

Assessment Practices of Teachers and Critical Thinking Skills of Students in Public Secondary Schools in Bolinao, Pangasinan

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ABSTRACT

This study examined the relationship between teachers' assessment practices and students' critical thinking skills among public secondary schools in Bolinao, Pangasinan, using a descriptive-correlational research design. The study's respondents were 88 public secondary school teachers from the Bolinao District. The collected data were analyzed using descriptive statistics, such as frequency counts, percentage distributions, weighted means, and rankings, and inferential statistics, such as the Pearson Product-Moment Correlation Coefficient, to determine significant relationships among variables. Findings revealed that the majority of the public secondary school teachers are within the middle-age bracket (aged 31-40), predominantly female and married, occupying Teacher I to Teacher VI positions, with units in master's degree or master's degree holders, having several years of teaching experience, earning below Php50,000 monthly, and attending 5 or less number of seminars and training related to assessment practices. The study further revealed that teachers made extensive use of formative and summative assessments, authentic and performance-based assessments, assessment design and alignment, and assessment results for instructional decision-making. Likewise, students demonstrated a high level of critical thinking skills in analysis, interpretation, inference, evaluation, explanation, and self-regulation. However, teachers encountered challenges in implementing assessment practices due to limited instructional resources, time constraints, large class sizes, and insufficient training opportunities. Results also showed significant relationships between selected teacher profile variables and assessment practices, as well as between teachers' assessment practices and students' critical thinking skills. The findings imply that effective assessment practices significantly enhance students' higher-order thinking skills. Hence, the study recommends implementing a comprehensive capacity-building program to strengthen teachers' competencies in assessment design, feedback mechanisms, and learner-centered assessment strategies to further improve students' critical thinking.

Keywords: Assessment Practices, Critical Thinking Skills, Public Secondary School Teachers

INTRODUCTION

The growing demand for quality education in the 21st century has placed strong emphasis on assessment practices and the development of critical thinking skills among learners. Traditionally, assessment systems focused mainly on rote memorization and standardized testing, which limited students' opportunities to develop higher-order thinking skills. However, modern educational philosophies now emphasize learner-centered approaches, reflective thinking, and problem-solving as essential components of effective education. According to Dewey (ND), critical thinking is an important educational outcome that enables learners to

analyze, evaluate, and make sound judgments. In line with this, assessment practices have evolved to include formative assessment, authentic assessment, and performance-based tasks that promote deeper learning and reasoning abilities among students.

Globally, educational reforms have been aligned with the goals of fostering critical thinking and other 21st-century competencies, particularly through the framework of Sustainable Development Goal 4 (SDG 4) on Quality Education. The United Nations Educational, Scientific and Cultural Organization (UNESCO) emphasized the need to improve assessment systems that focus on higher-order thinking skills and meaningful learning outcomes. In the Philippine context, the Department of Education (DepEd) has implemented the K to 12 curriculum, which promotes learner-centered instruction and competency-based assessment practices. Despite these reforms, studies revealed that many Filipino students continue to perform below expected proficiency levels in critical thinking-related competencies, as reflected in international assessments such as the Programme for International Student Assessment (PISA) (Albert et al., 2023; Rivera et al., 2025). These findings suggest a gap between curriculum intentions and actual classroom assessment practices.

Moreover, teachers play a significant role in fostering students' critical thinking skills through effective assessment practices. Research suggests that formative assessment, authentic assessment, and performance-based activities provide students with opportunities to analyze information, solve problems, and engage in reflective learning. However, many teachers still encounter challenges such as limited training, insufficient instructional resources, curriculum overload, and lack of assessment literacy, which affect the effective implementation of innovative assessment strategies (Novita et al., 2024; Obmerga, 2025). In Region I and other parts of the Philippines, public secondary schools continue to struggle to fully implement assessment reforms aligned with the demands of 21st-century education. These challenges highlight the need to strengthen teachers' competencies in assessment design and instructional decision-making to better support students' development of critical thinking skills.

In light of these considerations, this study aimed to assess teachers' assessment practices and students' critical thinking skills in public secondary schools in Bolinao, Pangasinan, as a basis for a proposed capacity-building program. Specifically, it sought to assess the level of utilization of assessment practices across formative and summative assessment, authentic and performance-based assessment, assessment design and alignment, and the use of assessment results for instructional decision-making. It also aimed to determine the extent of students' critical thinking skills and to examine the significant relationship between teachers' assessment practices and students' critical thinking skills. Ultimately, the study's findings may contribute to improving educational quality through enhanced assessment practices and teacher professional development.

Statement of the Problem

This study determined the assessment practices of teachers and the critical thinking skills of students in public secondary schools in Bolinao, Pangasinan, as a basis for a proposed capacity-building program.

Specifically, it sought answers to the following questions:

1. What is the profile of public secondary school teachers in Bolinao, Pangasinan in terms of:

- a. age;
- b. sex;
- c. marital status;
- d. position;
- e. highest educational attainment;
- f. bachelor's degree;
- g. number of teaching years;
- h. number of seminars or trainings attended related to assessment practices;

and

- i. average monthly income?

