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Skills and Roles of Teachers in 21st Century Teaching: Basis for Professional Development Plan

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Abstract. Enhancing teachers' and students' 21st-century skills is a valuable goal. This study explores the skills and roles of teachers in 21st-century education across three community colleges: Opol, Tagoloan, and Salay, during the 2023-2024 academic year. The research investigates the relationship between teachers' skills and their roles in modern education and examines differences based on the respondents' profiles. The study involved 255 teachers from local government-run colleges in Misamis Oriental, using a validated questionnaire and a mixed-methods descriptive approach. Statistical analyses included mean, standard deviation, ANOVA, and correlation tests. The results revealed that most participants held units in master's degrees, with communication skills rated highest. The role of facilitator emerged as the most prominent in 21st-century teaching. Notably, creative thinking, critical thinking, collaboration, and communication skills significantly correlated with teachers' roles. Characteristics such as age and position also influenced their skills and roles. The study emphasized Deci and Ryan's theory, Vygotsky's zone of proximal development, and ICT integration to address the complexity of modern teaching. In conclusion, community college teachers are eager to adopt 21st-century teaching skills. It is recommended to encourage faculty to complete graduate studies, model critical thinking, recognize teachers' efforts, create engaging environments, retrain senior teachers, and support their well-being through seminars and workshops.

Keywords: skills, roles, 21st century, community college

Introduction

Enhancing teacher and student abilities for the modern era is not a new concept. As our global economy increasingly values knowledge, there is a growing need for skilled college graduates. Teachers and students must be prepared for this, and businesses are seeking graduates who can readily apply these skills. According to the Organization for Economic Cooperation and Development, a 20-point difference in test scores is equivalent to being a year behind in school. Today's teachers need to emphasize teaching thinking skills and move from mere understanding of the subjects to effectively using technology. Employers believe that merely being able to learn and read may not suffice for students now. Skills such as being proactive, efficient, adaptable, good with people, and capable of leadership are also crucial.

Tribble (2023) highlights that employers look for a broad set of thinking skills in their staff, such as creativity and the ability to learn independently. Teachers face the challenge of nurturing these skills in students. Jain et al. (2023) affirm that the global education community supports teaching methods that encourage students to learn independently, as this can better prepare them for workplace demands. However, it appears that students in community colleges in the Philippines were not ready for this approach or strategies for learning from community colleges in remote areas, as most of them are still more attached to or exposed to traditional methods.

The researcher experienced teaching in community colleges and handled sections with students who were Alternative Learning System (ALS) graduates. The researcher found that these ALS graduates need more time to develop their comprehension and numeracy skills. ALS graduates were allowed to study at community colleges as lifelong learners for one year before being admitted as freshmen. In light of this, the researcher in this paper finds it challenging to

handle this type of class. Mamba et al. (2021) found that ALS graduates face challenges with college-level studies due to poor study habits and a lack of readiness. The results revealed that the ALS graduates have an unfavorable study orientation and are not college-ready. The study orientation was found to significantly influence and predict college readiness. Thus, their research concludes that a student's study habit is closely linked to their preparedness for college and can predict their success. Additionally, the findings imply the need for ALS graduates to enhance their study habits and attitudes, as there are essential skills for improving their college readiness. Furthermore, combining good study practices with strong thinking skills is crucial for students to thrive in higher education.

Consequently, the curriculum of ALS students should be strengthened to ensure their seamless transition from basic to tertiary education. The study by Mamba et al. (2021) reveals that out of the 143 respondents in Northeastern Luzon community colleges, 119 (83.20 %) are not prepared college students and 24 (16.80%) are college-ready students. In many public colleges, the uneven student-teacher ratio has become a challenge that teachers are currently facing. This has underscored the need for schools to utilize digital systems to manage learning. Leading educators suggest that colleges should have digital platforms to help students become more engaged and support both traditional and independent learning styles.

Initially, online learning posed a challenge for students, requiring more self-motivation and concentration than face-to-face classes. Teachers had to become tech-savvy to effectively engage students in live online sessions. Even as in-person classes resume, the importance of technology in education continues to grow. In the 21st century, teachers in community colleges play a vital role in preparing students for a rapidly evolving world. They possess a diverse set of skills beyond traditional teaching methods, including technological proficiency, adaptability to changing educational landscapes, and a strong commitment to student success. Their roles extend beyond the classroom as mentors and guides, fostering critical thinking, creativity, and practical skills necessary for today’s workforce.

Additionally, teachers must be well-trained in both acquiring and teaching these skills. Pursuing a master's or doctoral degree can provide teachers with the necessary expertise and knowledge. Moreover, encouraging community college teachers to attend seminars focused on 21st-century skills can further enhance teachers' abilities to engage students and facilitate modern learning experiences by incorporating ICT into their teaching processes. In the current era, it is crucial to enhance the abilities of both teachers and students to meet the demands of a rapidly evolving world. The global economy places a high value on knowledge, creating an imperative for skilled college graduates. To meet this demand, teachers and students must be well-prepared, and businesses are seeking graduates who can readily apply these skills.

Literature Review

Skills in 21st Century

The workplace and the learners demanded that the students develop 21st century-skills to succeed in the 21st century. Ama et al. (2020) state that teachers must adapt to impart these skills effectively. It is crucial for students to think and operate creatively in the digital and non-digital worlds to come up with original solutions. In this era, a solid education alone is insufficient for success in college, workplaces, and as productive citizens (Limna et al., 2022).

Mopara et al. (2023) emphasize that knowledge is essential for success. Students' innate problem-solving abilities can be greatly enhanced with appropriate learning engagement. Furthermore, teachers need to be digital to produce digital students, guiding them to enhance their learning experiences with digital tools. Government policies need to align with society's behavior, focusing on creating peaceful, productive global citizens with 21st-century abilities. The Philippines is addressing the poor quality and unequal access to education through tuition-

free state universities and colleges and later including the local community universities and colleges under Republic Act 10931. It is essential to integrate skills with knowledge and conceptual comprehension for successful education. The curriculum for 21st-century and innovation skills is necessary to prepare students for modern society, ensuring they become proficient communicators, creators, critical thinkers, and collaborators (Sohaya, 2020).

Also, Buckle (2023) from Panorama Education highlights the crucial role of soft skills for success in the workplace. Students need diverse abilities to excel in unpredictable situations and in forthcoming job roles. For example, technological advancements are predicted to change the job landscape, and students need the skills to adapt to these changes.

Creative Skills

Students' ability to synthesize, analyze, combine, or convey what they have learned in novel and creative ways to solve complex issues or tasks is known as creativity. Generating original ideas is also a form of creative thinking, which is why proficiency in all academic areas is essential for students. Creative thought, often associated with right brain activity, is a crucial skill for the 21st century (Ama et al., 2020). The idea of creativity is further exemplified by the need for teachers to utilize technology, such as gadgets, and to be innovative in expediting administrative responsibilities (Limna et al., 2022).

Thinking outside the box is a key component of creative thinking, representing an expanded, unrestricted creation and discovery of possibilities (Ama et al., 2020). Being inventive and providing a fresh perspective on an issue are integral aspects of creative thinking. This skill involves a novel approach that explores the impact of blended learning on students' general weighted average (GWA) and 21st-century skills when applied in a course setting from a cultural perspective. Students expressed satisfaction, and their grades improved as a result of their creative concept exploration. Therefore, creative learning significantly impacts student performance and happiness. Furthermore, students must think creatively to succeed in all areas of their academic studies. Consequently, creativity is identified as a crucial component of the worldwide trend and one of the 21st-century skills associated with 21st-century education.

Critical Thinking

Teachers play a crucial role in fostering critical thinking skills among students. According to Vincent-Lancrin (2023), teachers can begin by explaining why critical thinking is essential particularly in today's innovative and digital world. This understanding helps students appreciate the relevance of these skills in both democracy and the economy. Moreover, providing a clear definition of critical thinking is vital. Teachers can break down the concept into simpler terms, making it more accessible for students. This clarity helps students grasp what is expected of them when engaging in critical thinking activities. Regular formative assessments allow teachers to gauge students' critical thinking progress. By providing ongoing feedback, teachers can help students identify areas for improvement and encourage them to reflect on their thinking processes.

