

EVALUATING THE UNDERSTANDING OF SOCIAL CONSTRUCTIVISM AMONG PRE-SERVICE TEACHERS AT INSTITUT PENDIDIKAN GURU, KAMPUS KENINGAU, SABAH

Muhammad Naufal Bin Abbas¹

Emmi Binti Joking²

Edna John³

Sabriah Binti Maili @ Mohd Rasli⁴

Doti Bin Asing⁵

¹Sekolah Kebangsaan Ulu Dusun, Sandakan, Sabah, Malaysia

(E-mail: nukafal89@gmail.com)

²Institut Pendidikan Guru Kampus Keningau, Keningau, Sabah, Malaysia,

(Email: emmielus@yahoo.com)

³Institut Pendidikan Guru Kampus Keningau, Keningau, Sabah, Malaysia,

(Email: nana_elena@yahoo.com))

⁴Institut Pendidikan Guru Kampus Keningau, Keningau, Sabah, Malaysia,

(Email: sabriah@ipgm.edu.my

⁵Institut Pendidikan Guru Kampus Keningau, Keningau, Sabah, Malaysia,

(Email: doti.asing@ipgm.edu.my)

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Abstract: *The present study, which was conducted at IPGK Keningau, assessed the comprehension of social constructivist techniques among pre-service teachers. These techniques emphasize collaborative learning and knowledge acquisition through social interactions. The study included participants from various academic years, allowing for a comprehensive analysis of their comprehension levels. The study included participants from several academic years, allowing for a comprehensive analysis of their comprehension levels at different phases of their educational progression. After the data was collected, the raw scores were transformed into percentage values. The average score across all academic years was 74.38%, indicating a good level of understanding of social constructivist principles. However, discrepancies were observed across different school years, with factors such as cohort size affecting these variations. The study concluded that pre-service teachers have shown commendable comprehension of social constructivist approaches, but discrepancies across different academic years call for a more thorough investigation. The results emphasize the need for a similar instructional approach throughout all academic years to promote consistent understanding and application of these essential educational principles.*

Keywords: *Social Constructivism, Institut Pendidikan Guru, learning theory*

Introduction

Exploring the Diverse Landscape of Education

The field of education is characterized by intricate and unpredictable elements, necessitating educators to adeptly navigate through a wide range of responsibilities including multitasking, discipline management, and addressing disruptions. Moreover, educators are required to make an average of 500 decisions per day, and they encounter both successes and challenges in their professional journey (Ching, 2011). The process of becoming a professional for pre-service teachers involves actively constructing and reconstructing knowledge, drawing from a wide range of sources (Yin, 2019). Teacher education programs have the objective of providing support for aspiring teachers in their professional development. They do this by teaching them essential theories of teaching, which in turn allow them to carefully observe and analyze educational practices. This knowledge then informs their future teaching efforts.

The field of educational psychology has witnessed the emergence of numerous schools of thought, characterized by their diverse perspectives and sometimes contradictory educational philosophies. These schools have been subject to ongoing debates, modifications, and occasional dismissals (Aubrey & Riley, 2022). The discourse in psychology on education and learning theory has been significantly influenced by three main schools of thought: behaviorism, constructivism, and humanism. While their viewpoints may differ, there have been observed instances of collaborative improvements in educational understanding through the intersectionality of their views.

Social constructivism as a Learning Theory

The concept of social constructivism has played a pivotal role in influencing contemporary approaches to education, emphasizing the importance of collaborative learning, active engagement, and the building of knowledge through social interactions (Vygotsky, 1978). In 1997, Virginia Richardson, a highly regarded figure in the field of teaching and teacher education, emphasized the significant importance of constructivism. Richardson advocates for a pedagogical approach that empowers individuals to develop their own understandings by integrating established knowledge with emerging ideas (Beck & Kosnik, 2012). From an evolutionary perspective, constructivism has undergone changes to emphasize the significance of societal elements, as social factors play a crucial role in the development and acquisition of knowledge. In the context of education, social constructivism promotes an active engagement of students, wherein they connect their learning experiences with practical situations in the real world (Taylor, 2018). This approach aims to cultivate a dynamic community, encourage diverse forms of expression, and facilitate both personal and intellectual development.