2. What is the level of utilization of assessment practices of teachers in public secondary schools in Bolinao, Pangasinan along:

- a. formative assessment practices;
- b. summative assessment practices;
- c. authentic and performance-based assessment;
- d. assessment design and alignment; and
- e. use of assessment results for instructional decision-making?

3. What is the level of manifestation of the critical thinking skills of public secondary school students in Bolinao, Pangasinan in terms of:

- a. analysis;
- b. interpretation;
- c. inference;
- d. evaluation;
- e. explanation; and
- f. self-regulation?

4. What are the problems encountered in the utilization of assessment practices in public secondary schools in Bolinao, Pangasinan?

5. Is there a significant relationship between the level of utilization of assessment practices of teachers and their profile variables?

6. Is there a significant relationship between the level of utilization of assessment practices of teachers and the level of manifestation of students' critical thinking skills?

Scope and Delimitations

This study focused on determining the assessment practices of teachers and the critical thinking skills of students in public secondary schools in Bolinao, Pangasinan as basis for a proposed capacity-building program. Specifically, it examined the teachers' profiles in terms of age, sex, marital status, position, highest educational attainment (including a bachelor's degree), number of teaching years, number of seminars or training sessions attended related to assessment practices, and average monthly income. It also assessed the level of utilization of assessment practices along formative assessment, summative assessment, authentic and performance-based assessment, assessment design and alignment, and the use of assessment results for instructional

decision-making. Furthermore, the study determined the level of manifestation of students' critical thinking skills in terms of analysis, interpretation, inference, evaluation, explanation, and self-regulation, as well as the problems encountered by teachers in the utilization of assessment practices. However, the study was delimited to selected public secondary schools in Bolinao, Pangasinan, during the School Year 2025–2026 and excluded private schools, administrators, parents, and other stakeholders. The study also relied mainly on survey questionnaires and self-reported responses, which may not fully reflect actual classroom assessment practices and students' critical-thinking abilities.

REVIEW OF RELATED LITERATURE

Assessment practices are considered essential components of the teaching and learning process because they help determine students' understanding, monitor academic progress, and improve instructional effectiveness. In recent years, educational systems have shifted from traditional assessment methods toward learner-centered approaches that emphasize formative, authentic, and performance-based assessment. According to the Department of Education under the K to 12 curriculum, assessment should support students' holistic development by promoting critical thinking, problem-solving, and meaningful learning experiences (DepEd Order No. 8, s. 2015). Formative assessment, in particular, provides immediate feedback that allows teachers to adjust instructional strategies and address learners' needs effectively (Black & Wiliam, 1998). Similarly, authentic and performance-based assessments encourage students to apply knowledge and skills in real-life situations, thereby strengthening deeper understanding and analytical thinking abilities (Wiggins, 1998).

Several studies emphasized that effective assessment design and alignment significantly influence students' academic performance and cognitive development. Assessment practices that are properly aligned with learning competencies and instructional objectives help ensure that students achieve the desired learning outcomes (Biggs & Tang, 2011). Teachers who use assessment results in instructional decision-making are better able to identify students' strengths and weaknesses and provide appropriate interventions (Stiggins, 2005). Moreover, research has shown that assessment practices that promote inquiry, reflection, collaboration, and problem-solving positively contribute to the development of students' critical thinking skills (Facione, 2015). Critical thinking skills such as analysis, interpretation, inference, evaluation, explanation, and self-regulation are considered essential competencies in 21st-century education because they enable students to become independent and reflective learners (Paul & Elder, 2014).

Despite the recognized importance of effective assessment practices, many teachers continue to face challenges in implementing innovative, learner-centered assessment strategies. Studies have shown that limited instructional resources, insufficient training opportunities, heavy workloads, large class sizes, and a lack of assessment literacy affect teachers' ability to design and implement classroom assessments effectively (Brookhart, 2017). In public secondary schools, traditional assessment methods still dominate many classroom practices, limiting students' opportunities to develop higher-order thinking skills (Popham, 2011). These challenges highlight the need for continuous professional development programs and capacity-building

initiatives that strengthen teachers' competencies in assessment practices (Darling-Hammond et al., 2017). Hence, the present study was conducted to determine the assessment practices of teachers and the critical thinking skills of students in public secondary schools in Bolinao, Pangasinan, as a basis for a proposed capacity-building program.

Theoretical Framework

This study was anchored on the Constructivist Theory of Jean Piaget, the Social Constructivism Theory of Lev Vygotsky, the Formative Assessment Theory of Black and Wiliam, and the Constructive Alignment Theory of John Biggs. These theories provided the foundation in explaining the relationship between teachers' assessment practices and students' critical thinking skills.

The Constructivist Theory of Jean Piaget emphasized that learners actively construct knowledge through experiences, interaction, and reflection. According to this theory, students learn effectively when they are actively engaged in meaningful learning activities rather than passively receiving information. In the context of the study, assessment practices such as authentic assessment, performance-based assessment, and reflective activities allow learners to analyze, evaluate, and apply concepts, thereby enhancing their critical thinking skills. This theory supports the idea that effective classroom assessments promote deeper understanding and independent learning among students.