According to Supena et al. (2021), aside from a liberating force in education, critical thinking is also an important skill for both personal and public life. The goal of the process of critical thinking is to help people make informed decisions regarding their beliefs and actions. It is higher-order thinking skill stage. It goes without saying that critical thinking and education are linked because good thinking is necessary for learning. Therefore it is expected of teachers to consistently include HOTS in Bloom's Taxonomy into their lessons in order to improve their student's critical thinking skills.

Collaboration

Collaborative participation is essential for successful change. Collaboration is recognized as a necessary skill to produce significant and beneficial results since it involves putting talent, skills, and intelligence to work toward a common objective (Chiruguru, 2020). Cabahug et al. (2024), suggest that collaborative teaching can be seen to attain improved teaching outcomes due to its peer-reviewed and monitored nature. It is designed to provide a broader approach to materialize the implementation of the various disciplinary perspectives to the curriculum. Hence, collaborative teaching challenges conventional instructional delivery methods by leveraging combined efforts to address common goals or issues. This implies that a team effort enhances teachers' performance and students' learning ability.

According to Vidyarthi (2024), teachers who implement collaborative learning strategies transition from being traditional information transmitters to facilitators or mentors. They design academic programs that support student-led learning, guiding students through the learning process rather than directing. Moreover, the shift towards collaborative teaching necessitates a change from a teacher-centered approach to a student-centered paradigm. This change allows teachers to focus more on a student engagement and exploration which can lead to more effective teaching practices. Finally, engaging in collaborative teaching can also enhance teachers' professional skills. Teachers can learn from each other by working with colleagues sharing strategies and improving their instructional methods.

The most crucial problem of the quality of education at this time is the students' learning outcomes, especially collaboration thinking skills (Amalia, 2018). Instead of only learning things in a classroom, students can retain what they learn when they work with a peer. Constructivism, collaboration, and a supportive learning atmosphere are present. Investigating novel concepts and innovative methods to complete a task is pivotal for students acquire a deeper comprehension and memorization of important abilities.

Communication

Sharing ideas, concerns, answers, and opinions is the essence of communication. In the growing service industry, where connections with clients and coworkers are crucial, effective communication skills are especially important. Effective communication, empathy, and listening skills are crucial for everyone working in the service economy, regardless of language or cultural background (Chiruguru, 2020). A fundamental communication skill is body language, verbal and oral communication, listening comprehension, and technology. As social creatures, this information becomes essential to how all humans can effectively communicate with one another.

Eadie (2019) provides a comprehensive exploration of communication theory and practice within the contemporary context. The author asserts that interpersonal communication is now more dynamic and involves the exchange of information, feelings, and meaning between individuals. It explores various aspects of interpersonal communication, such as verbal and nonverbal cues, active listening, empathy, and relationship development. In addition, the emergence of digital technology such as social media and other digital platforms has influenced interpersonal communication patterns in the 21st century, including the challenges and opportunities they present.

Even though communication skills are crucial, it can be challenging to distinguish them from other Cs, like collaboration. According to the 21st Century Skills Framework, collaboration skills like working well in diverse teams, accepting shared responsibility for collaborative work, and reaching necessary compromises to achieve a shared goal are closely tied to communication competencies like clearly articulating ideas through speaking and writing. Hence, effective communication requires that the message be heard and comprehended. Chiruguru (2020) asserts that research supports the significance and

relationship between cooperation and communication. Professor Carol Seefeldt discovered that "social skills and communication skills go hand in hand" in her work with young children. Children who create and maintain friends with ease are those who pay attention to the other child when they speak, who recognize the importance of taking turns when conversing, and who are skilled at resolving verbal disputes.

According to Celik et al. (2023), it is interesting to note that while the course had a significant impact on the empathic tendencies of preservice teachers, it did not significantly improve their communication skills. This suggests that while student engagement can enhance certain interpersonal aspects, it may not be sufficient alone to develop all the desired professional skills. Furthermore, a study by Wangdi et al. (2022) suggests that teacher training institutions should consider integrating courses that enhance communication skills for teachers. It also emphasizes the need to provide professional development programs to in-service teachers to improve this crucial soft skill.

Roles of Teachers in 21st-Century Teaching

In the 21st century, teachers have a complex and demanding role. They are expected to prepare students for future challenges and the needs of future employers. According to Djoub (2023), teachers fulfill several essential roles in a high-performing classroom, including facilitator, mentor, curator, advocate, and lifelong learner. These roles create a dynamic learning environment where students are not just informed but transformed, emphasizing the shift from passive reception of knowledge to active construction of understanding.

Gumus (2022) discusses critical aspects of teacher education and professional development in today's rapidly evolving landscape, offering recommendations such as holistic goals, mobility and compensation, professional development, curriculum and resources, and support and mentorship. These recommendations aim to equip teachers to handle modern educational challenges and prepare learners for the future, emphasizing continuous learning and adaptation. The study emphasizes the relevance of using TIPPS for teacher feedback, reflective practice, and continuous improvement to enhance teacher skills aligned with 21st-century standards, contextualize teaching practices, and support meaningful professional development. Using context-specific tools like TIPPS addresses the challenges of teacher professional development and improves education quality, helping teachers create an environment that nurtures 21st-century learners.

Implementing these recommendations requires collaborative efforts from educational institutions, policymakers, and teachers themselves to enhance the quality of education and prospects for future generations. Kim et al. (2019) highlight the importance of developing competencies for 21st-century skills to improve instructional quality and prepare students for the future. They introduce the Teacher Instructional Practices and Processes System as a valuable tool for measuring and enhancing the social quality of teaching processes. TIPPS is designed as a research instrument and practical feedback tool, focusing on classroom interactions and the psychosocial development of students, with global adaptability shown in countries like Uganda, India, and Ghana.

Facilitator

Students need to be able to effectively address complex issues (Ama et al., 2020). As society advances, conflicts will become more intricate and varied. Teachers play a crucial role as facilitators, equipping students with the necessary skills to navigate the demands of a complex society. Competent and compassionate educators guiding the use of technology can enhance learning experiences but should not replace in-person interactions (Seward et al., 2019). Customization is essential for educational technology tools to meet each student's unique needs and interests, fostering motivation and engagement through personalized learning

experiences that empower students and make education more relevant to them. Educational technology tools also facilitate communication and collaboration among students through virtual classrooms, group projects, and online discussions, promoting meaningful interactions, knowledge exchange, and a sense of community, leading to increased participation and engagement in the learning process. However, teachers can only provide excellent facilitation to students if they are trained on how to facilitate properly with their peers first.

The study of Khaludorova (2022) relies on the methods of questioning, conversations, and asking oneself questions. The conclusion emphasizes facilitation as the process of training teachers to improve their professional skills, rethink their role in a constantly changing environment, and build their interaction following the principles of cooperation (trust, empathy, mutual understanding, and acceptance of others). Facilitators can bridge the gap between classroom instruction and real-world applications by using virtual field trips, simulations, and practical problem-solving exercises to help students see the practical implications of their learning and encourage greater motivation and engagement.

In addition, facilitators can provide timely feedback to help students track their progress, make necessary adjustments, and take ownership of their education, fostering active participation in the learning process and promoting personal growth and development. Furthermore, facilitators also play a key role in creating engaging and memorable educational experiences, enabling students to acquire relevant knowledge and skills through active participation in class. Overall, the facilitator's role in leveraging educational technology tools in learning environments encourages multimodal experiences, real-world connections, active learning, and collaboration, creating dynamic and supportive learning environments that foster student growth and achievement.

