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TEACHING METHODOLOGIES, 21ST CENTURY LEARNING SKILLS, AND COMPETENCIES IN HOME ECONOMICS

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ABSTRACT

The core of the study was to determine the relationship between the teachers' practice of teaching methodologies and the learners' 21st-century learning skills and competencies in Home Economics. The study utilized the descriptive correlational research design with the use of survey questionnaires that were delivered both in-person and online to gather the needed data. It was conducted in the selected public secondary schools in Bohol Division, School Year 2022-2023. The respondents of the study were the selected ninety-eight (98) Home Economics teachers and their learners. Chi-square and Spearman's Rank Correlation Coefficient were used to calculate the significant relationships. The results of the study revealed that teachers highly practiced various teaching methodologies, while learners demonstrated very skillfully the 21st-century learning skills and high competence level in home economics. It was found that there was a significant relationship between the teachers' practice of teaching methodologies and the learners' 21st-century learning skills since the computed p-value is below 0.05 level of significance. It also revealed that learners' 21st-century learning skills are correlated with their competence level. The researcher concludes that teachers in home economics typically use various teaching methodologies in their classrooms. Teachers' practices on teaching methodologies influence the learners' acquisition of 21st-century learning skills and their competence level. Moreover, the acquisition of 21st-century learning skills affects the learners' competence level and signifies that the competencies embodied in the K to 12 Curriculum are already aligned with the skills of the 21st century. Hence, it is recommended that teachers and learners may be provided with essential

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August 2023
Available online at https://www.instabrightgazette.com

technology resources such as computers, tablets, and the internet, along with training and support to effectively access, analyze, and use digital information and other media creation tools. Teachers may be given training and seminars to effectively utilize technology-based and practical demonstration teaching methodologies including plan garment designs. Also, further studies may be conducted with the inclusion of technology-driven teaching methodologies.

Chapter 1

PROBLEM AND ITS SCOPE

INTRODUCTION

Rationale

Education in the 21st century emphasizes globalization and internationalization. Producing learners in a globalized environment equipped with century 21st skills has become a priority. The role of teachers in attaining this drive is crucial. Teachers don't only focus on students' academic performance but also make sure that they are creating a workforce based on skills for the twenty-first century.

To satisfy the needs of the workforce in the market, schools across the country have evolved to prioritize cutting-edge teaching strategies based on 21st-century skills components. This could be achieved through the efficient pedagogical skills of teachers. These comprise methodologies such as dynamic, cooperative, collaborative, and problem-based learning for the

INSTABRIGHT e-GAZETTE
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Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

purpose of raising the quality of instruction and learning in the classroom (Mamman and Oyinloye, 2016).

Based on the researcher's reflection, promoting, and using 21st-century skills in one's own classroom is a great challenge for teachers, especially in Home Economics (HE). Still, many teachers teaching Home Economics subjects employed conventional methods which may not be relevant for the student's learning the 21st -century skills. As a result, students find the subject less challenging and motivating which led them to poor performance.

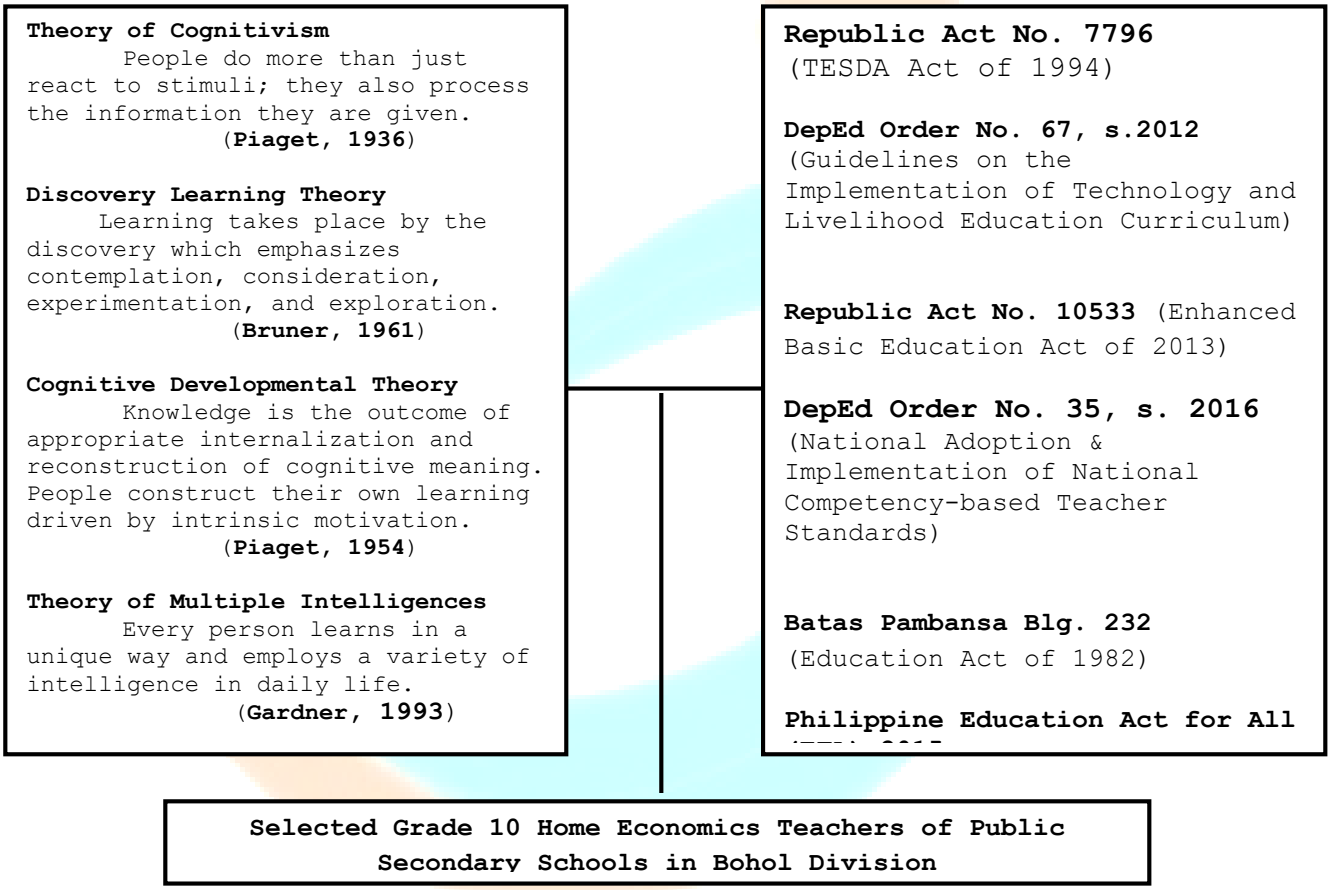
With this scenario, the researcher believes that applying effective and efficient teachers' teaching methodologies bridges the gaps in learners' poor performance, and skills in Home Economics. The researcher herself, as a home economics teacher, had encountered factors that might lead to the reduction of students' skills and competencies. These factors comprise teachers' technical abilities, the incorporation of 21st-century skills into the lessons, state-of-the-art learning facilities, and many more. It is believed that there is a dire need to conduct this study on teaching methodologies to develop 21st-century learning skills and competencies in Home Economics. Additionally, to propose an action plan for selected Home Economics specializations for Junior High School teachers.

Literature Background

This study is anchored on Jean Piaget's theory of cognitivism (1936) which is based on the thinking process underlying a behavior. According to this view, people do more than just react to stimuli; they also process the information they are given. This theory is put into practice in the classroom when the student participates in tasks like discussion and problem-solving (Singh et al, 2020). Students are encouraged to think critically and creatively while teachers coach students to ask questions, analyze and draw conclusions. The classroom activities are generally student-centered and are accomplished through active discovery learning.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

According to Bruner (1961), learning takes place by discovery, which emphasizes contemplation, consideration, experimentation, and exploration. It occurs in problem-solving contexts where the learner builds on prior knowledge and experience to uncover new learnings. This will be employed in projects that inspire students' interest and point them in the right direction to learning via research and discovery. As a result, students might be more likely to retain ideas and information they independently find (Balim, 2009).



INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
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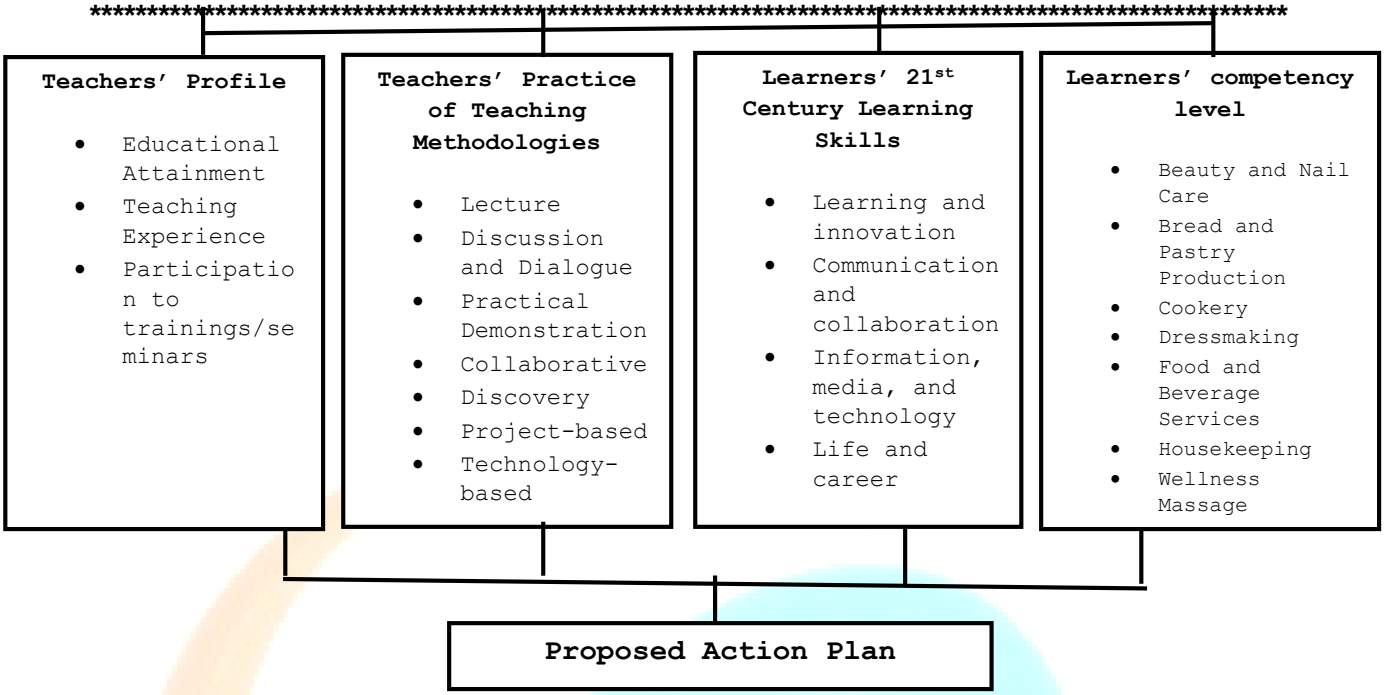

Figure 1. Theoretical and Conceptual Framework

The creation of independent learners should be the goal of education. (i.e., learning to learn). It should help learners develop their thinking and problem-solving skills so that they may be used to a variety of contexts. The role of the teacher should not be to teach information by rote learning, but instead to facilitate the learning process. This means that a good teacher will design lessons that help students discover the relationship between bits of information (Mcleod, 2008).

