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# THE INFLUENCE OF ASSESSMENT TECHNIQUES ON STUDENTS' ACADEMIC CONFIDENCE: A CONVERGENT DESIGN

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**ABSTRACT**

*This study aimed to examine the relationship between constructivist assessment techniques and students' academic confidence in Central District, Panabo City, using a parallel convergent mixed methods design. The researcher selected 202 public elementary school teachers through simple random sampling. Quantitative data were gathered using modified survey questionnaires, while qualitative data were obtained through semi-structured interviews. The extent of constructivist assessment techniques was rated as extensive, with peer feedback being the most evident, while application of knowledge was the least evident. Similarly, the extent of students' academic confidence was rated as extensive, with participation in class discussions as the most evident and persistence in challenging tasks as the least. A weak but significant positive relationship was found between constructivist assessment techniques and students' academic confidence, particularly in self-assessment and critical thinking. Qualitative findings revealed that teachers consistently applied constructivist techniques, including practical knowledge application, reflective self-assessment, constructive peer interaction, and critical thinking development. The integration of quantitative and qualitative data demonstrated a strong convergence, highlighting that teachers' use of constructivist assessments fosters students' academic confidence. These findings suggest that constructivist assessments can effectively enhance students' academic confidence, but further support may be needed to strengthen their impact.*

**KEYWORDS:** *Constructivist Assessment; Academic Confidence; Self-Assessment; Critical Thinking, Peer Feedback.*

## INTRODUCTION

The low level of students' academic confidence remains a critical concern in many elementary schools. While various teaching methods have attempted to address this issue, there is limited research on how constructivist assessment techniques might specifically boost students' confidence. This study posits that applying constructivist approaches, which prioritize active learning and student-centered evaluations, can significantly influence learners' self-assurance in their academic abilities. The parallel convergent design of this research allows for both quantitative and qualitative data to be collected simultaneously, providing a comprehensive view of how these assessment methods shape student confidence.

The problem of poor academic confidence among elementary school students is a significant concern that can impede learning outcomes and decrease student engagement. Ballane (2019) identifies that low self-confidence in high school students in USA can lead to a decrease in academic motivation and achievement, underscoring the importance of supportive educational environments that foster student confidence. Similarly, Yıldırım (2019) found that students with lower self-confidence, particularly in subjects like mathematics, tend to have poorer academic outcomes, suggesting that enhancing self-confidence could be key to improving academic performance. These findings highlight the need for educational strategies that build confidence through more personalized and engaging learning experiences.

In Africa, issues of self-esteem and the quality of student-lecturer interactions play crucial roles in shaping academic confidence and performance. Terblanche et al. (2021) demonstrate that positive interactions between students and lecturers can significantly boost students' self-esteem, which in turn enhances their academic performance in demanding courses like chartered accounting. Wills and Hofmeyr (2019) further emphasize that in challenging educational environments such as township and rural schools in South Africa, fostering academic resilience can be instrumental in overcoming the detrimental effects of low academic confidence. These studies suggest that targeted interventions to improve student-teacher relationships and resilience training can be effective in boosting confidence among students facing educational adversities.

In Asia, Wu and Wu (2022) analyze how engagement and confidence are critical determinants of science achievement, illustrating that higher levels of both can lead to better academic outcomes. Clavel, García Crespo, and Sanz San Miguel (2022) explore the exceptional cases of disadvantaged students in East and South-East Asia who perform well despite their circumstances, finding that self-confidence plays a significant role in such academic resilience. This evidence points to the necessity of integrating confidence-building practices into the curriculum, which could particularly benefit students in less advantageous conditions by providing them with the tools to succeed academically despite their backgrounds.

In the Philippines, the shift to online learning during the pandemic brought new challenges to maintaining student confidence. Blanco et al. (2020) investigate the correlation between self-confidence and self-efficacy in online learning, noting a significant impact on students' engagement and performance when both are low. Austria-Cruz (2019) adds that academic stress, particularly among college students, can further erode confidence, highlighting the importance of coping strategies that bolster self-assurance and facilitate better academic outcomes. These studies underscore the critical need for academic support systems that not only address the stressors unique to the Filipino educational context but also actively work to enhance students' self-confidence as a fundamental aspect of their academic success.