Motivator

Being a motivator for students is like being a leader in the classroom. The leadership position of an educational institution is defined by every aspect of the school's management. Therefore, leadership involves initiating, planning, inspiring, and guiding followers' actions in specific circumstances to achieve common objectives. Maintaining discipline and the moral and spiritual atmosphere of the school are two aspects that require a focus on leadership quality (Morales, 2022).

According to Quiño et al.'s (2021) study, teachers should prioritize student-teacher contact as mentors and/or informal advisors through technology especially in person by inviting students to visit their office during non-consultation hours, which is crucial for student motivation and engagement. This suggests that emotionally invested students are more motivated and engaged in learning. To engage students and make learning more enjoyable, a motivator should offer immersive and engaging experiences. This emotional connection helps improve students' participation in education and overall engagement. Properly motivated students show immediate emotional engagement, which can enhance their memory and understanding of the material. Students can learn more when motivated and emotionally invested in their studies. To effectively motivate students, teachers should use gamification, multimedia, and personalized learning experiences that evoke strong emotions and improve retention.

Additionally, Beboso (2022) asserts that students' desire to demonstrate their skills to friends, family, and others drives them extrinsically. Their fear of punishment from parents and teachers and their desire for rewards rather than being internally motivated to learn are proofs of their dedication. To ensure continuous, high-quality learning, public schools or community colleges should encourage their students both internally and externally.

Life-long Learner

A teacher can teach well by learning, and learn well by teaching. The primary verb learn, which implies acquiring information or skills in a new subject or activity, is where the word learner originates. A person who is still learning something is referred to as a learner. The act of gaining knowledge is referred to as learning. The processes of teaching and learning are intrinsically intertwined. Instructors are lifelong learners. First and foremost, an excellent teacher ought to be a good student. A teacher who is skilled in the art of teaching can help his or her students develop the same skills. A teacher with this quality will naturally be motivated, and motivation is the foundation of all learning.

According to Ye et al. (2022), lifelong learning represents the capability of people to continually acquire new skills or novel knowledge from a sequence of tasks while also maintaining their performance on previously learned tasks. This implies that when presented with a new task, humans would use their previously learned experience to understand it. And the more related two tasks are, the easier it is to learn them one after the other.

One of the most fundamental requirements for a teacher is to be an effective learner (Gumus, 2022). Students must have this to learn, be creative, and be receptive to growth and change. To help students adjust to areas of change like the previously mentioned sifting social life, new student profiles, changing educational environments, and sifting economic order, teachers must improve their teaching practices, keep an eye on innovations in their field, and share these innovations with their students in an effective manner.

Statement of the Problem

The study aims to determine the skills of 21st century and the role of teachers in 21st century teaching at Opol Community College, Tagoloan Community College, and Salay Community College for the School Year 2023-2024. Particularly, this paper sought to answer the following questions:

1. What is the respondents' profile in terms of age, highest educational attainment, position, and teaching experience?
2. How do the respondents assess their 21st century skills considering the following creative skills, critical thinking skills, collaboration skills, and communication skills?
3. How do the respondents assess the roles of teachers in 21st century teaching based on facilitator, motivator, and life-long learner?
4. Is there a significant relationship between skills in the 21st century and the roles of teachers in 21st century teaching concerning facilitator, motivator, and life-long learner?
5. Is there a significant difference between skills in the 21st century and the roles of teachers in 21st century teaching when grouped according to age, highest educational attainment, position, and teaching experience?
6. Based on the findings, what professional development plan on the skills of teachers in 21st century teaching in the classroom setting can be designed

Theoretical Framework

The Partnership for 21st Century Skills (P21) is a coalition of educators, business leaders, and policymakers advocating for the integration of 21st-century skills into education. Their framework identifies four key skill areas: collaboration, critical thinking, communication, and creativity. P21 emphasizes the need for these skills to prepare students for success in the global workforce. On the other hand, UNESCO's four pillars of learning—learning to know, learning to do, learning to be, and learning to live together—align with 21st-century skills such as critical thinking, problem-solving, adaptability, and cultural competence. UNESCO emphasizes the importance of these skills in fostering sustainable development and global citizenship.

Vygotsky's zone of proximal development theory implies that learning through interaction with a more knowledgeable other is more effective than independent learning. In the context of the study, having the teacher model 21st-century skills such as critical thinking and the role of a teacher as a facilitator are paramount for the success of students in the workplace. Additionally, Bloom's Taxonomy is a hierarchical framework that classifies different levels of cognitive skills. In the 21st century, the focus has shifted from lower-order thinking skills to higher-order thinking skills, reflecting the need for students to develop critical thinking, problem-solving skills, and creativity.

Manninen et al. (2022) emphasized Deci and Ryan's self-determination theory, which claims that motivation results from a person's need to meet three fundamental psychological demands, one of which is competence. Furthermore, SDT posits that individuals have innate psychological needs such as autonomy, competence, and relatedness, and when these needs are fulfilled, individuals are more likely to experience intrinsic motivation and engagement in their activities. In the context of the study, teachers' 21st-century skills can be seen as fulfilling the need for competence.

Additionally, SDT emphasizes the importance of autonomy and relatedness, which can be fostered through opportunities for peer support, mentorship, and collaboration, ultimately promoting more fulfilling and meaningful teaching in the 21st century. Lastly, Kopceva (2023) suggests that centering on efficacious learning methodologies for contemporary learners in the 21st century. This introduces a framework that amalgamates diverse educational methodologies, such as digital learning, inquiry-based learning, cooperative learning, and social and emotional learning, to facilitate the acquisition of essential skills by individuals in the 21st century. In the context of this study, the teacher's skills and roles in 21st-century teaching can be seen as fulfilling the amalgamation of diverse educational methodologies.

These theories and frameworks provide a theoretical basis for the inclusion of 21st-century skills in global education, highlighting the need for students to develop skills beyond traditional academic knowledge to prepare them for the demands of the modern world.

Scope and Limitations

This study involved full-time and part-time instructors from Opol Community College, Tagoloan Community College, and Salay Community College in Misamis Oriental Region 10. The research aimed to comprehensively represent the teaching population at these institutions. The scope of the study included an examination of the skills and roles of teachers in 21st-century teaching for the School Year 2023-2024. It focused on analyzing the current state of teachers' 21st-century skills, such as creative, critical thinking, collaboration, and communication skills. The research also aims to propose a professional development plan to enhance the roles of teachers based on the development made as a result of implementing 21st-century skills.

Methodology

Research Design

The study utilized a descriptive research design, which is a powerful tool for gathering information about a specific group or phenomenon. Therefore, the research question for this study needed to be clear and specific. The study used a combination of questionnaires and focus group discussions to collect data, which is a decisive method of quantitative research. According to Vieira et al. (2020), this technique is used to test hypotheses and explain functions or qualities. The investigation focused on 21st-century skills and the roles of teachers in 21st-century teaching, using a descriptive approach. This helped in developing a deeper

understanding of the issue and provided insightful information for future studies (Sirisilla, 2023).

The results accurately represented the situation as expected using this method. Data was collected, collated, and computed for this investigation. Data analysis and interpretation were required to determine the consequences of the findings. The variables tested the teacher-respondents' characteristics and their proficiency in 21st-century learning skills. A focus group discussion was conducted to supplement the data obtained from the survey.

Study Setting

On February 13, 2018, the Commission on Higher Education (CHED) approved the inclusion of seventy-eight (78) local universities and colleges (LUCs) in the list of institutions eligible to offer free tuition and other school fees under the Universal Access to Quality Tertiary Education Act of 2017, also known as RA 10931. Opol Community College, Tagoloan Community College, and Salay Community College, were founded by local government entities and are committed to promoting 21st-century skills and the role of teachers. They regularly conduct an annual conference to facilitate knowledge exchange, celebrate pedagogical accomplishments, and inspire teachers to engage in scholarly activities. The annual in-service training in every tertiary-level school underscores CHED Region 10's commitment to pedagogical excellence and the professional development of its educators. It is essential for fostering a culture of 21st-century skills and the roles of teachers in 21st-century teaching, aligning with the broader goal of enhancing educational quality in the region.

