

## Original Research Article

## Professional Qualifications and Training Needs of Public Senior High School Science Teacher: Basis for Capability Enhancement Program

Maricel M. Tabligan<sup>1\*</sup>, Marshall James P. Dantic<sup>1</sup><sup>1</sup>President Ramon Magsaysay State University**Article History****Received:** 22.03.2022**Accepted:** 05.05.2022**Published:** 30.06.2022**Journal homepage:**<https://www.easpublisher.com>**Quick Response Code**

**Abstract:** The purpose of this research was to determine the training needs of the five (5) areas outlined in the Results-Based Performance Management System. These areas, as specified in their Individual Performance Commitment and Review Form (IPCRF), served as the foundation for developing a faculty competence improvement program. 90 senior high school Science students participated in the survey. The descriptive survey research design was used for this investigation. The data was gathered using a questionnaire designed to analyze the needs of public senior high school science teachers in five areas: Teaching Learning Process; Student Outcomes; Community Involvement; Professional Growth and Development; and Class Management. The findings of the investigation show that instructors' professional knowledge, professional practice, and professional qualities are quite visible. The results demonstrated that the participants were highly competent in the various areas, although they need considerably required training in the Teaching-Learning Process, Professional Growth and Development, Class Management, Community Involvement, and Student Outcomes. The research suggests that the Public Schools District could consider the Proposed Capability Enhancement Program for Senior High School Teachers. These may be an avenue for potential subjects for LAC sessions in senior high schools. Topics linked to the stated requirements of Senior High School instructors, particularly in terms of Classroom Management, are included. Rep the research study, concentrating on particular components of the Training Needs Analysis (TNA) under pedagogy and subject knowledge.

**Keywords:** Professional Qualifications, Senior High School, Enhancement Program, Science Teacher, Training Needs, Professional Development.

**Copyright © 2022 The Author(s):** This is an open-access article distributed under the terms of the Creative Commons Attribution **4.0 International License (CC BY-NC 4.0)** which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

### INTRODUCTION

When it came to joining educational institutions, professional credentials and academic qualifications were the most significant prerequisites. According to the Department of Education (DepEd), the competency of teachers is a critical aspect in the success of any educational system. As a result, when the comprehensive K to 12 Education Program was adopted, a lack of trained and highly competent senior high school teachers constituted a hurdle. The initiative intends to accomplish this goal by establishing professional standards that will better guarantee that the instructors chosen can substantially contribute to the development of lifelong learners. The employment standards released by the Department of Education in accordance with DepEd Order No. 3, Section 2016 were based on the merit and fitness concept of the Civil

Service Doctrine of the Constitution, as well as the DepEd's ongoing efforts to improve the quality of basic education.

The Senior High School Curriculum, as part of the K to 12 Program, aims to produce graduates who have the following characteristics: 1) Holistically developed; 2.) Equipped with 21st century skills (i.e., learning and innovation skills, life and career skills, communication skills, and information media and technology skills); and 3) Prepared for the future, be it in pursuit of higher education or acquisition of middle-level skills, or geared towards employment or entrepreneurship.

Every senior high school student will obtain a great education if the education system is internationally competitive and meets international

standards based on a good pedagogical curriculum. Senior high schools, on the other hand, must have highly competitive instructors in order to generate these graduates. In line with globalization, Republic Act 10533, also known as the "Enhanced Basic Education Act of 2012," highlighted that Senior High School education seeks to address the needs of graduates in terms of college preparation, vocational and technical career opportunities, as well as creative arts, sports, and entrepreneurial employment.

According to Thames (2021) teachers will learn more successfully if their training is interesting, job-related, instructionally focused, collaborative, and continuing. If these criteria are satisfied, instructors are encouraged to pursue meaningful and genuine professional development. As a result, schools should strengthen teachers' capacities and skills by motivating and providing them with the essential tools for professional growth. Professional development has been a topic of much study and implementation in recent years, greatly increasing teachers' quality and competitiveness.

It is clear that a good professional development program for teachers has had a substantial impact on the growth of both instructors and students (Karabenick & Conley, 2011). Spiral progression was employed in the K12 Science curriculum in the Philippines. A technique of learning in which students study the same subjects in science at each level with far more convolutions and complemented by past knowledge (Rogayan & Antipolo, 2021). Scientific instructors should provide chances for students to understand, comprehend, and research science concepts (Rogayan & Dantic, 2021). Professional development programs give excellent opportunity for teachers of all grade levels to actively participate in activities that may assist enhance their scientific literacy, STEM motivation, and instructional quality, in addition to benefiting students' academic performance (Wilson, 2013).

Based from the recommendations of Darling-Hammond, Hyler, Gardner and Espinoza (2017) policymakers might establish professional development standards to govern the design, assessment, and financing of professional learning for educators. The administration should provide assistance to science

instructors in their efforts to continue their professional development. (Rogayan & Dantic, 2021).

It is in this premise that the researcher got interested in analyzing the professional qualifications and training needs of public Senior High School Science Teachers. The results of this study will be used as bases for the development of the Capability Enhancement Program for the Senior High School Science Teachers.