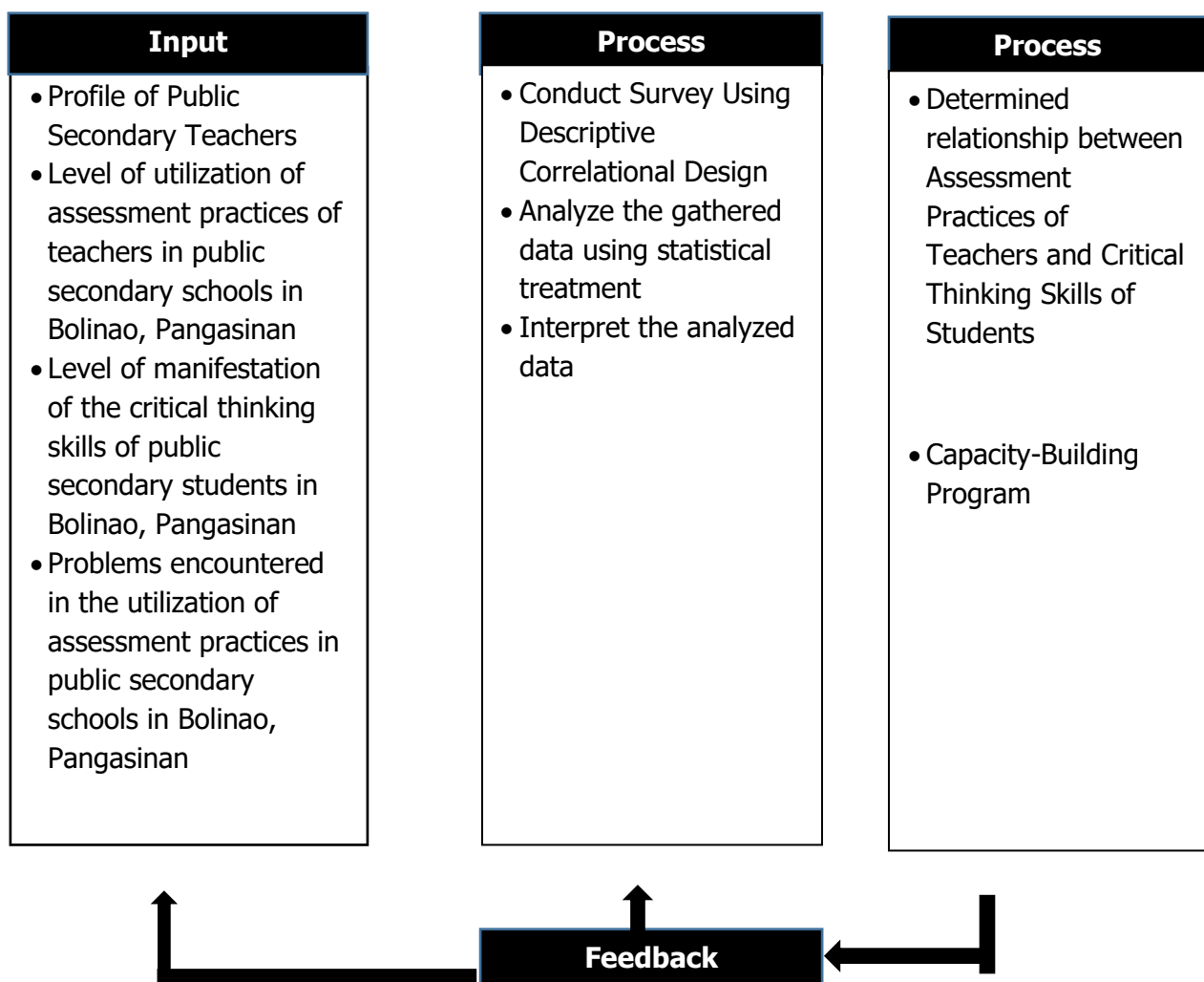
Similarly, Lev Vygotsky's Social Constructivism highlighted the importance of social interaction, collaboration, and guided learning in cognitive development. Vygotsky believed that learning occurs through interaction with teachers and peers within the learners' Zone of Proximal Development (ZPD). Assessment practices that involve collaborative activities, feedback mechanisms, classroom discussions, and guided tasks help students develop analytical and reasoning abilities. This theory explains how teachers' assessment strategies and instructional support contribute to improving students' critical thinking skills.

Moreover, the Formative Assessment Theory of Paul Black and Dylan Wiliam emphasized that assessment should be used as a tool to improve learning through continuous feedback and monitoring of student progress. According to the theory, formative assessments enable teachers to identify students' strengths and weaknesses and adjust instruction accordingly. Through timely feedback, students become more reflective and aware of their learning processes, which strengthens their critical thinking and problem-solving abilities. This theory supports the use of formative assessment practices to enhance learner performance and cognitive development.

Lastly, John Biggs's Constructive Alignment Theory explains that learning outcomes, teaching strategies, and assessment methods should be aligned to ensure effective learning. Assessment practices must be consistent with instructional objectives and desired learning competencies to promote meaningful learning experiences. In this study, the theory underscores the importance of aligning assessment practices with critical-thinking objectives to ensure that students develop skills in analysis, interpretation, evaluation, and self-regulation. Collectively, these theories served as the conceptual and theoretical foundation of the study's examination of teachers' assessment practices and their relationship to students' critical thinking skills.

