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Assessment on the Professional Competence and Teaching Performance OF SEAMEO Innotech Guro21 Course 1 Scholars In Region XII

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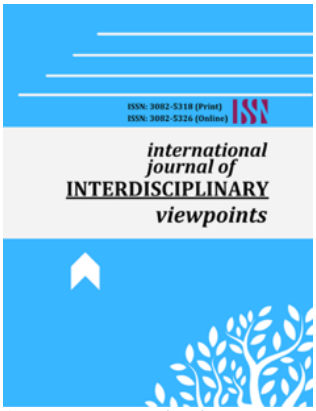
Research Article



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ABSTRACT

This study looked at the professional skills and teaching abilities of SEAMEO INNOTECH GURO21 Course 1 students in Region XII during the 2023–2024 school year. This was done because technology in education around the world changes so quickly. The mean, one-way ANOVA, and the Kruskal-Wallis Test were some of the statistical tools used in the study of 354 teacher-scholars. A descriptive-correlational method was used. According to the data, all school divisions consistently demonstrated very high levels of professional competence and high levels of instructional effectiveness. They were not significantly different from each other. This means that every school, everywhere, wants to be the best. This shows that structured professional development programs, such as GURO21, can change the way teachers teach in the 21st century. Politicians and school leaders should continue to support these kinds of programs and possibly expand them. They should also ensure that they can be adapted to meet the changing needs of the classroom. Additionally, new tools and teaching methods are introduced to provide students with more practice in the classroom, making them more adaptable and effective. Systems can help kids more in digital environments that move quickly by providing teachers with additional training and support. In the future, researchers may investigate how participation in GURO21 impacts the quality of teaching and the academic performance of students over the long term. This would reveal important insights into how professional ability can significantly impact the way schools operate. *Keywords: professional competence, teaching performance, SEAMEO Innotech Scholars*

INTRODUCTION

Due to new technology, shifting job market needs, and the need to teach youngsters skills they will require in the 21st century, schools worldwide are undergoing significant changes. Teachers should help kids become more creative, think critically, work effectively with others, and use technology (Thornhill-Miller et al., 2023). Fernández-Batanero et al. (2022) argue that digital competence has become an essential component of teacher professional development, necessitating continuous skill development and pedagogical innovation. Massive Open Online Courses (MOOCs) and other large-scale learning platforms have emerged as global solutions to these challenges, providing educators with adaptable tools to stay current with evolving pedagogical approaches (Rahaman et al., 2025). In this sense, programs like SEAMEO INNOTECH's GURO21 Course 1 represent an endeavor in the region to meet global standards while also meeting local needs.

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The digitization of learning environments and the K–12 curriculum have made it easier to utilize the ideas of Education 4.0 in the Philippines. Simpal and Robles (2024) and Galaura and Simpal (2025) discovered that educators in Region XII had significant challenges in preparing for digital learning, delivering effective instruction, and adhering to regulations. Furthermore, the experiences of GURO21 alums underscore the need for contextualized professional development specifically designed to address the unique needs of Filipino educators (Honculada & Naparan, 2020). National initiatives focused on improving instructional supervision (Reyes & Oropa, 2025), leadership behavior (Lacaza & Dioso, 2025), and teacher retention (Pedro & Dioso, 2025) underscore the importance of investing in programs that foster teacher competence and resilience.

A considerable body of research exists regarding teacher competency, digital readiness, and instructional leadership; however, there is a deficiency of studies that systematically investigate the impacts of structured professional development programs, such as GURO21, on teaching efficacy and pedagogical flexibility. Contemporary research primarily focuses on technology integration (Gorakhnath, 2022; Bayo Jr. & Doronio, 2025) or policy issues (Buenafe & Mahistrado, 2025), sometimes overlooking the interrelationship between professional development, instructional quality, and student results. Furthermore, there is a lack of empirical data regarding the effectiveness of regional programs in promoting systemic change and developing human capital in underserved areas. This study fills the gap by examining how the GURO21 Course 1 affects teacher-scholars in Region XII. This provides a deeper understanding of how targeted interventions can lead to lasting improvements in education.

This study is important for teachers, legislators, and educational leaders who aim to enhance teachers' abilities in addressing complex problems that involve technology. Assessing the outcomes of the GURO21 Course 1 provides evidence-based insights into the effectiveness of regional professional development initiatives. Hrusa et al. (2020) argue that investment in teacher development not only enhances individual performance but also yields substantial systemic benefits, including improved student outcomes and social progress. The findings inform future program creation, instructional oversight strategies, and legislative amendments that prioritize equity, adaptability, and contextual relevance. This study addresses the ongoing issue of empowering teachers to be agents of change in 21st-century learning environments.

