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Teachers' Competence in Action Research

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Abstract:

Studying teachers' competence in action research can lead to improved teaching practices and a culture of innovation within the school. In this context, this study examined the teachers' levels of competence in action research in a District in a 2nd class municipality of a large Division in Central Philippines during the school year 2022-2023. Data needed for this descriptive study was collected from 139 teachers using a self-made data-gathering instrument that has passed the stringent validity and reliability tests. Initial analysis showed that most teachers are younger, have lower educational backgrounds and shorter teaching experience, and belong to the lower plantilla position. The ensuing analysis showed that teachers are highly competent in action research according to problem identification, proposal writing, and research completion. Teachers have high competence in action research when grouped and compared according to age, educational attainment, length of service, and plantilla position. A significant difference exists in the level of competence of teachers in action research in problem identification according to their length of service. The results of this study call for extensive training and seminars in action research, wider online resources, scholarship, rewards, and technical assistance to further elevate the levels of research competence of teachers.

Keywords: Education, action research, research skills, competence, Negros Occidental, Philippines

Introduction:

Nature of the Problem

Teachers' competence in action research is crucial to professional development and educational improvement. For basic education institutions to meet the demands of a rapidly changing world, several crucial considerations must be made. One of these elements is the importance of action research in a teacher's job in the twenty-first century (Tindowen et al., 2019). DepEd stresses the role of Philippine teachers in continually improving their teaching strategies, which could be done through action research making, an essential tool for improving teaching and learning processes and more innovation.

Teachers are researchers in their own ways. Doing action research makes them a catalyst of change and brings development to every classroom they have. Thus, knowing problems in the classroom gives them a chance to make innovations and solutions to make changes. Action research is a valuable tool for teachers to improve their practice, enhance student learning, and contribute to the broader educational community.

However, despite the Department of Education's numerous initiatives and programs and the institutionalization of research in basic education, the research productivity of teachers is still low (Mapa, 2017). In fact, the researcher observed in the school where she was teaching that action research adoption by teachers in basic education settings is still in the adjusting stage. Additionally, there were issues and concerns regarding their competence in action research. Therefore, this study was conducted to ascertain the teachers' levels of competence in action research. The researcher observed that teachers could be more productive, as she is a teacher. The study findings will address the root causes of teachers' underwhelming action research productivity.

Current State of Knowledge

It was significant to develop teachers' competence in resolving a delinquent, help them observe and build classroom performances, and develop an understanding of their teaching and learning processes. Teachers are not only restricted to the four walls of the classroom for the delivery of instruction in the 21st-century learning environment but also must carry out one of its functions, which is research (Winch et al., 2015). Teachers engage in classroom action research specifically because prior knowledge can suggest a model for resolving issues (Kunlasomboon et al., 2015; Narmaditya et al., 2017).

In their separate studies, Dalwampo (2017) discovered that teachers' skills and competence were the precursors to providing the best learning for students. Teachers must constantly upgrade and empower themselves because they serve as knowledge brokers. Campbell (2011) agreed with these findings, stating that teacher-educators must learn more about action research as part of our classroom integration. According to De la Cruz (2016), researchers are better at teaching because they can identify problems and record procedures for enhancing their teaching and learning.

Some of the essential qualities that teacher-researchers need to have were mentioned by Garces and Granada (2016). They also concluded that teachers needed negotiation skills, teamwork, opportunity, and the ability to be responsive to actively participate in action research making. Erba (2013) added that for teachers to succeed in action research making, they must have the interest, sufficient knowledge and skills, budget (time, money, and other resources), and context (training being offered, principals' support, and officers' involvement).

Theoretical Underpinnings

This study is anchored on Susan Harter's (1970) Competence Motivation Theory. The achievement motivation theory is based on a person's feelings of personal competence. According to the theory, competence motivation increases when a person completes a task. This motivates the individual to complete more tasks. Harter also added a developmental dimension to her theoretical framework by claiming that children who are successful in their initial mastery attempts and receive positive and effective reinforcement from significant adults will internalize both a self-reward system and a set of mastery goals (with sufficient cognitive maturation). It is important that individuals possess high perceptions of ability or competence in at least one valued achievement domain in order to have an overall high regard for the self.

Moreover, this theory was immanent to the study because it provides a simplified way of determining whether learning can be implemented successfully in the delivery of instruction. Correspondingly, its perceived competence levels can also affect or predict individuals' behavior. The theory is most significant in determining teachers' competence level in action research.

Objectives of the Study

This study aimed to determine the teachers' levels of competence in action research in one of the districts in a 2nd class municipality of a large Division in Central Philippines during the School Year 2022-2023. Specifically, it aimed to determine 1) the level of competence of teachers in action research in problem identification, proposal writing, and research completion; 2) the level of competence of teachers in action research when grouped according to age, educational attainment, number of years in teaching, and plantilla position; and 3) the significant difference in the level of competence of teachers in action research when grouped according to the selected demographics.

Research Methodology:

This section presents the research design, study respondents, data gathering instrument, data gathering procedure, analytical schemes, statistical tools, and ethical considerations.

Research Design

This paper used the descriptive research design to determine the teachers' level of competence in action research. Descriptive research is used to describe characteristics of a population or phenomenon being studied. It does not answer questions about how, when and why the characteristics occurred. Rather it addresses the what questions (McCOmbes, 2014). This research design fits the purpose of the present study as it entails observation, analysis and mainly description of factors. The use of survey questionnaires also qualifies this study as a descriptive research design.

