Junior High School Teachers' Self-Efficacy Toward Teaching Thinking Skills: Basis for the Development of In-Service Training Courses

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Abstract: This descriptive-correlational study aimed to determine the relationship between Junior High School science teachers' self-efficacy and teaching thinking skills. The respondents were thirty-two (32) Junior High School science teachers of rural public high schools in Panay Island for S.Y. 2025-2026. The researcher-made and expert-validated instrument, the Teaching Thinking Skills Scale (TTSS) ($\propto$ = 0.95), was used to determine the Junior High School science teachers' level of teaching thinking skills. The Science Teaching Efficacy Belief Instrument (STEBI-A) by Enochs and Riggs (1990) which consists of two factors, personal science teaching efficacy belief (PSTEB) ($\propto$ = 0.92) and science teaching outcome expectancy (STOE) ($\propto$ = 0.77) was adopted and used to measure the Junior High School science teachers' level of self-efficacy. Mean and standard deviation were used for descriptive statistics, while Pearson's product-moment correlation set at 0.05 alpha level was used for inferential statistics. Results of the study revealed that the Junior High School science teachers' level of self-efficacy in terms of PSTEB was significantly higher than that in terms of STOE, described as "moderate". In terms of the level of teaching thinking skills, problem-solving skills and creative thinking skills obtained significantly higher mean than critical thinking skills and decision-making skills. The result of Pearson's product-moment correlation indicated a very weak positive correlation between Junior High School science teacher's self-efficacy and teaching thinking skills. All these led to the development of the In-Service Training Design for Junior High School Science Teachers' Self-Efficacy and Teaching Thinking Skills as the output of this study. As the In-Service Training for Junior High School science teachers equips them for the implementation of new modalities as well as new ways of addressing the challenges brought by the pandemic, the teachers were expected to be able to identify and critically evaluate their level of self-efficacy and teaching thinking skills that can bring significant changes to the teaching and learning process. With this, the Department of Education may conduct additional trainings to reskill and upskill teaching competence among science teachers, specifically on self-efficacy and teaching thinking skills, which in turn will help improve the quality of education in the country and bring new perspectives to science teaching in the K to 12 curriculum.

Keywords: self-efficacy, teaching thinking skills, critical thinking, problem-solving, decision-making, creative thinking, in-service training for teachers

Introduction

The ability to think critically and make sound decisions is an essential skill in today's rapidly changing world. Although thinking is a natural human ability, research suggests that thinking skills can be developed and improved through proper instruction and continuous practice. As a result, the teaching of thinking skills has become an important focus in education. Scholars have identified several key thinking skills, including critical thinking, creative thinking, problem-solving, and decision-making, all of which help learners become more effective and independent individuals (Costa, 2001).

Teachers play a vital role in developing these skills among students. Their knowledge, confidence, and teaching practices greatly influence how effectively thinking skills are integrated into classroom instruction. For this reason, understanding teachers' beliefs about their own capabilities, particularly their self-efficacy, is important. Self-efficacy influences how teachers approach challenges, implement instructional strategies, and respond to the

diverse needs of learners. When teachers have strong confidence in their abilities, they are more likely to create engaging learning experiences that encourage higher-order thinking.

This study focuses on Junior High School science teachers' self-efficacy in teaching thinking skills as a basis for developing In-Service Training (INSET) programs for science educators. The success of any educational system largely depends on teachers, as they are at the forefront of the teaching and learning process. Their motivation, commitment, and confidence directly affect the quality of education provided to students. Consequently, examining factors that shape teachers' instructional practices, such as self-efficacy, is essential for improving educational outcomes.

In educational psychology, self-efficacy refers to an individual's belief in their ability to successfully perform specific tasks or achieve desired goals (Bandura, 1997; Zimmerman, 2000). In the context of teaching, self-efficacy reflects teachers' confidence in their capacity to facilitate learning, manage classrooms effectively, and help students develop important skills, including thinking skills. Teachers with high self-efficacy are generally more willing to adopt innovative teaching methods and persist in overcoming instructional challenges.

The importance of thinking skills has become even more evident in the 21st century. As societies become increasingly complex and technology-driven, employers seek individuals who can analyze information, solve problems, and make informed decisions. Studies have shown a growing demand for skills related to critical thinking, creativity, and problem-solving in the workforce (Othman & Mohamad, 2014). This highlights the need for schools to prepare students not only with knowledge but also with the ability to think effectively and adapt to changing circumstances.