Conceptual Framework

The conceptual framework of the study was anchored on the Input–Process–Output (IPO) model, which illustrated the interaction of the study variables in achieving the intended outcome. The input component included profiles of public secondary school teachers, the level of utilization of assessment practices, the level of manifestation of students' critical thinking skills, and the problems encountered in implementing assessment practices in public secondary schools in Bolinao, Pangasinan. The process component involved a descriptive-correlational research design, data collection through survey questionnaires administered via Google Forms, and statistical analysis to determine relationships and significant findings among the variables. The study's output was a proposed capacity-building program to enhance teachers' assessment practices and improve students' critical thinking skills. Furthermore, the framework incorporated a feedback mechanism to ensure the continuous improvement and relevance of the proposed interventions, highlighting the dynamic relationship among the study's inputs, processes, and outputs.



METHODOLOGY

This quantitative research study examined the relationship between assessment practices of secondary school teachers and the level of manifestation of critical thinking skills of students in Bolinao, Pangasinan.

Research Design

This study utilized a descriptive-correlational research design to examine the relationship between teachers' assessment practices and students' critical thinking skills in public secondary schools. The descriptive component described the current status of the variables, including the level of utilization of assessment practices and the level of manifestation of students' critical thinking skills, without manipulating any conditions, making it appropriate for obtaining factual information in natural educational settings. Meanwhile, the correlational aspect determined the degree and direction of the relationship between the identified variables, particularly whether teachers' assessment practices were significantly associated with students' critical thinking skills. Through statistical analysis, the design generated both descriptive and relational data that served as the basis for evidence-based recommendations and the proposed capacity-building program.

Research Steps

The study began with identifying the research problem and reviewing related literature and studies to establish its theoretical and conceptual foundations. After the research title, objectives, and framework were finalized, the researcher prepared a researcher-made questionnaire as the primary data-gathering instrument. The questionnaire was then subjected to content validation by a panel of experts to ensure its clarity, relevance, and alignment with the objectives of the study. Thereafter, permission to conduct the study was secured from the Schools Division Office and the school heads of the participating public secondary schools in Bolinao, Pangasinan. Upon approval, the researcher coordinated with the designated school focal persons to distribute the survey questionnaire via Google Forms to the selected teacher-respondents. The accomplished responses were gathered, organized, screened, and tabulated for analysis. The data were then treated using appropriate statistical tools such as frequency count, percentage, weighted mean, ranking, Spearman rank correlation, chi-square test of independence, and Cramer's V to determine the level of utilization of assessment practices, the level of manifestation of students' critical thinking skills, the problems encountered, and the significant relationships among the variables. Finally, the results were interpreted, conclusions were drawn, and recommendations, including a proposed capacity-building program, were formulated based on the study's findings.

Data Collection and Sample Selection

The study involved public secondary school teachers in Bolinao, Pangasinan from the sixteen (16) public secondary schools in the municipality. Using purposive sampling with equal representation per school, a total of 88 teacher-respondents were selected to participate in the study. Data were collected using a validated, researcher-developed questionnaire administered

via Google Forms. After securing approval from the Schools Division Office and the respective school heads, the researcher coordinated with the designated focal persons to distribute the survey link to the target respondents. The accomplished responses were then retrieved, organized, screened, and prepared for statistical analysis.

Data Analysis Methods

The data gathered in the study were analyzed using both descriptive and inferential statistics. Frequency counts and percentages were used to describe the profile of public secondary school teachers in terms of age, sex, marital status, position, highest educational attainment (including a bachelor's degree), number of teaching years, number of seminars or training sessions attended related to assessment practices, and average monthly income. Percentage, weighted mean, and ranking were used to determine the level of utilization of assessment practices, the level of manifestation of students' critical thinking skills, and the problems encountered in implementing assessment practices. To determine the significant relationships among variables, Spearman's rank correlation, chi-square test of independence, and Cramer's V were employed depending on the nature of the data. These statistical tools were used to examine the relationships between teachers' profile variables and assessment practices, and between teachers' assessment practices and students' critical thinking skills.

Research Hypotheses and Validation

The study examined the following null hypotheses at the 0.05 level of significance: first, that no significant relationship exists between the profile of public secondary school teachers in Bolinao, Pangasinan and their level of utilization of assessment practices; and second, that no significant relationship exists between teachers' level of utilization of assessment practices and the level of manifestation of students' critical thinking skills in public secondary schools in Bolinao, Pangasinan. The validation of these hypotheses was conducted using appropriate statistical tools, specifically Spearman's rank correlation, chi-square test of independence, and Cramer's V, depending on the type and nature of the variables involved. The outcomes of these statistical analyses served as the basis for the acceptance or rejection of the null hypotheses.