The purpose of this study is to determine the professional qualifications and training needs of public senior high school science teacher. It will serve as basis for capability enhancement program.

## METHODOLOGY

This study used quantitative descriptive - developmental research design with descriptive checklist as the main instrument to gather data. The study describes the professional qualifications and training needs of public Senior High School Science Teachers. The results served as basis for formulation an outline Capability Enhancement Program for the Senior High School Science Teachers. The study used purposive sampling. There are 90 senior high school science teachers that served as participants. The instrument was validated by three experts and treated through reliability testing. There are two parts of the instrument, (a) is the demographic profile of the respondents; and (b) is the training needs assessment tool for senior high school teachers adopted from Training Needs Assessment (TNA) Tool based on the competencies and qualifications set by the Department of Education in the DepEd Order No. 32 series of 2011, DepEd Order No. 3, s. 2016 and DepEd Order No. 43, s. 2013.

## FINDINGS AND DISCUSSION

### 1. Profile of the Senior High School Teachers

The data on the frequency and percentage distribution according to age, position, number of years teaching, bachelor's degree, post-graduate degree and subject taught, eligibility, performance rating, number of number of trainings/seminars/ studies attended are presented in Table 2.

**Table-2: Frequency and Percentage Distribution of the Respondents' Profile**

Age (years)	Frequency	Percent
60+	0	0.00
50-59	3	3.30
40-49	15	16.70
30-39	39	43.30
25-29	22	24.40
Under 25	9	10.00
Missing Data	2	2.20
Total	90	100.00

<b>Position</b>	<b>Frequency</b>	<b>Percent</b>
Teacher I-III	88	97.80
Master Teacher I-III	0	0.00
Missing Data	2	2.20
<b>Total</b>	<b>90</b>	<b>100.00</b>
<b>Number of Years in Teaching</b>	<b>Frequency</b>	<b>Percent</b>
more than 20 years	2	2.20
16-20	0	0.00
11-15	4	4.40
6-10	9	10.00
3-5	46	51.10
1-2	27	30.00
Missing Data	2	2.20
<b>Total</b>	<b>90</b>	<b>100.00</b>
<b>BS Degree</b>	<b>Frequency</b>	<b>Percent</b>
BSE	41	45.60
BS Biology	8	8.90
BS Chemistry	1	1.10
BS Physics	1	1.10
BSN	9	10.00
Others	28	31.10
Missing Data	2	2.20
<b>Total</b>	<b>90</b>	<b>100.00</b>
<b>Post Graduate Degree</b>	<b>Frequency</b>	<b>Percent</b>
Doctorate	0	0.00
Unit in Doctorate	2	2.20
Master	13	14.40
Unit in Master Degree	48	53.30
Missing Data	27	30.00
<b>Total</b>	<b>90</b>	<b>100.00</b>
<b>Subject Taught</b>	<b>Frequency</b>	<b>Percent</b>
Science	28	31.10
Non-science	58	64.40
Missing Data	4	4.40
<b>Total</b>	<b>90</b>	<b>100.00</b>
<b>Eligibility</b>	<b>Frequency</b>	<b>Percent</b>
LET	73	81.10
PBET	1	1.10
Others	7	7.80
Missing Data	9	10.00
<b>Total</b>	<b>90</b>	<b>100.00</b>
<b>Latest Performance Rating</b>	<b>Frequency</b>	<b>Percent</b>
4.50-5.00 (Outstanding)	22	24.40
3.50-4.49 (Very Satisfactory)	38	42.20
2.50-3.49 (Satisfactory)	5	5.60
1.50-2.49 (Unsatisfactory)	8	8.90
below 1.49 (Poor)	1	1.10
Missing Data	16	17.80
<b>Total</b>	<b>90</b>	<b>100.00</b>
<b>Number of Trainings/Seminars Attended</b>	<b>Frequency</b>	<b>Percent</b>
9 and more	15	16.70
7-8	16	17.80
5-6	20	22.20
3-4	19	21.10
1-2	15	16.70
Missing Data	5	5.60
<b>Total</b>	<b>90</b>	<b>100.00</b>

1.1 Age. Out of 90 respondents, 39 (43.30 %) belong to the age group 30-39 years. There were no (0.00 %) senior high school teachers in the age group 60+ years. The mean age was 32.98 years old.

1.2 Position. It can be deduced from Table 2 that out of 90 respondents eighty eight (88) or 97.8% of the respondents are holding the position Teacher I-III. There were no (0.00%) senior high school teachers holding the position of Master Teacher I-III.

DepEd Order No. 3, s. 2016 stipulates that once the Registry of Qualified Applicants (RQA) has been released, the Division Selection Committee shall determine and communicate directly with the participants the teaching rank and salary to be offered to all applicants following the standards set in the Qualifications Standards (QS). A new applicant can be offered the highest possible position of Master Teacher IV. In the case of the Senior High School Science Teachers of Zone II Schools, no one was given the Master teacher position which implies that their qualifications suit that of Teacher 1 to 3 only.