Given these realities, it is important to explore the level of self-efficacy among science teachers in teaching thinking skills. The findings of this study may provide valuable insights for designing professional development programs that strengthen teachers' confidence and competence in fostering thinking skills among students, ultimately contributing to improved teaching and learning outcomes.

Methodology

This study employed a descriptive-correlational research design to examine the relationship between Junior High School science teachers' self-efficacy and their teaching of thinking skills. Self-efficacy was measured using the Science Teaching Efficacy Belief Instrument (STEBI-A) developed by Enochs and Riggs (1990), while teaching thinking skills was assessed through a researcher-made questionnaire.

A descriptive-correlational design was considered appropriate because the study aimed to describe the existing levels of teachers' self-efficacy and teaching thinking skills and determine whether a significant relationship existed between these variables. Rather than establishing cause-and-effect relationships, this design focused on identifying patterns and associations among the variables being investigated. According to Creswell (2012), correlational research helps determine the direction and strength of relationships between variables without manipulating them.

The study was conducted during the School Year 2025-2026 in three public secondary schools in the Schools District of San Enrique and two public secondary schools in the Schools District of Banate, Province of Iloilo. Quantitative data were gathered from Junior High School science teachers through survey questionnaires and analyzed using appropriate statistical tools. The use of a survey method allowed the researcher to collect information directly from the respondents regarding their beliefs, experiences, and teaching practices related to thinking skills instruction.

By utilizing this research design, the study sought to provide a clearer understanding of how teachers' confidence in their teaching abilities relates to their implementation of thinking skills in science education. The findings were expected to serve as a basis for developing relevant professional development and in-service training programs for science teachers.

Results and Discussion

This presents the descriptive and the inferential analyses of data and their interpretations, focusing on Junior High School science teachers' self-efficacy and teaching thinking skills.

This presents and discusses the results of the study in line with the following research questions:

1. What is the Junior High School science teachers' level of self-efficacy as a whole and in terms of: (a) personal science teaching efficacy belief (PSTEB), and (b) science teaching outcome expectancy (STOE)?
2. What is the Junior High School science teachers' level of teaching thinking skills as a whole and in terms of: (a) critical thinking, (b) problem-solving, (c) decision-making, and (d) creative thinking?
3. Is there a significant relationship between the Junior High School science teachers' self-efficacy and teaching thinking skills?
4. What in-service training program can be developed based on the Junior High School science teachers' self-efficacy and teaching thinking skills?

Junior High School Science Teachers' Level of Self-Efficacy

Table 1 shows the mean and the standard deviation of Junior High School science teachers' self-efficacy as a whole and in terms of: (a) personal science teaching efficacy belief (PSTEB), and (b) science teaching outcome expectancy (STEO). As reflected in Table 2, the results of Junior High School science teachers' self-efficacy are M = 3.34, SD = 0.29 as a whole; M = 3.88, SD = 0.32 in terms of PSTEB; and M = 2.97, SD = 0.37 in terms of STEO. Between the two indicators, PSTEB had a higher mean score than STEO.

Table 1. Junior High School Science Teachers' Level of Self-Efficacy

Self-efficacy	N	SD	Mean	Interpretation
As a Whole	32	0.29	3.34	Moderate
PSTEB	32	0.32	3.88	High
STEO	32	0.37	2.97	Moderate

Note: 4.51–5.00 Very High; 3.51–4.50 High; 2.51–3.50 Moderate; 1.51–2.50 Low; 1.00–1.50 Very Low

The findings revealed that Junior High School Science teachers demonstrated a moderate level of self-efficacy overall. This suggests that while teachers generally possess confidence in their ability to teach science effectively, there remains room for further professional growth and development. The moderate level of self-efficacy may be influenced by teachers' varying teaching experiences, instructional backgrounds, and opportunities for professional learning. As noted by Walag et al. (2020), many high school science teachers enter the profession without extensive preparation specifically related to science teaching, which may affect the degree of confidence they develop in handling science content and instruction.