Moreover, the selected schools, funded by the national government through UNIFAST and managed by local government units such as Opol Community College, Tagoloan Community College, and Salay Community College, served as research settings for studying skills and the roles of teachers in 21st-century teaching. The researcher purposely selected Opol Community College, Tagoloan Community College, and Salay Community College within Misamis Oriental Region 10 of Northern Mindanao because they have a large population of ALS graduates. Therefore, there is a greater need for the implementation of 21st-century skills with the help of different roles in 21st-century teaching.

The research aims to assess and enhance teachers' skills and their roles, considering factors like professional development opportunities, available resources, and support from school administrators and the CHED regional office. This research is significant, as its findings have the potential to not only improve local education quality but also inform education policies and practices at the national level.

Study Population and Sampling Technique

The study surveyed two-hundred fifty-five (255) teachers from Opol Community College, Tagoloan Community College, and Salay Community College in Misamis Oriental Region 10 of Northern Mindanao. The respondents were selected using stratified sampling, so not all the teachers from these schools were involved in the study for the School Year 2023–2024. Teachers in Misamis Oriental play a crucial role in shaping the quality of education in the region. CHED Region X office has praised the high passing rate of board passers from these tertiary level schools every year. To ensure a comprehensive and meaningful analysis, the study employed a stratified random sampling technique. This approach involves categorizing the study population into distinct strata or subgroups based on relevant criteria such as age, highest educational attainment, position, and teaching experience. Stratification enables the study to account for the diversity present within Misamis Oriental HEIs.

Table A: Distribution of Respondents per School

Name of School	Number of Faculty	Respondents
Opol Community College	120	92
Tagoloan Community College	110	86
Salay Community College	95	77
Total	**325**	**255**

Research Instruments

The research questionnaire was created to gather valuable insights into the skills and roles of teachers in 21st-century teaching and the development of teachers in Opol Community College, Tagoloan Community College, and Salay Community College. The questionnaire was divided into four parts: The first part of the questionnaire covered the respondent's profile, including age, highest educational attainment, position, and teaching experience. The second part focused on 21st-century skills such as creative skills, critical thinking skills, collaboration skills, and communication skills. This researcher-made questionnaire assessed the 21st-century skills of teachers. The third part of the questionnaire was also researcher-made and assessed the roles of teachers in 21st-century teaching. Teachers answered the survey about their roles as conceptualized in Sustainable Goal Number 4 and adapted globally. Specifically, the roles of teachers in the 21st century included being facilitators, motivators, and lifelong learners in response to the demands of employers.

Statistical Treatment of Data

The study utilized descriptive statistics to outline the fundamental characteristics of the data. It also conducted a narrative analysis to identify challenges, gaps, and stakeholder perspectives and propose strategies to enhance the skills and roles of teachers in 21st century teaching. Simple descriptions of the sample and measurements were provided, forming the basis for quantitative data analysis. Respondent distribution was presented using frequency and percentage, while the mean and standard deviation were used to indicate central tendency and data distribution, particularly related to difficulties. To categorize respondents into groups based on specific profiles, analysis of variance (ANOVA) was used to assess the significance of differences in identified problem areas. Additionally, the Pearson Correlation Coefficient (Pearson-r) was employed to evaluate the significance of relationships between 21st-century skills and their roles in 21st-century teaching. These statistical techniques provided a comprehensive analysis of the data, shedding light on key aspects of instructional practices and teaching efficacy within the study's context.

Ethical Consideration

In educational research, ethical considerations are vital to ensuring participant rights and the credibility of the study. Researchers secured informed consent by clearly communicating the study's purpose, methods, and potential risks, respecting participants' autonomy. Confidentiality was maintained through stringent data protection measures, safeguarding participants' privacy, especially regarding sensitive information. Fair treatment was upheld, avoiding discrimination or bias in participant selection and the distribution of research benefits, promoting equity. The principles of beneficence and non-maleficence guided the research, with a focus on maximizing benefits and minimizing harm through careful planning and ongoing monitoring. Transparency and honesty were maintained in reporting methods, funding sources, and conflicts of interest, fostering accountability and research integrity. Finally, the study obtained ethical approval from an Institutional Review Board (IRB) or ethics committee, ensuring adherence to established ethical standards.

Results and Discussion

Problem 1. What is the respondent's profile in terms of age, highest educational attainment, position, and teaching experience?

Table 1: Distribution of Respondents Profile in terms of Age

Age	Frequency	Percent
49 years old and above	3	1
44-48 years old	8	3
39-43 years old	17	7
34-38 years old	40	16
29-33 years old	46	18
24-28 years old	141	55
Total	**255**	**100.00**

Table 1 presents the distributions of the respondents profile in terms of **age.** The highest frequency of **141 (55%)** belonged to the 24 to 28 years old category. This implies a dominance of young faculty engaged in teaching within the institutions. It also indicates that many young people in this age group have recently completed their undergraduate or graduate studies and may already have the necessary qualifications to teach at the higher institution level. Some individuals in this age group are passionate about teaching and see it as a rewarding and fulfilling career path. They may choose to start their teaching career early rather than pursue other opportunities. In some cases, higher institutions may have a demand for young teachers due to factors such as the retirement of older faculty members, increased student enrollment, or the need for fresh perspectives and ideas in the classroom.

According to Sulaiman et al. (2020), age is not a barrier for teachers to apply teaching based on 21st-century skills. Thus, the ability of teachers to absorb elements of 21st-century skills in lessons depends on their effectiveness rather than age factors. However, it cannot be denied that young teachers often bring energy, enthusiasm, and a willingness to adapt to new teaching methods and techniques, which can be beneficial in the rapidly evolving higher education environment. Overall, the decision for young people to work as teachers in higher institutions or at tertiary levels can be influenced by a combination of personal interests, qualifications, opportunities, and career aspirations.

On the other hand, data revealed the lowest frequency of **3 (1%)** of the respondents were **48 years old and older**. This indicates that many teachers may choose to retire or transition to part-time roles as they approach this age, leading to a lower number of teachers aged 48 and above in the workplace. In addition, some teachers may reach senior positions or administrative roles within higher institutions by the time they are in their late 40s or early 50s. This shift in responsibilities may lead them to move away from direct teaching roles, impacting the number of older teachers in traditional classroom settings. Furthermore, higher education institutions may experience turnover among older faculty members due to factors such as changing academic priorities, funding constraints, or institutional restructuring. This turnover can result in a lower proportion of teachers aged 48 and above within the institution.

The research findings of Davidovitch et al. (2020) on the output of academic faculty and measures of excellence in higher education indicate that upon retirement, the academic institution as an organization loses not only the faculty who are still capable of contributing both to research and teaching but rather also to two other important products: valuable knowledge and experience accumulated by senior faculty in the academic system in light of the institution's investment in them. The vast amount of experience and knowledge acquired by the retiring faculty member has distinct value. Even if the faculty does not engage in

research or teaching, the faculty's knowledge and experience can serve the institution by guiding and accompanying new faculty members, membership in committees that require experienced personnel, and technology-based teaching to preserve the knowledge of reputable faculty members.

Table 2: Distribution of Respondents' Profile I terms of Highest Educational Attainment

Highest Educational Attainment	Frequency	Percent
PhD/EdD/DM Holder	5	2
With units in PhD/EdD/DM	32	13
Master's Degree Holder	65	25
With units in Master's Degree	149	58
Baccalaureate Degree	4	2
Total	**255**	**100.00**

Table 2 illustrates the distribution of respondents' profile in terms of **highest educational attainment.** The highest frequency of **149 (58%)** belonged to faculty **with units in a master's degree**. It is evident that many teachers in higher education prioritize gaining practical knowledge and skills directly relevant to their teaching roles. This means that completing individual units or courses within a Master's program can provide them with specific expertise in a particular subject area or teaching methodology without committing to the full program. Pursuing a full Master's degree can be time-consuming and costly, particularly for working professionals with other commitments such as teaching, research, extension, and administrative duties. Opting to take individual units allows teachers to enhance their knowledge and qualifications in a more flexible and manageable way.

