Work Immersions/ Business Simulation the highest AWM score achieved 92.72 and a standard deviation of 1.68 and exhibited as Outstanding. This demonstrates the high level of performance exhibited by the students in the respective field.

The average weighted mean (AWM) for the subjects Pre-Calculus, Basic Calculus, General Biology 2, General Chemistry 1, General Chemistry 2, General Physics 1, and General Physics 2 ranged between 85.00 and 88.52. Similarly, the standard deviation for these subjects varied between 5.88 and 3.52. In this study, it was observed that the student's academic performance is Very Satisfactory in the said Specialized areas.

The average weighted mean (AWM) for General Biology 1 was found to be 84.31, with a corresponding standard deviation of 3.4 revealed and interpreted as Satisfactory. In general, the average value of the assessments was 86.74, with a standard deviation of 4.15. This implies that the overall performance of the student in these Specialized subjects was deemed to be Very Satisfactory.

The obtained results provide a comprehensive overview of the academic performance of students across various courses at SHS. The data presented in these assessments highlight areas of proficiency and areas for potential growth in students' educational achievements.

Table 3.2. *Performance of the Students in terms of Final Grades in different subjects in College*

Different Subjects In College And GWA	*f*	*%*	*AWM*	*SD*	*Result Interpretation*
General Education	47	64.38	89.58	5.59	Outstanding
Professional Education	28	38.36	88.79	4.71	Very Satisfactory
Major Education	30	41.09	84.56	4.61	Very Satisfactory
GWA	43	58.9	87.64	2.72	Very Satisfactory

Legend: 90 – 100 (Outstanding), 85 – 89 (Very Satisfactory), 80 – 84 (Satisfactory), 75 – 79 (Fairly Satisfactory), and Below 75 (Did Not Meet Expectations), AWM - Average Weighted Mean, SD - Standard Deviation

Table 3.2 presents an overview of the academic performance of students in higher education, as indicated by their final grades in various courses. The provided information is categorized into three distinct groups: General Education, Professional Education, and Major Education. It is noteworthy to acknowledge that the students demonstrated exceptional performance in the General Education subject, as evidenced by their average weighted mean (AWM) score of 89.58, indicating an "Outstanding" outcome. The frequency of 64.38% indicates that a majority of the students have demonstrated proficiency in these domains, which is a positive indication.

The students in the Professional Education program demonstrate a high level of performance, as indicated by an Average Weighted Mean (AWM) of 88.79 and a frequency rate of 38.36%. These results place them within the 'Very Satisfactory' performance range. In the Major Education course, students achieved an average weighted mark (AWM) of 84.56, accompanied by a frequency rate of 41.09%. Similarly, a comparable outcome was observed.

The student's overall academic achievement, as assessed by the General Weighted Average (GWA), was 87.64, indicating a level of performance categorized as 'Very Satisfactory'. The result is further supported by the substantial frequency rate of 58.9%. The findings indicate that the students demonstrate proficiency across various academic domains, which bodes well for their future educational trajectory.

Inferential Statistics

This section contains the parametric statistical inferences on the extent of influence of respondents to their assessment of educators' performance across core, applied, and specialized fields of study.

Table 4. *Relationship Between the Respondent's Demographic Profile and their Self-Reports on Teachers' Performance in Core, Applied, and Specialized Subjects*

Profile	*Core*		*Applied*		*Specialized Field*	
	x	*sig.*	*x*	*sig.*	*x*	*sig.*
Agea	0.055ns	0.642	0.069ns	0.560	-0.045ns	0.704
Genderb	0.367ns	0.077	0.004ns	1.000	0.271ns	0.326
Civil Statusc	-0.077ns	0.145	-0.049ns	0.180	0.057ns	0.188
Employment Statusd	0.070ns	0.221	0.024ns	0.739	0.198ns	0.062
Eligibilitye	-0.052ns	0.808	-0.385ns	0.303	-0.289ns	0.142