1.3 Number of Years in Teaching. Table 2 shows the distribution of respondents by number of years in teaching. Out of 90 respondents forty six (46) or 51.10% had 3-5 years teaching experience. No (0.00 %) senior high school teachers had 16-20 years of teaching experience.

As indicated in DepEd Order No. 3 s. 2016, Teaching or industry or workplace experience is given 15 points. At least one (1) year of professional experience in the field(s) under the track/strand/subject being applied for shall be given 0.50 point for each month of employment beginning on the 13th month of employment.

A senior high school teacher applicant can only earn points on the 13th month of his/her work experience. In the case of the senior high school teachers being studied, majority of them got 1 – 5 years of experience which means that they still lack the needed personal qualifications for positive learning outcomes to happen in the classroom.

1.4 BS Degree. Out of 90 respondents forty one (41) or 45.6% of the respondents are BSE graduates and twenty eight (28) or 31% were graduates of other courses like Computer Science, Business Administration/Commerce, HRM and Social Science.

The data shows that majority of the Senior High School Science Teachers have not been trained formally as science teachers or educators. Pedagogy or the art of teaching of these majority is at stake. Since Grade 11 and 12 are still both considered as part of the basic education, the Department of Education still has to attend to this very serious matter.

1.5 Post Graduate Degree. Table 2 shows the distribution of the respondents in terms of their graduate education. Forty Eight (48) or 53.3% of the respondents have gained some units in master's degree and there were no (0.00%) senior high school science teachers has to pursue doctorate degree.

This indicates that most of the teachers are enticed to get a master's degree. This also means that teachers must be having other priorities in mind instead of getting back to school and earn a degree on the graduate program. The data in terms of graduate education post an alarming problem in terms of the ability of the SHS teachers on curriculum and content knowledge. The data imply that the 13 SHS teachers with MA degree are the only qualified teachers to teach in terms of the 'certification' required based on the Teacher Qualification Model (Figure 1).

1.6 Subject Taught. The data on subject taught indicates that out of 90 respondents, 58 (or 64.40%) are teaching non-science subject, 28 (or 31.10%) are teaching science. There were 4 missing data.

1.7 Eligibility. The data on eligibility indicate that out of 90 respondents, 73 (or 81.10%) are LET passers, 7 (or 7.80%) are non-LET passers, 1 (or 1.10%) is a PBET passer. There were 9 missing data.

In the Philippines, LET can only be taken if you have a Bachelor's degree in Education, or you have received a Certification of Professional Education (CPE). This is a non-degree program that offers at least eighteen (18) units of professional education courses to qualify a non-education baccalaureate degree holder to teach in elementary or secondary school as required by DepEd. Anybody who graduated with a 4 – year course may enroll in this program.

Because of this, many teachers in the Senior High School were graduates of another baccalaureate degree and just enrolled in the CPE program to qualify for the board exam. But before applying to teach in the public school, these teachers had a different career, some came from another government agency and some private industries or companies. They are called second career teachers (Hunter-Johnson, 2015). These teachers are tasked to teach other subjects closely relevant to their field of expertise.

1.8 Latest Performance Rating. It can be gleaned from Table 2 that out of 90 respondents thirty eight (38) or 42.2% of the respondents garnered Very Satisfactory (VS) performance rating while one (1) or 1.10% got Poor (P) rating for the last rating period.

The majority of the SHS teachers being studied got Very Satisfactory (VS) performance rating only, innovations in teaching should be pushed and focus on instructional supervision should be given

paramount attention by the school heads in order for these teachers to render maximum excellent performance.

1.9 Number of Relevant Trainings/Seminars Attended. It can be gleaned from Table 2 that out of 90 respondents twenty (20) or 22.2% of the respondents have attended 5-6 relevant trainings and fifteen (15) or 16.7% attended 1-2 trainings.

Majority of the SHS teachers still lack the needed trainings in order for them to upgrade their teaching skills. There is a pressing demand among teachers to undergo relevant trainings that aim to enhance their instructional practices. As the learning environment and learning preference of the student continue to evolve, teachers must upgrade their pedagogical competency in order to respond to the needs of the learners. The teaching practice of teachers is central to student learning.

The students' mastery of competency is relatively dependent on the teacher's instructional competence. However, there are teachers who perform poorly in giving instruction which resulted to ineffective student teaching (Hudson & Hudson, 2008). Also, Omar (2014) emphasized the In-service training act as a catalyst for teacher's effectiveness. It is also a way of updating teachers' skills and knowledge for improving teaching and learning which lead to better job performance. In-service training act as a catalyst for teacher's effectiveness. It is also a way of updating teachers' skills and knowledge for improving teaching and learning which lead to better job performance.