The Philippines can produce values-driven, holistic learners with qualified teachers equipped with 21st-century capabilities and capable of driving the nation's growth and advancement. Globalization, K–12 Reform, ASEAN Integration, and the shifting nature of 21st-

INSTABRIGHT e-GAZETTE
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Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

century learners are just a few of the national and international frameworks causing changes that call for improved and adaptable education as well as a reconsideration of the current teaching standards (Llego, 2017).

A study of Jan (2017) pointed out that teachers in the twenty-first century must create the highest quality of instruction to equip their students with both technical and behavioral skills. In doing so, they must be proficient in both teaching techniques and contents, as well as in utilizing technology in the classroom. They must continue to upgrade their technical skills for them to go with the digital and global technological age. Further, Seechaliao (2017)' study proved that instructional strategies which support the creation of creative and innovative education strategies using questions, classroom discussion, self-directed study, inductive and deductive thinking, media or social media make students engage in learning activities and create innovation in learning.

Accordingly, the quality of educational system depends on the kind of teachers who manage it. This shows that teachers play essential role in the success of any educational program, to meet students' learning at the optimum level. The sustainability of education based on 21st-century skills and economic success depends on the teachers (Friedman, 2017). For the study of Omar et al. (2019), mentioned that teachers should be capable of learning the most recent technological abilities in addition of being curriculum experts with strong and empathic teaching skills. The 21st century requires new skills; thus, learners need teaching strategies that can promote adaptable and fulfilling lives.

Through several programs, the Philippine Government has constantly worked to improve the quality of teaching. The National Competency-Based Teacher Standards (NCBTS) were formalized as a framework for teacher quality by CHED Memorandum Order No. 52, s. 2007 and DepED Order No. 32, s. 2009. Teacher quality in the Philippines is determined by the Philippine

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Professional Standards for Teachers (PPST). The standards describe the expectations of teachers' increasing levels of knowledge, practice, and professional engagement.

Hence, teaching skills in pedagogical, technological, and social characteristics have a great contribution to the multidisciplinary learning process. These are the skills that teachers must develop to succeed in their chosen field of endeavor. Quality teaching is a result of the systematic use of appropriate strategies in delivering and assessing the learning objectives for each lesson (Huebler, 2014). To become a 21st-century effective and quality teacher in the Philippines, one must competently possess the necessary teaching skills and competences.

Nevertheless, conventional teaching methods are teacher-centered activities. These methods might not equip students with useful abilities or even a body of knowledge that endures for very long after the semester is over (Udovic et al., 2012). Non-conventional techniques, like dynamic, cooperative, collaborative, and problem-based learning, can be utilized in the classroom to improve the quality of teaching and learning. Hence, learner-centered instruction enables learners to learn more knowledge and skills. This provides students to be more motivated and knowledgeable with each other.

According to the study of Mamman and Oyinloye (2016) revealed that the perceived influence of cutting-edge teaching methodologies on the acquisition of 21st-century learning skills, resulted that cutting-edge methodologies have a positive influence on the acquisition of 21st-century business education students' skills in Nigerian universities. This implies that when students are taught using cutting-edge methodologies, they would become more relevant in the 21st-century world of work. Students are likely to develop the necessary 21st-century learning skills when teachers use new, creative, and innovative methods of instruction. Improvise the educational system, teaching pedagogies and use of innovative methodologies in teaching

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

enhances students' social and academic skills and positively influence their performance (Yamin and Purwati, 2021).

Meanwhile, the cognitive developmental theory developed by Piaget (1954) supported the use of current teaching methodologies as one of the constructivist theories which assert that students learn via discovery. Additionally, it highlighted that students construct their own learning and that it is driven by intrinsic motivation. Some of these teaching methodologies involve students working together to create knowledge, stressing the interdependence of roles and resources ((Al Mahmud, 2013). With learner-centered teaching methodologies, teachers become facilitators of learning. For this, learners can acquire the most essential needed skills in 21st-century learning if they are more actively and rigorously involved in the learning process.

There are numerous new difficulties that students are dealing with, and these issues create a demand for students to be able to interact, function, and affect change on a local, national, and international level. Students have no option but to acknowledge the vital necessity of obtaining 21st-century skills. The students will be honed to use the skills, especially in facing the real challenge in the teaching and learning process to produce active learners in the class.

For instance, the lecture-based method also known as direct instruction, expository or deductive teaching and is one of the oldest teaching methods used by teachers. It is an educational presentation given by a teacher to a group of students using instructional aids and teaching tools. In this method, the teacher organizes the course material and delivers it to the students orally. Students often take notes during lectures, though there may be varied levels of participation (Gill and Kusum, 2017).

The results of the study conducted by Sajjad (2010), showed that the lecture method is effective because it creates new ideas, works well for large classes, fosters student creativity, and

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

teachers who are knowledgeable and experienced on the subject can fully explain all points and respond to all queries made by the students. Further, this method is helpful in channeling students' thought processes in a specific direction and in effectively communicating information to students who struggle to understand their readings.

Another is the discussion or dialogue method. It is a type of teaching method that makes use of collaborative, open-ended exchanges of ideas between a teacher and students or among students to develop their critical thinking, problem-solving skills, and literary appreciation. In this method, students express a variety of points of view, respond to the opinions of others, and reflect on their own ideas to increase their knowledge, understanding, or interpretation of the lesson. The discussion technique encourages active participation in learning. According to the study of Borich, (2017), when students actively participate in the learning process, they learn more and retain material for longer. Additionally, it promotes listening to one another and encourages mutual learning, and positively develops 21st-century learning skills among them.

Further, collaborative learning (CL) is a method of teaching and learning in which a group of students works together to carry out a task, finish a project, or produce something. Students are divided into smaller groups with assigned tasks for each member of the group. In this method learners at various performance levels work together in small groups toward a common goal. Laal and Laal 2012 studies concluded that collaborative learning fosters the development of critical thinking and problem-solving skills through discussion, clarification of ideas, and evaluation of others' ideas.

Another is a practical demonstration. It is considered one of the general teaching methods which are effective in teaching skills. The teacher demonstrates the skills in front of the students in the best way possible, and he may repeat them several times or let the students perform the skills under his guidance (Maricic et al., 2019). In this method, the demonstrator must speak

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

clearly and follow a step-by-step process so that the students may readily grasp the demonstration's concept. Teachers should provide students the opportunity to ask questions to help them understand any concepts or problems they are having with the lesson. Gunawan's (2017) study revealed that the demonstration method improved student learning outcomes and student participation in the learning process. Hence, this method increased students' ability to speak out, explore, and ask and respond to questions, they become more engaged in class.

Next is discovery learning, also known as problem-based learning, experiential learning, and learning in the twenty-first century. According to Bruner, discovery learning is a method of teaching that applies constructivist learning theory and happens when students are tasked with solving problems and building on prior knowledge. Using prior knowledge to uncover information and connections in newly discovered material (Bruner, 1961, Learning Theories, 2017).

Herdiana et al. (2017)'s study on guided discovery learning proved to be effective in improving mathematical problem-solving ability. Rahman (2017) also concluded that the discovery learning model can foster students' capacity for independent thought. Students who learn by discovery have stronger cognitive and critical thinking skills. Thus, learning that is encouraged through discovery develops students' capacity for investigation, problem-solving, and rational thinking, as well as for invention and discovery through creative learning. Students that use discovery learning can engage in active learning, as well as integrate and create their own knowledge.

Moreover, the project-based method is a typical cooperative and research-based learning strategy that emphasizes active student participation and comparative learning. Students typically collaborate to solve a specific issue, create a product for a specific market, and then assess the project and development process. This method is an efficient way to build 21st-century skills because it encourages critical thinking together with problem-solving, interpersonal

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

communication, information and media literacy, cooperation, leadership and teamwork, invention, and creativity. Students are involved in in-depth inquiries that enable them to build their own knowledge and autonomy. Also, there is an opportunity for collaboration because it enables them to negotiate, and resolve issues, and encourages them to provide, accept, and integrate feedback (Diise et al., 2018).

The study by Almulla (2020) revealed that the project-based methodology was found to significantly influence student engagement through collaborative, interdisciplinary, and authentic learning thus enhancing student involvement. Further, Telegina et al. 2019 showed that project-based learning in mathematics classes increased students' enthusiasm to learn the subject's most challenging material.

Likewise, technology-based teaching is the application of technology to enhance the teaching-learning environment. It employs different technologies to carry out common tasks more successfully and how this usage can reshape these activities. It facilitates classroom instruction by giving students chances to perform technology-related assignments. (Gilakjani, 2017). Thus, the use of technology in teaching and learning is a key factor to prepare and hone learners in facing the challenges of a rapidly changing world.

The study of Abulon (2014) employed an interactive teaching strategy and the use of technology in the classroom is essential because teachers should be knowledgeable in both pedagogy and technological content. Technology enhances learning quality by encouraging learner motivation, idea mastery, and the development of abilities for lifetime learning. Using technology in education helps to create a manageable learning environment where knowledge is delivered much more smoothly, and learning is made simpler.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

The Department of Education organized numerous training sessions to equip teachers with the skills necessary to teach and learn using technology. Many private institutions and non-government agencies work together to realize this vision to utilize technology in instruction. For students to have the chance to learn and employ the necessary 21st-century skills in this digital age, technology-based instruction in the classroom is essential. Therefore, it is important for teachers to fulfill their responsibility of developing technology-based pedagogies in their teaching (Ratheeswari, 2018).