Incorporating Adams' Principles: A Theoretical Framework for the Study

The present study was based on the theoretical framework of social constructivism, utilizing insights derived from concepts outlined by Adams (2006). Adams emphasized a set of fundamental concepts that are crucial for facilitating effective education and fostering optimal learning outcomes. The approach emphasizes a comprehensive perspective on the learning process, placing greater importance on the comprehension and proficiency of skills rather than only obtaining favorable outcomes.

- **Focus on learning not performance:** A learning orientation emphasizes student-centered understanding and personal progress, as opposed to a performance orientation which focuses on standardized test outcomes, potentially stifling innovation and fostering fear-driven environments.

- **View learners as active co-constructors of meaning and knowledge:** Promotes active learning by fostering critical thinking, problem-solving, and real-world application of knowledge through collaborative methods between teachers and students, avoiding dependency culture in behaviorist learning models.
- **Establish a teacher-pupil relationship building upon the idea of guidance not instruction:** A shift from a rigid, teacher-centric model to a social constructivist one, prioritizing student-centered learning and collaborative experiences over standardized test scores.
- **Seek to engage learners in tasks as ends in themselves and consequently as having implicit worth:** Teachers should help students learn by connecting what they are learning to their real-life and cultural situations and letting them have a say in how they learn.
- **Promote assessment as an active process uncovering and acknowledging shared understanding:** Promotes a dynamic approach to assessment, fostering interactive dialogues and the Zone of Proximal Development, promoting rich learning opportunities and extending constructed knowledge.

Institut Pendidikan Guru Kampus Keningau

Institutions are very important to teacher education because they shape the ideas and actions of future teachers. At Institut Pendidikan Guru Kampus (IPGK) Keningau, Sabah, academic life is more than just teaching facts; it's an immersive experience where students are introduced to a wide range of educational theories and ways of teaching. IPGK Keningau teaches students about different learning theories that support good teaching and learning so that they have a full picture of the educational world. One of these theories is social constructivism, which stresses how information is made through collaboration and interaction. There are chances for students to learn about and use social constructivist ideas as they move through their teacher education program. These experiences eventually affect how they teach. Because this learning theory is so important, this study looks at how much students understand social constructivism and sees if there are any differences based on the year(s) they studied it.

Research Objectives

The main objectives of this quantitative research study are as follows:

1. To assess the IPGK Keningau pre-service teachers' overall understanding of social constructivist approaches.
2. To investigate the influence of distinct study years on the understanding of social constructivism among IPGK Keningau pre-service teachers.

Research Questions

In order to achieve the research objectives, the following questions will guide this study:

1. What is the level of understanding of social constructivist approaches among IPGK Keningau pre-service teachers?
2. Do the different years of study at IPGK Keningau result in varied levels of understanding of social constructivism among pre-service teachers?

Problem Statement

Within the field of teacher education, the incorporation of social constructivist principles into instructional methods holds significant significance. Nonetheless, a noticeable deficiency may be identified in the current body of research pertaining to the understanding of learning theories, particularly in the context of Malaysian teacher training institutions such as IPGK Keningau,

Sabah. The lack of comprehensive research has the ability to impede the overall growth and development of prospective educators. The comprehension and implementation of these concepts by individuals preparing to become teachers play a crucial role in assessing the caliber of educational encounters for future cohorts. In order for pre-service teachers to effectively translate their theoretical knowledge into practical classroom applications, it is imperative that they possess a comprehensive comprehension of these fundamental theories.