## 2. Training Needs of Public Senior High School Science Teachers

### 2.1 Teaching Learning Process

**Table 3: Training Needs of Public Senior High School Science Teachers in terms of Teaching-Learning Process**

Teaching-Learning Process	Weighted Mean	Qualitative Rating	Rank
1. Developing daily lesson plans/learning logs based on the needs of the learner's vis-à-vis curriculum guides.	3.09	Moderately Needed	7
2. Constructing and developing instructional materials to adapt the curriculum needs of the learners.	3.30	Highly Needed	2
3. Providing both individualized and group instruction in all classes assigned as teaching load for the current school year.	3.08	Moderately Needed	8
4. Facilitating engaging lessons with the help of ICT.	3.35	Highly Needed	1
5. Holding demonstration teaching lessons in class.	3.13	Moderately Needed	6
6. Adapting the use of higher order thinking skills.	3.28	Highly Needed	3
7. Promoting the development of good study habits among the students.	3.24	Moderately Needed	5
8. Developing students' self-directed learning skills and retention skills.	3.26	Highly Needed	4
<b>Overall Weighted Mean</b>	<b>3.22</b>	<b>Moderately Needed</b>	

Table 3 shows the training needs of public senior high school science teachers on teaching-learning process. Indicator 4. "Facilitating engaging lessons with the help of ICT," had a mean rating of 3.35 (ranked 1<sup>st</sup>, Highly Needed). Indicator 3. "Providing both individualized and group instruction in all classes assigned as teaching load for the current school year," had the lowest mean rating of 3.08 (ranked 8<sup>th</sup>, Moderately Needed). Overall, the public senior high school science teachers perceived that training on teaching-learning process is Moderately Needed with a rating of 3.22.

All students ought to understand and enjoy science, and supporting teachers means fostering rich learning settings for all scientific educators. Adopt school policies and procedures that encourage learning cultures for both instructors and students (National Academies of Sciences, Engineering, and Medicine, 2015). For the "new normal" in basic education, they require training in blended learning design, flexible learning for synchronous sessions, how to bridge the digital gap with offline learning, and classroom preparation for blended learning designs (Dizon, De Guzman and Orge, 2021).

## 2.2 Student Outcomes

**Table-4: Training Needs of Public Senior High School Science Teachers in terms of Student Outcomes**

Student Outcomes	Weighted Mean	Qualitative Rating	Rank
1. Administering teacher-made tests and standardized tests set by the region/division/school for the current school year.	3.06	Moderately Needed	4
2. Monitoring and evaluating student progress using formative and summative assessment.	3.05	Moderately Needed	7
3. Conducting regular remediation to improve scores of low performing students.	3.05	Moderately Needed	7
4. Targeting the increase of the general average of student scores after each quarter.	3.06	Moderately Needed	5
5. Employing non-traditional assessment techniques (portfolio, journals, rubrics, etc).	2.99	Moderately Needed	9
6. Interpreting and using assessment results to improve teaching and learning.	3.05	Moderately Needed	7
7. Using tools for assessing authentic learning	3.17	Moderately Needed	1
8. Providing timely and accurate feedback to learners to encourage them to reflect on and monitor their own learning growth	3.10	Moderately Needed	2.5
9. Keeping accurate records of grades/performance levels of learners.	3.10	Moderately Needed	2.5
<b>Overall Weighted Mean</b>	<b>3.07</b>	<b>Moderately Needed</b>	

Table 4 shows training on “Using tools for assessing authentic learning” had a mean rating of 3.17 (ranked 1<sup>st</sup>, Moderately Needed). Indicator 5 “Employing non-traditional assessment techniques (portfolio, journals, rubrics, etc),” had the lowest mean rating of 2.99 (ranked 9<sup>th</sup>, Moderately Needed). This means that the SHS teachers identified this competency as a priority need for professional development. The rest of the items pertain to competencies which are moderately needed. The SHS teachers identified these competencies as secondary needs for professional development. The over-all mean of 3.07 means training is moderately needed in all competencies in the domain Student Outcomes.

Teachers play the critical role in student learning and achievement. The teachers must have the instructional knowledge (knowledge of content, pedagogy, and students) and instructional tools or materials (curriculum, teaching materials, and

assessments) for them to be efficient and effective inside the classroom.

There is a widespread disconnect between classroom activities and the teaching goal. Teachers' preparation skills must be strengthened. Some instructors are unable to connect their courses to the real world, hindering students from finding the real value of their learning (Clinchy, 2012). Also, the ability of instructors to prepare assessments and use them to design lessons has also been called into doubt. Many teachers lecture without thinking. Because some teachers do not know how to prepare tests for their students' levels, they do not give them (Hargreaves & Fullan, 2012). In relation, Burns and Lawrie (2015) justified that teaching is an excellent approach to learn about other cultures. It also improves test results, performance, and school involvement. They aid in the development and flourishing of children.

## 2.3 Community Involvement

**Table-5: Training Needs of Public Senior High School Science Teachers in terms of Community Involvement**

Community Involvement	Weighted Mean	Qualitative Rating	Rank
1. Conducting regular meetings with learners and parents to report learners' progress	3.09	Moderately Needed	3
2. Involving parents to participate in school activities that promote learning	3.15	Moderately Needed	2
3. Involving community in sharing accountability for learners' achievement.	3.09	Moderately Needed	4
4. Using community resources (human, material) to support learning.	3.22	Moderately Needed	1
5. Using the community as a laboratory for learning	3.03	Moderately Needed	7
6. Participates in community activities that promote learning.	3.05	Moderately Needed	6
7. Using community networks to publicize school events and achievements.	3.08	Moderately Needed	5
<b>Overall Weighted Mean</b>	<b>3.10</b>	<b>Moderately Needed</b>	

Table 5 shows the training needs of public senior high school science teachers on community involvement. Indicator 4 “Using community resources (human, material) to support learning,” had a mean rating of 3.22 (ranked 1<sup>st</sup>, moderately Needed). Indicator 5 “Using the community as a laboratory for

learning,” had the lowest mean rating of 3.03 (ranked 7<sup>th</sup>, Moderately Needed). This means that the SHS teachers identified this competency as a priority need for professional development. The rest of the items pertain to competencies which are moderately needed. Overall, the public senior high school science teachers

perceived that training needs on community involvement is moderately needed with a rating of 3.10.