Computer-based activities, according to Gençlter (2015), give students quick access to relevant information and online resources to encourage learners to learn more. Additionally, Larsen-Freeman and Anderson (2011) backed up the idea that technology offers instructional resources and expands the realm of learning for students. It allows for the provision of a wide variety of real resources, which can inspire learners.

As Palmer (2015) claimed that teachers should be student-centered and technologically competent. They should focus on the needs, interests, and abilities of the students, and designs instruction that is tailored to their individual needs. Further, teachers should be familiar with various technologies and be able to use them effectively to provide a more engaging and effective learning experience. This assertion is consistent with the study of Laar et al. (2017) who stressed that with the use of 21st-century skills, one gained a wider range of knowledge than digital skills. Critical thinking, collaboration, creativity, communication, multiple forms of literacy (information, media, technology, digital), adaptability, leadership, initiative, productivity, social skills, and local and international connections are among the "21st-century skills".

According to Afandi (2019), many practitioners, educators, and international organizations are concerned about what skills students should possess. Due to the explosion of knowledge, the rapid advancement of technology, and the entrenchment of corporate-led globalization, students

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

flourish in the twenty-first century, they must have the chance to cultivate a set of fundamental abilities through relevant educational experiences.

Furthermore, it is also based on Vygotsky's (1978), Social Constructivism theory which posits that social contact and context are crucial for cognitive growth. It is based on the idea that students produce, interpret, and reorganize information as they go along the lessons. Students actively engage in the activities in the classroom. They must interact with people who are more knowledgeable than the instructors to increase their knowledge (Mostafa, 2020). When students work in groups in the classroom, collaboration is possible. A collaborative learning strategy is essential in fostering critical thinking, problem-solving, and creativity in both students and teachers, especially in 21st-century classroom engagement.

The 21st century brings a difficult time for students to compete in their educational careers. Since classroom knowledge would not be enough to contribute to a good quality of life (Whorton et al, 2017). Section 1 of DepEd Order No. 55, series of 2016, defines 21st-century skills as the abilities embedded in the K to 12 Basic Education Curriculum that learners must acquire. These include communication skills, information, media, and technology skills, learning and innovation skills, and life and career skills.

Learning and innovation skills refer to the ability to think critically, analyze and solve problems, create, and implement innovations, and generate functional knowledge. It comprises skills in communication, collaboration, critical thinking, and creativity. To learn the skills in the 21st century, one must be a creative, critical thinker, and problem solver, and possess excellent communication abilities. Learners who are critical thinkers continuously engage in critical thought and try to live logically, sensibly, and compassionately (Sural, 2017).

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Further, Halvorsen (2018), pointed out that thinking critically about something entails examining it objectively from a variety of perspectives. It is a skill that is based on the capacity to carry out thoughtful analyses of problems and crucial students' thinking abilities. Thus, students can develop techniques on how to solve life problems through their critical thinking processes and ideas.

Creativity is another innovative learning skill in 21st-century teaching and learning. It is a thinking style that is focused on coming up with concepts that are unique and useful in resolving problems (Hashim et al, 2019). Creativity is crucial to stay up with the changes and challenges in the twenty-first-century era. Robinson (2015) asserted that being creative involves using one's imagination and emanating from it. His study proved that creativity allows students to employ creative problem-solving techniques and enhances their ability to solve difficulties to become decisive and wise.

In addition, Howard Gardner's (1993) theory of multiple intelligences supported this study. According to this theory, every person learns in a unique way and employs a variety of intelligence in daily life. Therefore, it is important for teachers to recognize and accommodate different learning styles and intelligence in their teaching methods. This means that students may benefit from a variety of teaching approaches, such as visual aids, hands-on activities, group work, or musical exercises, depending on their individual strengths and learning preferences (Herndon, 2018).

In the classroom, students' creativity should be encouraged since it will enable them to express themselves freely. Teachers must be adaptable and provide students with opportunities wherever possible to provide them the chance to express themselves creatively. Accordingly, a creative teacher in the 21st century makes the lesson interesting and engaging. Creativity can

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

also make students better communicators when they work collaboratively (Shute & Wang, 2016).

Other skills for the 21st century are communication and collaboration. Department of Education Order No. 021, series of 2019 defines communication as an ability that enables learners to easily adapt to present and future challenges and opportunities. Teamwork, collaboration, interpersonal skills, and interactive communication are parts and parcels of 21st-century learning which are integrated into different learning areas, and gradually developed through learning competencies and performance standards. This means that the DepEd is hopeful to produce K-12 graduates who are holistically developed with strong foundations of learning and possess 21st-century learning skills.

According to Gorman (2020), students have the chance to own and internalize their learning through communication by explaining it to others. Also, students can ponder, visualize their ideas, and make connections between various pieces of knowledge and real-world concepts. Through this, communication allows students the growth learning from the surface to deeper learning through reflection on various points of view, disciplines, and possibilities.

A trend of the twenty-first century is the shift from teacher- or lecture-centered settings to collaborative environments for learning. Collaborative learning is a broad term for a 'variety of educational approaches involving a joint intellectual effort by learners, or learners and teachers together. Students collaborate in groups of two or more, looking together for understanding, answers, or meanings or producing a product (Barkley, 2014). The collaborative learning atmosphere encourages students to share and defend their opinions as well as come up with original ideas after deep consideration. They engage in peer discussions, exchange viewpoints, ask questions, seek clarification from others, and take part in managing, organizing, conducting critical analysis, solving problems, producing new knowledge, and developing a better

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

understanding. It means that students learn more if they collaborate with each other in the classroom than by making himself/herself alone.

The study by Joseph and Mathew (2019) proved that collaboration improves students' participation, self-assessment, and group evaluation to increase school attendance. The outcome of collaborative learning is the creation of new information, which embodies free thinking. Additionally, it promotes the growth of metacognition, enhances the ability to formulate ideas, and raises the level of discussion and debate.

Additionally, a significant technological revolution ushers in the new millennium. Today's society is becoming more varied, multinational, complex, and media-rich. Students in today's classrooms have grown up surrounded by media in the 21st century. They are digital learners, as they essentially perceive the world via the computer's lens, and devices, including mobile phones, portable gaming consoles, laptops, PDAs, and televisions people use while traveling and at home (Natasi and Clements, 2010).

Students in the 21st century live in a technology and media-suffused environment, characterized by a variety of factors, including 1) access to an abundance of information; 2) quick advances in technology tools, and 3) the capacity for unprecedented levels of collaboration and individual involvement (Sulaiman and Ismail, 2020). Students immersed in technology demonstrate a variety of functional and critical thinking abilities linked to information, media, and technology to be effective in the twenty-first century.

Moreso, digital literacy is a component of technological literacy in the twenty-first century. It encompasses not only technical proficiency but also the concerns, expectations, and dispositions that surround the usage of specific technology. Due to the current state of technological development, educational institutions must conduct initiatives that encourage digital

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

literacy (Yunus et al, 2019). Both teachers and students use Information and Communication Technology (ICT) as media for communication. These are the skills that are currently essential in improving the teaching and learning process in the 21st century time.

Utilizing technology in education produces a manageable learning environment where knowledge is delivered more smoothly, and learning is made simpler. According to Limon (2015), ICT enhances the quality of learning as it encourages student motivation, mastery, and the development of abilities for lifelong learning. In terms of technology-related skills, learners need both technical skills for work and communication. They also need media literacy skills to encounter an unlimited flow of information in the era of advanced technology. Based on the findings of the study of Boholano (2017), showed that technology in the twenty-first century is a remarkable instrument for enhancing and forming the learning environment. Digital literacy skills are necessary to ensure that technology is applied to enhance high-quality educational approaches.

The new learning paradigm is the formulation of essential 21st-century skills with the direct aim of teaching students to learn and work well with 21st-century skills. Life and career skills comprise the knowledge needed to expand opportunities in gaining employment. These skills cater to more than employability skills; they include soft skills, technical skills, and academic skills to survive in the 21st century (Saadah et al., 2020). More than critical thinking and content understanding are needed in today's work and personal situations. Students must pay close attention to building the necessary life and career skills if they want to manage successfully their challenging personal and professional contexts in the globally competitive information era. Students need to learn how to be flexible and self-driven in their work as they develop their life and job abilities. As they are expected to work with people from other cultures, customs, and political viewpoints, they should possess cross-cultural abilities. To maintain productivity and efficiency at work, leadership, and responsibility are also crucial.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

This study is aligned with the goals of Republic Act No. 7796 known as the Technical Education and Skills Development Act or TESDA Act of 1994 which states that:

> "It is the goal and objective of this Act to promote and strengthen the quality of technical education and skills development programs to attain international competitiveness; focus technical education and skills development on meeting the changing demands for quality middle-level manpower; encourage critical and creative thinking by disseminating the scientific and technical knowledge base of middle-level manpower development programs".

This means that teaching home economics entails engaging learners in an immersive, contextualized, and authentic teaching-learning process that fits the skills of the 21st century. Teachers must hone students to become more technologically proficient and globally competitive with the appropriate work values and life skills in the century 21st era.

It is the industry that will determine the specification of competencies required for effective work performance. To be competent means meeting all these competency standards and qualifications set by TESDA. Students' development in middle-skills is reflected in the curricular integration of vocational courses. Given the importance placed on advancing technical and vocational education, international employers who are looking for employees to work with them might consider the country's graduates. This is true, especially for well-equipped graduates in the most common vocational courses with high demands for employability (Mayuga and Ojales 2021).

Enclosure No. 2 of DepEd Order No. 67, s. 2012 Guidelines on the implementation of Technology and Livelihood Education curriculum in public and private secondary schools which states that:

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

"The Technology and Livelihood Education (TLE) of the K to 12 Basic Education Program provides a Technical Vocational-based TLE curriculum designed based on the training regulations (TR) of the Technical Education and Skills Development Authority (TESDA). It focuses on technical skills development in any area of specialization that the student wants to pursue. The tech-voc-based TLE focuses on the five (5) common competencies including mensuration and calculation, technical drafting, use of tools and equipment, maintenance of tools and equipment, and occupational health and safety in the exploratory phase in Grades 7 and 8. Specialization will start from Grade 9 to 12".

Among the areas of specialization in TLE specifically, Home Economics is offered between Grades 9-12. Also, the competencies are based on the K to 12 Basic Education Curriculum anchored on the training regulations set by TESDA.