In the researcher's setting, low academic confidence among students is also a pressing concern that demands urgent attention. Part of this issue to resource shortages and overcrowded classrooms, which hinder personalized instruction. In addition, it had been observed that many teachers struggle to accommodate diverse student needs, resulting in learners feeling overlooked and unsure of their abilities. Such challenges often discourage active participation, causing students to withdraw and underperform academically. Improving teacher-to-student ratios, upgrading facilities, and integrating confidence-building activities can help Panabo City students reach their potential and thrive in school.

While numerous studies have explored the impact of various teaching methodologies on student outcomes, the specific combination of constructivist assessments and their effects on academic confidence has rarely been examined in a mixed-methods context. Most existing research tends to focus either on qualitative insights into student experiences or quantitative analysis of educational outcomes, without integrating these perspectives. Furthermore, the researcher has not yet come across any mixed-method studies examining these variables together, particularly within the local context of Panabo South District II. This gap highlights a crucial area for exploration, as understanding the interplay between constructivist techniques and student confidence could yield valuable insights into how these assessments support or hinder student learning.

The urgency of conducting this study in Panabo South District II is underscored by the unique educational challenges and opportunities present in this setting. Constructivist approaches, which involve students actively in the learning process and encourage them to construct new knowledge based on their experiences, are believed to be beneficial for enhancing student engagement and confidence. However, without empirical evidence specific to the local context, educators and policymakers are hesitant to fully integrate these techniques into the curriculum. The use of a parallel convergent design in this study will allow the researcher to comprehensively assess both the measurable outcomes and the nuanced experiences of students and teachers, providing a robust basis for future educational strategies. This approach is not only timely but essential for informing local educational practices and policies that aim to foster an environment conducive to building academic confidence among students.

## REVIEW OF SIGNIFICANT LITERATURE

This section provides the discussions of variable and its indicators. The discussions of the concepts, ideas and viewpoints from various authors were taken from different books, journal and electronic.

### *Constructivist Assessment Techniques*

Constructivist assessment techniques of teachers refer to the methods and approaches used by teachers to evaluate students' learning and understanding in a way that aligns with constructivist principles. These techniques emphasize assessing students' ability to apply knowledge in real-world contexts, encouraging reflection, and fostering self-assessment and peer feedback to build a deeper understanding of the subject matter (Misra, 2020). It was emphasized that constructivist assessment techniques enable teachers to gauge students' understanding through interactive and reflective activities, aligning assessments with real-world applications. This approach fosters a deeper level of cognitive engagement, as students are encouraged to connect new knowledge with prior experiences actively. By focusing on formative assessments, constructivist techniques provide continuous feedback, helping both teachers and students to identify areas for improvement and adapt the learning process dynamically (Shah, 2019).

The constructivist assessment techniques employed by teachers encourage a shift from traditional evaluation to more student-centered practices, which, according to Hueter (2022), align with the constructivist paradigm. Hueter's study highlights that teachers utilizing constructivist strategies often view assessment as a continuous process that values student input and active engagement in learning. In this context, teachers are less likely to rely on summative evaluations, favoring formative assessments that allow students to reflect and build on their knowledge progressively. Similarly, Chen et al.

(2022) suggest that teachers' constructivist beliefs significantly influence classroom observations and assessment strategies, as they prioritize understanding students' thought processes over rote memorization. This perspective encourages an environment where students are assessed on their ability to critically analyze and apply concepts, reflecting the core values of a constructivist learning approach.

In addition, studies by Ainjärv and Laas (2024) and Neutzling et al. (2019) reveal that constructivist assessment techniques foster an experiential and participative learning environment that empowers students to take charge of their learning journey. Through hands-on assessments, students are encouraged to actively explore and construct meaning from their experiences, aligning with Ainjärv and Laas's findings on the effectiveness of applying constructivist principles in education. This experiential approach to assessment reinforces students' abilities to draw connections between concepts and real-life applications, making learning more relevant and impactful. Neutzling et al. further emphasizes that, in a constructivist environment, assessment goes beyond traditional testing and focuses on holistic student development, encouraging critical reflection and personal growth. Thus, constructivist assessment techniques enable students to engage deeply with the material, fostering autonomy and a sense of ownership over their learning outcomes.