Vural et al.'s research in 2021 aimed to understand why instructors enroll in master's degree programs and the challenges they face. According to the author, teachers with master's degrees pursue them for personal development, to advance their academic careers, for professional development, and to gain in-depth knowledge of the field. Teachers who have not yet earned a master's degree aim to become more knowledgeable in their subject while also pursuing academic studies, specializations, and improved performance in their line of work. Economic factors, limited time, interview and language barriers, and institutional reasons all play a role for instructors desiring to pursue a master's degree.

Data revealed that the lowest frequency, 4 (2%) of the respondents, were baccalaureate degree holders. This indicates that newly hired individuals were accepted to teach in community colleges with an assurance or promise that they would pursue a master's degree, pointing to a shortage of teachers in community colleges. In Misamis Oriental, a shortage of teachers is a prevailing issue among higher education institutions, potentially due to the majority of them having children to care for and the affordability of tuition fees in some graduate schools in the city.

The Global Report on Teachers (2024) states that teacher shortages are a global issue, prevalent not only in developing nations but also in high-income regions like Europe and North America. Despite well-resourced education systems, these regions struggle to recruit and retain qualified educators, posing significant challenges to educational quality and equity. In the Philippines, the lack of support from stakeholders, especially government officials, is the dominant reason for teacher shortages in the country. In community colleges, the lack of full-fledged master's degree holders is seen as the number one issue to solve.

Table 3: Distribution of Respondents' Profile in Terms of Position

Position	Frequency	Percent
Assistant Prof III	13	5
Assistant Prof II	64	25
Assistant Prof I	15	6
Instructor III	31	12
Instructor II	56	22
Instructor I	76	30
Total	**255**	**100.00**

Table 3 presents the distribution of respondents' profile in terms of position. The highest frequency of **76 (30%)** belonged to the **Instructor I** category. It is suggested that the majority of teachers are recent graduates who have chosen a career in education. This also means that their youth and energy can greatly influence students' intellectual development. In higher education, teachers play a vital role in guiding students to deepen their understanding, develop critical thinking skills, and become independent learners.

According to Mor Singh et al. (2022), young teachers impact students' intellectual development through curriculum design, classroom teaching skills, pre-class preparation, and post-class summary. On the other hand, data revealed the lowest frequency of 13 (5%) of the respondents were Assistant Professor III. It implies that there is a low number of senior teachers involved in this study, possibly due to administrative duties. Community colleges often have high student-to-teacher ratios, which can be challenging for senior teachers. Yet, empowering school administrators at community colleges to innovate is important. Senior teachers at community colleges play a crucial role in guiding students beyond a single-right-answer mentality and fostering higher-level thinking using experiential teaching approaches. It is essential to have high-quality mentoring by senior faculty in community colleges to improve student development. Ongoing educational experiments involve exploring how mentoring by faculty at Colorado School of Mines impacts students' maturation, emphasizing the need for continuous improvement in teaching methods to enhance students' higher-level thinking skills.

Table 4: **Distribution of Respondents Profile in terms of Teaching Experience**

Teaching Experience	Frequency	Percent
21-25 years	3	1
16-20 years	2	1
11-15 years	20	8
6-10 years	108	42
1-5 years	122	48
Total	**255**	**100.00**

Table 4 presents the distribution of respondents' profile in terms of **teaching experience**. The highest frequency of 122 (48%) had 1 to 5 years of teaching experience. This implies that many new professionals are drawn to teaching at the college level because it offers opportunities for intellectual stimulation, academic freedom, and the chance to have a significant impact on students' lives. Teaching at this level allows professionals to share their

expertise and passion with motivated and engaged students. Additionally, it often provides a more flexible schedule and the opportunity to engage in research and scholarly activities. The autonomy, intellectual challenge, and potential for personal and professional growth make teaching at the college level a rewarding career choice for many professionals.

According to scholars and academicians, teaching experience has an impact on the relationship between teachers and students. Farhah et al. (2021) suggest that a positive teacher-student relationship can contribute to the well-being of instructors. Particularly in the context of middle school, establishing a positive connection with students is seen as an important effort for teachers, and it can also affect the teacher's well-being. The study found that the more teaching experience a teacher has, the better they are able to navigate their relationship with students. The study aimed to investigate whether teaching experience influences the impact of teacher-student interaction on the teacher's subjective well-being.

On the other hand, the data shows that the lowest got only 2% of the teachers with 16 to 20 years of experience were represented in the survey. This suggests that more experienced teachers may have taken on administrative roles rather than continuing as regular faculty. Some of them may have sought opportunities at other institutions offering higher salaries. Others may have experienced burnout due to a lack of support from school administration and colleagues, especially those in non-educational roles. According to Somosot et al. (2023), support from peers, superiors, and colleagues can help teachers overcome challenges throughout their career in higher education institutions. Additionally, effective time management is crucial for overcoming the unique challenges of working in academia.

Problem 2. How do the respondents assess their twenty-first century skills, considering the following: creative skills, critical thinking skills, collaboration skills, and communication skills?

Table 5: Summary of Respondents' Level on Skills in 21st Century

Variables	Mean	SD	Interpretation
Creative Skills	4.06	0.60	Always Practice
Critical Thinking Skills	4.03	0.61	Always Practice
Collaborative Skills	4.08	0.67	Always Practice
Communication Skills	4.42	0.61	Always Practice
OVERALL	**4.14**	**0.62**	**Always Practice**

Legend:
4.01-4.75 Extremely Skilled/Always Practice. 3.26-4.00 Highly Skilled/Often Practice
2.51-3.25 Skilled/Sometimes Practice 1.76-2.50 Moderately Skilled/Rarely Practice
1.00-1.75 Unskilled/Does not Practice

Table 5 displays the summary of respondents' levels of skills in the 21st century with the overall mean is 4.14 (SD = 0.62), interpreted as **Always Practice.** This indicates that there is **an Extremely Skilled** perception of skills in the 21st century. Insights into a highly competitive landscape, creativity, and innovation drive progress. Individuals who can think outside the box, generate new ideas, and adapt existing ones are more likely to succeed. The pace of change in the 21st century requires individuals to be adaptable and flexible. They must be open to learning new skills, adjusting to new environments, and embracing change.

According to Kim et al. (2019), the education delivery system has a substantial impact on how 21st-century skills develop in learners. Pedagogy, curriculum, school rules, and

benchmarking skill acquisition are all key factors in the way 21st-century skills develop and are monitored. Nevertheless, the classroom is the primary environment where the aforementioned factors culminate in knowledge acquisition and skill development. Therefore, it is equally important to prepare and train teachers not only in the acquisition of 21st-century skills but also in the dissemination of these skills through measuring the classroom processes and teachers' practices. These enabling and supporting practices must develop 21st-century skills in the classroom as the first step.

The variable **Communication Skills** obtained the highest mean of 4.42 (SD = 0.61) interpreted as A**lways Practice**. This indicates that employers highly value effective communication when seeking candidates. Individuals with strong communication abilities are more likely to succeed in their careers, as they can express their ideas, collaborate effectively, and lead teams. Communication skills play a crucial role in personal relationships, professional success, and organizational effectiveness in the 21st century. Investing in the improvement of communication skills can bring substantial benefits to individuals, teams, and organizations.

According to Shilpa (2023), the way teachers communicate with their students significantly influences their learning, motivation, and overall development. Therefore, it is essential for teachers to enhance their communication skills in order to create a positive and productive learning environment for their students. The author suggests various tips, such as active listening, using clear language, body language, empathy, feedback, the use of technology, and practice. By incorporating these tips into their teaching, teachers can improve their communication skills, better connect with their students, and foster a more engaging and productive learning environment, which is essential for 21st-century education.