Outside the classroom, teachers may create interdisciplinary units with their pupils. The world is not divided into disciplines. Using community resources in the classroom may help students see the local and global importance of their schoolwork.

Using instructional materials in the classroom may help establish student-centered pedagogies (Abdo & Semela 2010). The usage of appropriate instructional material in the classroom, according to Calhoun and Mateer (2012), is also essential for engaging students, aiding knowledge retention and inspiring interest in the subject matter, as well as demonstrating issues given.

### 2.4 Professional Growth and Development

Find research irrelevant because there is little research written by practicing teachers, and many times it does not relate to the daily activities in classrooms (Ferrance, 2000; McBee, 2004). However, research is conducted in many educational settings and often has a positive impact. According to McBee (2004), “classrooms that become laboratories are better classrooms” (p.157) because, as Johnson (2005) explains, research is not effective if it is perceived by teachers as an edict that is passed down from researchers to practicing educators, but is much more effective when it is constructed with personal relevance.

**Table-6: Training Needs of Public Senior High School Science Teachers in terms of Professional Growth and Development**

Professional Growth and Development	Weighted Mean	Qualitative Rating	Rank
1. Maintaining stature and behavior that upholds the dignity of teaching by knowing up-to-date policies and laws governing the teaching profession.	3.16	Moderately Needed	7.5
2. Allocating time for personal and professional development through participation in educational seminars and workshops, reading educational materials regularly.	3.24	Moderately Needed	4
3. Engaging oneself in educational research.	3.30	Highly Needed	1
4. Keeping abreast with recent developments in education.	3.28	Highly Needed	2
5. Linking with other institutions and organizations for sharing best practices.	3.26	Highly Needed	3
6. Reflecting on the quality of his/her own teaching by doing diligently the reflections in the DLL.	3.22	Moderately Needed	5
7. Improving teaching performance based on feedback from the mentor, students, peers, superiors and others.	3.18	Moderately Needed	6
8. Accepting personal accountability to learners' achievement and performance.	3.16	Moderately Needed	7.5
9. Using self-evaluation to recognize and enhance one's strength and correct one's weaknesses.	3.14	Moderately Needed	9
<b>Overall Weighted Mean</b>	<b>3.21</b>	<b>Moderately Needed</b>	

Table 6 shows the training needs of public senior high school science teachers on professional growth and development. Indicator 3 “Engaging oneself in educational research,” had a mean rating of 3.30 (ranked 1st, Highly Needed). Indicator 9 “Using self-evaluation to recognize and enhance one's strength and correct one's weaknesses,” had the lowest mean rating of 3.14 (ranked 9th, Moderately Needed). Overall, the public senior high school science teachers perceived that training on professional growth and development is Moderately Needed with a rating of 3.21.

Based from the results, teachers highly need the research trainings. So, in order to become a better teacher, it takes time, space for new ideas, and opportunities to share ideas with other teachers who teach the same subject (Willemse, Dam, Geijsel,

Wessum & Volman, 2015). For Perines (2021), the study indicates it's critical to encourage engagement in educational research by fostering a wide-ranging vision of this topic among university educators and the broader university community. Teachers' capacity to apply and reflect on new material and practices improves when school leaders participate in professional development programs for teachers. They had a positive effect on the leaders' professional growth as well (Hilton, Hilton, Dole & Goos, 2015). The groups involved and their needs must be clearly specified if we are to raise the level of teacher professional development. Criticism and introspection must also be allowed. It is common practice to conduct surveys among college students in order to get feedback on the effectiveness of certain instructional strategies (Washington, 2019).