Home Economics, one of the TLE's component areas, focuses on helping students gain the knowledge and skills needed to live independently and manage a household. Young learners are taught to master with the essential values and skills that they can use at home or while applying for jobs. They are also given the opportunity to develop the personal entrepreneurial skills necessary to succeed as entrepreneurs in the future. Home Economics offers different specializations in public secondary schools. Commonly offered are beauty & nail care, bread and pastry production, cookery, dressmaking, food and beverage services, housekeeping, and wellness massage.

Beauty and Nail Care Services consists of competencies that a person needs to possess to provide beauty and nail care services such as manicures, pedicures, hand, and foot spas, which all contribute to increasing one's own beauty. This covers the development of the learner's

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

knowledge, skills and attitude required in performing: 1) hand spa; 2) foot spa and 3) manicure and pedicure. A person who has earned this qualification is qualified to work as a nail technician, pedicurist, or manicurist.

Another is bread and pastry production sometimes referred to as baking and pastry production is a course designed for high school student to develop knowledge, skills, and attitude to perform the tasks on Bread and Pastry Production. It covers core competencies namely: 1) prepare and produce bakery products; 2) prepare and produce pastry products; 3) prepare and present gateau, tortes, and cakes; 4) prepare and display petit fours and 5) present deserts. Also, it includes safe practices, sanitation, and various presentation techniques.

Moreover, commercial cooking or cookery is the art, technology, and craft of preparing food for consumption with the use of heat. This course teaches students how to use kitchen utensils, and in the creation of both hot and cold meals. The curriculum also includes classes on local and foreign cuisine, preparing plates of food or meat for customers in restaurants or motels, cruising, clubs, and canteens. Additionally, included in cookery are the diverse cooking techniques and recipes used around the world, in the baking of various types using ovens to utilize electric stoves in grilling food over as customs and changes in the environment, economy and culture.

Another is dressmaking. It consists of competencies that a person must achieve to be able to draw and cut patterns, lay out patterns on materials or fabrics, sew materials or fabrics, and add finishing touches to women casual clothing for the garment industry. Casual clothing includes culottes, shorts, a skirt, a shirt, and a pair of pants. This course develops students' knowledge, skills, and attitude to perform tasks on Dressmaking. It covers three competencies namely: 1) Produce ladies' skirt; 2) Produce ladies' blouse and 3) Produce ladies' trousers.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Likewise, food and beverage services as a course to student's develop knowledge, skills, and attitude to perform the tasks required. It covers the core competencies of (1) prepare dining room/restaurant area for service; (2) welcome guests and take food and beverage orders; (3) promote food and beverage products; (4) provide food and beverage services to guest; (5) provide room service; and (6) receive and handle guest concerns.

Furthermore, housekeeping as area of Home Economics specialization. It consists of competencies that a person must achieve to prepare guest rooms, clean public areas, and equipment, provide housekeeping services, provide valet services, handle intoxicated guests, and laundry linen and guest clothes to a range of accommodation services. Students who have achieved this qualification is competent to be cleaners, room/cabin, laundry, and housekeeping attendant.

Additionally, wellness massage is one of the specialization courses of home economics designed to develop knowledge, skills, and attitude to perform the tasks of Wellness Massage service. It covers core competencies namely: (1) plan the wellness massage program of client/s; (2) provide preliminary services to client/s; (3) apply wellness massage techniques; and (4) provide advice on post-wellness massage services.

In today's rapidly changing world of work, it's essential for students to develop skills that will enable them to stay relevant and succeed in their careers. Teachers should encourage students to pursue their interests and passions, as this can foster creativity and help them develop a sense of purpose in their learning, hence, be successful in the 21st-century workforce and beyond.

This study is rooted in Section 2 of Republic Act No. 10533 otherwise knowns as the "Enhanced Basic Education Act of 2013" which states that:

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

> "The State shall establish, maintain, and support a complete, adequate, and integrated system of education relevant to the needs of the people, the country and society at large. Every graduate of basic education shall be an empowered individual who has learned, through a program that is rooted in sound educational principles and geared towards excellence, the foundations for learning throughout life, the competence to engage in work and be productive, the ability to coexist in fruitful harmony with local and global communities, the capability to engage in autonomous, creative, and critical thinking, and the capacity and willingness to transform others and one's self".

These 21st-century skills include the capacity for critical thought and problem-solving, network collaboration and influence-based leadership, flexibility and adaptability, initiative and entrepreneurship, effective oral and written communication, information access and analysis, and creativity and curiosity.

> Further, the Department of Education Order No. 035, series of 2016 states that:
> "The central feature of the K to 12 Basic Education Program includes 21st-century skills in the teaching and learning process. Teachers must enrich lessons with simple integration strategies with 21st-century pedagogies that are developmentally appropriate".

This implies that teachers are expected to be catalysts for meaningful learning using their creativity to select from a variety of teaching techniques to create conditions and chances for in-depth learning encounters that might reveal and enhance students' capacities (Caena and Redecker, 2019).

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Moreover, the study is aligned to the Batas Pambansa Bilang 232 known as the "Education Act of 1982" which states that:

> "The State shall promote the right of every individual to relevant quality education, regardless of sex, age, creed, socio-economic status, physical and mental conditions, racial or ethnic origin, political or other affiliation. The act clearly supports upgrading the relevance and quality of education for every person either in formal or non-formal schooling".

Thus, the study is very suited to the objectives of this act as it pursues the upgrading of teaching styles that fits to the learners' skill in the 21st century. Thus, it supports the cutting-edge methodologies adopted by the teacher for the acquisition of the 21st-century learning skills.

It is further supported in Provision 31 of Philippine Education Act for All 2015 (EFA) which states that:

> "A vital part of the restructured curriculum is the promotion of the use of Information and Communication Technology (ICT) in every learning area in every learning area. DepEd through its Computerization program provided computers and peripherals to the recipient public high schools nationwide. Other government agencies like the Department of Trade and Industry (DTI), local governments, and private firms such as Intel likewise contributed to the advancement of computer education in public elementary and high schools through donations of computers".

In support of the EFA 2015, there is a need for teachers to advance quality instruction to the students. The researcher believes that teaching methodologies stimulate the acquisition of

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

digital and technological literacy in the 21st century. The use of advanced and innovative instructional materials in teaching has been proven to be an effective tool in conceptualizing ideas by demonstrating actual processes. Hence, technological innovation molds learners to be creative and progressive.

Thus, the gathered facts and related information through related literature and studies made the study more relevant and fitted in assessing the teachers' practice of teaching methodologies in acquiring the learner's 21st-century learning skills and competence in Home Economics. The result of this study will serve as a basis for the proposed teachers' management plan in teaching Home Economics subject.

THE PROBLEM

Statement of the Problem

The main purpose of the study was to determine the relationship between the teachers' practice of teaching methodologies and the learners' 21st-century learning skills and competencies in Home Economics of public secondary schools in Bohol Division for the School Year 2022-2023.

Specifically, the study sought to answer the following questions:

1. What is the profile of the respondents in terms of:
   1.1. educational attainment;
   1.2. teaching experience; and
   1.3. relevant seminars/trainings attended?
2. What is the level of practice of teaching methodologies as perceived by the respondents?
3. What is the learners' level of 21st-century learning skills as perceived by the respondents in terms of:

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

3.1. learning and innovation;

3.2. communication and collaboration;

3.3. information, media, and technology; and

3.4. life and career?

4. What is the competence level of learners in the following area of specialization as experienced by the respondents:

4.1. beauty/nail care;

4.2. bread & pastry production;

4.3. cookery;

4.4. dressmaking;

4.5. food and beverage services;

4.6. housekeeping; and

4.7. wellness massage

5. Is there a significant relationship between the following:

5.1 teachers' profile and the teachers' level of practice of teaching methodologies;

5.2. teachers' profile and the learners' level of competence;

5.3. teachers' level of practice of teaching methodologies and learners' level of acquisition of 21st-century learning skills;

5.4. teachers' level of practice of teaching methodologies and learners' level of competence; and

5.5. learners' level of competence and their level of acquisition of 21st-century learning skills?

6. Based on the findings, what action plan can be proposed?

Statement of Null Hypothesis

This study assumed that there is no significant relationship between the:

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

1.1. teachers' profile and the teachers' level of practice of teaching methodologies;

1.2. teachers' profile and the learners' level of competence;

1.3. teachers' level of practice of teaching methodologies and learners' level of acquisition of 21st-century learning skills;

1.4. teachers' level of practice of teaching methodologies and learners' level of competence; and

1.5. learners' level of competence and their level of acquisition of 21st-century learning skills?

Significance of the study

The researcher believed that the study would be of great significance to the following:

Learners. The result of the study may help learners to be assessed with 21st-century learning skills and competence level in their chosen area of specialization in Home Economics.

Teachers. The findings of the study will aid the teachers to know and assess their level of practice of teaching methodologies, update their teaching skills and competence, and make plans on how to conduct lessons that will fit the skills of 21st-century learners.

School Administrators. This study may help school administrators in assessing teachers' teaching performance and competence and providing them with technical assistance most especially in venturing into new teaching skills and pedagogies in the 21st century.

Researcher. The conduct of this study will benefit the researcher's professional and literacy growth and assess her level of proficiency in teaching in the twenty-first century as a Home Economics teacher.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Future Researchers. Future researchers may use the study's findings as a guide and reference. They may expound the scope and venture other significant variables that would be worthwhile to research.

RESEARCH METHODOLOGY

Design

The study employed the descriptive-correlational research design. This design is used to examine and provide a descriptive analysis of the relationships between the teachers' practice of teaching methodologies, learners' 21st-century learning skills, and their level of competence in the selected area of specialization in Home Economics. This design allows the researcher to collect data in a natural setting, which can increase the external validity of the study and explore what independent variables correlated with the dependent variables in this study.

Environment and Participants

The study was conducted in the selected public secondary schools in Bohol Division among the three (3) congressional districts that covered Education Service Area (ESA1, ESA2, and ESA3) which offered specializations in home economics. Bohol is in the central portion of the Visayas lying between Cebu to the northwest and Leyte to the northeast. The province has one city and is subdivided into 47 towns. Figure 2 shows a map of Bohol with the study's location highlighted.