Study Limitations and Ethical Considerations

The study was limited to public secondary school teachers in Bolinao, Pangasinan, from the sixteen (16) public secondary schools in the municipality. It did not include teachers from private schools, elementary schools, other municipalities, or other educational stakeholders, such as students, parents, school heads, and supervisors; therefore, the findings may not generalize beyond the study setting. The study focused only on teachers' assessment practices and students' critical thinking skills, as perceived from the gathered responses, and did not extensively examine other external factors, such as school facilities, administrative support, learning environment, and socio-economic conditions, that may have influenced the results. In addition, the study relied primarily on self-reported responses obtained through survey questionnaires, which may be subject to personal bias and varying interpretations among respondents. Ethical

considerations were strictly observed throughout the study by obtaining permission from the Schools Division Office and school heads prior to data collection. Informed consent was obtained from all participants, and they were assured that their participation was voluntary. The anonymity, privacy, and confidentiality of the respondents and their responses were protected, and participants were informed of their right to withdraw from the study at any stage without penalty. Furthermore, the researcher ensured that all data gathered were treated with honesty, integrity, and responsibility in the analysis, interpretation, and presentation of the findings.

RESULTS AND DISCUSSION

SOP 1: What is the profile of public secondary teachers in Bolinao, Pangasinan?

The respondents were mostly in the age bracket of 36–40 years, largely in middle adulthood, and predominantly female. Most were married, occupying Teacher III and Teacher VI positions, and had completed master's degrees or earned master's units. A large proportion were graduates of Secondary Education programs, had 5–10 years of teaching experience, and had attended fewer than 5 seminars or training sessions related to assessment practices in the last few years. In terms of income, most belonged to the lower- to middle-income bracket, earning less than ₱50,000 per month. These findings suggest that the teaching force in Bolinao, Pangasinan, is largely composed of mid-career, professionally advancing educators who are academically prepared but have relatively limited exposure to sustained assessment-related professional development.

SOP 2: What is the level of utilization of assessment practices of teachers in public secondary schools in Bolinao, Pangasinan?

Table 2 shows the summary of the level of utilization of assessment practices of teachers in public secondary schools in Bolinao, Pangasinan.

Table 7
Summary of the Level of Utilization of Assessment Practices of Teachers in Public Secondary Schools

Indicators	AWM	DM
a. Formative Assessment Practices	4.39	Highly Utilized
b. Summative Assessment Practices	4.63	Very Highly Utilized
c. Authentic and Performance-Based Assessment	4.45	Highly Utilized
d. Assessment Design and Alignment	4.52	Very Highly Utilized
e. Use of Assessment Results for Instructional Decision-Making	4.38	Highly Utilized
GRAND MEAN	4.47	Highly Utilized

The level of utilization of assessment practices of teachers in public secondary schools in Bolinao, Pangasinan, is generally “Highly Utilized,” with an overall grand mean of 4.47. This indicates that teachers consistently and actively employ a range of assessment practices in their instruction to evaluate student learning, monitor academic progress, and support the development of learners’ critical thinking skills. The findings suggest that assessment is strongly

integrated into classroom instruction and is considered an essential component of effective teaching and learning.

Among the assessment domains, summative assessment practices were the most utilized (WM = 4.63, Very Highly Utilized), indicating a strong emphasis on periodic tests, competency-based examinations, and grading systems to measure student achievement. This is followed by assessment design and alignment (WM = 4.52, Very Highly Utilized), showing that teachers consistently align assessments with learning competencies and objectives while ensuring validity and reliability. Meanwhile, authentic and performance-based assessment (WM = 4.45, Highly Utilized) and formative assessment practices (WM = 4.39, Highly Utilized) are also frequently practiced, reflecting teachers' use of learner-centered and skill-based evaluation strategies such as rubrics, projects, feedback, and real-life tasks.

In terms of specific use, the utilization of assessment results for instructional decision-making received the lowest mean (WM = 4.38, Highly Utilized), although it was still interpreted as highly utilized. This suggests that while teachers regularly use assessment data to track progress, identify learners' needs, and adjust instruction, there is still room to strengthen practices in remediation, enrichment, and differentiated instruction.

Overall, these findings imply that teachers in Bolinao demonstrate a strong and consistent application of assessment practices across all dimensions, with particularly strong performance in summative assessment and assessment design. However, continuous improvement is still needed to maximize the use of assessment data for instructional interventions and differentiated learning support, further strengthening students' critical thinking and academic development.

SOP 3: What is the level of manifestation of the critical thinking skills of public secondary students in Bolinao, Pangasinan?

Table 3 presents a summary of the levels of manifestation of critical thinking skills among public secondary students in Bolinao, Pangasinan, across six key indicators: analysis, interpretation, inference, evaluation, explanation, and self-regulation.

Table 3
Summary of the Level of Manifestation of the Critical Thinking Skills of Public Secondary Students

Indicators	Average Weighted Mean (AWM)	Descriptive Meaning (DM)
Analysis	3.73	Highly Manifested
Interpretation	3.69	Highly Manifested
Inference	3.66	Highly Manifested
Evaluation	3.65	Highly Manifested
Explanation	3.62	Highly Manifested
Self-Regulation	3.76	Highly Manifested
GRAND MEAN	3.69	Highly Manifested

The level of manifestation of the critical thinking skills of public secondary students in Bolinao, Pangasinan, is generally “Highly Manifested,” with a grand mean of 3.69. This indicates that students demonstrate strong critical thinking competencies across the dimensions of analysis, interpretation, inference, evaluation, explanation, and self-regulation. The findings suggest that students possess higher-order thinking skills necessary for understanding information, solving problems, making informed decisions, and reflecting on their own learning processes. The high level of manifestation further suggests that classroom instruction and assessment practices positively contribute to the development of students’ cognitive and reflective abilities.