Respondents

The study's respondents were 139 teachers in one of the districts in a 2nd class municipality of a large Division in Central Philippines from a total population of 215. Since the number of respondents is quite large, stratified sampling and random sampling techniques were used using the Cochran formula to find the sample size. To get the percentage, the respondents from each school were divided by the total number of respondents and multiplied by the sample size. The researcher randomly selected the respondents from each school using the lottery technique.

Instruments

In gathering the necessary data for this research, the researcher used a researcher-made survey questionnaire subjected to validity and reliability testing. The research instrument was divided into two (2) parts: Part I was the profile of the respondents, which contained the respondents' age, educational attainment, number of years in teaching, and plantilla position. Part II is the survey questionnaire describing the teachers' competence in action

research with 15 total line items with 5 line items for the level of competence according to the following areas: problem identification, proposal writing, and research completion. Each item was rated on a scale of 1 to 5, where 5 was interpreted as always, 4 as often, 3 as sometimes, 2 as rarely, and 1 as almost never.

Data Gathering Procedure

The researcher complied with the legal process in asking permission to ensure the smooth conduct of the study. A letter requesting permission was sent to the Division Office of Negros Occidental addressed to the Schools Division Superintendent (SDS) through the Public Schools District Supervisor (PSDS). After being approved, letters were prepared to the school principals or school heads.

The researcher scheduled the administration of the research instrument to avoid inconvenience and unpreparedness. Administration of the instrument was administered face to face, observing safety health protocols such as wearing masks, face shields, and social distancing while some were also provided with hard copies through their respective principals' offices. All data gathered in this study were treated with utmost confidentiality. Upon retrieval of the survey questionnaire, the data gathered was sent to the statistician for tabulation, application of the appropriate statistical tools in every problem, analysis, and presentation of the data in a tabular manner.

Data Analysis and Statistical Treatment

In the data analysis, various procedures were employed depending on the study's objectives. Objectives 1 and 2 used the descriptive analytical scheme and mean as statistical tools to determine the level of competence of teachers in action research according to the areas of problem identification, proposal writing, and research completion. Objective 3 used a comparative analytical scheme and Mann-Whitney U-test as statistical tools to determine the significant difference in teachers' competence level in action research when grouped and compared according to the variables above.

Ethical Considerations

To ensure the study was conducted in an ethically sound manner, the researcher followed general ethical guidelines such as respect for people, beneficence, and justice. By using aliases or pseudonyms for their names, the researcher assured the participants of confidentiality in accordance with the Data Privacy Act of 2021. The participants were seen by the researcher as literate, employed adults who displayed no signs of vulnerability. The study, in the researcher's opinion, has significant social value in ensuring the quality of instruction because it values the various perspectives of school principals and presidents of teachers' leagues in the context of the new normal. The participants have the option of not responding to any questions that might in any way distress them because this study is based on their experiences. In light of the current health crisis, the researcher and participants strictly followed health and safety procedures during the face-to-face distribution.

Results and Discussion

This section deals with the presentation, analysis, and interpretation of data gathered to carry out the objectives of this study. All these were made by following certain appropriate procedures so as to give the exact data and solution to each specific problem.

Level of Competence of Teachers in Action Research according to Problem Identification, Proposal Writing, and Research Completion

Table 1
Level of Competence of Teachers in Action Research in Problem Identification

Area		
A. Problem Identification ***As a teacher, I...***	**Mean**	**Interpretation**
1. study educational problems and identify which of them need to be addressed	4.12	High Level
2. analyze the general issues identified and narrow them down to a specific/workable/targeted issue for action research.	4.05	High Level
3. know how to formulate action research questions	3.65	High Level
4. comprehensively discuss the nature, extent, and salience of the problem or issue	3.81	High Level
5. read completed action research to give me ideas about how common problems in school are solved	3.90	High Level
Overall Mean	**3.91**	**High Level**

Table 1 shows the level of competence of teachers in action research in problem identification with an overall mean score of 3.91, which is interpreted as a high level. Item no. 1 got the highest mean score of 4.12, which states, "study educational problems and identify which of them need to be addressed," interpreted as a high

level. In contrast, Item no. 3 got the lowest mean score of 4.06, which states, "know how to formulate action research questions," and was interpreted as a high level. This implies that the lowest score was at a high level, which means that the teachers have the mastery of skills needed to understand the research process to formulate action research questions in an identified problem or an issue. However, some did not perceive themselves as expert or at least advanced. The findings conform to Cortes et al. (2021) study on the Confirmatory Factor Analysis of Teacher's Competence in Action Research (TCAR) Questionnaire, which revealed a high level of competence of teachers in creating or formulating research questionnaires.

Table 2
Level of Competence of Teachers in Action Research in Proposal Writing

Area		
B. Proposal Writing	**Mean**	**Interpretation**
As a teacher, I...		
1. comprehensively discuss the nature, extent, and salience of the problem or issue	3.78	High Level
2. highlight the proposed innovation/intervention to address the problem at hand	3.83	High Level
3. include a list of major activities and timelines	3.87	High Level
4. clearly state the target participants and/or other sources of data and information	3.75	High Level
5. create an appropriate data-gathering instrument or questionnaire	3.44	Moderate Level
Overall Mean	**3.73**	**High Level**

Table 2 shows the level of competence of teachers in action research in proposal writing with an overall mean score of 3.73, which is interpreted as a high level. Item no. 3 got the highest mean score of 3.87, which states, "includes a list of major activities and timelines," interpreted as a high level. In contrast, Item 5 got the lowest mean score of 3.44, which states, "create appropriate data gathering instrument or questionnaire," and interpreted as moderate level. This implies that teachers had a difficult time deciding what questions they would create because they had a limited understanding of how to create appropriate data gathering instrument or questionnaire. The results for the moderate level also show that some of the teachers did not complete a master's degree in education and did not master the research methodology, which essentially explains their moderate competence. The findings concur with Manila et al. (2022) study on the capability of Elementary school teachers to conduct research. Teachers only have fair skills in selecting and developing research instruments as some have inadequate knowledge in the conduct of action research and have limited training and seminars.