Problem Statement

The main objective of this study was to assess the professional competence and teaching performance of SEAMEO INNOTECH GURO21 Course 1 scholars in Region XII.
Specifically, this study sought answers to the following questions:

1. What is the level of professional competence of SEAMEO INNOTECH GURO21 Course 1 scholars in Region XII in terms of

1.1 communication;
1.2 cognition;
1.3 personal effectiveness;
1.4 occupational;
1.5 interpersonal?

2. What is the level of teaching performance of SEAMEO INNOTECH GURO21 Course 1 scholars in Region XII in terms of

2.1 content knowledge and pedagogy;
2.2 learning environment and diversity of learners;
curriculum and planning; and
2.3 Assessment and reporting?

3. Is there a significant difference in the professional competence of SEAMEO INNOTECH GURO21 Course 1 scholars across divisions in Region XII?
4. Is there a significant difference in the teaching performance of SEAMEO INNOTECH GURO21 Course 1 scholars across divisions in Region XII?

Literature Review

Reading and writing about how teachers can become more knowledgeable and effective in the twenty-first century. As 4.0 and a move toward learner-centered, technology-enhanced education gain traction worldwide, it is vital to design successful teacher development models. The study's authors emphasize the relevance of

professional competence, lesson adaptability, and structural support in determining how to teach effectively and produce favorable student outcomes.

How effective the teacher is and how well the lessons work

According to various studies, simply understanding how to do your job is insufficient to be an effective teacher. It also requires the ability to teach and adjust in response to changing conditions (Bacus et al., 2024; Bayo Jr. & Doronio, 2025) with both looking at how TPACK (technology, platform, and content knowledge) might be merged. Alda et al. (2025) and Lacaza & Dioso (2025) look into how leaders' behaviors and company support affect job growth and enjoyment at work. According to Reyes and Oropa (2025), monitoring schools is a great way to help instructors and students improve their performance. Teachers' IT abilities are becoming more vital. Fernández-Batanero et al. (2022) and Simpal and Robles (2024) measure instructors' readiness and capacity to employ technology. Combining video lessons with classroom education can help pupils in the twenty-first century (Acedo & Robles, 2019). It could be used to boost education and job growth in an accessible way (Rakhaman et al., 2025).

Several approaches for teaching and supporting children in learning

According to Abdullah et al. (2024) and Thornhill-Miller et al. (2023), the way we educate must change to reflect how people learn and the skills needed in the twenty-first century, such as the capacity to communicate, collaborate, and think critically. Problems in schools and various teaching approaches influence children's interest and capacity to learn, especially in grades K-12. Both Bongabong and Doronio (2025) and Galaura and Simpal (2025) look into this. Recent qualitative research elucidates how Filipino educators adeptly manage evolving professional demands with resilience, adaptation, and a profound sense of purpose. Honculada and Naparan (2020) found that GURO21 graduates place a high value on professional development that is relevant to the classroom and based on real-world situations. This shows how important peer cooperation, reflective practice, and localized support systems are for maintaining the quality of instruction. This underscores the imperative of developing programs that meet both national standards and the specific needs of the community. Monloy and Espacio (2025) showed that social studies teachers learn how to teach through culturally based methods of infusion, diffusion, and acculturation. This means that they change how they teach based on their own school settings and life experiences. Their findings indicate the necessity for flexible training approaches that honor educators' autonomy and address community requirements. Barbarona-Gudelosao and Escote (2025) investigated the emotional and logistical challenges teachers have in balancing professional and personal obligations, illustrating that collegial support, intrinsic motivation, and adaptive coping strategies are crucial for sustaining resilience. Along with these results, Juntilla-Amora and Simpal (2025) looked into what it was like for new instructors who were hired under the 2023 recruitment policy. They discovered that a lot of them are driven by service and stability, but they don't always know what is expected of them or how to get started. Their research supports structured introduction, mentorship, and recognition of the unique contributions of novice educators. These studies collectively affirm that effective teacher development must be holistic, encompassing not only instructional needs but also the cultural, emotional, and policy contexts that shape educators' daily experiences.