This study focuses on two main areas of investigation. The primary objective of this study is to determine the level of understanding of social constructivist techniques among pre-service teachers at IPGK Keningau. Additionally, this study aims to investigate if different academic years have an impact on students' knowledge of social constructivism in distinct ways. The research findings have significant consequences, particularly in addressing the gap that currently exists between theoretical knowledge and its practical implementation in real-life educational settings. The research seeks to provide insights that can stimulate changes in teacher education curricula, with the goal of ensuring that future teachers are not only knowledgeable about important theories but also capable of implementing them effectively in their future careers.

Literature Review

Social Constructivism

The understanding and utilization of learning theories are of utmost significance in influencing educational practices. Social constructivism is a prominent theory that has had a significant impact on teaching approaches. Based on Piaget's socio-cognitive conflict theory, it is proposed that social interactions play a crucial role in intellectual growth. According to this viewpoint, the presence of contradictions and disequilibrium in social interactions can facilitate cognitive development (Palincsar, 1998). Moreover, it seems that peer interactions have a greater positive impact on cognitive development compared to interactions with adults. Vygotsky's sociocultural theory places further emphasis on the significance of social processes in the context of learning and development. According to Palincsar (1998), although both theories emphasize the significance of social interaction in the learning process, they differ in their interpretations of the underlying mechanisms and the resulting effects on cognitive development.

According to social constructivism, which draws heavily from Vygotsky's theories, people actively construct knowledge through interactions with others in a social environment (Adams, 2007; Taylor, 2018). Individuals subsequently absorb and use this knowledge for their own cognitive development. It is argued that collaborative elaboration, which involves the exchange of individual views, facilitates the collective construction of understanding among learners, a task that cannot be accomplished in isolation by individuals. When teachers follow the ideas of constructivism, they give their students fun things to do so that they are actively learning. Saleem, Kausar, and Deeba's (2021) paper shows how important constructivist theory is in shaping teachers' strategies and how they act in the learning environment. It stresses a whole-person approach where the way the classroom is set up, the choices made about the curriculum, and how teachers respond to what students have to say are all deeply connected and influenced by the main educational philosophy. This means a focused, student-centered method where students' thoughts are valued and used to improve their learning and results.

According to the constructivist method, teachers use what students already know and have experienced to help them figure out what they need to know. Piaget (1970) and Jones and Brader-Araje (2002) both mention how crucial mentors are for students' learning, which lends support to this. Teachers should not just give students information; they should also give them chances to build their own knowledge (Aljohani, 2017). Giving students important, real-world experiences is a good way to get them to explore, discover, and solve problems (Hackthorn, Solomon, Blankmeyer, Tennial, & Garczyn, 2011; Omotayo & Adeleke, 2017). Assuring both academic and social growth, a social constructivist teacher puts equal weight on students learning what they read in textbooks and their ability to work together and learn through social exchanges. Naidoo and Mabaso (2023) say that this method gets students to compare what they think they know with what experts say, which helps them learn more about the world around them. Kim (2001) and Beck and Kosnik (2012) state that social constructivism is built on certain ideas about what is real (reality), what we know (knowledge), and how we learn (learning). All of the ideas that were brought up are explained in more detail below:

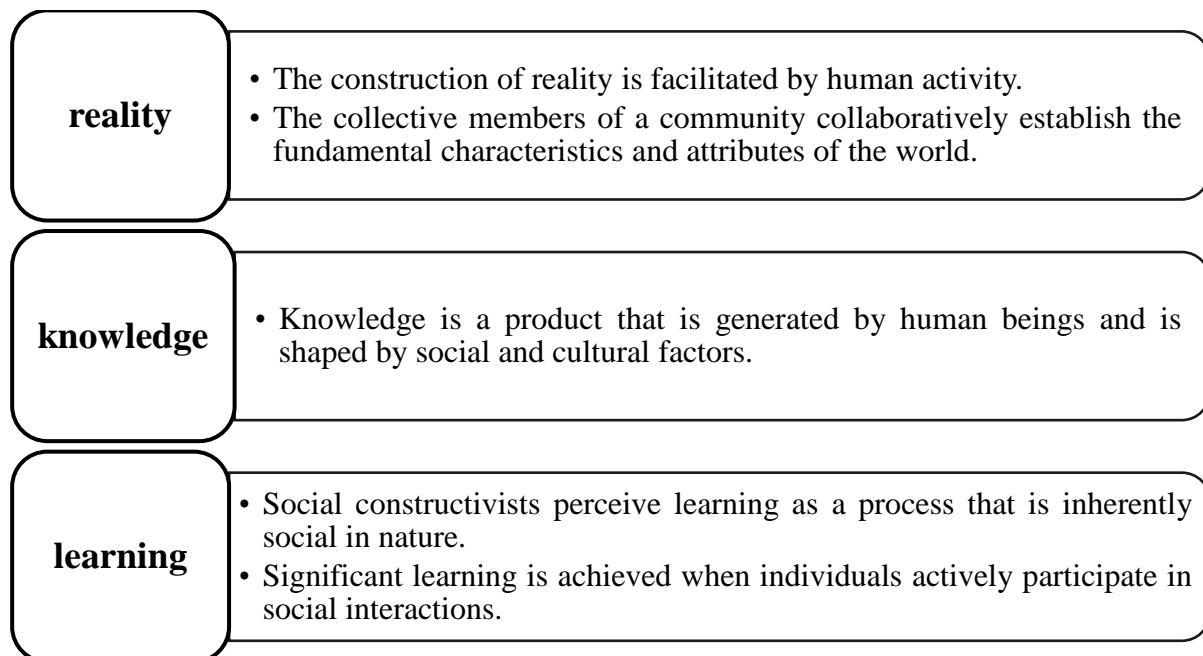


Figure 1: The Foundational Assumptions Upon Which Social Constructivism Is Grounded

Source: Kim (2001) and Beck & Kosnik (2012)

Zone of Proximal Development

The Zone of Proximal Development (ZPD), talked about by Eun (2018), is a concept by Lev Vygotsky that describes the gap between what a learner can do alone and what they can do with help from someone smarter. It's about understanding not just what learners can do by themselves, but also what they can achieve with a bit of assistance. Eun explains that ZPD connects self-growth and potential growth, playing a big part in how people learn and grow throughout their whole life. It says that learning starts with external help and slowly becomes a personal understanding, constantly moving from shared learning to individual knowledge.

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that collaborative elaboration, which involves the exchange of individual views, facilitates the collective construction of understanding among learners, a task that cannot be accomplished in isolation by individuals.

Schunk (2000) also emphasizes the significance of social constructivist education approaches, which prioritize reciprocal teaching, peer cooperation, cognitive apprenticeships, problem-based learning, online quests, and anchored instruction. These models highlight the significance of collaboration between learners and practitioners within society, underscoring the interconnections between practitioners, their practice, and the social organization and political economy of communities of practice in the practical knowledge of a society.

Past Studies on Social Constructivism and Pre-Service Teachers

Exploring Constructivist Theory Applications

Leela Ramsook and Marlene Thomas (2016) conducted an insightful investigation into how Year 2 pre-service primary school teachers at the University of Trinidad and Tobago integrated constructivist theory into their teaching methodologies. Utilizing a mixed-methods research approach that encompassed a meticulously devised questionnaire, they found a varied application of constructivist principles among the participants. Although several teachers were able to successfully employ constructivist strategies like active learning and knowledge sharing during their practicums, a substantial portion adhered to traditional teaching paradigms. This dichotomy underscored a significant variance in the adoption of student-centered pedagogy among future educators.