Additionally, Eadie (2019) argues that convergence is a key concept in 21st-century communication. This convergence encompasses four basic properties, including processes, forms, types of communication, characteristics to consider in creating messages, and relationships between communicators. The author emphasizes that these four basic properties result from the convergence of ideas and theories, offering an opportunity to challenge traditional ways of thinking about communication, which is crucial to practice in educational institutions.

On the other hand, the variable **critical thinking skills** got a lowest mean of 4.03 (SD = 0.61)**,** interpreted as A**lways Practice.** This means that it is essential to note that critical thinking skills require attention and improvement, through practice and reinforcement, to fully develop. Many individuals may not have enough opportunities to engage in critical thinking exercises or problem-solving activities in their daily lives, which can lead to underdeveloped critical thinking skills. This implies that the deficiency can lead to a reliance on a rote memorization and traditional teaching methods, limiting students ability to think independently and critically. Moreover the lack of critical thinking skills in teachers can hinder their ability to adapt instructional strategies to meet diverse student needs ultimately affecting academic performance and motivation. Furthermore, the interplay between teachers' critical thinking abilities and their pedagogical approaches suggests that enhancing these skills is crucial for improving educational outcomes. Therefore, addressing this gap is vital for fostering a more effective and responsive educational environment.

Hooks (2019) delves deep into the meaning of critical thinking within the context of teaching and learning. The author views critical thinking as a process of inquiry, analysis, and reflection that enables individuals to question assumptions, challenge dominant narratives, and participate in transformative learning experiences. Practical strategies and pedagogical approaches for integrating critical thinking instruction into educational practices are presented. The author also advocates for creating inclusive and participatory learning environments where students feel empowered to question, analyze, and challenge ideas. Moreover, the importance

of incorporating diverse perspectives, experiential learning opportunities, and collaborative inquiry processes into curriculum design and classroom instruction is emphasized.

Problem 3. How do the respondents assess the role of teachers in 21st-century teaching based on facilitator, motivator, and learner?

Table 6: Summary of Respondents Level on the Roles of Teachers in 21st Century Teaching

Variables	Mean	SD	Interpretation
Facilitator	4.60	0.54	Very High
Motivator	4.32	0.65	Very High
Life-long Learner	4.42	0.68	Very High
OVERALL	**4.45**	**0.62**	**Very High**

Legend:
4.01-4.75 Extremely proficient/Very High *3.26-4.00 Proficient/ Highly proficient/High*
2.51-3.25 Proficient/Moderate *1.76-2.50 Moderately proficient/Low*
1.00-1.75 Not proficient/Very Low

Table 6 presents a summary of respondents level on the roles of teachers in 21st century teaching with an overall mean of 4.45 (SD=0.62) interpreted as **Very High.** This means that there is E**xtremely Proficient** perception of the roles of teachers in 21st-century teaching. The roles of teachers in 21st-century teaching are crucial and have significant implications. It suggests that teachers have developed the necessary attitude and characteristics to effectively perform their daily duties in the 21st century. This competence enables them to take on rigorous and meaningful roles as teachers, contributing to the advancement of knowledge in the field of education.

This implies that teachers with a strong grasp of the roles in 21st-century teaching are better equipped to critically analyze educational issues, make evidence-based decisions, and implement innovative teaching practices. This can lead to improved student outcomes and a positive impact on the overall education system. According to Peng (2023), the teacher's role changes over time, varying in different countries due to multiple policies. Educators aim for learner-centered education, as it allows teachers to be more than just knowledge contributors, controllers, and authorities, but also facilitators and resources for their students. Teachers encourage students to make decisions about their learning, which leads to a more meaningful process. The focus of instruction then shifts to the students. Teachers strongly agree that they have performed well in the roles of facilitator, motivator, and lifelong learner, as these roles are essential for creating a dynamic and effective learning environment. By serving as a facilitator, teachers guide students through the learning process, encourage active participation, and foster independent thinking and problem-solving skills. As motivators, teachers inspire and support students to achieve their full potential, instilling confidence, perseverance, and a growth mindset.

In line with this, the variable **facilitator** got the highest mean of 4.60 (SD=0.54) interpreted as **Very High.** This means that the role of the facilitator is becoming increasingly important in 21st-century teaching. This role emphasizes the need to empower students, encourage critical thinking, foster collaboration and communication skills, promote lifelong learning, and provide tailored instruction. By adopting this role, teachers are able to create

engaging learning environments that prepare students for success in today's complex and fast-changing world. This implies that the role of teachers as facilitators has become increasingly vital in fostering student-centered learning environments. Research indicates that teachers are shifting from traditional authoritative figures to guides who supports students in their learning journeys. Facilitators encourage active participation and engagement allowing students to take ownership of their learning which is essential in a rapidly changing world. However, challenges remain such as the need for professional development to equip teachers with the skills necessary for this facilitative role.

According to Perry et al. (2024), research often overlooks the role of professional development facilitators, despite their crucial role in planning and conducting professional development activities. This highlights the importance of understanding and appreciating the contributions of facilitators in improving teacher professional learning. Given the interconnected nature of facilitators' responsibilities, training programs should emphasize the development of competencies in content, pedagogy, and facilitation techniques. Facilitators need both subject-specific knowledge and effective facilitation skills to successfully deliver professional development programs.

On the other hand, the variable **motivator** got the lower mean of 4.32 (SD = 0.65) interpreted as **Very High.** This means that respondents generally agree with the level on the roles of teachers in 21st century teaching, specifically concerning motivator. It is important to innovate the way teachers are recognized and appreciated for their contributions to boost morale and motivation. School leaders should establish systems to acknowledge teachers' efforts, achievements, and successes. This could involve public recognition, awards, appreciation events, or other forms of acknowledgment to demonstrate gratitude for teachers' hard work and dedication. This implies that pursuing a master's degree was considered one of the best way to learn how to motivate students efficiently. The study observed that teachers with master's degrees comprised the highest number of participants. Therefore, school administrators should address the lack of full-pledged master teachers in community colleges by supporting and motivating them in any means and ways to continue and finish their studies.

In a study by Cho-Baker et al. (2022), the main factors motivating teachers to pursue graduate school were identified as professional development, alternative job opportunities, and improved career prospects. The research also found that considerations such as diversity and research opportunities were positively associated with the number of applications.

Problem 4. Is there a significant relationship between skills in the 21st century and the role of teachers in the 21st century teaching concerning: facilitator, motivator, and life-long learner?

Table 7: Test of Relationship between the Skills in 21st century and the role of teachers in 21st century teaching

	Role of teachers in 21st century Teaching			
Skills in 21st century	**Facilitator** r-value p-value	**Motivator** r-value p-value	**Life-long Learner** r-value p-value	**Overall** r-value p-value
Creative Skills	0.2483 **0.0001**** **S**	0.4518 **0.0001**** **S**	0.1566 **0.0123*** **S**	**0.2856** **0.0042*** **S**
Critical Thinking Skills	0.3044 **0.0001**** **S**	0.4333 **0.0001**** **S**	0.2714 **0.0001**** **S**	**0.2450** **0.0001*** **S**
Collaboration Skills	0.2945 **0.0001**** **S**	0.4976 **0.0001**** **S**	0.3136 **0.0001**** **S**	**0.3686** **0.0001*** **S**
Communication Skills	0.5513 **0.0001*** **S**	0.3939 **0.0001*** **S**	0.1164 0.0634 NS	**0.3539** **0.0212*** **S**
Overall	**0.3496** **0.0001*** **S**	**0.4444** **0.0001*** **S**	**0.2145** **0.0190*** **S**	**0.3362** **0.0064*** **S**

Note: Significant if p-value < 0.05* and p-value < 0.01**

Table 7 shows the correlation coefficients (r-values) and p-values of the relationship between the respondents' assessment of skills in 21st century and the role of teachers in 21st century teaching in terms of facilitator, motivator, and life-long learners. The overall results in Table 14 show a significant relationship between 21st-century skills and the role of teachers in 21st-century teaching, with p-values less than 0.05, leading to the rejection of the null hypothesis. This provides strong evidence supporting a significant relationship between 21st-century skills and the roles of teachers in 21st-century teaching as facilitators, motivators, and life-long learners. The null hypothesis was not rejected for the relationship between communication skills and the life-long learner, as the p-value was greater than 0.05. This indicates a significant impact of facilitator and motivator roles on all 21st-century skills.