## 2.5 Classroom Management

**Table-7: Training Needs of Public Senior High School Science Teachers in terms of Classroom Management**

Classroom Management	Weighted Mean	Qualitative Rating	Rank
1. Decreasing average rate of absenteeism every quarter.	3.22	Moderately Needed	4
2. Maintaining a learning environment of courtesy and respect for different learners(e.g. ability, culture, gender)	3.19	Moderately Needed	8
3. Providing gender-fair opportunities for learning.	3.16	Moderately Needed	12
4. Recognizing that every learner has strengths.	3.18	Moderately Needed	10
5. Maintaining a safe and orderly classroom free from distractions.	3.19	Moderately Needed	8
6. Arranging challenging activities in a given physical environment.	3.15	Moderately Needed	14.5
7. Using individual and cooperative learning activities to improve capacities of learners for higher learning.	3.16	Moderately Needed	12
8. Encouraging learners to ask questions.	3.23	Moderately Needed	2.5
9. Providing learners with a variety of learning experiences.	3.23	Moderately Needed	2.5
10. Providing varied enrichment activities to nurture the desire for further learning.	3.20	Moderately Needed	5.5
11. Communicating and maintaining high standards of learning performance.	3.20	Moderately Needed	5.5
12. Handling behavior problems quickly and with due respect to children's rights.	3.24	Moderately Needed	1
13. Giving timely feedback to reinforce appropriate learners' behavior.	3.11	Moderately Needed	17
14. Guiding individual learners requiring development of appropriate social and learning behavior.	3.15	Moderately Needed	14.5
15. Communicating and enforcing school policies and procedures for appropriate learner behavior.	3.13	Moderately Needed	16
16. Encouraging free expression of ideas from students.	3.16	Moderately Needed	12
17. Creating stress-free environment.	3.19	Moderately Needed	8
<b>Overall Weighted Mean</b>	<b>3.18</b>	<b>Moderately Needed</b>	

Gleaned from Table 7, Indicator 12, training on “Handling behavior problems quickly and with due respect to children’s rights” had a mean rating of 3.24 (ranked 1<sup>st</sup>, moderately Needed. Indicator 15, “Communicating and enforcing school policies and procedures for appropriate learner behavior” had the lowest mean rating of 3.13 (ranked 16<sup>th</sup>, Moderately Needed). This means that the SHS teachers identified these competencies as priority needs for professional development. The rest of the items pertain to competencies which are moderately needed. The SHS teachers identified these competencies as secondary needs for professional development. The over-all mean of 3.18 means training is moderately needed in all competencies in the domain Classroom Management.

Disruptive pupils are one of the most tough difficulties for teachers (Demir, 2009; Pane, 2010). Classroom misbehavior is a source of teacher fatigue and a reason for administrators and other school personnel to intervene (Wang, Hall, & Rahimi, 2015). A research found that student misbehavior negatively impacts academic attainment (Sun & Shek, 2012). Using a range of classroom management techniques helps minimize disruptive behavior and enhance cooperation and engagement (Postholm, 2013).

## 2.6 Summary of Training Needs of Public Senior High School Science Teachers

**Table-8: Summary of Training Needs of Public Senior High School Science Teachers**

Training Needs	Overall Weighted Mean	Qualitative Rating	Rank
Teaching-Learning Process	3.22	Moderately Needed	1
Student Outcomes	3.07	Moderately Needed	5
Community Involvement	3.10	Moderately Needed	4
Professional Growth and Development	3.21	Moderately Needed	2
Classroom Management	3.18	Moderately Needed	3
<b>Grand Mean</b>	<b>3.16</b>	<b>Moderately Needed</b>	

The summary (Table 8) shows that the mean assessment of training needs in terms of teaching-

learning process was 3.22, student outcomes 3.07, community involvement 3.10, professional growth &



development 3.21 and classroom management 3.18. The grand mean was 3.16 with qualitative rating as “Moderately needed”.

Traditionally the role of the teacher has been as a purveyor of information. There is a pressing demand among teachers to undergo relevant trainings that aim to enhance their instructional practices. As the learning environment and learning preference of the student continue to evolve, teachers must upgrade their pedagogical competency in order to respond to the needs of the learners. The teaching practice of teachers is central to student learning. The students’ mastery of competency is relatively dependent on the teacher’s instructional competence. But there are also incompetent instructors who fail to educate their students, resulting in poor student teaching (Hudson & Hudson, 2008). That’s why, teacher training is vital. Experts in education, research, psychology, and other sectors may unite to build a comprehensive teaching guide. Skills development must be different from topic enrichment (Nair & Jog, 2020). Learning new skills and techniques is a great way for professionals to grow. Teachers must have opportunities for professional development in order to be successful and satisfied in their jobs in primary and secondary schools.

### **3. Analysis of Variance on the Difference in the Perceived Training Needs of Public Senior High School Science Teachers when Grouped According to the Respondents’ Profile**

There is no significant difference in the perceived training needs in terms of teaching-learning process, student outcomes, community involvement and classroom management when grouped according to the profile variables. It means that regardless of profile, teachers need these trainings. However, that there is a significant difference on the perceived training needs in terms of professional growth and development when grouped according to the profile number of years in teaching.

Teachers definitely need trainings, as it was also evident from the results. Ongoing training allows science teachers to present students with relevant and individualized course materials. It assists them in adapting their lectures and courses to better meet the requirements of their students. Also, it allows instructors to take on the role of pupils. As a consequence, they are motivated to improve their teaching methods (Queens University of Charlotte, 2022). Though teachers at some educational institutions lack understanding of topic and pedagogy. These trainings bridge these gaps and better educate them to support student learning. Yes, it’s not easy. Because the system, school, teacher, and student levels should all have competing goals that must be coordinated to get the desired outcomes (Hwa, 2020).