Table 3
Level of Competence of Teachers in Action Research in Research Completion

Area		
C. Research Completion	**Mean**	**Interpretation**
As a teacher, I...		
1. examine and craft the result of our action research	3.68	High Level
2. clearly states the discussion of Results and Reflections	3.63	High Level
3. share ideas in creating abstract	3.82	High Level
4. ensure and prepare references in APA, which consist of all documents, including books, journals, articles, technical reports, computer programs, and unpublished works that are cited in the main body of our research report.	3.70	High Level
5. assist and help in making preliminary pages and appendices	3.67	High Level
Overall Mean	**3.70**	**High Level**

Table 3 shows the level of competence of teachers in action research in research completion with an overall mean score of 3.70, which is interpreted as a high level. Item no. 3 got the highest mean score of 3.82, which states, "includes a list of major activities and timelines," interpreted as a high level. In contrast, Item no. 2 got the lowest mean score of 3.63, which "clearly states the discussion of Results and Reflections" and is interpreted as high level. This signifies that the high-level result on the teachers' lowest score indicates that some of these teachers are highly competent in discussing the results and reflections since there is already a substantial number of relevant literature or electronic references and software that helps the teachers to discuss their results. The results conform to Cortez et al. (2021) study on Examining Competence in Action Research of Basic Education Teachers in Cebu City, Philippines, which states that some teachers can discuss the results and reflections. This is explained by the fact that many research tools are already available to them.

Level of Competence of Teachers in Action Research according to Problem Identification, Proposal Writing, and Research Completion when grouped according to Age, Educational Attainment, Number of Years in Teaching, and Plantilla Position

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Table 4
Level of Competence of Teachers in Action Research in Problem Identification according to Age

Categories	Younger		Older	
A. Problem Identification	**Mean**	**Interpretation**	**Mean**	**Interpretation**
As a teacher, I...				
1. study educational problems and identify which of them need to be addressed	4.13	High Level	4.11	High Level
2. analyze the general issues identified and narrow them down to a specific/workable/targeted issue for action research.	4.05	High Level	4.05	High Level
3. know how to formulate action research questions	3.68	High Level	3.61	High Level
4. comprehensively discuss the nature, extent, and salience of the problem or issue	3.82	High Level	3.79	High Level
5. read completed action research to give me ideas about how common problems in school are solved	3.90	High Level	3.90	High Level
Overall Mean	**3.92**	**High Level**	**3.89**	**High Level**

Table 4 shows the level of competence of teachers in action research in problem identification according to age. The result shows an overall mean score of 3.92 for younger respondents and a 3.89 overall mean score for older respondents, both interpreted as a high level. Item no. 1, which states, "study educational problems and identify which of them are needed to be addressed", got the highest mean score of 4.13 for younger respondents and 4.11 for older respondents, both interpreted as high level. In contrast, item no. 3, which states, "know how to formulate action research questions," got the lowest mean score of 3.68 for younger respondents and 3.61 for older respondents, both interpreted as high level. This indicates that both groups are highly competent in formulating action research questions because they can see the problems they encounter and eventually know the variables and areas they need. However, it appeared to be the lowest because there are factors that may affect some of the teachers, such as insufficient training or some are less interested in conducting action research. The findings coincide with Dignos's (2021) study on the Profile and Action Research Competence of Elementary Teachers, which stated that teachers are proficient in formulating action research questions because some have the knowledge to identify problems for study and can eventually create variables they need.

Table 5
Level of Competence of Teachers in Action Research in Proposal Writing according to Age

Categories	Younger		Older	
B. Proposal Writing	**Mean**	**Interpretation**	**Mean**	**Interpretation**
As a teacher, I...				
1. comprehensively discuss the nature, extent, and salience of the problem or issue	3.78	High Level	3.79	High Level
2. highlight the proposed innovation/intervention to address the problem at hand	3.86	High Level	3.79	High Level
3. include a list of major activities and timelines	3.90	High Level	3.84	High Level
4. clearly state the target participants and/or other sources of data and information	3.83	High Level	3.64	High Level
5. create an appropriate data-gathering instrument or questionnaire	3.50	High Level	3.36	Moderate Level
Overall Mean	**3.77**	**High Level**	**3.68**	**High Level**

Table 5 shows teachers' competence level in action research in proposal writing according to age. The result shows an overall mean score of 3.77 for younger respondents and a 3.68 overall mean score for older respondents, both interpreted as high. Item no. 3, which states, "include a list of major activities and timelines," got the highest mean score of 3.90 for younger and 3.84 for older respondents, both interpreted as high level. In contrast, item 5, which states, "create appropriate data gathering instrument or questionnaire," got the lowest mean score of 3.50 for younger respondents, interpreted as high level, and 3.36 for older respondents, interpreted as moderate level. This signifies that those younger teachers have a high level of competence in terms of creating appropriate data-gathering instruments or questionnaires. On the other hand, older people are moderately competent because some are less familiar with online or electronic resources. The findings conform to Cortes et al. (2021) on the Confirmatory Factor analysis of the Teacher's Competence in Action Research (TCAR) Questionnaire, which revealed teachers' high level of competence in creating or formulating research questionnaires.