In a related view, Anayitime et al. (2021) and Chan et al. (2020) note that constructivist assessments can enhance student participation and motivation, particularly in subjects like mathematics and science where abstract concepts are often challenging for students. According to Anayitime et al., constructivist approaches to teaching mathematics in Ghana have shown to improve students' willingness to engage with difficult material by providing interactive and relatable assessments. This is echoed by Chan et al., who observe that in science education, constructivist assessments encourage inquiry and experimentation, allowing students to explore concepts in a supportive and collaborative environment. These assessments not only make learning more meaningful but also help students develop problem-solving skills and resilience. Therefore, constructivist assessment techniques, when effectively implemented, support an engaging and motivating learning environment that caters to diverse learning needs, enabling students to achieve a more comprehensive understanding of complex concepts.

## STATEMENT OF THE PROBLEM

This study explored the relationship between constructivist assessment techniques and students' academic confidence in Panabo Central District. A parallel convergent mixed methods design was used, involving the simultaneous collection of qualitative data and quantitative results. In the quantitative phase of the study, primary data were collected from the elementary school teachers regarding the relationship between constructivist assessment techniques and students' academic confidence. The research questions underlying the investigation in this study were as follows:

1. What is the extent of constructivist assessment techniques of teachers in terms of:
   1.1 application of knowledge;
   1.2 self-assessment;
   1.3 peer feedback; and
   1.4 critical thinking?
2. What is the extent of students' academic confidence in terms of:
   2.1 willingness to ask questions;
   2.2 participation in class discussions;
   2.3 initiative in learning tasks; and
   2.4 persistence in challenging tasks?
3. Is there a significant relationship between constructivist assessment techniques and students' academic confidence?
4. What are the lived experiences of participants with regard to constructivist assessment techniques and students' academic confidence?
5. To what extent do the qualitative findings corroborate with the quantitative data?

## METHODOLOGY

This section contains the research design, research respondents, research instrument, trustworthiness of the study, ethical consideration, data gathering procedure, and data analysis.

### *Research Design*

In this study, the researcher employed mixed methods, specifically a convergent research design. A mixed method research design combined both quantitative and qualitative research approaches within a single study to provide a more comprehensive understanding of the research problem. It integrated numerical data and statistical analysis with narrative data and thematic exploration to enrich insights and corroborate findings (Headley & Plano Clark, 2020). In this study, a mixed method design was highly appropriate because it allowed the researcher to quantify changes in academic confidence while also capturing the nuanced experiences of students. The quantitative component measured the extent of the impact using surveys or assessments, while the qualitative component explored students' perceptions and experiences through

interviews or focus groups. This combination provided a holistic understanding of how constructivist assessments affected academic confidence, strengthening the validity and reliability of the study's conclusions.

The parallel convergent approach was a type of mixed method design where quantitative and qualitative data were collected simultaneously but analyzed separately before being merged during interpretation. This method enabled researchers to compare and combine results from both data sets to draw comprehensive conclusions (Creswell, 2021). Using a parallel convergent design was suitable for this study as it allowed for the concurrent collection of quantitative data and qualitative data. By analyzing these data sets separately and then converging the findings, the researcher cross-validated and corroborated the results. This approach enhanced the depth and breadth of understanding regarding how constructivist assessment techniques influenced students' academic confidence.

In the quantitative phase, the researcher specifically used the descriptive correlational techniques of research to gather data, ideas, facts, and information related to the study. A descriptive correlational research design examined the relationship between two or more variables without manipulating them. It aimed to identify patterns and determine the strength and direction of associations among variables as they naturally occurred (Judd & Sadler, 2003). This design was appropriate for investigating whether a relationship existed between the use of constructivist assessment techniques and students' academic confidence. By measuring both variables, the researcher analyzed the correlation to see if increased use of constructivist assessments was associated with higher levels of academic confidence. However, this design did not establish causality and lacked the qualitative depth to understand the underlying reasons behind the relationship.