Strategic Leadership, Inclusive Design, and Equitable Innovation in Education

Recent scholarly research underscores the importance of strategic leadership, inclusive design, and evidence-based innovation in the formulation of effective educational systems. Pedro and Dioso (2025), along with Guiani and Robles (2025), demonstrate that leadership styles and research management directly influence the recruitment, retention, and professional autonomy of educators. This means that giving school directors strategic tools can help make the instruction better and keep the staff stable. Buenafe and Mahistrado (2025) argue that grant programs are still having challenges and that we need clear processes and capacity-building to make sure that everyone has equal access and that the programs last. Cariaga et al. (2024) advocate for culturally responsive education and design thinking as pathways for employment and social impact, especially within marginalized communities. Their research investigates the capacity of ICT innovations to transform rural mathematics education, emphasizing the need of innovative pedagogy in addressing digital disparities. Bernardo et al. (2022) utilize machine learning to classify the global citizenship traits of Filipino students, offering a data-driven framework for examining learners' cognitive, social, and behavioral development. Darling-Hammond et al. (2022) also support personalized, equitable learning environments and call on studies to clarify the processes of human development and learning. These studies collectively contribute to a strategic framework that amalgamates leadership, innovation, and cultural responsiveness, guiding educators to lead the creation of inclusive, future-ready learning ecosystems.

MATERIALS AND METHODS

Study Area

The research was conducted in Region XII, specifically in the SOCCSKSARGEN area of the Philippines. The focus was on the SEAMEO INNOTECH GURO21 Course 1 scholars who are educators in the eight school divisions: Cotabato, General Santos City, Kidapawan, Koronadal, Sarangani, South Cotabato, Sultan Kudarat, and Tacurong. The divisions represent a diverse educational landscape, providing a crucial context for examining professional competence and teaching performance across the region.

Sampling Design

The study concentrated on the SEAMEO INNOTECH GURO21 Course 1 scholars from the eight divisions of Region XII. From the school years 2012 to 2018, a total of 4,489 students finished the course, and a sample of 354 was selected using proportionate stratified random sampling. The selection process involved the Human Resource Departments from each Schools Division Office (SDO), ensuring that all divisions were represented fairly. Respondents were included in the study if they met these criteria: they had to have a minimum of three years of teaching experience, be certified GURO21 Course 1 scholars, and be actively employed during the 2023–2024 school year. Cochran's formula was applied to calculate the sample size.

Research Instrument

A structured survey questionnaire, which was adapted and modified from previously validated tools, was employed for data collection. Part I of the instrument included twenty items based on Rodgers' (2016) framework that assessed professional competence across five key domains: communication, cognition, personal effectiveness, occupational skills, and interpersonal relationships. In Part II, we evaluated teaching performance with 12 items taken from the RPMS Self-Assessment Tool for Teachers, focusing on aspects like content knowledge and pedagogy, learning environment and learner diversity, curriculum and planning, and assessment and reporting. To guarantee its validity, the questionnaire was reviewed by specialists from the Department of Education (DepEd) and the Commission on Higher Education (CHED), adhering to the validation protocol set by Robles (2019). Adjustments were made based on the guidance of experts. The reliability test, which yielded a Cronbach's alpha of 0.96, demonstrates that there is excellent internal consistency. The two parts of the questionnaire used a 5-point Likert scale, with responses ranging from "Never" (1) to "Always" (5), and had clear descriptors to guarantee consistent interpretation.

Data Analysis

Quantitative data analysis was conducted with a significance level set at 0.05. Descriptive statistics, such as frequency counts, weighted means, and standard deviations, were used to evaluate the levels of professional competence and teaching performance across the specified domains. To evaluate the differences in professional competence among divisions, a One-Way Analysis of Variance (ANOVA) was employed since the data met the normality assumptions, as confirmed by the Kolmogorov-Smirnov test. The nonparametric Kruskal-Wallis test was used to assess whether there were significant differences in teaching performance among divisions, since it did not meet the normality assumptions.

RESULTS AND DISCUSSION

Table 1. The Level of Professional Competence of SEAMEO INNOTECH GURO21 Course 1 Scholars

Indicators	WM	SD	Description
Communication	4.46	0.62	High
Cognition	4.39	0.62	High
Personal Effectiveness	4.47	0.59	High
Occupational	4.37	0.62	High
Interpersonal	4.53	0.57	Very High
OVERALL MEAN	**4.44**	**0.60**	**High**

Legend: 4.50 – 5.00 Very High, 3.50 – 4.49 High, 2.50 – 3.49 Moderate,1.50 – 2.49 Less, 1.00 – 1.49 Least

Table 1 shows the level of professional competence of SEAMEO INNOTECH GURO21 Course 1 Scholars across various domains, including communication, cognition, personal effectiveness, occupational skills, and interpersonal skills. Each indicator reflects the scholars' proficiency in key competencies essential for success in professional settings.