For beginning teachers, confidence in teaching science often develops gradually as they gain classroom experience and become more familiar with effective instructional practices. Continuous professional development programs, mentoring opportunities, and targeted training can help strengthen teachers' confidence by providing them with practical strategies and relevant pedagogical skills. According to Bandura's theory of self-efficacy, mastery experiences, vicarious experiences, social persuasion, and emotional well-being contribute significantly to the development of self-efficacy beliefs. Providing teachers with opportunities to engage in these experiences may therefore enhance their confidence and effectiveness in science instruction.

Among the two dimensions of self-efficacy examined, teachers obtained a high level of Personal Science Teaching Efficacy Belief (PSTEB). This indicates that the respondents generally believed in their capability to facilitate student learning and successfully teach science concepts. Such confidence may stem from accumulated teaching experiences, content knowledge, and participation in professional development activities. Similar findings have been reported in previous studies, which suggest that teachers with strong self-efficacy are more likely to implement innovative instructional strategies, remain persistent when students encounter learning difficulties, and

demonstrate greater commitment to improving student outcomes (Khorey-Bower & Simons, 2003; Shohani et al., 2015).

Teachers with high personal teaching efficacy tend to approach classroom challenges with greater confidence and resilience. They are more willing to experiment with diverse teaching methods, provide additional support to struggling learners, and maintain high expectations for student achievement. These characteristics are particularly important in science education, where abstract concepts often require creative and engaging instructional approaches to promote meaningful learning.

In contrast, the respondents' level of Science Teaching Outcome Expectancy (STEO) was found to be moderate. This suggests that while teachers believe in their own teaching abilities, they may be less certain about the extent to which their efforts alone can influence student achievement. Such perceptions may arise from external factors that affect learning outcomes, including students' motivation, socioeconomic conditions, parental support, availability of learning resources, and classroom environment. Consequently, teachers may recognize that successful learning is influenced not only by effective teaching but also by factors beyond their direct control.

The difference between PSTEB and STEO scores indicates that teachers have greater confidence in their personal teaching competence than in the certainty that their instruction will always result in improved student performance. This finding highlights the importance of providing supportive school environments, adequate instructional resources, and collaborative professional learning opportunities that can help teachers strengthen both their confidence and their expectations regarding student success. By fostering these conditions, educational institutions can contribute to the development of more effective and self-assured science teachers who are better equipped to facilitate meaningful learning experiences for their students.

Table 2 shows the mean and the standard deviation of Junior High School science teachers' level of teaching thinking skills as a whole and in terms of: (a) critical thinking skills, (b) problem-solving skills, (c) decision-making skills, and (d) creative thinking skills. As reflected in Table 3, the results for teaching thinking skills are $M = 4.19$, $SD = 0.37$ as a whole; $M = 4.16$, $SD = 0.43$ for critical thinking skills; $M = 4.30$, $SD = 0.41$ for problem-solving skills; $M = 4.08$, $SD = 0.39$ for decision-making skills; and $M = 4.23$, $SD = 0.40$ for creative thinking skills. Among the four indicators, problem-solving has the highest mean, followed by creative thinking, critical thinking, and decision-making, respectively. All indicators were classified as "high".

Table 2 Junior High School Science Teachers' Level of Teaching Thinking Skills

Teaching Thinking Skills	N	SD	Mean	Interpretation
As a Whole	32	0.37	4.19	High
Critical Thinking	32	0.43	4.16	High
Problem-Solving	32	0.41	4.30	High
Decision-Making	32	0.39	4.08	High
Creative Thinking	32	0.40	4.23	High

Note: 4.51–5.00 Very High; 3.51–4.50 High; 2.51–3.50 Moderate; 1.51–2.50 Low; 1.00–1.50 Very Low

The high mean score of Junior High School science teachers' teaching thinking skills as a whole can be attributed to the consistent application of thinking skills across different learning areas in which science teachers apply critical thinking skills, problem-solving skills, decision-making skills, and creative thinking in delivering lessons. This implies that science teachers can critically think and more easily figure out problems. In terms of problem-solving skills, teachers can use authentic methods like creative ideas and high-level thinking when they encounter difficulty. In terms of decision-making and creative thinking, science teachers can make wise decisions about planning, implementing, and assessing instruction and creating a positive learning environment.

The high mean score of Junior High School science teachers' critical thinking skills can be attributed to their instructional training in critical thinking, which is found to promote thinking skill development that includes redirection, probing, and reinforcement; asking higher-order questions during classroom discussions; and lengthening wait-time during classroom questioning. Teaching and practicing critical thinking provides teachers

with opportunities to embrace and take charge of their learning. Teachers engaged in critical thinking approach the classroom experience differently.