Note: x - Chi-Square Correlation Analysis, a - Pearson, b - Contingency Coeficient, c - Somer' d, d - Lambda, e - Gamma, ns - Not significant at 5% level of significance

Table 4 presents the relationship between the respondents' demographic characteristics and their self-assessed ratings of teachers' performance in Core, Applied, and Specialized subjects. In this context, the Pearson correlation coefficient is employed to assess the relationship between variables related to age, while the Contingency Coefficient is utilized to examine the association between variables of gender. Furthermore, Somer's d statistic is employed to evaluate the correlation between variables concerning civil status, the Lambda coefficient is utilized to assess the relationship between variables related to employment status, the and Gamma coefficient is employed to examine the association between variables about eligibility. Statistical correlation studies were conducted for each of the demographic groups in the Core, Applied, and Specialized subject areas. The empirical evidence indicates that there is no statistically significant association between the demographic characteristics of the participants and their perceptions of teacher performance across the three subject domains, namely Core, Applied, and Specialized. None of the values exhibit significance at the 5% level of significance, as indicated by the notation 'ns' (not significant) and corroborated by p-values exceeding 0.05.

This implies that students' evaluations of their teachers' performance remain relatively consistent irrespective of factors such as age, gender, marital status, employment status, or eligibility. These findings suggest that demographic factors do not appear to exert any influence on students' perceptions of the effectiveness of their teachers in delivering instruction on core, applied, or specialized subjects.

Table 5. *Relationship Between the Respondent's Demographic Profile and their Academic Performance in SHS and College*

Profile	*Performance in SHS*		*Performance in College*	
	x	*sig.*	*x*	*sig.*
Agea	0.114ns	0.337	0.131ns	0.270
Genderb	0.202*	0.000	0.636ns	0.289
Civil Statusc	-0.014ns	0.953	-0.038ns	0.187
Employment Statusd	0.839ns	0.560	0.758ns	0.057
Eligibilitye	0.047ns	0.766	0.304*	0.026

Note: x - Chi-Square Correlation Analysis, a - Pearson, b - Contingency Coeficient, c - Somer' d, d - Lambda, e - Gamma, ns - Not significant at 5% level of significance

The study presented in Table 5 examines the correlation between the demographic characteristics of the participants and their academic performance in Senior High School (SHS) and College. In this study, various demographic variables such as age, gender, marital status, employment status, and eligibility were considered. There was no statistically significant association observed between age and academic performance in both secondary school (SHS) and college settings. Given that the p-value exceeded the predetermined significance level of 0.05 in both instances, it can be inferred that there is no substantial impact of respondents' ages on their academic performance during these periods. Various outcomes occurred when gender became associated with academic achievement. The statistical analysis revealed a significant association between gender and academic achievement in the context of secondary education, as indicated by a p-value below 0.05. This finding demonstrates that the gender of students significantly impacts their academic performance in secondary high school. However, the observed association was not statistically significant at the college level, as indicated by a p-value exceeding 0.05. This suggests that gender does not have a substantial impact on academic performance among college students.

There was no statistically significant association observed between civil status and academic achievement in both Senior High School (SHS) and College, similar to the lack of correlation observed with advancing age. This implies that the marital or legal status of a student has minimal influence on their academic achievement at these educational levels.

Furthermore, it is worth noting that there was no statistically significant correlation observed between employment status and academic achievement in both secondary school and college settings. Although the p-value for the College group approached the significance threshold of 0.05 more closely than it did for the High School group, it still surpassed this threshold. This implies that the employment status of students has minimal impact on their academic performance. Lastly, a p-value below 0.05 indicated a significant association between Eligibility and academic achievement, albeit solely observed at the collegiate level. This finding demonstrates that a student's eligibility status significantly impacts their academic performance in college. Conversely, a significant correlation between performance in secondary high school (SHS) and eligibility was not observed.

In summary, the findings presented in Table 5 indicate a significant influence of gender on academic achievement in secondary education, whereas eligibility status demonstrates an impact on academic performance in higher education. The influence of age, marital status, and employment status on academic performance in secondary school (SHS) or college is not significant.