INSTABRIGHT e-GAZETTE

ISSN: 2704-3010

Volume V, Issue I

August 2023

Available online at https://www.instabrightgazette.com

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The Research Environment

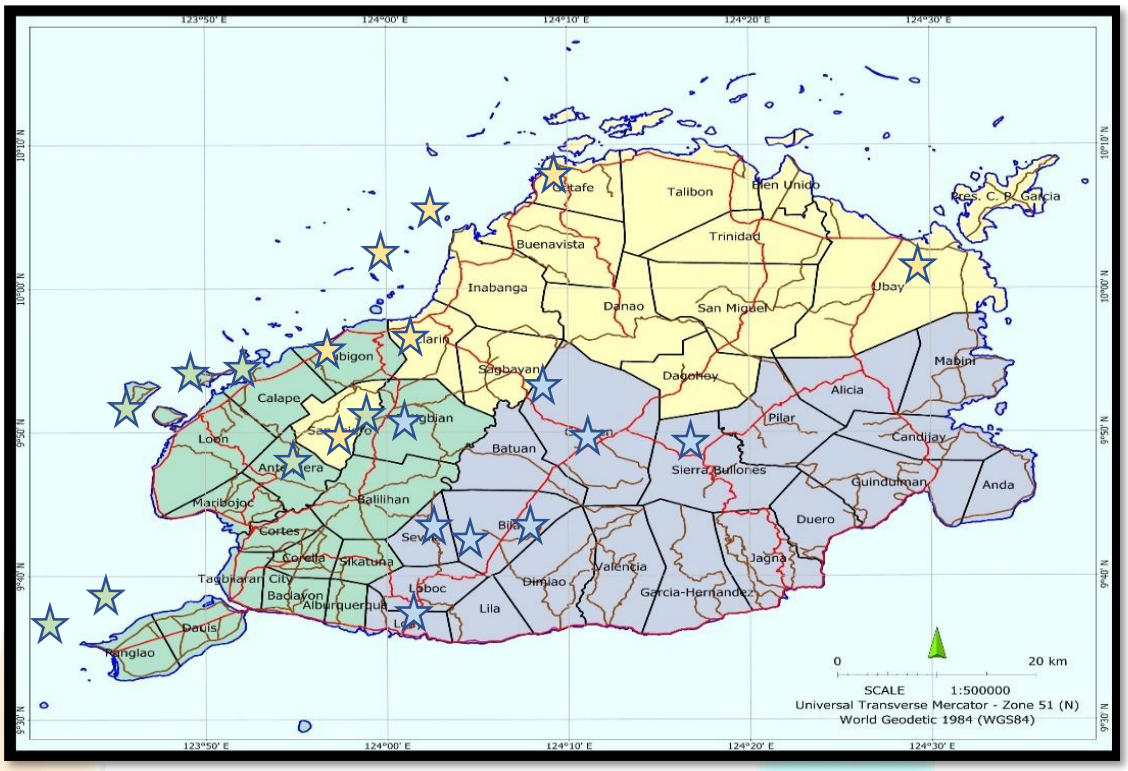

Figure 2. Map of Bohol

The purposive sampling method was used in this study. It is sometimes referred to as judgmental, selective, or subjective sampling, wherein it is a type of non-probability sampling using its own judgment to pick people from the population to take part in the study. The study's respondents were the chosen Grade 10 Home Economics teachers and their learners. They have been selected as respondents because they are teaching and specializing in home economics.

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INSTABRIGHT e-GAZETTE

ISSN: 2704-3010

Volume V, Issue I

August 2023

Available online at https://www.instabrightgazette.com

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Matrix of Respondents' Distribution

NAME OF DISTRICTS	Home Economics Teachers	Junior High School Learners
FIRST CONGRESSIONAL DISTRICT (ESA 1)		
Balilihan	3	48
Calape	6	108
Catigbian	4	85
Dauis	5	105
Loon	5	104
Panglao	2	45
Tubigon	6	115
Subtotal	**31**	**610**
SECOND CONGRESSIONAL DISTRICT (ESA 2)		
Buenavista	6	105
Clarin	3	45
Inabanga	6	120
Sagbayan	6	117
San Isidro	3	60
Talibon	6	110
Ubay	4	73
Subtotal	**32**	**630**
THIRD CONGRESSIONAL DISTRICT (ESA 3)		
Batuan	4	72
Bilar	4	78
Carmen	3	52
Dimiao	4	75
Lila	4	72
Siera Bullones	5	110
Pilar	5	106
Valencia	6	125
Subtotal	**35**	**690**
Overall Total	**98**	**1,930**

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INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

The study involved 98 home economics teachers and 1,930 learners in the three (3) congressional districts of Bohol. They were selected to evaluate and assess their learning skills in the 21st century and their competence level in relation to the teaching methodologies used by their teacher.

Instruments

A survey questionnaire was prepared as an instrument for gathering relevant information needed in the study. It consists of four (4) parts. The first part contains items determining the profile of the respondents such as educational attainment, teaching experience, and relevant seminars and training attended.

The second part contains teaching methodologies used by the teachers in teaching home economics which were adopted from the Teaching and Learning Survey Questionnaire (TALIS,2013), and from the studies of Al-Rawi (2013), Abanador et al (2014), Carag (2020), and Abalos (2021). These were composed of forty-nine (49) items which were divided equally to suit the seven (7) teaching methods namely collaborative, discovery, discussion & dialogue, lecture-based, practical demonstration, project-based, and technology-based methods. In this, the researcher intended to assess the level of practice in each teaching methodology. Also, the researcher changed the options of the Likert Scale and excluded some parts or aspects in the questionnaire which are not related to the study.

To obtain unbiased results, the items pertaining to a particular method are not arranged in a successive manner. The items were rated on a Likert scale of 1 to 4, with 4 being Always Practiced (AP), 3 being Sometimes Practiced (SP), 2 being Rarely Practiced (RP), and 1 being Never Practiced (NP).

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

The respondents scored an item based on how often the teacher practice this method in his/her teaching. The scales used were: 3.25-4.00 – Always Practiced (AP); 2.50-3.24 – Sometimes Practiced (SP); 1.75-2.49 – Rarely Practiced (RP); 1.00-1.74 – Never Practiced (NP). The results for each method were then tallied and assessed again for the same scale.

Part 3 of the questionnaire is the learners' level of 21st-century learning skills as perceived by the respondents. It contained items for learners' 21st-century skills specifically on learning and innovation skills, communication and collaboration skills, information, media, and technology skills, and life and career skills. All aspects in the 21st century learning skills comprised of seven (7) items. A total of twenty-eight (28) items were adopted from Cutting-edge Teaching Methodologies Questionnaire (CTMQ), which was created by Mamman and Oyinloye, 2016. The items were placed on the 4-point Likert rating scale of Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2, and Strongly Disagree (SD) = 1. The scales used were: 3.25-4.00 – Strongly Agree (SA); 2.50-3.24 – Agree (A); 1.75-2.49 – Disagree (D); 1.00-1.74 – Strongly Disagree (SD). The results for all 21st-century skills were then totaled and evaluated once again using the same scale.

Part 4 consisted of items to assess the learner's level of competency in the selected area of specialization in Home Economics namely Beauty and Nail Care Services, Bread and Pastry Production, Cookery, Dressmaking, Food and Beverage Services, Housekeeping, and Wellness Massage. The researcher adopted the list of competencies from the K to 12 Home Economics curriculum guide of 2016. The items were also rated on a Likert scale of 1 to 4, with 4 being Highly Competent (HC), 3 being Competent (C), 2 being Slightly Competent (SC), and 1 being Not Competent (NC). The study focused solely on competencies covered in the second quarter, including eleven (11) competencies for Beauty and Nail Care Services and Bread and Pastry Production, twelve (12) competencies for Cookery and Dressmaking, seventeen (17) for Food and

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Beverage Services, twenty-five (25) for Housekeeping, and thirteen (13) competencies for Wellness Massage.

The face and content validity of the instrument was evaluated by the dissertation adviser and the expert panel of the university. The instrument was pilot tested on 30 respondents who were not participants in the study. It was done to find out whether the contents were clear, readable, and comprehensible. The reliability of the scales was calculated using Cronbach's alpha: teaching methodologies, α=0.886; learner's 21st-century learning skills α=0.882. which indicates a high level of internal consistency and reliability. In other words, the items in the scale or test are highly correlated with each other and are likely measuring the same underlying construct. This suggests that all scales possessed exemplary reliability according to the standards for instrument reliability for Cronbach's alpha by Robertson, Shaver, and Wrightsman (1991).

Procedure

The researcher underwent the following steps in gathering the data:

First, the researcher sent a letter to the University President of BISU, and the Schools Division Superintendent of Bohol Division, for permission and approval to conduct the study. Upon approval, the researcher secured a consent form from the respondents prior to the distribution of the questionnaires.

Second, the distribution of the questionnaire. A combination of face-to-face using printed questionnaires and online survey questionnaires using the Google Form application was used. The respondents were asked to answer the questionnaires honestly and without hesitation while being assured of the anonymity and confidentiality of their answers to ensure the validity of the research tools. The survey questionnaire was personally administered by the researcher to the respondents. Prior to this, the researcher provided the respondents with informed consent and

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

obtained their signatures as a sign of their voluntary participation in the study. The participants were given instructions on how to answer the survey and were encouraged to ask any questions about the study. The researcher enthusiastically addressed all the questions and concerns raised by the participants, particularly on the difficult items in the questionnaire. All their queries were answered to the best of the researcher's ability.

Lastly, the retrieval of survey questionnaires was done by the researcher for those respondents who answers face-to-face. And, for those who answered online, the responses were accessed automatically through Google Sheets. The data were processed accordingly to generate the answers to the problems of the study.

Statistical Treatment

In the analysis of the data, the following procedures were followed:

The simple percentage formula was utilized to analyze the data on the demographic profile of the teacher-respondents in terms of educational attainment, teaching experience, and relevant seminars and training attended.

To get the overall picture of the teaching methodologies, learners' 21st-century learning skills, and learners' competence level in the selected specialization of Home Economics, a weighted mean was used. Additionally, it was utilized to determine the weight in terms of mean responses. After getting the weighted mean, the results for teachers' practice on teaching methodologies were interpreted using the following scale:

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Range	Description	Interpretation
3.25-4.00	Always Practiced (AP)	The teaching method is practiced all the time.
2.50-3.24	Sometimes Practiced (SP)	The teaching method is occasionally practiced.
1.75-2.49	Rarely Practiced (RP)	The teaching method is seldom practiced.
1.00-1.74	Never Practiced (NP)	The teaching method is not practiced at all.