### **Implications of the Findings in the Formulation of the Capability Enhancement Program for Senior High School Science Teachers in Schools, Division of Zambales.**

Based on the data presented, Senior High School Science Teachers in the Division of Zambales, Philippines are facing a lot of challenges in terms of personal qualifications and certification. These prohibit them to deliver basic quality education that will effect student learning and positive learning outcomes.

The results of the study clearly reveal the need to enhance the skills and competencies of the SHS science teachers. This, therefore, necessitates the development of a training and development program that will address the identified needs of these teachers relative to the following areas of school leadership and management namely: Teaching Learning Process, Student Outcomes, Community Involvement, Professional Growth and Development, and Class Management.

The SHS teachers felt that in-service training courses aligned with the identified areas were needed. Of paramount importance, it was expressed that SHS teachers need trainings to improve their skills and competencies on how to carry out immersion related activities and to bring about improvement in the teaching learning process. The choice of topics, time, place and duration are considered as important, and thus, have to be planned carefully during the formulation of the School Learning Action Cell (LAC) Plan, these factors are contributory to the effectiveness of the training program.

On the other hand, these SHS teachers should be encouraged to take up post graduate studies which are aligned to their subject area specializations. This will strengthen their capacity to teach the curricular content more effectively which is deemed necessary to better prepare the SHS students for college education.

### **CONCLUSIONS**

From the summary of findings, the following conclusions were drawn:

1. The respondent is an adult female, Teacher II, with 5 years of teaching experience, a BS graduate major in Social Science, have not earned Masteral degree, an NC II holder, with a very satisfactory performance, got 9 or more relevant trainings, without industry experience and had no membership in professional organizations.
2. Public Senior High School Science teachers perceive trainings in terms of different domains “Moderately Needed.”
3. There is no significant difference on the training needs of public senior high school science teachers when grouped according to the respondents’ profile except for professional growth and development.

## REFERENCES

- Abdo, M., & Semela, T. (2010). Teachers of Poor Communities: The Tale of Instructional Media Use in Primary Schools of Gedeo Zone, Southern Ethiopia. *Australian Journal of Teacher Education*, 35(7). <http://dx.doi.org/10.14221/ajte.2010v35n7.7>
- Burns, M., & Lawrie, J. (2015). Where it matters most: Quality professional development for all teachers. *New York, NY: InterAgency Network for Education in Emergences*.
- Clinchy, E. (2012). Developing an Educational Performance Indicator for New Millennium Students. *Journal of Research on Technology in Education*, 43(2), (pp. 157-170).
- Darling-Hammond, L., Hyler, M. E., Gardner, M., & Espinoza, D. (2017). Effective Teacher Professional Development. [https://learningpolicyinstitute.org/sites/default/files/product-files/Effective\\_Teacher\\_Professional\\_Development\\_BRIEF.pdf](https://learningpolicyinstitute.org/sites/default/files/product-files/Effective_Teacher_Professional_Development_BRIEF.pdf)
- Demir, S. (2009). Teacher perception of classroom management and problematic behaviors in primary schools. *Procedia – Social and Behavioral Sciences*, Vol. 1, Issue 1. DOI: <https://doi.org/10.1016/j.sbspro.2009.01.105>
- Dep Ed Order No. 3, S. (2016). “Hiring Guidelines for Senior High School (SHS) Teaching Positions Effective School Year (SY) 2016-2017”. *GOVPH*. [file:///C:/Users/DepEd/Desktop/THESIS%20TEACHER%20JENNILYN/DO\\_s2016\\_03.pdf](file:///C:/Users/DepEd/Desktop/THESIS%20TEACHER%20JENNILYN/DO_s2016_03.pdf)
- DepEd Order No. 32, S. (2011). “Policies and Guidelines on Training and Development (T&D) Programs and Activities”. *GOVPH*. <https://www.deped.gov.ph/2011/03/31/do-32-s-2011-policies-and-guidelines-on-training-and-development-td-programs-and-activities/>
- DepEd Order No. 43, S. (2013). “Implementing Rules and Regulations of Republic Act 10533 Otherwise Known as the Enhanced Basic Education Act of 2013”. *GOVPH*. [file:///C:/Users/DepEd/Desktop/THESIS%20TEACHER%20JENNILYN/DO\\_s2013\\_43.pdf](file:///C:/Users/DepEd/Desktop/THESIS%20TEACHER%20JENNILYN/DO_s2013_43.pdf)
- Dizon, R. C., De Guzman, M. F., & Orge, N. B. (2021). Training needs on learning delivery modalities of senior high school teachers of Zambales, Philippines: Response to the Changes in the Basic Education during the Pandemic. *EAS Journal of Humanities and Cultural Studies*. [https://easpublisher.com/media/features\\_articles/EASJHCS\\_31\\_43-50\\_FTc.pdf](https://easpublisher.com/media/features_articles/EASJHCS_31_43-50_FTc.pdf)
- Hargreaves, A., & Fullan, M. (2012). Professional capital: Transforming teaching in every school. New York. NY: *Teachers College Press*. <https://eric.ed.gov/?id=ED530692>
- Hilton, A., Hilton, G., Dole, S., & Goos, M. (2015). School leaders as participants in teachers’ professional development: The impact on teachers’ and school leaders’ professional growth. *Informit*. 10.14221/ajte.2015v40n12.8
- Hudson, P., & Hudson, S. (2008). Changing preservice teachers’ attitudes for teaching in rural schools. *Australian Journal of Teacher Education*. DOI: 10.14221/ajte.2008v33n4.6
- Hunter-Johnson, Y. (2015). Demystifying the mystery of second career teachers’ motivation to teach. *The Qualitative Report*. <https://nsuworks.nova.edu/tqr/vol20/iss8/14/>
- Hwa, Y. Y. (2020). Six insights on teacher training. *Research on Improving Systems of Education (RISE)*. <https://riseprogramme.org/blog/six-insights-teacher-training>
- Calhoun, J., & Mateer, D. (2011). Incorporating media and response systems in the economics classroom, Chapters, in: Gail M. Hoyt & KimMarie McGoldrick (ed.), *International Handbook on Teaching and Learning Economics*, chapter 13, Edward Elgar Publishing.
- Karabenick, S. A., & Conley, A. (2011). Teacher motivation for professional development. *Math and Science Partnership - Motivation Assessment Program, University of Michigan, Ann Arbor*. <http://mspmap.org/wp-content/uploads/2012/01/Teacher-PDM.pdf>
- Nair, S., & Jog, A. (2020). Teacher training and skill enhancement in India using innovative technique. *International Journal of Innovative Technology and Exploring Engineering; Vol. 9, Issue 4S*. <https://www.ijitee.org/wp-content/uploads/papers/v9i4s/D10120394S20.pdf>
- National Academies of Sciences, Engineering, and Medicine. (2015). *Science teachers' learning: enhancing opportunities, creating supportive contexts*. Ch 9. pp 213-232. *Washington, DC: The National Academies Press*. <https://doi.org/10.17226/21836>.
- Omar, C. M. Z. C. (2014). The need for in-service training for teachers and it’s effectiveness in school. *International Journal for Innovation Education and Research*, 2(11), 1–9. <https://doi.org/10.31686/ijer.vol2.iss11.261>
- Perines, H. (2020). Educational research training in teacher training programs: The views of future teachers. *International Education Studies*; 14; 1 <https://files.eric.ed.gov/fulltext/EJ1281381.pdf>
- Perines, H. (2021). Educational research training in teacher training programs: The views of future teachers. *International Education Studies; Vol. 14, No. 1*. DOI: 10.5539/ies.v14n1p76
- Postholm, M. B. (2013). Classroom management: What does research tell us? *European Educational Research Journal*. 2013;12(3):389-402. doi:10.2304/eeerj.2013.12.3.389
- Queens University of Charlotte. (2022). The importance of professional development for educators.