Table 5.1. *Relationship Between Students' Performance in Core, Applied, and Specialized vs. Teachers' Performance in Core, Applied, and Specialized Subjects vs. College Grades*

Metrics/Subjects	*Student Performance (AWM)*	*Teachers Performance (SD)*	*College Grades (AWM)*
Core			
Oral Communication	89.08	3.07	89.58
Earth Science	90.63	3.07	88.79
General Mathematics	89.08	3.08	84.56
Average	89.59	3.07	87.64
Applied			
Empowerment & Technologies	90.00	3.04	89.58
Practical Research1	89.15	3.05	88.79
Filipino sa Piling Larang	90.00	3.04	84.56
Average	89.72	3.05	87.64
Specialized			
Pre-Calculus	85.00	3.07	89.58
Basic Calculus	85.58	3.07	88.79
General Biology 1	84.31	3.41	84.56
Average	84.96	3.18	87.64

Legend: 90 – 100 (Outstanding), 85 – 89 (Very Satisfactory), 80 – 84 (Satisfactory), 75 – 79 (Fairly Satisfactory), and Below 75 (Did Not Meet Expectations), AWM - Average Weighted Mean, SD - Standard Deviation, Scale 1-4

Students have consistently achieved an average weighted mean (AWM) of 89.30 in the Core Subjects. Some subjects, like Earth Science, have achieved a maximum weighted average mark (AWM) of 90.63, while others, such as Oral Communication (89.08) maintain similar standards. General Mathematics has an AWM of 89.08, indicating its alignment with this trend. The teachers' performance in these subjects is commendable, with an average weighted mean ranging from 3.04 to 3.08 out of 4. The College Grade for general education, which includes various subjects, has an average weighted mean (AWM) of 87.64, indicating overall proficiency in these subjects.

The inclusion of Specialized Subjects introduces an intriguing variation to the prevailing trend. Pre-Calculus and Basic Calculus exhibit lower average weighted means (AWMs) in comparison to other courses, with values of 85.00 and 85.58, respectively. The overall student performance in General Biology 1 is 84.31 percent. Although the students' scores have decreased, there has been a significant improvement in the teachers' performance in Gen Bio 1, with an average weighted mean of 3.41. The average performance of students in this category is 84.96, compared to 3.18 for teachers. The College Grade AWM remains constant at 87.64.

The Core and Applied categories consistently yield high scores, indicating the efficacy of the current education system. However, the Specialized category exhibits varied outcomes, suggesting the presence of nuanced factors. Teachers consistently uphold high standards and demonstrate exceptional performance in challenging subjects like General Biology 1. The College Grade's AWM of 87.64 reflects satisfactory educational standards.

Action Plan to Enhance the Senior High School Program

In light of the heterogeneous nature of student demographics and scholastic achievements, it is imperative to customize interventions to cater to the individualized needs of each student. The aforementioned may encompass individualized academic advising, guidance initiatives, educational facilities, and discipline-targeted supplementary instruction services. These initiatives are designed to aid students in achieving their utmost academic potential. It is recommended that routine professional development initiatives for educators prioritize the enhancement of their competence in basic, practical, and specialized areas of expertise. Possible academic rewrite: The professional development opportunities available to teachers may encompass various formats, such as workshops, seminars, certification programs, and collaborative platforms, which aim to facilitate the exchange of knowledge among educators. Improving the competencies and expertise of educators can lead to an improvement in the quality of education imparted to students, thereby resulting in better academic achievements.

To facilitate a smoother progression from secondary education to tertiary education, it is recommended that there be increased

collaboration between high schools and colleges. This could involve the synchronization of curriculum design, the exchange of educational materials, and the establishment of articulation accords that delineate discrete routes from secondary education to tertiary-level coursework. By enhancing the coherence between the Senior High School (SHS) track/strand and college curricula, students can more effectively comprehend and strategize their academic trajectory. It is imperative to engage in ongoing research endeavors to gain a more comprehensive comprehension of the variables that influence scholastic achievement, as well as the correlation between demographic characteristics and academic results. The process may entail the utilization of questionnaires, interviews, or longitudinal studies aimed at monitoring the progression of students over an extended period. The outcomes of the study can be utilized to enhance the efficacy of the proposed course of action and develop more focused interventions.