Moreover, the results of the learners' 21st-century learning skills are interpreted using the following scale:

Range	Description	Interpretation
3.25-4.00	Strongly Agree (SA)	Very skillful in the 21st-century learning skills
2.50-3.24	Agree (A)	Skillful in the 21st-century learning skills
1.75-2.49	Disagree (D)	Less skillful in the 21st-century learning skills
1.00-1.74	Strongly Disagree (SD)	Not skillful in the 21st-century learning skills

Further, the results of the learners' competency level are also interpreted using the following scale:

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Range	Description	Interpretation
3.25-4.00	Highly Competent (HC)	Has the ability to perform beyond the required competencies.
2.50-3.24	Competent (C)	Has the ability to perform all required competencies.
1.75-2.49	Slightly Competent (SC)	Has the ability to perform not all the required competencies.
1.00-1.74	Not Competent (NC)	Cannot perform the required competencies.

The Chi-square was employed to get the relationship between the teacher's profile and the teachers' level of practice of teaching methodologies and the learners' competence level.

The Spearman Rank Correlation Coefficient was used to determine the relationship between the teachers' level of practice of teaching methodologies, learners' level of 21st-century learning skills, and the learners' level of competence in their selected area of specialization

DEFINITION OF TERMS

To avoid ambiguity in the interpretation of data, it is essential that the terminologies utilized throughout the research study be made clear. To make the study easier to comprehend, the words below are operationally defined.

Beauty and Nail Care. It is one of the home economics specializations that focuses on teaching students to develop the knowledge, skills, and attitudes needed to perform hand, foot, and manicure and pedicure services.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Bread and Pastry. It is one of the elements of TLE under Home Economics that aids students in honing their cake and dessert-making, baking, and pastry production abilities.

Competencies. This means the acquisition of knowledge, skills, and attitudes that a learner must possess in accordance with the standard performance in areas in the selected areas of specialization in Home Economics.

Cookery. This is a specialized course in Home Economics which is composed of the art, technology, and craft of preparing food for consumption with the use of heat for students to know how to use kitchen utensils for the creation of hot and cold meals.

Dressmaking. It entails the skills a student must master to be able to design and cut patterns, arrange patterns on materials or fabrics, sew materials or fabrics, and add finishing touches to women's casual wear. It covers the competencies of producing ladies' skirts; producing ladies' blouses; and producing ladies' trousers.

Food and Beverage Services. It is a specialization under Home Economics designed to increase students' knowledge, abilities, and attitudes to perform the core competencies of preparing the dining room/restaurant area for service; welcoming guests and taking food and beverage orders; promoting food and beverage products; providing food and beverage services to guest; providing room service; and receiving and handling guest concerns.

Home Economics. It is one of the component areas of TLE, which focuses on assisting students in acquiring the knowledge and skills necessary to live independently and manage a household.

Housekeeping. It consists of competencies that students must achieve to prepare guest rooms, clean public areas, and equipment, provide housekeeping services, provide valet services,

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

handle intoxicated guests, and laundry linen and guest clothes to a range of accommodation services.

Learners' 21st-century learning skills. It refers to the skills, knowledge, and expertise learners must master to succeed in today's world in this 21st century, such as learning and innovation, communication and collaboration, information, media and technology, and life and career skills.

Teaching methodologies. It refers to the general principles, pedagogy, and management strategies employed by teachers in the classroom. Lectures, discussion, and dialogue, as well as practical demonstrations, collaboration, discovery, project, and technology-based are the teaching methodologies commonly used by teachers in teaching Home Economics subjects.

Technology and Livelihood Education (TLE). This is one of the learning areas in the Secondary Education Curriculum used in Philippine secondary schools. It covers four (4) major components namely: Home Economics (HE); Agriculture and Fishery Arts (AFA), Industrial Arts (IA); and Information and Communications Technology (ICT).

Wellness Massage. It is one of the home economics specialized courses, which aims to equip students with the knowledge, abilities, and attitudes necessary to carry out responsibilities related to wellness massage services. It covers the following fundamental competencies: planning the client's wellness massage program, providing preliminary services to clients, applying wellness massage techniques, and giving post-wellness massage counseling.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

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Chapter 2

PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

This chapter covers the presentation of the gathered data pertaining to teachers' teaching methodologies, learners' 21st-century learning skills, and competencies in Home Economics. The said data were then analyzed and interpreted in accordance with the specific problems of the study.

The first imperative thing to point out in this study was the profile of Home Economics Teachers in the selected public secondary schools in the Division of Bohol. The respondents' profiles were tabulated and computed based on the following criteria: highest educational attainment, teaching experience, and relevant seminars attended in the previous three years.

Table 1 presents the profile of the teacher respondents in terms of highest educational attainment. Part 1 of the table shows the highest educational attainment of the respondents. It was categorized into seven (7) levels: bachelor's degree, bachelor's degree with MA units, Complete Academic Requirements for MA, master's degree, master's degree with Doctorate Units, Complete Academic Requirements for Doctorate, and Doctorate Degree holder. It displays that 35 out of 98 or 36% hold a bachelor's degree. However, there were also 63 out of 98, or 64 % who were able to continue their professional education. The data implied that most of the respondents were able to pursue their graduate and post-graduate degrees.

Table 1
Teacher's Profile
n=98

1.1. Highest Educational Attainment	Frequency (f)	Percentage (%)	Rank
Bachelor's Degree	35	36	1

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INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Bachelor's Degree with MA units	22	22	3
Complete Academic Requirements for MA	27	28	2
Master's Degree	6	6	4
Master's Degree with Doctorate units	4	4	5
Complete Academic Requirements for MA	1	1	7
Doctorate Degree	3	3	6
Total	**98**	**100**	
1.2. Number of Years in Teaching Experience			
0-5	32	33	2
6-10	40	41	1
11-15	9	9	3.5
16-20	10	10	3.5
21-25	4	4	5
26-30	2	2	6
31& above	1	1	7
Total	**98**	**100**	
1.3. Number of relevant seminars/trainings attended (last 3 years)			
2	4	4	6
3	30	31	1
4	28	29	2
5	15	15	3
6	10	10	4
7	5	5	5
8	2	2	8
9	1	1	9
10	3	3	7
Total	**98**	**100**	

According to Soe (2018), teachers who acquire advanced studies and professional development demonstrate a profound understanding and devotion to the profession, allowing them to adapt curriculum goals and teaching approaches. As a result, they can more effectively

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

apply their teaching-learning process and improve their classroom practices. Teachers must have significant expertise and skills in both teaching and learning practices to meet the demands and standards of quality education in the 21st century.

Moreover, part 2 in the table data revealed that 40 out of 98 teachers, or 41% had 6-10 years of teaching experience while 26, or 27 % had a teaching experience of more than 10 years. This suggests that most of the teachers have been teaching for several years and are more experienced. According to Goe and Stickler (2008), the greater the number of years spent teaching, the better the teacher's degree of expertise and skills. Throughout a teacher's career, teaching experience is positively associated with student success gains. Gains in teacher effectiveness related to experience are greatest in the first few years of teaching, but they continue to be considered when teachers enter their second, and often third, decades of teaching (Podolsky et al., 2019).

Additionally, part 3 of the table reveals the relevant training and seminars attended by the respondents and the levels. It was found that 30 out of 98 or 31% of the respondents had participated in 3 trainings relevant to their major or area of specialization in Home Economics. While 64 out of 98 or 65% of the respondents had attended four or more relevant training and seminars. This indicates that most home economics teachers were able to attend training/seminars relevant to the field of specialization.

Ongoing training on professional development is an essential aspect of teachers' teaching quality. According to Solheim (2017), effective teacher learning, and professionalism is important for student achievement. Teacher learning is a continuous process that promotes teachers' teaching skills, master new knowledge, and develop new proficiency which in turn, helps improve students' learning. Teachers who receive effective training and ongoing professional development may be successful in their schools.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Table 2 reveals the level of teachers' practice of teaching methodologies.

Table 2
Teacher's Practice of Teaching Methodologies
n=98

Indicators	WM	VI
A. Lecture		
1. Discusses the lessons in the class in an easy language students can easily understand.	3.56	Always Practiced
2. Makes time for questions before, during, and after the lecture to encourage student participation.	3.53	Always Practiced
3. Explains all points and answer all questions raised by the students.	3.50	Always Practiced
4. Urges students to take down notes by hand since it improves their ability to remember lessons and their writing and spelling abilities.	3.42	Always Practiced
5. Let students work individually with textbooks or worksheets to practice the newly taught subject matter.	3.34	Always Practiced
6. Keeps lessons brief for students who may have short attention spans.	3.28	Always Practiced
7. Asks students to memorize verbatim the steps in a procedure.	3.26	Always Practiced
Composite Mean	**3.41**	**Always Practiced**
B. Discussion & Dialogue		
1. Gives students the opportunity to share their thoughts as well as hear the opinions of others.	3.54	Always Practiced
2. Provides an enthusiastic and enjoyable atmosphere in the classroom.	3.45	Always Practiced
3. Immerses learners into differing disciplines to learn a given lesson.	3.44	Always Practiced
4. Increases the focusing and concentrating ability of the students.	3.44	Always Practiced
5. Stimulates thinking to open discussions.	3.38	Always Practiced
6. Enables students to discuss their thoughts with one another.	3.33	Always Practiced

INSTABRIGHT e-GAZETTE

ISSN: 2704-3010

Volume V, Issue I

August 2023

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7. Evokes critical thinking among students.	3.20	Sometimes Practiced
Composite Mean	**3.40**	**Always Practiced**
C. Practical Demonstration		
1. Set standards of workmanship and safety procedures.	3.60	Always Practiced
2. Shows and performs the skills in front of my students in an optimal way.	3.44	Always Practiced
3. Provides an enthusiastic and enjoyable learning atmosphere.	3.43	Always Practiced
4. Imparts extremely complex procedures and principles to students.	3.39	Sometimes Practiced
5. Teaches students manipulative operations or procedures of the lesson.	3.38	Always Practiced
6. Adapts tactile, auditory as well as visual experiences with students.	3.24	Sometimes Practiced
7. Uses real-world objects and three-dimensional models in teaching.	3.17	Sometimes Practiced
Composite Mean	**3.38**	**Always Practiced**
D. Collaborative Learning		
1. Makes students more active in classroom activities.	3.59	Always Practiced
2. Allows students to review and reflect on their learning processes together.	3.44	Always Practiced
3. Encourages students to work in groups based on their interests and abilities.	3.37	Always Practiced
4. Makes sure that students work in teams through brainstorming and buzz sessions.	3.36	Always Practiced
5. Sees to it that learners acquire knowledge from themselves and their peers.	3.35	Always Practiced
6. Engages students in joint activities across different classes and age groups.	3.16	Sometimes Practiced
7. Learning depends greatly on collaborative work among students.	3.06	Sometimes Practiced