Another factor that may contribute to this is the consistency of the application of critical thinking skills in solving real-life problems. Teachers who possess higher critical thinking abilities can figure out problems, especially in real-life situations, and can more easily formulate solutions and more skillfully behave in exploring solutions as compared to those of their peers who have lower critical thinking abilities. Science teachers' critical thinking abilities is indeed very important, especially in choosing appropriate teaching techniques and materials in delivering lessons that promote critical thinking ability.

To think critically, teachers should therefore possess the cognitive ability to consider all aspects and the intention and motivation to do so. This critical thinking ability is seen as necessary for teachers who need to constantly evaluate learning contexts and learners' performance and to decide on the best future actions in class. The researcher found it timely to develop an in-service training for science teachers as a way to further enhance their critical thinking skills. The development of such in-service training is supported by the study of Abrami, Bernard, Borokhovski, Wade, Surkes, Tamim, and Zhang (2008) who reported that teachers who received specific training on methods in teaching critical thinking were more effective in developing critical thinking skills.

The high mean scores of Junior High School science teachers' problem-solving skills can be attributed to real-life applications of the lessons, in which the contextualization of learning materials was observed, making them more relatable to the learners. Another factor that may have caused this was the commitment of science teachers to the improvement of their problem-solving skills. This implies that when teachers encounter difficulties and complicated issues, they can commit to seek for immediate solutions and to find ways to overcome the challenges met.

According to Leikin (2009), problem-solving skills require mental mastery. When problems are thought of as difficulties that individuals encounter on their own, the individual should use authentic methods such as creative ideas and high-level thinking for problem-solving (Tertemiz, 2013). The researcher therefore found it timely to develop an in-service training for science teachers to further enhance their problem-solving skills. This is supported by Jahangir, Saheen, and Kazmi (2012) who reported that in-service training plays a major role in the improvement of teachers' performance in school. In-service training also provides teachers with ample opportunities to learn new concepts, methods, and approaches in problem-solving.

The high mean score of Junior High School science teachers' decision-making skills can be attributed to sufficient time in planning, implementation, and assessment of instruction as well as creation of proper conditions for a positive learning environment. Teachers make countless decisions in an effort to promote student learning — some decisions are made when preparing lesson or unit plans, designing instructional activities, or grading papers. Another factor that may be attributed to this is the science teachers' consistency in decision-making. Emotional feeling should not be the bases in making decisions, especially in dealing with student behavior.

This implies that Junior High School science teachers should make wise decisions about planning, implementation, and assessment of instruction and creation of a positive learning environment. When planning for instruction, for example, teachers must decide on goals and objectives, needs assessment, appropriate instructional strategies, materials and technology, and evaluation of student performance. Teachers make decisions in achieving varied academic, social, and behavioral goals, so the teacher must consider these and decide on ways to plan and to simultaneously implement the goals.

Being a consistent teacher, moreover, promotes a high sense of respect from the students. Great teachers deal with the specific details of a problem rather than the broad context. The researcher thus found it timely to develop an in-service training for science teachers to enhance the science teachers' decision-making skills. The development of such in-service training was supported by Abrami, Bernard, Borokhovski, Wade, Surkes, Tamim, and Zhang (2008) in which teachers who received specific training on methods to teach decision-making skills were more effective in developing decision-making in students than those who had no prior training.

Lastly, the high mean score of Junior High School science teachers' creative thinking skills can be attributed to a high level of imagination that they use in creating teaching strategies which promote effective teaching thinking skills. Science teachers innovate contextualized learning materials that can be used as tools to teach lessons in more creative ways. This implies that Junior High School science teachers should be highly imaginative in putting ideas into practice in accordance to a plan, which involves the use of external resources. Creative teaching includes creating teaching activities, drawing up creative teaching plans, and improving creative teaching strategies. Sawyer (2011) noted that creative teaching includes the teachers' use of imagination and trendy methods to form the values of originality and judgment.