Institute policies and initiatives aimed at fostering equity and equal access to educational opportunities for all students, regardless of their socioeconomic background. One potential strategy is to provide students from underprivileged backgrounds with various forms of support, such as scholarships, financial aid, and other types of assistance. This measure would ensure that all students are allowed to achieve success. The diversity of college courses pursued by students necessitates an improvement in career guidance services within SHS. This will enable students to make well-informed decisions regarding their college course choices and future career trajectories.

Conclusions

The present study investigated the influence of the K-12 curriculum on the college education and career pathways of Peñaranda National High School's 2018 senior high school STEM graduates. The findings shed light on various aspects of the respondents' profiles, including their socio-demographic characteristics, college courses, evaluation of teachers' performance, and academic performance. It is evident that the respondents' educational journey after senior high school is diverse, with a range of courses taken in college. This suggests that the K-12 curriculum has provided opportunities for students to pursue different career paths based on their interests and aspirations. The evaluation of teachers' performance indicates that the majority of the respondents perceived their teachers as proficient in core, applied, and specialized subjects in senior high school. This suggests a positive impact of the teaching staff on the student's learning experiences. The analysis of academic performance in senior high school and college highlights the need for a deeper understanding of the factors influencing academic outcomes. Further investigation into the relationship between demographic profiles and academic performance would provide valuable insights for educational institutions to tailor their support and interventions accordingly. Additionally, exploring the connection between the SHS track/strand and the college course taken or finished would contribute to improving the alignment and relevance of the educational pathways for the students.

Firstly, it is crucial to strengthen support systems for students by implementing tailored interventions based on their socio-demographic profiles and academic performance. This may include mentorship programs, academic counseling, and specialized support for specific subjects. By providing personalized support, educational institutions can address the unique needs of students and help them succeed academically. Secondly, there is a need to prioritize the training and professional development of teachers. Continuous training opportunities should be provided to enhance their core proficiency, applied, and specialized subjects. By investing in teacher development, educational institutions can improve teaching practices and ultimately enhance student learning outcomes. This can be achieved through workshops, seminars, and collaborative platforms that facilitate the sharing of best practices among educators. Furthermore, fostering collaboration between senior high schools and colleges is essential. This collaboration can take the form of regular communication, the sharing of curriculum resources, and the establishment of articulation agreements. By working together, senior high schools and colleges can ensure better alignment between the SHS track/strand and the college courses. This will provide students with a smoother transition and a more seamless educational pathway. Lastly, it is recommended to conduct further research to delve deeper into the factors that influence the relationship between demographic profiles and academic performance. This research will provide valuable insights into the specific interventions and support mechanisms needed to address the diverse needs of students. By understanding these factors more comprehensively, educational institutions can implement targeted strategies to promote equity and improve academic outcomes.

References

Aclan, E., Saban, G. A., Fameronag, J., & Francisco, R. (2022). Tracer Study of AUP, BEED, and BSED Graduates from 2012 to 2016. American Journal of Multidisciplinary Research and Innovation, 1(3), 29–36. https://doi.org/10.54536/ajmri.v1i3.288

Adoption of the Basic Education Research Agenda, Do 39, PH. (2016). Https://Www.Deped.Gov.Ph/2016/06/10/Do-39-S-2016-Adoption-Of-The-Basic- Education-Research-Agenda/

Dagli, F. M., Larra, R. J., & Ilao, V. (2019). A Tracer Study of Baybayin National High School (Grade 7-12) Senior High School Graduates. Ascendens Asia Journal of Multidisciplinary Research Abstracts, 3(2). https://doi.org/10.17760/d20281425

Department of Education. (2019). Department Order number 21 series of 2019 (DO no. 21, s. 2019) – Policy Guidelines on K to 12 Basic Education Program.