Creative skills are statistically significant to teaching this is primarily due to the continuously evolving educational environment that necessitates innovative methodologies to effectively engage students. Teachers assume a critical role in shaping the educational system through the utilization of diverse innovative approaches to enhance student learning. These approaches include the cultivation of creative skills which are indispensable in the 21st century. Nevertheless, teachers encounter obstacles such as staying current with technological advancements, catering to the needs of diverse student populations, and designing pertinent curricula. These challenges underscore the significance of teachers consistently honing their creative abilities to meet the evolving educational standards and adequately equip students for the future. Consequently, it is imperative to foster creative skills among teachers to address the requisites of 21st-century education and guarantee that students attain the essential proficiencies to succeed in a rapidly changing global landscape.

According to Yuliana (2022), the paramount proficiency in teaching and learning in the 21st century lies in the adeptness of creative thinking abilities within the instructional approach of problem-solving. Proficiency in creative skill is of utmost significance for educators and

learners alike, as it facilitates a more immersive and efficient educational experience. Additionally, LinkedIn data ranks creativity as the second most in-demand job skill, especially as automation replaces routine jobs (Krueger, 2022). In conclusion, creativity plays a crucial role in motivating learning, brain activation, emotional development, and future job success.

Critical thinking skills is statistically significant and a vital competence in 21st-century education, empowering educators to nurture curious and analytical learners capable of navigating the intricacies of the knowledge-based economy. Through the promotion of critical thinking, educators can provide students with the capacity to think autonomously, collaborate efficiently, and adjust to the evolving demands of contemporary society. Moreover, proficient critical reading abilities are pivotal in enriching students' understanding and consciousness, enabling them to engage profoundly with academic material and cultivate 21st-century literacy. Additionally, the cultivation of critical thinking skills in higher education, specifically within the field of engineering, enhances cognitive abilities and encourages multi-dimensional thinking, crucial for dissecting intricate issues and devising innovative solutions. Additionally, qualified teacher candidates as an effect of critical thinking continuously improve their learning and produce high-quality graduates well-prepared for the future (Arsih et al., 2021). According to Llego (2022), critical thinking skills are significant to 21st-century teaching due to important factors such as problem-solving, adaptability, inquiry and exploration, and secret weapons. Critical thinking develops problem-solving abilities for both teachers and students. Teachers equipped with critical thinking skills can adapt quickly to change and inspire students to develop the same skills. Critical thinkers investigate, ask questions, and solve mysteries, encouraging students to avoid bad ideas and find solid ground. Lastly, critical thinking becomes a secret weapon to adapt and thrive in an ever-evolving future.

Collaboration skills are also essential and the result is statistically significant to the roles of teachers in 21st-century teaching, as they are considered crucial for students to thrive in the modern working environment. Collaboration fosters crucial skills such as communication, teamwork, problem-solving, and critical thinking, preparing students for future career opportunities. Moreover, collaboration as a skill in the 21st century is statistically significance for teachers' roles in contemporary teaching, given its pivotal role in improving learning outcomes and preparing students for the challenges in the modern days. Many studies in research have demonstrated the importance of collaboration as a fundamental element of 21st-century skills, underscoring its value in educational as well as professional settings. While collaborative tasks are employed to some extent in student learning, research indicates the relevance of such activities, despite their limited integration into educational contexts.

Furthermore, collaborative practices have been shown to enhance teachers' competencies for the modern age, resulting in positive transformations for both educators and learners, highlighting the effectiveness of collaborative efforts over individualistic approaches in achieving superior results. Teachers significantly influence the 21st-century education landscape by utilizing innovative methods to engage students and facilitate learning, with collaboration playing a vital role in addressing obstacles and promoting ongoing enhancements in teaching methodologies.

The research of Riaz et al. (2023) emphasizes the importance of collaborative skills for effective work and survival in the 21st century. The research concluded that collaboration as a 21st-century learning skill is not extensively practiced among undergraduate students in public sector universities, indicating a moderate level of implementation in certain activities. While collaborative tasks are utilized to some extent, practices such as pairing, small grouping, group work, and peer assessment are not fully integrated into the teaching and learning process at the undergraduate level. There is a recognized need to incorporate collaborative skills more

prominently in classroom activities to raise students' awareness and proficiency in working collaboratively.

The study emphasized the importance of enhancing collaborative practices in undergraduate education to better prepare students with the necessary skills for success in the modern workforce, highlighting the gap between current practices and the desired level of collaboration in academic settings. Recommendations were made to increase the incorporation of collaborative activities, such as group projects and peer assessments, into the direct teaching and learning process to foster a more collaborative learning environment for students.

Communication skills are statistically significant to the role of teachers in 21st-century teaching as an overall results. Communication as a proficiency in the 21st century holds significant value in the realm of educators in 21st-century pedagogy owing to its pivotal role in facilitating efficient teaching and learning processes. Scholarly investigations underscore the significance of proficient communication skills for instructors in harnessing information and communication technology, managing instructional materials, and partaking in blended learning. Moreover, academic inquiries underscore that adept communication is imperative for educators to actively involve students in the academic discourse, transitioning from mere knowledge dissemination to collaborative knowledge construction. Educators endowed with robust communication competencies can establish a conducive learning milieu, foster student engagement, and elevate the overall caliber of education. Hence, possessing exemplary communication aptitudes stands as a fundamental prerequisite for contemporary educators to excel in their instructional capacities and guarantee favorable learning outcomes for students.

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Problem 5. Is there a significant difference between the skills in 21st century and the roles of teachers in 21st century teaching when grouped according to age, highest educational attainment, position, and teaching experience?

Table 8: Test of Difference Between the Skills in 21st Century and the Roles of Teachers in 21st Century Teaching when Grouped according to Profile

Respondents' Profile	**Skills in 21st Century** r-value p-value	**Roles of Teachers in 21st Century Teaching** r-value p-value	**Overall** r-value p-value
Age	0.1637 **0.0309** **S**	0.0390 **0.0420** **S**	**0.1014** **0.0365** **S**
Highest Educational Attainment	0.0574 **0.0153** **S**	0.0331 0.2644 NS	**0.0453** **0.1404** **NS**

Position	0.0268 **0.0091** **S**	0.0608 **0.0075** **S**	**0.0438** **0.0083** **S**
Teaching Experience	0.0458 **0.1539** NS	0.0686 0.1978 NS	**0.0572** **0.1759** **NS**
Overall	**0.0734** **0.0523** **NS**	**0.0504** **0.1279** **NS**	**0.0619** **0.0901** **NS**

Note: Significant if p-value < 0.05*

Table 8 depicts the differences between the respondents' assessment of skills in the 21st century and the roles of teachers in 21st century teaching. The data shows that respondents' age and position are significantly correlated with their assessment of 21st-century skills and the roles of teachers in 21st-century teaching. This means that factors such as age and position strongly influence perceptions of these skills and teaching roles. However, an interesting finding is the significant correlation between the assessment of 21st-century skills and the roles of teachers in 21st-century teaching, suggesting that teaching experience does not strongly influence these perceptions.

Teachers' position and age significantly impacts 21st century teaching, influencing pedagogical approaches and classroom dynamics. Younger teachers often embrace innovative technologies and contemporary teaching methods, fostering a more engaging learning environment, while older teachers may rely traditional practices, which can lead to a generational divide in educational strategies. Moreover, the roles of teachers have evolved to encompass not only knowledge dissemination but also mentorship, emotional support and facilitation of critical thinking skills. Teachers are now expected to be adaptable, integrating technology into their teaching and addressing diverse student needs. This shifts necessitates ongoing professional development to bridge the gap between different age groups and teaching styles., ensuring that all educators can effectively contribute to student learning in a rapidly changing educational landscape.