Teachers' active participation in trainings related to creative teaching strategies and innovation is a great factor in the increase of their creative thinking skills. The ability to think creatively is the ability to think of something while looking at several perspectives to create different ideas that can be used in solving a problem (Suryadi & Herman, 2008). This only implies that there should be a paradigm shift from the traditional way of teaching to a more creative and innovative way of delivering lessons to meet the standards of 21st century learning. This is supported by Jahangir, Saheen, and Kazmi (2012) who showed the major role of in-service training in improving teachers' creative thinking skills; providing them with ample opportunities to learn new concepts, methods, and approaches in creative thinking; and implementing programs and activities designed to build and establish harmonious relationships.

Correlation Between Junior High School Science Teachers' Self-Efficacy and Teaching Thinking Skills

To test the significance of the relationship between the Junior High School science teachers' self-efficacy and teaching thinking skills, Pearson's product-moment correlation was used. There was a very weak correlation between the Junior High School science teachers' self-efficacy and teaching thinking skills.

Table 3 shows that the Junior High School science teachers' self-efficacy and teaching thinking skills are not significantly related to each other as indicated by Pearson's product-moment correlation coefficient, r = 0.04 at p = 0.83.

Table 3 Correlation Between Junior High School Science Teachers' Self-Efficacy and Teaching Thinking Skills

		Science Teaching Self-Efficacy
Teaching Thinking Skills	Pearson Correlation	0.04
	Sig. (2-tailed)	0.83
	N	32

This implies that teaching thinking skills have no direct bearing on self-efficacy. This supports the study of Kaya (2008) that discovered a weak relationship between preservice teachers' self-efficacy and teaching thinking skills. Having low self-efficacy, however, results in selecting wrong or inappropriate teaching techniques in class (Hoy & Spero, 2005). In their study, Pearson and Moomaw (2005) reported that teachers having low self-efficacy are not ready to take risks or try new techniques inside the classroom, implying that educating preservice teachers on teaching thinking skills will increase their self-efficacy.

This, however, contradicts the claim of Akkaya, Memnun, and Katranci (2012) that in-service teachers' self-efficacy is critical to the achievement of skill-related curriculum goals in teaching thinking skills. Instructional processes need to develop teaching thinking skills, which means that the fulfillment of the requirements of the teaching profession must not rely only on offering a good theoretical public institution but also on teachers' perception of their own efficacy in meeting these requirements and responsibilities.

Another study (Tebbs, 2000) presented self-efficacy as an effective factor for teaching thinking. Facilitator-teachers are more successful in creating democratic classroom climates than teachers belonging to other groups as facilitator-teachers prefer student-centered teaching techniques. For better teaching thinking processes, a

democratic classroom climate, flexibility, and responsibility for one's own learnings are inevitable necessities (Costa, 2001; McGregor, 2007; Wilks, 2005).

Bandura (1997) explained that self-efficacy plays an essential role in determining teaching practices, which includes choosing the appropriate instructional activities, organizing lessons, and preparing oneself to handle challenging situations. Teachers with high self-efficacy are more likely to utilize inquiry-based practices in their teaching and provide learner-centered environments to their students (Watters & Ginns, 2000).

Personal self-efficacy has been considered an essential construct in teacher education and teacher professional development (Cantrell, Young, & Moore, 2003). Teachers who possess high self-efficacy are confident that they are adequately trained or experienced to develop teaching strategies that will overcome challenges in teaching thinking skills. STEO, on the other hand, is the notion that an intention to act is based on the expected success of that action despite the conditions at home or in the environment (Bleicher, 2004). This concept can be extended to the way science teachers view their capabilities. Science teachers who possess low STEO may believe that they cannot do much to improve students' motivation and performance — which is important because this supports the idea that those who believe student learning is possible are more likely to use teaching thinking skills allowing students to learn more.

The result of this study contradicts that of Tebbs (2000), which explained that there is a significant relationship between teachers' self-efficacy and teaching thinking practices. This may be because once people believe themselves to be successful in the field, they will start to show more effort to be successful in that field. It can thus be concluded from the results of his study that, for science teachers to improve in teaching thinking skills, adequate time should be set aside for teachers' comprehensive training for any performance task expected of them. Lessons, projects, and courses that specifically focus on critical thinking, creative thinking, problem-solving, and decision-making should be automatically included in the core curriculum. The issue of teaching thinking skills in school and the teachers' preparedness to perform this task should become a priority in public high schools in which the teachers' training occurs.