Table 6
Level of Competence of Teachers in Action Research in Research Completion According to Age

Categories	Younger		Older	
C. Research Completion	**Mean**	**Interpretation**	**Mean**	**Interpretation**
As a teacher, I...				

1. examine and craft the result of our action research	3.72	High Level	3.64	High Level
2. clearly states the discussion of results and reflections	3.64	High Level	3.61	High Level
3. share ideas in creating abstract	3.85	High Level	3.79	High Level
4. ensure and prepare references in APA, which consist of all documents, including books, journals, articles, technical reports, computer programs, and unpublished works that are cited in the main body of our research report.	3.69	High Level	3.70	High Level
5. assist and help in making preliminary pages and appendices	3.68	High Level	3.66	High Level
Overall Mean	**3.72**	**High Level**	**3.68**	**High Level**

Table 6 shows the level of competence of teachers in action research in the area of research completion according to age. The result shows an overall mean score of 3.72 for younger respondents and a 3.68 overall mean score for older respondents, both interpreted as high. Item no. 3, which states, "share ideas in creating abstract," got the highest mean score of 3.85 for younger respondents and 3.79 for older respondents, both interpreted as high level. In contrast, item 2, which "clearly states the discussion of Results and Reflections," got the lowest mean score of 3.64 for younger and 3.61 for older respondents, both interpreted as high level. This implies that both groups are trained in discussing results and reflections as they achieved a high-level result even on their lowest score. However, as it appeared to be the lowest, some still encountered issues. The findings conform to Cagaanan and Gosadan's (2018) study on the level of research competency among elementary school teachers, wherein some of the teachers are competent in data interpretation and reflection, but some still need to be more experienced with issues.

Table 7
Level of Competence of Teachers in Action Research in Problem Identification according to Educational Attainment

Categories	**Lower**		**Higher**	
A. Problem Identification ***As a teacher, I...***	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. study educational problems and identify which of them need to be addressed	4.11	High Level	4.14	High Level
2. analyze the general issues identified and narrow them down to a specific/workable/ targeted issue for action research.	4.04	High Level	4.07	High Level
3. know how to formulate action research questions	3.66	High Level	3.63	High Level
4. comprehensively discuss the nature, extent, and salience of the problem or issue	3.75	High Level	3.93	High Level
5. read completed action research to give me ideas about how common problems in school are solved	3.88	High Level	3.95	High Level
Overall Mean	**3.89**	**High Level**	**3.94**	**High Level**

Table 7 shows teachers' competence level in action research in problem identification according to educational attainment. The result shows an overall mean score of 3.89 for the lower group and a 3.94 overall mean score for the higher group, both interpreted as a high level. Item no. 1, which states, "study educational problems and identify which of them need to be addressed," got the highest mean score of 4.11 for the lower group and 4.14 for the higher group, both interpreted as high level. In contrast, item no. 3, which states, "know how to formulate action research questions," got the lowest mean score of 3.66 for the lower group and 3.63 for the higher group, both interpreted as high level. The results signify that research for the respondents is significant to everyday life. Hence, they can quickly formulate specific questions for the study. However, it was the lowest score; there is a need to strengthen the development of their skills in formulating action research questions. The findings coincide with Anub's (2020) study, which aimed to determine the level of Senior High School Teachers' Research Competence, wherein results revealed that some of the teachers were highly competent in constructing action research questions; however, some still needed further training as they do not see themselves as competent in constructing action research questions.

Table 8
Level of Competence of Teachers in Action Research in Proposal Writing according to Educational Attainment

Categories	**Lower**		**Higher**	
B. Proposal Writing ***As a teacher, I...***	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. comprehensively discuss the nature, extent, and salience of the problem or issue	3.72	High Level	3.93	High Level
2. highlight the proposed innovation/intervention to address the problem at hand	3.76	High Level	3.98	High Level

3. include a list of significant activities and timelines	3.85	High Level	3.91	High Level
4. clearly state the target participants and/or other sources of data and information	3.73	High Level	3.79	High Level
5. create an appropriate data-gathering instrument or questionnaire	3.43	Moderate Level	3.47	Moderate Level
Overall Mean	**3.70**	**High Level**	**3.81**	**High Level**

Table 8 shows teachers' competence level in action research in the area of proposal writing according to educational attainment**.** The result shows an overall mean score of 3.70 for the lower group and a 3.81 overall mean score for the higher group, both interpreted as a high level. For the lower group, item no. 3, which states, "include a list of major activities and timelines," got the highest mean score of 3.85, interpreted as a high level. Meanwhile, for the higher group, item no. 2, which states, "highlight on proposed innovation/intervention to address the problem at hand," got the highest mean score of 3.98, interpreted as a high level. In contrast, item 5, which states, "create appropriate data gathering instrument or questionnaire, " got the lowest mean score of 3.43 for the lower group and 3.47 for the higher group, both interpreted as moderate levels.