In the qualitative phase, the researcher made use of a phenomenological approach. The phenomenological approach was a qualitative research method focused on exploring and understanding individuals lived experiences of a particular phenomenon. It sought to describe the essence of these experiences from the participants' perspectives (Groenewald, 2004). Adopting a phenomenological approach was appropriate when the goal was to deeply understand how students experienced constructivist assessment techniques and how these experiences affected their academic confidence. This method allowed for rich, detailed narratives that captured the subjective meanings and feelings associated with the assessments. While it provided valuable insights into personal experiences, it did not offer generalizable data or quantify the extent of the influence across a larger population.

***Research Respondents***
***Quantitative Phase***
The respondents of this study were the 202 elementary school teachers in Panabo South District II. To determine the sample of 202 teachers from a total population of 406 in Panabo South District of Panabo City, the researcher used Slovin's formula. The calculation used the formula represented the population size, and eee denoted the margin of error. For a population of 406 teachers and a margin of error of 0.05, the researcher calculated nnn to be 202.

Once the sample size was established, the researcher employed random sampling methods to select the respondents. Simple random sampling, a fundamental probability sampling technique, ensured that every individual in the population had an identical chance of being included in the sample. This approach guaranteed that all segments of the population had an equal likelihood of selection, effectively minimizing selection bias (Boschetti, Stehman & Roy, 2016). For this study, the researcher assigned a unique number to each teacher within the population, then utilized a random number generator to select 202 teachers, maintaining an unbiased and representative sample of the overall population. Additionally, the researcher ensured that the selected teachers accurately represented the district's demographic and diverse characteristics, enhancing the study's overall validity.

In selecting respondents for the study, the researcher established specific inclusion criteria to ensure the relevance and validity of the data collected. The inclusion criteria comprised elementary school teachers who were currently teaching within Panabo South District II and had been actively implementing constructivist assessment techniques in their classrooms for at least one academic year. Teachers were required to have a minimum of two years of teaching experience to ensure they possessed sufficient professional expertise and familiarity with various assessment methods. Additionally, participants needed to be willing to engage in both quantitative and qualitative aspects of the study, including completing surveys and participating in interviews or focus groups.

**Research Instrument**
Two sets of instruments were used in this study—one for the quantitative phase and one for the qualitative phase. These questionnaires were subjected to content validity by a panel of experts and underwent pilot testing to assess their validity and reliability. The comments, corrections, and suggestions provided by the experts were incorporated into the final revisions of the questionnaires.

In the quantitative phase, the first part of the instrument focused on the constructivist assessment techniques of teachers. The instrument consisted of four domains, namely: application of knowledge, self-assessment, peer feedback, and critical

thinking. Respondents answered the questionnaire items using a 5-point Likert scale. As a guide in determining the extent of constructivist assessment techniques among teachers, the researcher used the range of means, descriptions, and interpretations.

***Data Analysis***

***Quantitative Phase***

The following were the statistical tools utilized by the researcher in processing the gathered data:

***Mean***. This was used to determine the extent of constructivist assessment techniques and students' academic confidence in Central District, Panabo City. It summarized the overall perceptions of the respondents in key areas related to these educational practices, providing an average value that reflected the general tendencies among the responses.

***Pearson Product-Moment Correlation.*** This statistical tool was employed to determine the strength and direction of the relationship between constructivist assessment techniques and students' academic confidence in Central District, Panabo City. It allowed the researcher to identify whether a positive or negative correlation existed between these variables, providing insights into how the use of constructivist assessments was associated with students' confidence levels.

## RESULTS AND DISCUSSIONS

This chapter presents the results generated from the data gathered. It is sequenced based on the objectives of the study as presented in the first chapter. Thus, it presents the extents of constructivist assessment techniques and students' academic confidence in Central District, Panabo City; the significant relationship among these variables; the lived experiences of the participants as regards to the relationship between constructivist assessment techniques and students' academic confidence in Central District, Panabo City; and corroboration of quantitative and qualitative results.