The Shift to Intercultural Agents in Vietnam

Ngoc Tung Vu (2020) identified a critical transition among Vietnamese English teachers from mere knowledge transmitters to emerging intercultural agents. This study, which spanned 16 weeks of teacher education programs (TEP), explored the efficacy of constructivist learning in enhancing intercultural communication competence (ICC) among pre-service English teachers. Notably, the research revealed a profound enjoyment and enhanced skill among participants in assimilating and interpreting intercultural information. Yet, it also brought to light the limitations in current higher education offerings in Vietnam regarding the incorporation of cultural knowledge into lessons.

Emphasizing Project-Based Learning in Education

A 2022 study by Desalu Dedayo Denuga and David Nkengbeza underscored the pivotal role of project-based learning in modern educational systems. Engaging 87 pre-service teachers from the University of "A" through a quantitative research approach, the study revealed that this methodology significantly enhanced participants' comprehension and valuation of learning and teaching resources. Further, it not only fostered a positive perspective towards the development of educational resources but also spurred the acquisition of vital 21st-century skills, including critical thinking and global awareness, among pre-service teachers.

Understanding and Practice of Constructivism among Pre-service Teachers

Savaş Baştürk (2016) delved into pre-service teachers' perceptions and practical implementations of constructivism within educational settings, engaging primary education teachers across several grade levels via semi-structured interviews. This study exposed a partial understanding of constructivism among pre-service teachers and highlighted a perceived deficit

in teacher education programs in adequately equipping them with the skills and knowledge to practically implement constructivist methods in their teaching practices.

Methodology

Research Design

The research employed a quantitative approach, specifically using a descriptive survey design to investigate the understanding of social constructivist approaches among IPGK Keningau pre-service teachers. This design was chosen to obtain specific data regarding the pre-service teachers' opinions, attitudes, and beliefs about social constructivism. The use of a survey design allowed for the collection of standardized data from a large group, making the findings more generalizable to the broader population of pre-service teachers at IPGK Keningau.

Upon collecting the responses, scores were converted into percentage values to standardize the results. This conversion facilitated an easier comparison and interpretation of the data. Furthermore, mean scores were computed to provide an overall picture of the understanding level among the pre-service teachers. The data was then stratified based on academic years to analyze if different years of study resulted in varied levels of understanding of the social constructivist approach.

Participants

A total of 210 replies were obtained from a sample of 293 bachelor's degree students at IPGK Keningau, Sabah. The participants were categorized according to their academic year of study.

- **Year 1 (PISMP Jun 2022-Mei 2027):** Out of the respondents, 36 students, accounting for 17.1% of the total, were from the first year.
- **Year 2 (PISMP Jun 2021-Mei 2026):** The majority of the respondents were from the second year, with 129 students, which represents 61.0% of the overall responses.
- **Year 3 (PISMP Jun 2021-Mei 2025):** The third-year students constituted 46 of the respondents, making up 21.9% of the total feedback.