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INSTABRIGHT e-GAZETTE

ISSN: 2704-3010

Volume V, Issue I

August 2023

Available online at https://www.instabrightgazette.com

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Composite Mean	**3.33**	**Always Practiced**
E. Discovery Learning		
1. Encourages students to ask questions, inquire through exploration and collaborate with teachers and peers.	3.44	Always Practiced
2. Allows students to use various sources of information to explore ideas and form questions.	3.37	Always Practiced
3. Inspires students' learning through challenging problems to discover.	3.35	Always Practiced
4. Let students explore to come up with a joint solution to a problem or task.	3.33	Always Practiced
5. Motivates students to think of solutions to practical problems themselves.	3.31	Always Practiced
6. Gives students activities that involve solving problems, building upon students' reasoning, and connecting to their experiences.	3.29	Always Practiced
7. Motivates learners to draw conclusions and revisit the conclusions by asking questions.	3.22	Sometimes Practiced
Composite Mean	**3.33**	**Always Practiced**
F. Project		
1. Encourages students to work on projects either individually or in groups.	3.57	Always Practiced
2. Makes sure that learners create outputs or projects based on how they interpret situations.	3.53	Always Practiced
3. Inspires students to create a product or project in their field of specialization.	3.52	Always Practiced
4. Gives students opportunities for self-expression by bringing out what is in them.	3.40	Always Practiced
5. Tasks learners to produce new knowledge or products based on the lessons given to them.	3.39	Always Practiced
6. Provides students the freedom to create projects on their own thinking.	3.31	Always Practiced
7. Enables students to share realizations on what they discovered through their outputs.	3.22	Sometimes Practiced
Composite Mean	**3.42**	**Always Practiced**

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INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

G. Technology-based		
1. Ensures that students are comfortable and benefited from technology-based learning.	3.37	Always Practiced
2. Provides a great opportunity for students to work at their own pace, as they can see the instructional videos again by rewinding and replaying them.	3.22	Sometimes Practiced
3. Incorporates audio and visual aids from multi-media resources into the lessons.	3.08	Sometimes Practiced
4. Integrates computer technology into my teaching activities.	3.04	Sometimes Practiced
5. Encourages students to watch lectures or instructional videos at home and complete assignments in class.	3.01	Sometimes Practiced
6. Allows students to use devices like cellphones, computers, and tablets to read materials, conduct research, or play educational games.	2.96	Sometimes Practiced
7. Uses online tools like video conferencing to check in with students on their progress.	2.75	Sometimes Practiced
Composite Mean	**3.06**	**Sometimes Practiced**
Over-all Composite Mean	**3.33**	**Always Practiced**

Lecture or direct instruction is one of the earliest teaching methods where the teacher organizes the lessons and delivers them verbally to a group of students using instructional aids and teaching tools. As shown in the table, in the lecture method "discusses the lessons in the class in an easy language student can easily understand"; got the highest weighted mean of 3.56 described as "Always Practiced". This means that when teachers simplify their lessons and use simple language during lectures, students can grasp the lessons well. "Asks students to memorize verbatim the steps in a procedure" had the lowest score of 3.26 "Always Practiced", indicating that a good lecture allows not only rote memorization but also comprehension.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

The respondents' composite mean on the lecture method is 3.41 categorized as "Always Practiced" which demonstrated that this method has a very high level of practice among teachers in teaching home economics. However, effective lectures should be interactive which means that teachers should encourage students to raise questions and participate in the discussion. The results show a connection to the studies by Sandhu et al. 2012 which found that interactive lectures resulted in higher student satisfaction, learning outcomes, a deeper approach to learning, and knowledge retention. This method not only arouses curiosity, but it fosters critical thinking that leads to effective problem-solving skills. When students are engaged in the lesson, they will be more likely to learn.

The table also reflects the level of teachers' practice of teaching methodologies on discussion and dialogue methods. It is a method that uses collaborative, open-ended exchanges of ideas between a teacher and students or among students to foster critical thinking, problem-solving skills, and literary appreciation in students. As reflected, "Gives students the opportunity to share their thoughts as well as hear the opinions of others." had a weighted mean of 3.54, which was the highest as rated by the respondents and described as "Always Practiced." This implies that when using the discussion and dialogue method, learners are given opportunities to share their opinions with their peers. Meanwhile, "Evokes critical thinking among students" scored lowest with a weighted mean of 3.20 and described as "Sometimes Practiced". This means that home economics teachers occasionally practiced activities and tasks that arouse and develop critical thinking skills among the students.

The composite mean of discussion and dialogue method garnered an average score of 3.40 categorized as "Always Practiced". It signifies that home economics teachers practiced discussion and dialogue as a method of teaching most of the time. This connects to the study of Borich, (2012), that when students actively participate in the learning process, they learn more

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

and retain material for longer. Additionally, it promotes listening to one another and encourages mutual learning, and positively develops 21st-century learning skills among them.

Further, on the practical demonstration method, the table tells that "Sets standards of workmanship and safety procedures" got the highest weighted mean of 3.60 described as "Always Practiced" which means that standards of workmanship and safety are essential, especially in teaching applied subjects like Home Economics. Following specific laboratory guidelines to safeguard people and the environment during laboratory studies and using laboratory equipment in the most appropriate way ensures safety in practical operations and laboratories (Caymaz, 2021). The classroom or laboratory shops are where the students learn typically and must be therefore conducive to learning. It should be a comfortable, safe, and secure learning environment.

Also, the item "Uses real-world objects and three-dimensional models in teaching" has the lowest weighted mean of 3.17 categorized as "Sometimes Practiced". This indicates that using 3-dimensional models in practical demonstrations was not a common practice among home economics teachers which contrasts with Stephen's (2016) research, which demonstrated that both realia and models had a substantial impact on the academic performance of physics students.

Practical demonstration as a method in teaching had a composite mean of 3.38 described as "Always Practiced" meaning, the teachers mostly employed practical demonstration in teaching home economics. This is in congruence with Gunawan's (2017) study findings which demonstrated that using the demonstration method increased students' engagement in learning and was extremely active as student learning outcomes improved.

In the collaborative learning method as shown in the table, the item "Makes students more active in classroom activities" had the highest weighted average of 3.59 described as

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

"Always Practiced". The results showed a connection to Vygotsky's (1978) Social Constructivism theory, which holds that social interaction and context are essential for cognitive development. When students speak up and participate more actively in class, their communication and thinking skills will be developed. While the item "Learning depends greatly on collaborative work among students." had the lowest weighted mean of 3.06 illustrated as "Sometimes Practiced" indicating that the teaching-learning process does not rely only on group activities but there are numerous methods to employ that fit to the learners' characteristics and abilities.

The collaborative learning method of teaching has a composite mean of 3.33, and is classified as "Always Practiced," indicating that teachers place a high value on cooperation and collaboration in the classroom. Students learn more when they work together than when they work alone. But still, the choice of a teaching strategy depends on what works best for the students and the subject. This correlates with research by Laal and Laal (2012) showing that collaborative learning fosters the development of critical thinking and problem-solving skills through discussion, clarification of ideas, and evaluation of others' ideas.

However, in the discovery learning as one of the teaching methodologies, the item "Encourages students to ask questions, inquire through exploration and collaborate with teachers and peers" got the highest weighted mean of 3.44 which is described as "Always Practiced". This indicates that the discovery learning approach to instruction encourages students to ponder questions and carry out explorations. Whereas item "Motivates learners to draw conclusions and revisit the conclusions by asking questions" scored low in the weighted mean of 3.22 labeled as "Sometimes Practiced". This indicates that learners still find difficulty and lack the skill in formulating conclusions by asking questions. The overall composite means of 3.33 indicated "Always Practiced". This supported Rahman (2017)'s claim that the discovery learning model can foster students' capacity for independent thought. Students who learn by discovery have stronger cognitive and critical thinking skills.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

As revealed in the table on project method, the item "Encourages students to work on projects either individually or in groups" as rated by the respondents had the highest weighted average of 3.57 described as "Always Practiced". This indicates that the respondents agreed that teachers frequently assigned projects to students, either individually or in groups. It is a teaching methodology that provides students with a variety of tasks or settings from which they must select the issue they intend to solve or the products they want to produce.

Meanwhile, item "Enables students to share realizations on what they discovered through their outputs" had the lowest average rating of 3.22 described as "Sometimes Practiced". In other words, teachers rarely engaged in the activity of assigning tasks to students that would sharpen their capacity to develop realizations on their outputs.

The project methodology entails a composite mean of 3.42 labeled as "Always Practiced" which means that this method is highly practiced by teachers in teaching home economics being one of the applied subjects in the K-12 curriculum. It is an applied subject in the sense that home economics can be learned well if performed. This relates to Dewey's Experiential Learning Theory which advocates that trying and doing contribute much to the development of students' skills and ideas. Students showed that they learn best when they have active involvement in the process of learning (Kolb, 2014).

Nevertheless, on teachers' level of practice on technology-based methods as reflected in the table, "Ensures that students are comfortable and benefited from technology-based learning" obtained the highest rating of 3.37 and was labeled as "Always Practiced". This suggests that the advantages and comforts of learners come first when using the technology-based methodology. While item "Uses online tools like video conferencing to check in with students on their progress" had the lowest average rating of 2.75 categorized as "Sometimes Practiced". This indicates that

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

most teachers used face-to-face interactions to check on learners' progress and provide feedback rather than using online platforms like video conferencing.

The technology-based teaching gathered a composite mean of 3.06 categorized as "Sometimes Practiced". This indicates that teachers of home economics occasionally use technology-based methods as one of their teaching methodologies. The findings indicated that teachers still require sufficient training in technology-based instruction as it is included in the K–12 curriculum. Technology-based classroom instruction is crucial in the current technological world. According to Ratheeswari (2018), it is crucial for teachers to carry out their duty of creating technology-based pedagogies in their instruction to give students the necessary 21st-century skills in this digital age.

The results proved that the project method is the most comprehensively used pedagogical method in teaching home economics with a composite mean of 3.42 classified as "Always Practiced". Since home economics is a subject that emphasizes both performance skills and cognitive comprehension, requiring students to use both hands-on activities and theoretical practice. Through the project, students are taught how to develop their skills and competencies that meet industry standards. The study by Almulla (2020) found that project-based methodology greatly influences student engagement through collaborative, multidisciplinary, and real learning, hence improving student involvement.