***Constructivist Assessment Techniques of Teachers***

On Table 1, results show that the extent of teachers' constructivist assessment techniques in terms of the application of knowledge is rated as extensive, with a mean score of 3.82. This finding suggests that teachers frequently implement constructivist assessment strategies that enable students to effectively apply their knowledge in various contexts. Such approaches are crucial for promoting deeper learning, as they encourage students to connect theoretical concepts to real-world situations, thereby enhancing their problem-solving skills and practical abilities. According to Steffe and Ulrich (2020), constructivist assessments empower learners by providing opportunities to demonstrate their understanding through authentic tasks, making learning more meaningful and relevant.

The range of means for the five statements assessing the application of constructivist assessment techniques varies from 3.53 to 4.18, indicating a generally consistent but slightly varied proficiency among teachers in this area. The highest-rated statement is Using constructivist assessment methods is improving students' practical skills application with a mean of 4.18, rated as extensive. Conversely, the lowest-rated statement is Integrating constructivist assessment techniques is enhancing students' ability to apply knowledge in new situations with a mean of 3.53, also rated as extensive. According to Jayasinghe (2021), effective constructivist assessment should not only focus on skill acquisition but also on fostering students' capacity to apply knowledge across various domains.

## CONCLUSIONS AND RECOMMENDATIONS

This part of the paper presents the conclusion and recommendation of the researcher. The discussion is supported by the literature presented in the first chapters and the conclusion is in accordance with statements of the problem presented in this study.

***Finding***

The primary objective of this study was to explore the relationship between constructivist assessment techniques and students' academic confidence in using a parallel convergent mixed methods design utilizing parallel convergent mixed method research design. The researcher selected the 202 public elementary school teachers from the Central District in Panabo City as the respondents through simple random sampling method. The researcher made use of modified and enhanced adapted survey questionnaires for quantitative phase which was pilot tested in a nearby school to ensure high reliability and internal consistency of the items in the instrument. Meanwhile, a semi-structured interview guide was utilized in qualitative phase.

The extent of constructivist assessment techniques demonstrated by teachers in Central District, Panabo City, is rated as extensive, indicating that they frequently use assessment strategies that promote knowledge application, self-assessment, peer feedback, and critical thinking. Among the indicators, peer feedback is the most evident, reflecting teachers' strong emphasis on promoting constructive peer interaction and collaborative learning. Conversely, the application of knowledge is the least evident, suggesting that teachers may need to further enhance strategies that allow students to apply theoretical concepts in practical contexts.

The extent of academic confidence demonstrated by students in Central District, Panabo City, is also rated as extensive, demonstrating that students regularly exhibit confidence in asking questions, participating in discussions, initiating learning tasks, and persisting in challenging activities. Among the indicators, participation in class discussions is the most evident, showing that students are comfortable expressing their ideas and engaging in dialogues. In contrast, persistence in challenging tasks is the least evident, indicating that students may benefit from further encouragement and support in maintaining their effort during difficult tasks.

The findings further reveal a weak but significant positive relationship between teachers' constructivist assessment techniques and students' academic confidence, suggesting that the use of constructivist assessments has a modest impact on enhancing students' confidence. Among the techniques, self-assessment and critical thinking show significant relationships with academic confidence, indicating that students who engage in reflective self-assessment and critical thinking activities are more likely to demonstrate confidence. On the other hand, application of knowledge and peer feedback show no significant relationship, implying that these techniques may not directly influence students' confidence. The qualitative findings reveal that teachers consistently employ constructivist assessment techniques that promote practical knowledge application, reflective self-assessment, constructive peer interaction, and critical thinking. Teachers shared that they guide students in connecting theoretical concepts to real-world situations, encourage self-reflection and goal setting, promote respectful peer feedback, and foster analytical thinking and problem-solving skills. These lived experiences confirm that teachers use constructivist assessments to engage students actively in the learning process, fostering both cognitive and affective growth.

The integration of quantitative and qualitative findings demonstrates a strong convergence between teachers' use of constructivist assessment techniques and the development of students' academic confidence. Quantitative data show that teachers frequently use constructivist techniques rated as extensive, while qualitative findings support this by highlighting teachers' emphasis on practical application, self-reflection, peer collaboration, and critical thinking. This alignment suggests that teachers' consistent use of constructivist assessments contributes to enhancing students' confidence in learning.