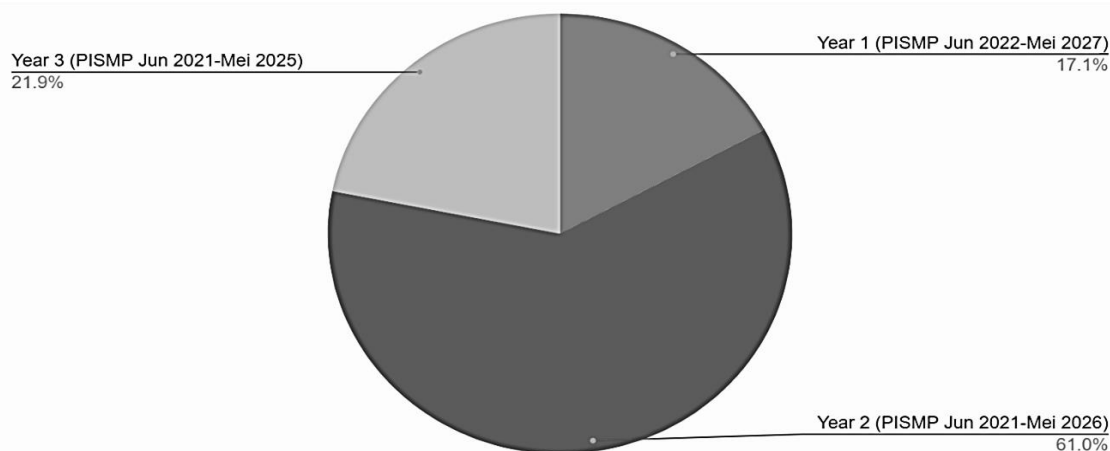


Figure 2: Distribution of survey responses from bachelor's degree students at IPGK Keningau, Sabah, segmented by year of study.

The data presented indicates a significant degree of involvement, particularly among students in their second year, leading to a diverse range of perspectives from different academic groups. The inclusion of individuals from diverse programs and academic levels in the Bachelor's Degree in Education program enabled the construction of a heterogeneous sample, thus spanning a broad spectrum of pre-service teachers within the institution. The inclusion of a diverse sample population enhances the generalizability of the findings and enables a comprehensive understanding of their readiness for and understanding of social constructivist principles.

Instrument

The study used a carefully designed questionnaire called the "Pre-Service Teachers' Understanding of Social Constructivist Approaches Questionnaire" to make sure it fit with Adams' (2006) fundamental principles about social constructivist approaches. An expert in the area of education carefully looked over this questionnaire before it was used. This poll is made up of four parts. The first part asks for basic demographic information, such as the participant's academic year, gender, and program of study. These questions were carefully thought out to test how well the participants understand social constructivist theories and how ready they are to use them in future classrooms.

Questionnaire: A structured questionnaire was developed as the primary data collection tool for this study. The instrument consisted of 17 questions designed to gauge the participants' understanding and attitudes toward social constructivist methodologies.

Scoring System: Participants were asked to respond to each statement using a 5-point Likert scale, where:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neutral
- 4 = Agree
- 5 = Strongly Agree

However, it should be noted that Questions 2, 6, 9, 12, and 17 were considered "reverse-scored" items. For these specific questions, the scoring was done inversely:

- 1 = 5 points
- 2 = 4 points
- 3 = 3 points
- 4 = 2 points
- 5 = 1 point

The reverse scoring was implemented to ensure the validity of the responses and reduce the potential bias of respondents answering in a consistent manner without reading the questions thoroughly (Haslam & McGarty, 2019). After all the scores were tallied, they were then converted into percentage values to allow for uniform interpretation. By integrating these reverse-scored items, and subsequently converting scores to percentages, the study aimed to ensure a more accurate reflection of the participants' true beliefs and understanding while facilitating the comparative analysis based on academic years.

Table 1 presents the classification of pre-service teachers' comprehension of social constructivist approaches based on the percentage scores obtained from the questionnaire. Scores within the range of 90–100% are indicative of an exceptional comprehension of the

underlying ideas, demonstrating thorough and comprehensive mastery. Individuals who achieved scores ranging from 80% to 89% exhibit a level of comprehension classified as "very good understanding." This designation indicates a robust understanding of the subject matter, with the possibility of subtle nuances being grasped. A score range of 70–79% signifies a level of comprehension categorized as 'Good Understanding,' denoting a substantial understanding of the subject matter. However, it is worth noting that there may be certain aspects that might benefit from additional emphasis or attention. Participants whose scores fall within the range of 60–69% demonstrate "adequate understanding," suggesting a basic level of knowledge but maybe lacking in-depth comprehension in specific domains. A "basic understanding" is indicated by scores ranging from 50% to 59%, indicating a superficial acquaintance with the underlying principles. In conclusion, scores that fall below 50% might be seen as an indication of a 'Limited Understanding,' suggesting notable deficiencies in comprehension.