This indicates that the teachers are experts in including a list of significant activities and timelines and highlighting proposed interventions to address the problem at hand but not as much as in applying or creating the appropriate tool in the gathering. The findings concur with Manila et al.'s (2022) study on the capability of elementary school teachers to conduct research. Teachers only have fair skills in selecting and developing research instruments, as some need more knowledge in conducting action research and have limited training and seminars.

Table 9
Level of Competence of Teachers in Action Research in Research Completion According to Educational attainment

Categories	**Lower**		**Higher**	
C. Research Completion ***As a teacher, I…***	Mean	Interpretation	Mean	Interpretation
1. examine and craft the result of our action research	3.63	High Level	3.81	High Level
2. clearly states the discussion of Results and Reflections	3.56	High Level	3.77	High Level
3. share ideas in creating abstract	3.78	High Level	3.91	High Level
4. ensure and prepare references in APA, which consist of all documents, including books, journalsjournals, articles, technical reports, computer programs, and unpublished works cited in the main body of our research report.	3.63	High Level	3.86	High Level
5. assist and help in making preliminary pages and appendices	3.63	High Level	3.77	High Level
Overall Mean	**3.64**	**High Level**	**3.82**	**High Level**

Table 9 shows teachers' competence level in action research in research completion according to educational attainment**.** The result shows an overall mean score of 3.64 for the lower group and a 3.82 overall mean score for the higher group, both interpreted as a high level. Item no. 3, which states, "share ideas in creating abstract," got the highest mean score of 3.78 for the lower group and 3.91 for the higher group, both interpreted as high level. In contrast, item no. 2, which states, "clearly states the discussion of Results and Reflections," got the lowest mean score of 3.56 for the lower group and 3.77 for the higher group, both interpreted as high level. Item no. 5, which states, "assist and help in making preliminary pages and appendices," got the lowest mean score of 3.77, interpreted as a high level.

This implies that both groups of teachers are equally capable of discussing the findings and reflections of the study. However, given that it is the lowest item, some have the inability to process grammar and construct sentences effectively. Additionally, those in the higher group are also proficient in writing or creating the preliminary pages and appendices because these sections of writing the research paper are quite simple for the respondents. However, given that it was the lowest, some know the competency and need additional training to become more competent. The findings conform to Saro's (2023) study on A Descriptive-Correlational Study of the Teachers' Motivation, competencies, and Perceptions in Writing Action Research. When asked how competent they felt they were in producing conclusions and recommendations, the respondents gave a highly significant rating for their ability to summarize the results, express extra value, and formulate appropriate recommendations. While respondents are only marginally proficient in summarizing their reference lists, this indicates that they understand the competency but require additional training to become more skilled.

Table 10
Level of Competence of Teachers in Action Research in Problem Identification according to Number of Years in Teaching

Categories	**Shorter**		**Longer**	
A. Problem Identification	**Mean**	**Interpretation**	**Mean**	**Interpretation**

As a teacher, I...				
1. study educational problems and identify which of them need to be addressed	4.16	High Level	4.09	High Level
2. analyze the general issues identified and narrow them down to a specific/workable/targeted issue for action research.	4.09	High Level	4.01	High Level
3. know how to formulate action research questions	3.71	High Level	3.58	High Level
4. comprehensively discuss the nature, extent, and salience of the problem or issue	3.84	High Level	3.77	High Level
5. read completed action research to give me ideas about how common problems in school are solved	3.90	High Level	3.90	High Level
Overall Mean	**3.94**	**High Level**	**3.87**	**High Level**

Table 10 shows teachers' competence level in action research in problem identification according to several years in teaching. The result shows an overall mean score of 3.94 for shorter years and a 3.87 overall mean score for longer years, both interpreted as a high level. Item no. 1, which states, "study educational problems and identify which of them needed to be addressed," got the highest mean score of 4.16 for the shorter years and 4.09 for the longer years, both interpreted as high level. In contrast, item no. 3, which states, "know how to formulate action research questions," got the lowest mean score of 3.71 for the shorter years and 3.58 for the longer years, both interpreted as high level. This indicates that both groups were highly competent in formulating action research questions. However, given that it is the lowest score, some of them are confused about creating and specifying confused to create and specify what the Action Researcher expects to find at the end of it. The findings coincide with Digno's (2021) study on the Profile and Action Research Competence of Elementary Teachers, which stated that teachers are proficient in formulating action research questions because some have the knowledge to identify problems for study and can eventually create variables they need.

Table 11
Level of Competence of Teachers in Action Research in Proposal Writing According to Number of Years in Teaching

Categories	**Shorter**		**Longer**	
B. Proposal Writing	**Mean**	**Interpretation**	**Mean**	**Interpretation**
As a teacher, I...				
1. comprehensively discuss the nature, extent, and salience of the problem or issue	3.79	High Level	3.78	High Level
2. highlight the proposed innovation/intervention to address the problem at hand	3.86	High Level	3.80	High Level
3. include a list of significant activities and timelines	3.90	High Level	3.84	High Level
4. clearly state the target participants and/or other sources of data and information	3.84	High Level	3.65	High Level
5. create an appropriate data-gathering instrument or questionnaire	3.53	High Level	3.35	Moderate Level
Overall Mean	**3.78**	**High Level**	**3.68**	**High Level**

Table 11 shows teachers' competence level in action research in proposal writing according to the number of years in teaching. The result shows a mean score of 3.78 for shorter years and a 3.68 overall mean score for longer years, both interpreted as high. Item no. 3, which states, "include a list of major activities and timelines," got the highest mean score of 3.90 for shorter years and 3.84 for longer years, both interpreted as high level. In contrast, item no. 5, which states, "create appropriate data gathering instrument or questionnaire," got the lowest mean score of 3.53 for the shorter years, interpreted as high level, and 3.35 for longer years, interpreted as moderate level. This means both groups were highly competent in creating appropriate data-gathering instruments or questionnaires. However, though they have a high-level interpretation, it is still the lowest item and some of them encountered problems as some were less trained and less exposed to action research seminars. This was supported by Gomez and Panaligan (2013), who claimed. However, some of the teachers have knowledge or are competent in action research making; it seems to have a small group who need competency on the method, particularly in developing a research design, constructing questionnaires, and statistical tools, as some of them are less exposed to seminars and training.