Further, the age of teachers is a significant factor in the skills and roles required for 21st-century teaching. Teaching today has evolved significantly, extending beyond traditional methods such as textbooks and chalkboards. Students are being prepared for a fast-paced, interconnected world filled with digital wonders. Age influences how teachers adapt to these changes. For example, in today's information-driven world, critical thinking is crucial. Older teachers might stick to traditional methods, while younger ones embrace new tools to analyze and evaluate information. Moreover, schools benefit from having a mix of experienced and young teachers, as each group brings unique strengths to the table. Regardless of age, teachers must continue learning, as a 21st-century classroom is dynamic, and everyone, including teachers, is a student in this digital adventure. In conclusion, experienced teachers should eagerly develop themselves in terms of digital integration in education.

Davidovitch et al.'s study in 2020 revealed that a school doesn't just lose a trained faculty member, but also the research and teaching capabilities. The institution loses the valuable experience and knowledge acquired by the retiring faculty member. Even if administrative staff or faculty members are not involved in research or teaching, the knowledge and experience of retiring faculty members can benefit the institution by guiding and supporting new faculty members, participating in committees that require experienced personnel, mentoring graduate students, and using technology-based teaching methods to preserve the knowledge of reputable faculty members. These research findings highlight the challenging task of integrating the experience and knowledge of experienced personnel while

also accepting new faculty who will operate within the higher education system until retirement.

Also, position is statistically significant to the role of teachers in 21st-century education is highly significant due to rapid changes in technology and society. Teachers today must prepare students for a dynamic and interconnected world, moving away from traditional rote learning. They play various roles such as guide, mentor, cheerleader, and tech wizard. Moreover, the position of teachers determines how smoothly the educational journey progresses, with school leaders setting the course and faculty and staff assisting along the way. Ultimately, the position of a teacher is not just about where they stand, but also about how they steer the ship towards student success. According to Gomez-Monarrez et al. (2019), effective teaching practices as documented in empirical studies underscore the significance of classroom teaching and climate dimensions in shaping teaching quality, underscoring the pivotal role of teachers' positioning within the classroom environment.

Lastly, the effectiveness of teachers' practices in the classroom setting can be influenced by their positioning, as indicated by research suggesting that some practices may lose their efficacy under evolving conditions, while others may become more conducive to student learning. The highest educational attainment is not statistically significant for teachers in 21st-century teaching. Simply having an advanced degree does not automatically make someone an effective teacher. Teaching is all about forming connections with students, igniting curiosity, and making learning an engaging experience. In addition, the 21st-century classroom is constantly changing just like a roller coaster ride.

According to Djumanova et al. (2020), today's teaching demands unique styles, techniques, and flexibility from every teacher. The educational systems and societies worldwide have undergone numerous changes, significantly impacting the way children are taught. In conclusion, teachers who are adaptable, willing to learn, and genuinely care will make the greatest impact, regardless of their qualifications. Teaching experience is not statistically significant for the skills and roles of teachers in 21st-century teaching. In the current era, teaching has evolved beyond the traditional model of standing in front of a class and imparting knowledge. Teaching is now focused on the students themselves, taking into account the dynamic changes in the world such as technology and globalization. Teachers need to adapt to these changes and cater to the needs of students who are tech-savvy and seek active participation in their learning. Although teaching experience is important, it is not the sole determinant of a teacher's effectiveness.

A study by Levrints et al. (2022) showed that novice educators face different challenges compared to more experienced teachers. Interestingly, experienced teachers (10-15 years) reported higher perceived challenges compared to less experienced teachers (1-5 years). This suggests that professional development programs for teachers should address the specific needs and challenges they face, taking into account the changes they undergo as they progress through their careers. In the 21st century, teachers play various roles such as guide, facilitator, tech wizard, and lifelong learner. Therefore, it is crucial for teachers to combine experience with adaptability, creativity, and a passion for shaping young minds. In summary, the characteristics of individual teachers are not as significant as the diverse skill set and roles required for 21st-century teaching.

Problem 6. Based on the findings, what professional development plan on the skills of teachers in 21st century teaching can be designed?

Table 9: Professional Development Plan

Year 1 (2024): Skills in 21st Century

Areas of Concern	Specific objectives	Strategies/ Activities	Time Frame	Person Involved	Source of Fund	Estimated Budget	Expected Output
Critical thinking skills	To enhance teachers' ability to analyze information, evaluate arguments, and make informed decisions.	A case study or scenario related to education and ask them to analyze the situation, identify key issues, evaluate possible solutions & justify their reasoning through written reflection	September 2024 Once a week for the whole month of September which is equivalent to 4 days.	College Dean Program Head Faculty Staff	MOOE	35,000	Self-assessment

Year 2 (2025): Roles of Teachers in 21st Century Teaching

Areas of Concern	Specific objectives	Strategies/ Activities	Time Frame	Person Involved	Source of Fund	Estimated Budget	Expected Output
Motivator	Cultivate an understanding of conflict resolution, empathy, and global citizenship among individuals.	Conflict Resolution Workshop where participants engage in role playing to practice effective empathy through communication, active listening and negotiation skills.	February 2025 Once a week for the whole month of February which is equivalent to 4 days.	College Dean Program Head Faculty Staff	School budget	40,000	Heightened awareness of conflict resolution strategies

Conclusions

Based on the results and discussions presented, the following conclusions are drawn:

The majority of respondents hold master's degrees, followed by full-fledged master's degree holders and serve as full-time faculty. This highlights the potential for a strong academic foundation and expertise within the institutions. Leveraging the knowledge and experience of this group can be instrumental in enhancing educational quality, fostering innovation, and driving positive academic outcomes within the local community colleges of the province of Misamis Oriental.

There is a commendable level of proficiency in critical thinking skills as the highest skills in the 21st century, and creative skills as the lowest. Local community college teachers

need to continue using HOTS in Bloom's Taxonomy guided by UNESCO's 4 pillars of learning. Strengthening creative skills, collaboration skills, and communication skills directing processes can further optimize institutional effectiveness and contribute to sustained academic excellence.

Teaching methods employed by the community colleges are highly effective as facilitators are found to be the highest, which will have a significant impact on student learning outcomes. However, motivators were found to be the lowest in the role of teachers which will serve as an opportunity to carefully execute the evaluation of teachers to enhance their roles in 21st century teaching. The test of the relationship between the skills of the 21st century and the roles of teachers in 21st-century teaching results in a significant relationship. The impact of possessing 21st-century skills and the roles of teachers in 21st-century teaching are significantly correlated, as evidenced by this study. Skills in 21st-century have been found to have a substantial impact on teachers' performance and students' academic outcomes.

Finally, the study revealed that the age is statistically significant to the 21st-century teaching because schools benefit from having a mix of experienced and young teachers, as each group brings unique strengths to the table. Moreover, position is significant to teaching because the position of teachers determines how smoothly the educational journey progresses, with school leaders setting the course and faculty and staff assisting along the way.

Recommendations

Based on the given conclusions of the study, several recommendations are presented:

1. The School President and major stakeholders should prioritize motivating faculty through financial means such as shouldering 10% of their tuition fee per semester and giving a lighter faculty load or easy-to-handle class schedules.
2. Teachers should model critical thinking skills to students. They should give enough time to process or analyze the lessons through scaffolding so that students could easily grasp the lessons well.
3. The College Dean of various colleges should emphasize the role of motivator as one of the roles of teachers in 21st-century teaching.
4. The Director of Quality Assurance and Director of the Teaching and Learning Office should maintain a holistic approach across all dimensions of skills in the 21st century and the roles of teachers in 21st-century teaching.
5. The Vice-President of Academic Affairs should ensure yearly training for senior teachers to stay current with modern educational methods, including those not specialized in education.
6. The Vice-President of Administration should adopt the two-year professional development of this study through an annual seminar-workshop into their professional development agenda.

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