Design and Development of In-Service Training Design for Junior High School Science Teachers' Self-Efficacy and Teaching Thinking Skills

I. Rationale

In adherence to Department of Education (DepEd) Order No. 12, s. 2025 or the School Calendar and Activities for School Year 2025-2026 and Republic Act 10533 that mandates the upholding and recognition of the significance of teachers' and employees' continuous personal and professional development and advancement. To perform this role, district and school personnel should be fully equipped with relevant core and technical competencies that will enable them to cascade intensive training and support the continuing professional development of personnel based on the principle of lifelong learning and DepEd's commitment to the development of teachers and their potential toward success in the profession.

This capacity building for teachers may be conducted through the districtwide In-Service Training (INSET) for Teachers that focuses on self-efficacy on identified common topics and enhances necessary teaching thinking skills. This ultimately contributes to their primary functions as prime movers of the professional learning community.

The Schools District of San Enrique and Schools District of Banate will conduct a three-day INSET on a face-to-face modality while strictly observing minimum safety protocols.

This program likewise supports the Basic Learning Continuity Plan in capacitating teachers with appropriate teaching and learning resources and processes to address the needs of the learners in this pandemic. This INSET will equip participants in the implementation of new modalities in self-efficacy and teaching thinking skills with new ways of addressing the challenges brought by the pandemic.

The INSET, in this aspect, is the driving force behind much change that has occurred in the area of teaching and learning. According to Kazmi, Pervez, and Mumtaz (2011), the INSET enables teachers to be more systematic and logical in their teaching styles. Through it, teachers can identify and critically evaluate the level of self-efficacy and teaching thinking skills that can bring changes to the teaching and learning process.

Imo, Oswald, and Inyang (2013) showed that teachers who attend in-service training perform effectively in their work concerning knowledge of the subject, classroom management, teaching thinking method, and student evaluation. A study by Jahangir, Saheen, and Kazmi (2012) also shows that in-service training plays a major role in the improvement of teachers' performance in school.

The INSET will be the avenue for teachers' reskilling and upskilling for the new normal in education. It will equip teachers with adequate new knowledge and skills in facing and overcoming challenges. The undying support of education leaders for teachers, learners, and parents and the long-term impact of INSET manifests a clear future ahead. INSET is proof that no global crisis can stop education.

Based on the results of this study, the researcher developed the In-Service Training (INSET) Design for Junior High School Science Teachers in Self-Efficacy and Teaching Thinking Skills, which is seen to act as catalyst for science teachers' effectiveness and a way of updating Junior High School science teachers' skills and knowledge for the improvement of their self-efficacy and teaching thinking that is seen to lead to better performance. In-service training is important for teachers as they face changes and challenges in the new normal. It is also fundamental aspect in the improvement of teacher professionalism. The effectiveness of in-service training is important so that teachers can apply the knowledge that they have acquired from here in teaching and learning.

In this respect, in-service training for teachers is a driving force behind much change that occurred in the area of teaching and learning. It is vital that teachers keep themselves up-to-date on the most current concepts in their field and promote professional growth among themselves to encourage excellent and effective teaching and learning environment. According to Kazmi, Pervez, and Mumtaz (2011), in-service training for teachers enables them to be more systematic and logical in their teaching styles as it is a planned process in which the collective or individual effectiveness of teachers is enhanced in response to new knowledge and changing circumstances so as to directly or indirectly improve the quality of science education.

In this three-day in-service training, the participants were grouped into two (2) with a maximum of 50 members per group. There were twelve (12) topics that were discussed by the speakers. The topics were aligned to the teachers' self-efficacy and teaching thinking skills. This is a great venue for the science teachers to upskill their self-efficacy and teaching thinking skills to better deliver quality education to the learners.

This implies that through in-service training, teachers can identify and critically evaluate self-efficacy and teaching thinking skills, which can bring changes to the teaching and learning environment. Imo, Oswald, and Inyang (2013) showed that teachers who attend in-service training effectively perform in their work concerning knowledge of the subject, classroom management, the use of the teaching thinking method, and student evaluation. The study by Jahangir, Saheen, and Kazmi (2012) also shows that in-service training plays a major role in the improvement of the science teachers' performance in school. The researcher therefore found it timely to develop an in-service training for science teachers as the right venue for reskilling and upskilling teachers for the new normal in education as it equipped teachers with adequate new knowledge and skills on how to face and overcome challenges.

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