Table 12
Level of Competence of Teachers in Action Research in Research Completion According to Number of Years in Teaching

Categories	**Shorter**		**Longer**	
C. Research Completion	Mean	Interpretation	Mean	Interpretation
As a teacher, I...				
1. examine and craft the result of our action research	3.73	High Level	3.64	High Level
2. clearly states the discussion of Results and Reflections	3.64	High Level	3.61	High Level

3. share ideas in creating abstract	3.86	High Level	3.78	High Level
4. ensure and prepare references in APA, which consist of all documents, including books, journals, articles, technical reports, computer programs, and unpublished works that are cited in the main body of our research report.	3.71	High Level	3.68	High Level
5. assist and help in making preliminary pages and appendices	3.73	High Level	3.61	High Level
Overall Mean	**3.73**	**High Level**	**3.66**	**High Level**

Table 12 shows the level of competence of teachers in action research in the area of research completion according to the number of years in teaching. The result shows a mean score of 3.73 for shorter years and a 3.66 overall mean score for longer years, both interpreted as high. Item no. 3, which states, "share ideas in creating abstract," got the highest mean score of 3.86 for the shorter years and 3.78 for the longer years, both interpreted as high level. In contrast, item no. 2, which "clearly states the discussion of Results and Reflections," got the lowest mean score of 3.64 for shorter years and 3.61 for longer years, both interpreted as high level. This indicates that stating the discussion of results and reflections is relatively easy for teachers in shorter and longer years of service as they achieve a high level of competence. Further, those teachers with longer years in service also achieved a high level of competence in making preliminary pages and appendices, as this part only requires the abstract, which summarizes the study results. However, given that these are the lowest items, the issues and concerns of the teachers are still present and must be given attention. The findings conform to Ching's (2022) study on Motivation and Competences in Writing Action Research: Basis for Teachers' Coaching and Training Program, which stated that teachers know how to present, interpret, and give correlated literature; likewise, they rated higher their ability to construct preliminary pages and appendices with background knowledge on it. They do, however, need more training to become more competent.

Table 13
Level of Competence of Teachers in Action Research in Problem Identification According to Plantilla Position

Categories	**Lower**		**Higher**	
A. Problem Identification	**Mean**	**Interpretation**	**Mean**	**Interpretation**
As a teacher, I...				
1. study educational problems and identify which of them need to be addressed	4.14	High Level	4.10	High Level
2. analyze the general issues identified and narrow them down to a specific/workable/targeted issue for action research.	4.06	High Level	4.04	High Level
3. know how to formulate action research questions	3.65	High Level	3.65	High Level
4. comprehensively discuss the nature, extent, and salience of the problem or issue	3.80	High Level	3.82	High Level
5. read completed action research to give me ideas about how common problems in school are solved	3.89	High Level	3.92	High Level
Overall Mean	**3.90**	**High Level**	**3.91**	**High Level**

Table 13 shows the level of competence of teachers in action research in the area of problem identification according to plantilla position. The result shows an overall mean score of 3.90 for the lower plantilla position and a 3.91 overall mean score for the higher plantilla position, both interpreted as a high level. Item no. 1, which states, "study educational problems and identify which of them needed to be addressed," got the highest mean score of 4.14 for the lower group and 4.10 for the higher group, both interpreted as high level. In contrast, item no. 3, which states, "know how to formulate action research questions," got the lowest mean score of 3.65 for the lower group and 3.65 for the higher group, both interpreted as high level. This indicates that the teachers in lower and higher plantilla positions achieved a high level of competence in formulating action research questions. Also, action research is one of the requirements for their promotion; hence, they were able to develop and articulate action research questions that are related to the purpose of their study. The findings conform to the conclusions made by Vaughan's (2020) study "Exploring Teachers' Experiences of Action Research" that teachers felt conducting action research was rewarding and empowering for their promotion. Some of them already attended training and had knowledge of how to formulate action research questions. However, there are several issues that need to be addressed before critical participatory action research.