Among the dimensions, self-regulation obtained the highest average weighted mean of 3.76, interpreted as “Highly Manifested.” This indicates that students are generally capable of reflecting on their learning processes, identifying strengths and weaknesses, monitoring their progress, and using feedback to improve. This was followed by analysis (AWM = 3.73) and interpretation (AWM = 3.69), both interpreted as “Highly Manifested,” suggesting that students are able to identify key ideas, distinguish facts from opinions, recognize relationships among concepts, interpret information, and explain underlying meanings effectively. These competencies demonstrate students’ ability to process information critically and engage in reflective and analytical thinking.

Meanwhile, inference (AWM = 3.66), evaluation (AWM = 3.65), and explanation (AWM = 3.62) were also interpreted as “Highly Manifested.” The findings indicate that students are generally capable of drawing conclusions, evaluating evidence, comparing viewpoints, justifying decisions, and communicating ideas logically. However, the relatively low ratings in evaluation and explanation suggest that students may still struggle with deeper reasoning tasks, such as assessing the strength of arguments, formulating evidence-based conclusions, and explaining concepts systematically.

Overall, the findings imply that public secondary students in Bolinao, Pangasinan, demonstrate strong critical thinking skills, particularly in self-regulation, analytical reasoning, and interpretation. However, there remains a need to further strengthen evaluative reasoning, argumentation, and explanatory communication through learner-centered instructional strategies and authentic assessment practices that promote higher-order thinking and reflective learning.

SOP4: What are the problems encountered in the utilization of assessment practices in public secondary schools in Bolinao, Pangasinan?

The table below presents a quantitative breakdown of eleven distinct problems encountered in the utilization of assessment practices in public secondary schools in Bolinao, Pangasinan, highlighting that ‘Students’ lack of readiness’ accounts for the highest proportion of concerns at 18.35%. Structural and resource-related issues—such as limited time (14.68%) and lack of materials (13.99%)—rank second and third, respectively, indicating that environmental constraints are more prevalent than personal resistance to change. The data also identifies a mid-tier cluster of challenges related to professional competencies, including feedback provision and class size management, while technical skills like tool construction and technology adoption represent smaller but still significant segments of the overall challenge landscape.

Table 4
Problems Encountered in the Utilization of Assessment Practices

Problems Encountered	Frequency	Percentage	Rank
Students' lack of readiness or engagement in higher-order thinking assessment tasks	80	18.35%	1
Limited time to design and implement varied and effective assessment strategies	64	14.68%	2
Lack of instructional materials and resources to support authentic and performance-based assessments	61	13.99%	3
Insufficient training and professional development on innovative assessment practices	48	11.01%	4
Challenges in providing timely and individualized feedback to students	40	9.17%	5
Large class sizes that hinder effective monitoring and assessment of student performance	38	8.72%	6
Inadequate use of assessment results for instructional decision-making	27	6.19%	7
Difficulty in aligning assessment tasks with learning competencies and objectives	26	5.96%	8
Limited skills in constructing valid and reliable assessment tools	26	5.96%	8
Resistance to adopting new or technology-based assessment methods	22	5.05%	10
Other factors, including heavy workloads and external barriers to learner welfare	4	0.92%	11

Profile	Correlation Coefficient (σ)	Sig.	interpretation
Age	-0.193	0.072	Not Significant
Position	-0.095	0.381	Not Significant
Highest Educational Attainment	-0.06	0.579	Not Significant

Number of Teaching Years	-0.198	0.065	Not Significant
Number of Seminars and Trainings	0.219*	0.04	Significant
Average Monthly Income	-0.071	0.509	Not Significant

Profile	Chi-square Statistic (χ^2)	df	Sig.	interpretation	Cramer's V	Interpretation
Sex	3.4	3	0.335	Not Significant	0.196	Moderate
Marital Status	16.6	12	0.167	Not Significant	0.25	Moderate
Bachelor's Degree	4.43	3	0.219	Not Significant	0.224	Moderate

Note:

*significant at .05 level

**significant at .01 level

Cohen's (1988) Cramer's V

<.1 (small-weak relationship); .3 (medium/moderate relationship) >.5 large (large/strong relationship)

The problems encountered in the utilization of assessment practices in public secondary schools in Bolinao, Pangasinan, are chiefly led by students' lack of readiness or engagement in higher-order thinking tasks, a challenge that Yan and Pastore (2022) argue significantly impacts critical thinking development. The prominence of students' lack of readiness for higher-order thinking tasks suggests the need for instructional approaches that gradually strengthen learners' analytical reasoning, problem-solving, and reflective thinking abilities. Teachers also contend with limited time to design varied strategies, a lack of instructional materials for authentic assessments, and insufficient professional development on innovative practices, echoing the findings of Sancar, Atal, and Deryakulu (2021) regarding institutional and workload-related barriers. Additional difficulties include challenges in providing individualized feedback, managing large class sizes that impede monitoring, and the inadequate use of assessment results for instructional decisions. Furthermore, issues such as difficulty aligning tasks with competencies, limited skills in constructing valid assessment tools, and minor resistance to technology-based methods reflect the assessment literacy gaps emphasized by DeLuca and Bellara (2021), while external factors like heavy workloads further complicate the consistent implementation of high-quality assessment practices.