***Conclusions***

Based on the findings of this study several conclusions were generated:

The findings conclude that the extent of constructivist assessment techniques demonstrated by teachers in Central District, Panabo City, is generally rated as extensive, indicating that teachers frequently employ assessment methods that promote knowledge application, self-assessment, peer feedback, and critical thinking. This implies that teachers possess a strong foundation in using assessment strategies that engage students actively in the learning process. Schools are encouraged to sustain this strength while providing further training focused on enhancing the practical application of constructivist assessments, as this area shows the least extent among the indicators.

Also, the results confirm that the extent of academic confidence demonstrated by students in Central District, Panabo City, is generally rated as extensive, indicating that students regularly exhibit confidence in asking questions, participating in discussions, initiating learning tasks, and persisting in challenging activities. This implies that students benefit from constructivist assessment techniques, which foster a supportive learning environment that encourages active participation and self-expression. Schools are recommended to provide additional support for activities that further enhance students' persistence, which is the least evident aspect of their academic confidence.

The findings further reveal a weak but significant positive relationship between teachers' constructivist assessment techniques and students' academic confidence, indicating that teachers' use of these assessment methods has a modest impact on enhancing students' confidence. This aligns with Piaget's (1952) Constructivist Learning Theory, which emphasizes that learners construct their own knowledge through active engagement and reflection, and Bandura's (1977) Self-Efficacy Theory, which suggests that learners develop confidence in their abilities through mastery experiences and feedback. This implies that continuous use of constructivist assessment techniques can gradually enhance students' confidence, but further support may be needed to strengthen this impact.

Moreover, the analysis of teachers' lived experiences reveals that they consistently demonstrate the use of constructivist assessment techniques that promote practical knowledge application, reflective self-assessment, constructive peer interaction, and critical thinking development. This implies that teachers are capable of maintaining a learner-centered assessment approach that encourages active learning and independent thinking among students. Schools are encouraged to provide further support in integrating these techniques effectively into everyday classroom practices to maximize their impact on student confidence.

Finally, the integration of quantitative and qualitative findings confirms that teachers' use of constructivist assessment techniques directly supports the enhancement of students' academic confidence. Quantitative data indicate that teachers' application of knowledge and critical thinking strategies are rated as extensive, while qualitative findings support this by

revealing that teachers emphasize problem-solving, self-reflection, peer interaction, and analytical thinking. This alignment suggests that teachers' consistent use of constructivist assessments contributes to fostering students' confidence, but schools should continue to provide training and resources that further enhance the use of these techniques.

***Recommendations***

Based on the findings and conclusions generated from the study, the researcher recommends the following:

It is recommended that schools focus on enhancing the practical application of knowledge, which has the lowest mean among the indicators of constructivist assessment techniques. Teachers can be provided with professional development sessions on designing authentic assessment tasks that directly connect classroom concepts to real-world situations. Additionally, peer mentoring can be implemented to share best practices on applying constructivist assessment techniques effectively.

Schools should prioritize enhancing students' persistence in challenging tasks, which has the lowest mean among the indicators of academic confidence. Teachers can be encouraged to integrate growth mindset strategies into their lessons, helping students develop resilience and persistence in the face of difficulties. Furthermore, creating a supportive classroom environment where students feel safe to make mistakes can strengthen their perseverance.

It is recommended that schools enhance the use of application of knowledge in constructivist assessment techniques, which shows a non-significant relationship with academic confidence. Teachers can be trained on how to effectively design tasks that require students to apply concepts in real-world scenarios, making learning more meaningful. Moreover, regular reflection sessions can be conducted to help students connect their learning to practical situations.

To further enhance students' academic confidence, schools can strengthen the focus on fostering critical thinking and problem-solving skills, which are vital for developing independent learners. Teachers can be trained in using Socratic questioning and problem-based learning techniques to stimulate critical thinking among students. Regular practice sessions can also be implemented, where students apply critical thinking to solve real-world problems.

It is recommended that schools focus on improving the integration of self-assessment strategies, as this aspect shows potential for greater impact on students' academic confidence. Teachers can be trained to guide students in setting personalized learning goals and reflecting on their progress. Additionally, the use of digital self-assessment tools can be explored to enhance student engagement in self-reflection activities.

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