Table 14
Level of Competence of Teachers in Action Research in Proposal Writing According to Plantilla Position

Categories	**Lower**		**Higher**	
B. Proposal Writing	**Mean**	**Interpretation**	**Mean**	**Interpretation**
As a teacher, I...				
1. comprehensively discuss the nature, extent, and salience of the problem or issue	3.75	High Level	3.84	High Level

2. highlight the proposed innovation/intervention to address the problem at hand	3.78	High Level	3.90	High Level
3. include a list of major activities and timelines	3.86	High Level	3.88	High Level
4. clearly state the target participants and/or other sources of data and information	3.74	High Level	3.76	High Level
5. create an appropriate data-gathering instrument or questionnaire	3.43	Moderate Level	3.45	Moderate Level
Overall Mean	**3.71**	**High Level**	**3.77**	**High Level**

Table 14 shows the level of competence of teachers in action research in the area of proposal writing according to plantilla position. The result shows an overall mean score of 3.71 for the lower plantilla position and a 3.77 overall mean score for the higher plantilla position, both interpreted as high. Item no. 3, which states, "include a list of major activities and timelines," got the highest mean score of 3.86, interpreted as a high level. In contrast, item no. 5 got the lowest mean score of 3.43, which states, "create appropriate data gathering instrument or questionnaire", interpreted as moderate for lower plantilla position. Meanwhile, for the higher plantilla position, item 2, which states, "highlight on proposed innovation/intervention to address the problem at hand," got the highest mean score of 3.90, which is interpreted as a high level. In contrast, item no. 5 got the lowest mean score of 3.45, which states, "create appropriate data gathering instrument or questionnaire," interpreted as a moderate level. This indicates that those in lower positions have a high level of competence in terms of creating appropriate data-gathering instruments or questionnaires. This is also an advantage for them in terms of promotion and teaching practices. On the one hand, those in higher positions are moderately competent given that some of them are in Master teacher's positions. The findings conform to Albalawi and Johnson's (2022) study on Action research skills among public school teachers, which revealed that teachers can select or create the appropriate research instrument for their action research. However, given some are in higher positions in teaching, they are less interested in action research making.

Table 15
Level of Competence of Teachers in Action Research in Research Completion According to Plantilla Position

Categories	**Lower**		**Higher**	
C. Research Completion	Mean	Interpretation	Mean	Interpretation
As a teacher, I...				
1. examine and craft the result of our action research	3.64	High Level	3.76	High Level
2. clearly states the discussion of Results and Reflections	3.58	High Level	3.71	High Level
3. share ideas in creating abstract	3.80	High Level	3.86	High Level
4. ensure and prepare references in APA, which consists of all documents, including books, journals, articles, technical reports, computer programs, and unpublished works cited in the main body of our research report.	3.66	High Level	3.76	High Level
5. assist and help in making preliminary pages and appendices	3.65	High Level	3.71	High Level
Overall Mean	**3.66**	**High Level**	**3.76**	**High Level**

Table 15 shows teachers' competence level in action research in research completion according to plantilla position. The result shows an overall mean score of 3.66 for the lower plantilla position and a 3.76 overall mean score for the higher plantilla position, both interpreted as high. Item no. 3, which states, "share ideas in creating abstract," got the highest mean score of 3.80, interpreted as a high level. In contrast, item no. 2 got the lowest mean score of 3.58, which "clearly states the discussion of Results and Reflections," interpreted as a high level for a lower plantilla position. Meanwhile, for the higher plantilla position, item 3, which states, "share ideas in creating abstract," got the highest mean score of 3.86, which is interpreted as a high level. In contrast, item no. 2, which states, "clearly states the discussion of Results and Reflections, "and item no. 5, which states, "assist and help in making preliminary pages and appendices," got the lowest mean score of 3.71, interpreted as high level.

This implies that the teachers in lower or higher plantilla positions achieved a high level of competence on their lowest, which clearly states the discussion of results and reflections. They learn to find the root cause of the problem and clearly discuss or make a solution. However, there are still issues and concernss as some still need to possess the required skills to write action research. The findings conform to Ching's (2022) study on Motivation and Competences in Writing Action Researches: Basis for Teachers' Coaching and Training Program, which stated that teachers know how to present, interpret, and give correlated literature; likewise, they rated higher their ability to construct preliminary pages and appendices with background knowledge on it. They do, however, need more training to become more competent.

Comparative Analysis in the Level of Competence of Teachers in Action Research According to Problem Identification, Proposal Writing, and Research Completion when grouped and compared according to Age, Educational attainment, Number of Years in Teaching, and Plantilla Position

Table 16

Difference in the Level of Competence of Teachers in Action Research in Problem Identification

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	78	73.84	2079.500	0.182	0.05	Not Significant
	Older	61	65.09				
Educational attainment	Lower	96	69.53	2018.500	0.828		Not Significant
	Higher	43	71.06				
Number of Years in Teaching	Shorter	70	76.95	1928.500	0.032		Significant
	Longer	69	62.95				
Plantilla Position	Lower	88	72.30	2042.000	0.354		Not Significant
	Higher	51	66.04				

Table 16 shows the difference in the level of competence of teachers in action research in the area of problem identification. The table also shows that the mean rank, according to age, is 73.84, with a total of 78 for younger and 65.09, with a total of 61 for older; using a Mann Whitney U test of 2079.500, it garnered a p-value of 0.182 and interpreted as not significant.

In terms of educational attainment, the mean rank is 69.53, with a total of 96 for lower and 71.06 with a total of 43 for higher; using a Mann Whitney U of 2018.500, it garnered a p-value of 0.828, and interpreted as not significant. In terms of a number of years in teaching, the mean rank for shorter years is 76.95 with a total of 70, and for longer years is 62.95 with a total of 69; using a Mann Whitney U of 1928.500, it garnered a p-value of 0.032 and interpreted as significant. In terms of plantilla position, the mean rank for the lower position is 72.30 with a total of 88, and for the higher position, is 66.04 with a total of 51; using a Mann Whitney U of 2042.000, it garnered a p-value of 0.354, and interpreted as not significant.