SOP 5. Is there a significant relationship between the level of utilization of assessment practices of teachers in public secondary schools in Bolinao, Pangasinan and the profile of teachers?

The table below presents the statistical relationship between various teacher profile variables and their assessment utilization levels.

Table 5
Significant Relationship Between the Level of Utilization of Assessment Practices of Teachers in Public Secondary Schools in Bolinao, Pangasinan and the Profile of Teachers

The study found that the 'Number of Seminars and Trainings' is the only variable with a statistically significant relationship ($r=0.219$, $p=0.040$) with the level of utilization of assessment practices of teachers in public secondary schools in Bolinao, Pangasinan. This suggests that professional development directly enhances assessment literacy and teacher confidence, corroborating studies by DeLuca and Bellara (2021) and Xu and Brown (2017), which emphasize that continuous training is more critical than demographic factors. Conversely, variables such as age, sex, position, years of experience, and income showed no significant impact, aligning with the perspective of Yan, Zhang, and Fan (2018) that professional competence is built through targeted capacity-building rather than mere length of service or personal status. Consequently, the findings advocate for sustained institutional support and assessment-focused workshops to ensure high-quality instructional and evaluative practices across all teacher demographics.

SOP 6. Is there a significant relationship between the level of utilization of assessment practices of teachers and the level of manifestation of the critical thinking skills of public secondary students in Bolinao, Pangasinan?

Table 6 presents the statistical correlation between the assessment practices employed by teachers and the level of critical thinking demonstrated by students.

Table 6
Significant Relationship Between the Level of Utilization of Assessment Practices of Teachers and the Level of Manifestation of the Critical Thinking Skills of Public Secondary Students in Bolinao, Pangasinan

		The Level of Utilization of Assessment Practices of Teachers
The Level of Manifestation of the Critical Thinking Skills of Public Secondary Students in Bolinao, Pangasinan	σ	0.447*
	Sig.	0.001

Note. * $p < .05$

This study identifies a statistically significant moderate positive relationship ($r = 0.447$, $p = 0.001$) between teachers' utilization of assessment practices and students' manifestation of critical thinking skills. The findings suggest that effective assessment—including formative tasks, timely feedback, and alignment with learning objectives—is not merely a measurement tool but a vital driver for developing cognitive abilities like analysis, inference, and self-regulation. These results, which corroborate studies by Yan and Pastore (2022) and Abrami et al. (2018), support a constructivist approach where inquiry-based assessments motivate students toward deeper learning rather than rote memorization. Consequently, the study advocates teacher

capacity-building programs to enhance assessment literacy as a direct means of improving students' critical-thinking outcomes.

SUMMARY

Based on the study's findings, public secondary school teachers in Bolinao, Pangasinan, were predominantly female, mostly aged 36 to 40 years, with many holding master's degrees or units and having 5 to 10 years of teaching experience. Most had attended fewer than five seminars and trainings related to assessment practices, and a significant portion had a monthly income of less than Php 50,000. The results further showed a high level of utilization of assessment practices across summative assessment, assessment design and alignment, and formative assessment. Teachers primarily utilized assessment tasks aligned with competencies and periodic assessments, while authentic and performance-based assessments and the use of results for instructional decision-making were also utilized, as reflected in the grand mean interpreted as 'Highly Utilized.' The level of manifestation of the critical thinking skills of public secondary students was found to be high across analysis, interpretation, inference, evaluation, explanation, and self-regulation, with a grand mean of 3.69, indicating that these skills were highly manifested. In terms of relationships among variables, age, position, highest educational attainment, teaching experience, and income showed no significant relationship with assessment utilization. On the other hand, the number of assessment-related training and seminars attended showed a significant positive correlation ($p = 0.040$), indicating that teachers who attended more training sessions were more likely to utilize effective assessment practices. Finally, the relationship between the use of assessment practices and students' critical thinking was found to be significant, with a moderate positive correlation coefficient of 0.447 at the 0.01 level of significance, indicating that as the level of assessment utilization increases, students' critical thinking skills also increase.

CONCLUSION

The study concludes that public secondary school teachers in Bolinao, Pangasinan, are generally middle-aged, feminine, academically qualified with master's degrees or units, and possess a relatively experienced professional background, yet they have limited exposure to specialized assessment-related training. They demonstrate a high level of utilization of assessment practices, particularly in summative assessment and assessment design, while authentic and performance-based strategies are utilized to a slightly lesser extent. Despite facing significant institutional constraints such as heavy workloads, large class sizes, and a notable lack of student readiness for higher-order thinking tasks, teachers maintain a high level of implementation across their evaluative responsibilities, which corresponds to a high manifestation of critical thinking skills among their students, particularly in self-regulation and analysis. The findings further indicate that demographic factors such as age, position, and experience do not significantly influence assessment utilization, whereas teachers who participate in more frequent professional development activities are significantly more likely to apply effective and innovative assessment practices. Moreover, a significant positive relationship exists between the use of assessment practices and students' manifestation of critical thinking, indicating that more effective teacher assessment strategies are directly associated with higher levels of analytical and reflective thinking among learners.