Gauch Jr, H. G., Gauch Jr, H. G., & Gauch, H. G. (2003). Scientific method in practice. Cambridge University Press. Implementing Rules and Regulations of the Enhanced Basic Education Act, 10533, 3286, PH. (2013). https://www.officialgazette.gov.ph/2013/05/15/republic-act-no-10533/

Kalinowski, S.T., Willoughby, S. (2019). Development and validation of a scientific (formal) reasoning test for college students. Journal of Research in Science Teaching, 1-16, tea.21555–.doi:10.1002/tea.21555

Liwanag, K. S. (2021). Senior High School Graduates Traces Study (GTS): Basis For A Proposed Learners' Work Immersion Plan. JPAIR Multidisciplinary Research, 6(5), 112–129. https://doi.org/10.7719/jpair.v39i1.763

Odame, L., Osei-Hwedie, B., Nketsia, W., Opoku, M. P., & Nanor Arthur, B. (2019). University Preparation and the Work Capabilities of Visually Impaired Graduated in Ghana: A Tracer Study. International Journal of Inclusive Education, 25(11), 1287–1304. https://doi.org/10.1080/13603116.2019.1609102

Orale, J. L. (2016). Tracer study of Graduate School Graduates of a State Higher Education Institution in the Philippines from 2016 to 2020. International Journal of Education and Literacy Studies, 10(2), 149–154. https://doi.org/10.7575/aiac.ijels.v.10n.2p.149

Padios, A. C., Lejano, R. L., Gorospe, S. A. T., & De Asis, V. L. (2021). Strand and Statehood Predictors of Senior High School Graduates: A Tracer Study. International Journal of Sciences: Basic and Applied Research. https://doi.org/10.17760/d20281425

Pentang, J. T., Perez, D. R., Cuanan, K. H., Recla, M. B., Dacanay, R. T., Bober, R. M., Dela Cruz, C. E., Egger, S. P., Herrera, R. L., Illescas, C. M., Salmo, J. M., Bucad, Jr.,, M. L., Agasa, J. V., & Abaca, N.-aina A. (2022). Tracer study of Teacher Education graduates of Western Philippines University - Puerto Princesa Campus: Basis for Curriculum Review and revision. International Journal of Multidisciplinary: Applied Business and Education Research, 3(3), 419–432. https://doi.org/10.11594/ijmaber.03.03.12

Sandström, U., & van den Besselaar, P. (2016). Quantity and/or Quality? The Importance of Publishing Many Papers. PLOS ONE, 11(11), e0166149. https://doi.org/10.1371/journal.pone.0166149

Shaw, A. (2019). Organizing Instructional Materials to Maximize Student Engagement. https://ctl.wiley.com/organizing-instructional-materials-to-maximize-student-engagement-2/

S. Navida, G. (2022). Status and trends of Teacher Education Board Performance of Pangasinan State University Alaminos city campus. International Journal of Scientific and Management Research, 05(07), 22–31. https://doi.org/10.37502/ijsmr.2022.5703

Tamayao, A., Vecaldo, R., Asuncion, J. E., Mamba, M., Paat, F. M., & Pagulayan, E. (2020). Design and validation of the College Readiness Test (CRT) for Filipino K to 12 graduates. International Journal of Higher Education, 9(2), 209. https://doi.org/10.5430/ijhe.v9n2p209

UNESCO Institute for Statistics. (2018). Quick Guide to Education Indicators for SDG 4. UNESCO IUS. http://creativecommons.org/licenses/by-sa/3.0/igo/

Yustina, Y., Eriyanti, F., Engkisar, A. F., Putri, N. E., Arifin, Z., & Syafril, S.(2018). The effect of professional education and training for teachers (PLPG) in improving pedagogic competence and teacher performance. Jurnal Keguruan Dan Ilmu Tarbiyah, 3(2), 123–130. https://doi.org/10.24042/tadris.v3i2.2701

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