Table 1: Categorization of Pre-service Teachers' Understanding of Social Constructivist Approaches Based on Percentage Scores

Score Range (%)	Description
90-100	Excellent Understanding of Social Constructivist Approaches
80-89	Very Good Understanding of Social Constructivist Approaches
70-79	Good Understanding of Social Constructivist Approaches
60-69	Adequate Understanding of Social Constructivist Approaches
50-59	Basic Understanding of Social Constructivist Approaches
0-49	Limited Understanding of Social Constructivist Approaches

Findings

The Students' Overall Performance

The mean score of 74.38% for the pre-service teachers reflects their average performance, which is categorized as "good understanding" according to the scoring table. This suggests that they have a competent understanding of social constructivist approaches. This statement indicates that they possess a thorough understanding of the fundamental ideas behind social constructivism in the field of education. During the training of these prospective educators, they are instructed on the significance of collaborative learning and the manner in which knowledge is derived from social interactions. The indication of their score being under the "good understanding" category suggests that they may possess the necessary skills and abilities to cultivate educational settings that prioritize student participation, enable the inclusion of diverse viewpoints, and facilitate collaborative construction of knowledge. These qualities align with the fundamental principles of a social constructivist approach to teaching and learning.

The Students' Performances Based on the Years of Study

Figure 3 illustrates the average percentage scores of students across three distinct years of the PISMP Program. The vertical axis represents the percentage of average scores, spanning from 72.5% to 76.5%, while the horizontal axis denotes the respective academic years.

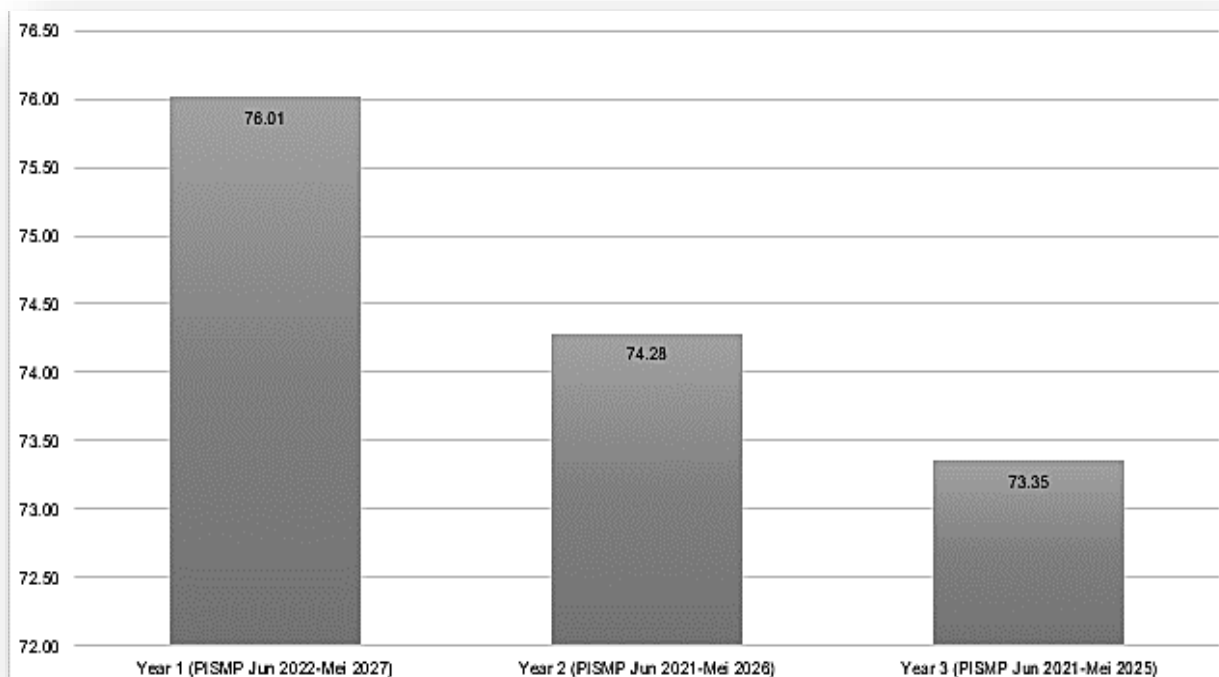


Figure 3: Percentage of Average Scores of Students Across Different Years of the PISMP Program