Region XII scholars who took the SEAMEO INNOTECH GURO21 Course 1 exhibited a consistently high level of professional competence in all areas. Their interpersonal skills were the best (M = 4.53). This finding emphasizes the importance of relational capacity in educational settings, especially for fostering cooperation, diversity, and shared leadership. Thornhill-Miller et al. (2023) assert that the fundamental elements of education and employment in the 21st century are interpersonal communication and teamwork, underscoring the significance of these competencies in dynamic learning contexts.

The high ratings in personal effectiveness (M = 4.47) and communication (M = 4.46) show that scholars are good at handling their duties and having meaningful conversations with stakeholders. These skills are very important for participatory school improvement projects since adaptive leadership and strategic communication are what make change happen. Alda, Boholano, and De Leon-Abao (2025) assert that professional education programs are vital in influencing career progression and self-efficacy, highlighting the significance of GURO21 in cultivating empowered educators.

Cognition (M = 4.39) and occupational competence (M = 4.37), however marginally lower, nonetheless signify robust performance in critical thinking, problem-solving, and professional execution. Fernández-Batanero et al. (2022) assert that cultivating digital competence and cognitive flexibility is essential for educators, especially in contexts shaped by Education 4.0. Simpal and Robles (2024) assert that faculty in Region XII are increasingly cognizant of digital demands; yet, they require ongoing support to transform their preparedness into enduring instructional innovation. These findings indicate that while GURO21 provides foundational competency, continuous mentorship and contextualized support are crucial for enhancing occupational effect.

Table 2. The Level of Teaching Performance of SEAMEO INNOTECH GURO21 Course 1 Scholars

Indicators	**WM**	**SD**	**Description**
Content Knowledge and Pedagogy	4.63	0.52	Very High
Infrastructure, Learning Environment, and Diversity of Learners	4.57	0.57	Very High
Curriculum and Planning	4.54	0.59	Very High
Assessment and Reporting	4.62	0.52	Very High
OVERALL MEAN	**4.59**	**0.55**	**Very High**

Legend: 4.50 – 5.00 Very High, 3.50 – 4.49 High, 2.50 – 3.49 Moderate,1.50 – 2.49 Less, 1.00 – 1.49 Leas

Table 2 shows the level of teaching performance of SEAMEO INNOTECH GURO21 Course 1 Scholars across various domains, including content knowledge and pedagogy, infrastructure, learning environment, and diversity of learners, curriculum and planning, and assessment and reporting. These indicators collectively assess the Pedagogy exhibited the highest mean score of 4.63 (SD = 0.52), indicating the scholars' proficiency in integrating content knowledge with effective pedagogical practices, categorized as very high. This suggests their ability to deliver instruction that is both comprehensive and engaging, ensuring that students receive high-quality learning experiences aligned with curriculum standards.

The ratings for all parts of teaching performance were very high. Content knowledge and pedagogy (M = 4.63) and assessment and reporting (M = 4.62) were the two highest. This means that scholars have the theoretical knowledge and practical tools they need to teach well. Abdullah et al. (2024) found that the way teachers teach and test students has a big effect on how engaged they are in school. This shows that teachers need to be consistent in their techniques and use data to inform their teaching. The learning environment and diversity of learners (M = 4.57) obtained a high rating, which demonstrates that scholars are good at making places that are welcoming to all kinds of students. Bongabong and Doronio (2025) assert that the integration of teaching approaches with contextual assistance is essential for forecasting student interest and engagement, especially in disciplines such as mathematics, where motivation frequently wanes. Darling-Hammond et al. (2022) assert the necessity of establishing learning settings that honor developmental science and justice, aligning with the capabilities demonstrated by GURO21 scholars. Curriculum and planning (M = 4.54), albeit the lowest of the domains, still obtained a very high rating. This suggests that although scholars are capable of formulating coherent instructional plans, they may gain from collaborative planning frameworks and the adaptation of resources to specific local circumstances. Honculada and Naparan's (2020) study found that GURO21 graduates enjoy learning experiences that are relevant to their lives. This means that curriculum design should be adaptable to the needs of the community. Acedo and Robles (2019) recommend incorporating multimedia tools to enhance

planning and implementation, especially in rural and underserved areas.

Table 3. Difference in the Professional Competence of SEAMEO INNOTECH GURO21 Course 1 Scholars across Divisions in Region XII

Indicators	Mean	*F*-value	*p*-value	Remark
Communication	4.46			
Cognition	4.39			Not
Personal Effectiveness	4.47	1.6479	0.1210	Significant
Occupational	4.37			
Interpersonal	4.53			
Overall Mean	**4.44**			

**Tested at 0.05 level of significance (ANOVA)*

Table 3 presents the difference in the professional competence of SEAMEO INNOTECH GURO21 Course 1 Scholars across divisions in Region XII, focusing on various indicators such as communication, cognition, personal effectiveness, occupational competence, and interpersonal skills. The mean scores range from 4.37 to 4.53, indicating consistently very high levels of professional competence across various domains.