This implies that the variable number of years in teaching affects the level of competence of teachers in action research in the area of problem identification. Those teachers who had shorter years in teaching obtained slightly higher mean than those teachers who had longer years in teaching. On the other hand, those who are tenured encountered issues in writing action research problems due to their teaching load. They are preoccupied with tasks, and doing action research is an additional burden for them. The findings conform to Anub's (2020) study on Senior High School Teachers' Research Competence and Satisfaction with Facilities and Resources, which revealed that there is a significant difference between more experienced and less experienced teachers and their level of competence in action research-making. Further, their study indicates that less experienced teachers who rendered 6-10 years in service claimed to be more competent in terms of research. This further implies that these teachers are more interested and possess adequate ability in research as compared to experienced ones.

Table 17
Difference in the Level of Competence of Teachers in Action Research in Proposal Writing

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	78	74.08	2061.000	0.166	0.05	Not Significant
	Older	61	64.79				
Educational attainment	Lower	96	68.01	1872.500	0.371		Not Significant
	Higher	43	74.45				
Number of Years in Teaching	Shorter	70	74.70	2086.000	0.155		Not Significant
	Longer	69	65.23				
Plantilla Position	Lower	88	69.43	2194.000	0.823		Not Significant
	Higher	51	70.98				

Table 17 shows the difference in the level of competence of teachers in action research in the area of proposal writing. The table also shows that the mean rank according to age, is 74.08 with a total of 78 for younger, and 64.79 with a total of 61 for older, using a Mann Whitney U of 2061.000, it garnered a p-value of 0.166 and interpreted as not significant. In terms in educational attainment, the mean rank is 68.01 with a total of 96 for lower, and 74.45 with a total of 43 for higher, using a Mann Whitney U of 1872.500, it garnered a p-value of 0.371, and interpreted as not significant. In terms of number of years in teaching, the mean rank for shorter years is 74.70 with a total of 70, and for longer years is 65.23 with a total of 69, using a Mann Whitney U of 2086.000, it garnered a p-value of 0.032, and interpreted as not significant. In terms of plantilla position, the mean rank for lower position is 69.43 with a total of 88, and for higher position is 70.98 with a total of 51, using a Mann Whitney U of 2194.000, it garnered a p-value of 0.823, and interpreted as not significant.

This denotes that all variables do not affect the level of competence of teachers in action research in the area of proposal writing. This could be attributed because regardless of whether they are younger or older, with lower or higher educational attainment, in shorter or longer years in teaching, and with lower or higher plantilla positions, they have shared the same level of competence and experience in proposal writing of action research. The findings conform to Digno's (2021) study on the Profile and Action Research Competence of Elementary

Teachers in which data revealed no significant relationship between age, educational attainment, research grants, and action research competence of elementary teachers.

Table 18
Difference in the Level of Competence of Teachers in Action Research in Research Completion

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	78	71.11	2292.500	0.695	0.05	Not Significant
	Older	61	68.58				
Educational attainment	Lower	96	66.80	1757.000	0.136		Not Significant
	Higher	43	77.14				
Number of Years in Teaching	Shorter	70	72.73	2224.000	0.391		Not Significant
	Longer	69	67.23				
Plantilla Position	Lower	88	68.82	2140.500	0.629		Not Significant
	Higher	51	72.03				

Table 18 shows the difference in the level of competence of teachers in action research in the area of research completion. The table also shows that the mean rank, according to age, is 71.11, with a total of 78 for younger, and 68.58, with a total of 61 for older; using a Mann Whitney U of 2292.500, it garnered a p-value of 0.695 and interpreted as not significant. In terms of educational attainment, the mean rank is 66.80, with a total of 96 for lower and 77.14 with a total of 43 for higher; using a Mann Whitney U of 1757.000, it garnered a p-value of 0.136, and interpreted as not significant. In terms of the number of years in teaching, the mean rank for shorter years is 72.73 with a total of 70, and for longer years is 67.23 with a total of 69; using a Mann Whitney U of 2224.000, it garnered a p-value of 0.391 and interpreted as not significant. In terms of plantilla position, the mean rank for the lower position is 68.82 with a total of 88, and for the higher position is 72.03 with a total of 51, using a Mann Whitney U of 2140.500, it garnered a p-value of 0.629 and interpreted as not significant. This means that the respondents, regardless of their grouping variables, shared the same level of competence as teachers in action research in research completion. Hence, their demographic profile does not affect their level of competence in action research. The findings conform to Marzo's (2019) study on the Level of Action Research Competence of Elementary School Teachers in The Second Congressional District of Quezon: Basis for Enhancement Program, which revealed that teachers' sex, age, education, designation, and length in service have no bearing in teachers' competence in action research writing.

Conclusion

Teachers had a high level of competence in action research when grouped according to age, educational attainment, teaching experience, and plantilla position. A significant difference exists in the level of competence of teachers in action research in problem identification according to a number of years in teaching. From the initial results of the study, it can be concluded that younger and less experienced teachers can bring tech-savviness and creativity to their research endeavors. High competence in action research among teachers reflects a commitment to excellence in the research locale. It is recommended that in order to achieve a very high level of competence in conducting action research, it is necessary that the school heads, in cooperation with SGOD, may conduct in-service research-related training for the sake of updating the teachers' knowledge and skills. Additionally, school heads may encourage teachers to further learn from online resources in formulating and crafting research questions and allocate funds through MOOE for the purchase of journals, books, and other materials. Future researchers may conduct more research to gather more information about specific issues not addressed by this study.

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