1. **Year 1 (PISMP Jun 2022-Mei 2027):** The students of Year 1, with a group of 36 participants, achieved an average score of 76.01%. With a smaller group size, it is possible that individual performances had a more pronounced effect on the overall average. A few exceptionally high scores within this smaller group could elevate the average, just as a few low scores could significantly depress it.
2. **Year 2 (PISMP Jun 2021-Mei 2026):** The largest group with 129 students, Year 2 students posted an average score of 74.28%. The larger sample size here likely provides a more stable average, less influenced by extreme scores from individual students.
3. **Year 3 (PISMP Jun 2021-Mei 2025):** With 46 students, the Year 3 batch recorded an average score of 73.35%. Similar to Year 1, the relatively smaller group size might make the average more susceptible to variations due to individual student performances.

Mean scores varied over time, and several factors might explain this. One noticeable factor was the different group sizes each year. Year 1, though smaller, performed better than the larger groups in Year 2 and Year 3. It's important to note that larger groups, like Year 2, usually give a truer average because outliers have less impact. Meanwhile, smaller groups, like Years 1 and 3, might show scores that closely mirror individual student performances. To understand these differences better, we should investigate other factors like changes in the curriculum, teaching methods, and student engagement, not just group sizes. Future studies can help shed light on these aspects.

Conclusion

The research shed light on the extent of knowledge and comprehension of social constructivist approaches among pre-service teachers enrolled at IPGK Keningau. Based on the average score obtained, it may be inferred that the participants have demonstrated a great degree of

comprehension. Nevertheless, the variability in academic performance throughout different academic years highlights the necessity for consistent pedagogical methodologies and maybe re-evaluating the size of instructional groups to promote more uniform comprehension. The observed discrepancies highlight the significance of guaranteeing equitable training and exposure to the ideas of social constructivism for all cohorts, irrespective of their academic year or cohort size. Future research should conduct a more comprehensive investigation into the underlying causes that contribute to these variances. This will enable educators to gain valuable insights that can be applied to improve their teaching approaches.

Recommendations

One of the limitations noted in this study pertains to the unequal distribution of participants across the different cohorts. This disproportionality may have influenced the results, particularly given that smaller cohorts might be more susceptible to variations from individual scores. Future research would benefit from ensuring an equal or near-equal number of participants from each cohort to achieve a more balanced representation. Such a methodological revision might lead to different findings, offering a potentially clearer picture of the understanding of social constructivist approaches across academic years.

The absence of a pilot test for the questionnaire might have resulted in certain overlooked biases or misinterpretations. While the questionnaire sought to gauge the students' understanding, it's possible that some questions may not have captured the essence of the students' real comprehension levels as effectively as intended. It is recommended that future studies engage in a rigorous pilot testing phase to ensure that the instrument used is both valid and reliable. This step would also ensure that questions are clear, appropriate, and meaningful in assessing the desired constructs.

The findings from this study, specific to IPGK Keningau, may not necessarily reflect the understanding levels of students at other teacher training institutes. Differences in curricula, teaching methodologies, institutional cultures, and student demographics can result in varying comprehension levels of social constructivist principles. Therefore, while these results provide valuable insights into the understanding levels at IPGK Keningau, they cannot be broadly generalized to all teacher training institutes. It is advisable for similar studies to be conducted across various institutes to gain a more comprehensive understanding of the situation at a larger scale.

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