RECOMMENDATIONS

Based on the above-mentioned findings and conclusions, the following recommendations are hereby presented:

1. School administrators may intensify professional development activities focusing on formative, authentic, and higher-order thinking assessments to further strengthen teachers' assessment literacy and instructional competencies. Continuous mentoring and collaborative learning activities may also help teachers improve assessment planning, implementation, and utilization in classroom instruction.
2. Teachers may further integrate learner-centered and inquiry-based assessment strategies that encourage analysis, evaluation, reasoning, and problem-solving among students. Providing more authentic, performance-based learning activities may help improve students' readiness and engagement in higher-order-thinking assessment tasks.
3. Additional training opportunities on assessment design, rubric construction, feedback strategies, and assessment alignment may help teachers address challenges in preparing valid, reliable, and competency-based assessment tools. Exposure to innovative and technology-supported assessment practices may also enhance instructional effectiveness.
4. Schools may consider strengthening support mechanisms such as collaborative assessment planning, Learning Action Cell sessions, and peer mentoring activities to help teachers manage time constraints and workload-related concerns associated with varied assessment preparation and implementation.
5. Teachers may further maximize the use of assessment results in planning instructional interventions, remediation activities, and differentiated learning experiences. Data-driven instructional practices may contribute to more responsive teaching approaches and improved student learning outcomes.
6. Educational leaders may consider providing additional instructional resources, contextualized learning materials, and assessment exemplars that support authentic and performance-based assessments. Improved access to assessment resources may help teachers implement meaningful and engaging classroom evaluation activities more effectively.
7. Future researchers may explore other variables related to assessment practices and critical thinking skills such as learning environment, instructional strategies, student motivation, and technology integration. Conducting similar studies in other educational settings may also provide broader perspectives and comparative findings.

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AI DECLARATION STATEMENT

AI-supported tools helped with grammar and structure in creating this article. No AI tools were used to collect, analyze, or interpret data; all authors are credited for their academic contributions.

REFERENCES

- Abrami, P. C., Bernard, R. M., Borokhovski, E., Wade, A., Surkes, M. A., Tamim, R., & Zhang, D. (2015). Strategies for teaching students to think critically: A meta-analysis. *Review of Educational Research*, 85(2), 275–314. <https://doi.org/10.3102/0034654314551063>
- Albert, J. R. G., Reyes, C. M., Vizmanos, J. F. V., & Canales, N. B. (2023). Results of the 2022 Programme for International Student Assessment (PISA) and their implications for education policy in the Philippines. Philippine Institute for Development Studies
- Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university: What the student does* (4th ed.). McGraw-Hill Education.
- Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, 5(1), 7–74. <https://doi.org/10.1080/0965821980050102>
- Brookhart, S. M. (2017). *How to give effective feedback to your students* (2nd ed.).
- ASCD.Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute.
- DeLuca, C., & Bellara, A. (2013). The current state of assessment education: Aligning policy, practice, and teacher education. *Canadian Journal of Education*, 36(4), 356–388.
- Department of Education. (2015). Policy guidelines on classroom assessment for the K to 12 Basic Education Program (DepEd Order No. 8, s. 2015). https://www.deped.gov.ph/wp-content/uploads/2015/04/DO_s2015_08.pdf
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. D.C. Heath and Company.
- Facione, P. A. (2015). *Critical thinking: What it is and why it counts*. Insight Assessment.
- Novita, D., Santoso, A., & Budiyo, B. (2024). Barriers to implementing authentic assessment in secondary schools: A systematic review. *Journal of Educational Research and Evaluation*, 8(1), 45–58.
- Obmerga, M. S. (2025). Assessment literacy and practices of secondary school teachers in the Philippines: A regional perspective. [Unpublished manuscript/Journal article].

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- Paul, R., & Elder, L. (2014). The nature and functions of critical & creative thinking. Foundation for Critical Thinking.
- Popham, W. J. (2011). Assessment literacy for teachers: Are they ready? Pearson Education.
- Rivera, J. M., Santos, L. K., & Dizon, R. C. (2025). The PISA 2022 performance of Filipino learners: Identifying the gaps in critical thinking. *Asia-Pacific Education Review*, 14(2), 112–129.
- Stiggins, R. J. (2005). Student-involved assessment for learning (4th ed.). Pearson/Merrill Prentice Hall.
- UNESCO. (2020). Global Education Monitoring Report 2020: Inclusion and education: All means all. <https://unesdoc.unesco.org/ark:/48223/pf0000373718>
- Wiggins, G. P. (1998). Educative assessment: Designing assessments to inform and improve student performance. Jossey-Bass.
- Xu, Y., & Brown, G. T. L. (2016). Teacher assessment literacy in practice: A reconceptualization. *Teaching and Teacher Education*, 58, 149–162. <https://doi.org/10.1016/j.tate.2016.05.010>
- Yan, Z., & Pastore, S. (2022). Self-assessment and critical thinking: A pathway to academic success. *Frontiers in Psychology*, 13, Article 875234. <https://doi.org/10.3389/fpsyg.2022.875234>