- <https://online.queens.edu/resources/article/professional-development-for-educators/>
- Rogayan Jr., D. V., & Antipolo, A. M. (2021). Filipino prospective teachers' experiences in teaching in K12 science curriculum: A cross-sectional research. *Jurnal Pendidikan Biologi Indonesia*.  
[https://www.researchgate.net/publication/350278529\\_Filipino\\_prospective\\_teachers\\_experiences\\_in\\_teaching\\_in\\_K12\\_science\\_curriculum](https://www.researchgate.net/publication/350278529_Filipino_prospective_teachers_experiences_in_teaching_in_K12_science_curriculum)
  - Rogayan Jr., D. V., & Dantic, M. J. P. (2021). Backliners: Roles of science educators in the post-covid milieu. *Aquademia*, 5(2), ep21010. <https://doi.org/10.21601/aquademia/11053>
  - Sun, R. C. F., & Shek, D. T. L. (2012). Student classroom misbehavior: An exploratory study based on teachers' perceptions. *The Scientific World Journal*, vol. 2012. <https://doi.org/10.1100/2012/208907>
  - Thames, D. H. (2021). Effective professional development for teachers. *Research Gate*. 10.1080/19415257.2020.523975
  - Wang, H., Hall, N. C., & Rahimi, S. (2015). Self-efficacy and causal attributions in teachers: Effects on burnout, job satisfaction, illness, and quitting intentions. *Teaching and Teacher Education*, 47, 120–130. <https://doi.org/10.1016/j.tate.2014.12.005>
  - Washington, B. (2019). Keys to improving teacher professional development. *Graduate Programs for Educators*. <https://www.graduateprogram.org/2019/09/keys-to-improving-teacher-professional-development/>
  - Willemse, T., & Dam, G., Geijsel, F., Van Wessum, Loes., & Volman, M. (2015). Fostering teachers' professional development for citizenship education. *Teaching and Teacher Education*, 49, 118-127. 10.1016/j.tate.2015.03.008.
  - Wilson, V. (2013). Research Methods: Mixed Methods Research. *Evidence Based Library and Information Practice*, 8(2), 275-277. <https://doi.org/10.18438/B8801M>

---

**Cite This Article:** Maricel M. Tabligan & Marshall James P. Dantic (2022). Professional Qualifications and Training Needs of Public Senior High School Science Teacher: Basis for Capability Enhancement Program. *EAS J Humanit Cult Stud*, 4(3), 138-148.