The statistical analyses indicated no significant differences in professional competency ($p = 0.1210$) or teaching performance ($p = 0.267$) across the eight divisions in Region XII. The consistent results across many areas and institutions suggest that GURO21 has been implemented uniformly, resulting in comparable effects universally. Reyes and Oropa (2025) say that instructional supervision is very important for making sure that quality is the same in all situations. Lacaza and Dioso (2025) say that how leaders act influences how happy and productive teachers are. This means that GURO21 is meant to be scalable and adaptable, which means it can help people do their best in a variety of settings. Guiani and Robles (2025) assert the necessity for contextualized policy suggestions derived from assessments of teacher competencies, highlighting the significance of sustaining and expanding projects such as GURO21. Pedro and Dioso (2025) assert that leadership style profoundly impacts retention, advocating for the integration of professional growth with supportive leadership to attain optimal long-term outcomes.

Table 4. Difference in the Teaching Performance of SEAMEO INNOTECH GURO21 Course 1 Scholars across Divisions in Region XII

Indicators	Mean	*H*-value	*p*-value	Remark
Content Knowledge and Pedagogy	4.63			
Infrastructure, Learning Environment, and Diversity of Learners	4.57	8.80	0.267	Not Significant
Curriculum and Planning	4.54			
Assessment and Reporting	4.62			
Overall Mean	**4.59**			

**Tested at 0.05 level of significance (Kruskal-Wallis Test)*

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Table 4 shows the difference in the teaching performance of SEAMEO INNOTECH GURO21 Course 1 Scholars across divisions in Region XII. It assesses various indicators, including content knowledge and pedagogy, infrastructure, learning environment, and diversity of learners, as well as curriculum and planning, and assessment and reporting.

This study validates that structured, contextually relevant professional development—such as GURO21—significantly enhances educators' proficiency and effectiveness. Bacus et al. (2024) assert that the efficacy of novice educators is contingent upon specific interventions that augment their pedagogical and adaptive competencies. The lived experiences documented by Barbarona-Gudelosao and Escote (2025) highlight the importance of work-life balance and emotional resilience, suggesting that future iterations of GURO21 may integrate wellness and reflective practice components. Education 4.0 has come along, but being ready for digital technology is still very important. The research of Rahaman et al. (2025) demonstrates the transformative potential of MOOCs in educational systems, while Cariaga, Pospos, and Dagunan (2024) present evidence that ICT tools and innovative methodologies can enhance numeracy education in rural areas. These insights show that GURO21 needs to change with new technology and ways of teaching. This means that teachers need to be flexible and quick to

respond.

Finally, the study by Bernardo et al. (2022) on global citizenship competencies for Filipino learners underscores the imperative of educating educators through developmental programs to foster civic, ethical, and intercultural knowledge. Cariaga and El Halaissi (2024) support culturally responsive education that links employability and social impact—an idea that GURO21 can represent and improve.

Conclusion and Recommendations

This study confirms the usefulness of the SEAMEO INNOTECH GURO21 Course 1 in enhancing the professional competence and instructional efficacy of educators in Region XII. Scholars consistently demonstrate remarkable proficiency in communication, cognition, personal effectiveness, occupational skills, and interpersonal interactions, with interpersonal and personal effectiveness recognized as significant strengths. They also got very high scores for their teaching in all areas, but especially for their knowledge of the material, their methods, and their testing methods. The program delivers everyone the identical outcomes, no matter where they work or what they do, because there aren't many big differences between divisions. These findings demonstrate that GURO21 is both a catalyst for individual development and a scalable framework for systemic enhancement. This means that teachers can confidently, adaptively, and professionally meet the expanding needs of 21st-century education.

The Department of Education should keep supporting and developing GURO21 across the country so that everyone has equitable access to and usage of advanced ICT and new ways of teaching. This would help keep the program's influence going and growing. To keep the program up to date and of high quality, regional offices should put up procedures for ongoing monitoring and feedback. These platforms should also make it easier for divisions to work together and share best practices. School leaders should aggressively encourage teachers to get involved, offer mentorship assistance, and create an environment where everyone is always learning. Teachers should also think of professional development as something they will do for the rest of their lives. They should use technology, engage with other teachers, and think about their own teaching to get better at it. Lastly, future studies might want to find out how the program can be used in different types of schools and what would impede it from being employed. This could help make professional development models that are available to everyone, flexible, and life-changing.

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Conflict of Interest

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