The lecture method came in second with a composite mean of 3.41, followed by discussion and dialogue with a 3.40 composite mean, and practical demonstration with a composite mean of 3.38. The composite mean for both collaborative and discovery methods was 3.33. Since all these methods were labeled as "Always Practiced", implies that home economics teachers employed all these methods when teaching their students. Yet, the technology-based method got the lowest composite mean of 3.06 categorized as "Sometimes Practiced". It attests that many

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

teachers in home economics need the retooling of skills regarding technology-based teaching as envisioned by the Department of Education through the DepEd Computerization Program; (DCP) aims to provide public schools with appropriate technologies that would enhance the teaching-learning process and meet the challenges of the 21st century.

It is connected to the study by Jan (2017), in which teachers must design the greatest quality of instruction in the twenty-first century if they want to give students the technical and behavioral skills they need. They must be adept in using technology in the classroom, as well as both teaching methods and subject matter. To keep up with the digital and global technological age, they must keep improving their technical skills.

Table 3 shows the level of learners' 21st-century learning skills.

Table 3
Learners' 21st-Century Learning Skills
n=98

Indicators	WM	Verbal Interpretation
A. Learning and Innovation		
1. Use a wide range of idea-creation techniques in doing projects or tasks.	3.38	Very Skillful
2. Apply entrepreneurial skills to enhance workplace productivity and career options.	3.30	Very Skillful
3. Demonstrate originality and inventiveness to adopt new ideas.	3.29	Very Skillful
4. Make sound judgments and decisions.	3.27	Very Skillful
5. Reflect critically on learning experiences, processes, and solutions.	3.27	Very Skillful
6. Develop, implement, and communicate new ideas to others effectively.	3.20	Skillful
7. Solve complex problems using both traditional and creative approaches.	3.13	Skillful
Composite Mean	**3.26**	**Very Skillful**
B. **Communication and Collaboration**		
1. Listen attentively to understand the thoughts being conveyed.	3.44	Very Skillful

INSTABRIGHT e-GAZETTE

ISSN: 2704-3010

Volume V, Issue I

August 2023

Available online at https://www.instabrightgazette.com

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2. Communicate interactively to support individual learning and contribute to the learning of others.	3.41	Very Skillful
3. Demonstrate the ability to work effectively and respectfully with diverse teams.	3.38	Very Skillful
4. Communicate ideas and concepts using oral, written, and nonverbal means.	3.37	Very Skillful
5. Use effective interpersonal skills during group discussions to build positive relationships with others.	3.36	Very Skillful
6. Work with others to figure out a plan.	3.36	Very Skillful
7. Assume shared responsibility for collaborative work and value individual contributions made by each team member.	3.35	Very Skillful
Composite Mean	**3.38**	**Very Skillful**
C. **Information, Media, and Technology**		
1. Use technology as a tool to research, organize, evaluate, and communicate information.	3.28	Very Skillful
2. Realize both how and why media messages are constructed and for what purposes.	3.26	Very Skillful
3. Use information accurately and creatively for the issue or problem at hand.	3.25	Very Skillful
4. Access information efficiently and effectively.	3.24	Skillful
5. Manage the flow of information from a wide variety of sources.	3.24	Skillful
6. Evaluate information critically and competently.	3.22	Skillful
7. Utilize the most appropriate media creation tools, characteristics, and conventions.	3.20	Skillful
Composite Mean	**3.24**	**Skillful**
D. Life and Career		
1. Demonstrate commitment to learning as a lifelong process.	3.37	Very Skillful
2. Utilize time and manage workload efficiently.	3.32	Very Skillful
3. Prioritize, plan, and manage work to achieve the intended result.	3.32	Very Skillful
4. Explore one's learning and opportunities to gain expertise.	3.32	Very Skillful
5. Adapt to different job responsibilities, schedules, and situations.	3.31	Very Skillful

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INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

6. Inspire others to do their best by setting an example and being selfless.	3.31	Very Skillful
7. Deal positively with problems, setbacks, and criticisms.	3.24	Skillful
Composite Mean	**3.31**	**Very Skillful**
Over-all Composite Mean	**3.30**	**Very Skillful**

In terms of learning and innovation, the item "Use a wide range of idea-creation techniques in doing projects or tasks" received the highest weighted average of 3.38 labeled as "Very Skillful". This means that there is a very high level of acquisition of learning and innovation skills in the aspect of idea creation techniques or creativity. It is a way of thinking that is concentrated on developing original concepts that are helpful in resolving problems. On the other hand, respondents scored "Solve complex problems using both traditional and creative approaches." lowest with an average of 3.13 and described as "Skillful". This demonstrates that the learner's ability to solve complex problems is low. It implies that students in today's generation still lack the tolerance and patience to deal with difficulties.

Learning and innovation as one of the 21st-century learning skills gained a composite mean of 3.26 and was described as "Very Skillful" meaning the learners strongly manifested a high level of acquisition of learning and innovation skills which includes critical and problem-solving and creativity. This interconnects with Robinson's (2015) research, which showed that creativity encourages students to use original approaches to solving problems and improves their capacity for problem-solving so they can make sensible and deliberate decisions. In the classroom, students' creativity should be encouraged since it will enable them to express themselves freely.

On the other hand, in the aspect of communication and collaboration, the data in the table displayed that the item "Listen attentively to understand the thoughts being conveyed." got the

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

highest average rating of 3.44 labeled as "Very Skillful". This suggests that learners have a highly developed capacity for listening. Effective listening skills are a prerequisite for effective communication. Meanwhile, the item "Assume shared responsibility for collaborative work and value individual contributions made by each team member." acquired the lowest score of 3.35 but is still interpreted as "Very Skillful" as assessed by the respondents. It means that collaboration as one of the 21st-century learning skills is still manifested and evident.

The composite mean for communication and collaboration is 3.38 also signified as "Very Skillful" meaning the learners demonstrate a very high level of 21st-century acquisition in these specific skills. This interconnects with Joseph and Mathew's (2019) study wherein collaboration enhances students' participation, self-evaluation, and group evaluation to increase school attendance. The generation of new information, which embodies free thinking, is the result of collaborative learning. Additionally, it increases the level of discussion and debate, enhances the capacity for concept formulation, and fosters the development of metacognition.

Further, in terms of information, media, and technology skills, the table displays "Use technology as a tool to research, organize, evaluate, and communicate information" scored the highest of 3.28 denoted as "Very Skillful" which means the students could have a very high degree of skills in terms of using technology as a tool to research most especially in this era of digitalization.

However, the item "Utilize the most appropriate media creation tools, characteristics, and conventions" scored the lowest of 3.20 classified as "Skillful" as rated by the respondents. It simply means that learners do show not-so-very-high levels of skills in terms of information access and utilizing media creation tools such as online learning platforms.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

The respondents rated information, media, and technology with a composite mean of 3.24, classified as "Skillful". This indicates that learners in today's classrooms are digital learners who have grown up surrounded by media in the twenty-first century. This relates to the conclusions of Boholano's (2017) study, which discovered that technology in the twenty-first century is an amazing tool for enhancing and forming the learning environment.

Moreover, in the aspect of life and career skills, the respondents scored highest on the item "Demonstrate commitment to learning as a lifelong process" which garnered an average score of 3.37 also categorized as "Very Skillful". It indicates being a self-directed learner who goes beyond fundamental mastery of skills most specifically in the home economics curriculum to investigate one's own learning and possibilities to foster expertise. But the item "Deal positively with problems, setbacks, and criticisms" received the lowest average rating of 3.24 categorized as "Skillful" indicating that learners lack the ability to react skillfully in situations that involve setbacks and criticisms.

The respondents rated life and career skills a composite mean of 3.31 categorized as "Very Skillful". This is relevant to the Saadah et al. (2020) study, which showed that life and career skills gave students the training and abilities they needed to survive in the real working world. Therefore, to produce a 21st-century workforce, schools must thoroughly understand current skill requirements, especially life and career skills, and subsequently nurture them to produce a workforce that meets employers' demands.

As indicated in the table, the respondents scored communication and collaboration the highest which has a composite mean of 3.38 described as "Very Skillful". This implies that learners manifest a very high level of acquisition in the 21st century-learning skills in the aspects of communication and collaboration skills. This relates to Vygotsky's (1978), Social Constructivism theory which posits that social contact and context are crucial for cognitive growth. Students

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

produce, interpret, and reorganize information as they collaborate with each other thus very essential in fostering their critical thinking, problem-solving, and creativity, especially in 21st-century classroom engagement.

Nevertheless, the skill in information, media, and technology got the lowest composite mean of 3.24 and was categorized as "Skillful" meaning that the learners moderately acquired skills in information, media, and technology. This interconnects with the study of Abulon (2014) which concluded that the use of technology in the classroom enhances learning quality, motivation, idea mastery, and the development of abilities for lifetime learning.

Table 4.1 reveals the learners' level of competencies in Beauty and Nail Care Services.

Table 4.1
Learners' Competency Level in Beauty and Nail Care
N=98

Indicators	WM	VI
1. Consult client on desired nail service activity and specific requirements and consultation record is agreed and signed	3.27	Highly Competent
2. Checked and analyzed clients' hand nail structure and condition.	3.29	Highly Competent
3. The client is provided with protective materials for hygiene purposes.	3.40	Highly Competent
4. Recognize nail disorders to prepare for nail repair.	3.53	Highly Competent
5. Select and prepare appropriate sanitized tools and equipment, supplies, and materials according to salon procedures.	3.40	Highly Competent
6. Disinfect, sanitize, clean, and dry hands and feet.	3.41	Highly Competent
7. Clean nails in accordance with the established or acceptable procedures.	3.58	Highly Competent

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

8. Trim and file nails based on clients' desired shape.	3.33	Highly Competent
9. Massage fingers following prescribed movements	3.18	Competent
10. Ensure the client's safety and comfort during the entire process.	3.24	Competent
11. Apply first aid in case of accidental cuts and wounds	3.53	Highly Competent
Composite Mean	**3.38**	Highly Competent

The data in the table showed that the respondents assessed the item "Clean nails in accordance with the established or acceptable procedures" as the highest weighted average of 3.58 labeled as "Highly Competent". Learners manifest a very high level of competence in cleaning the nail in accordance with the established standards and applying first aid in case of accidental cuts and wounds. They are very skillful in performing nail cleaning and applying first aid event of unintentional cuts or wounds while undergoing a manicure or pedicure. Whereas the respondents scored "Massage fingers following prescribed movements" lowest with an average rating of 3.18 and described as "Competent". This manifests that learners are skillful in these massaging fingers but still need to be mastered.

The composite mean of beauty and nail care is 3.38 respectively and described as "Highly Competent". The data tells that learners who are taking beauty and nail care specializations commonly demonstrated a very high level of competence thus, are very skillful in performing the required skill competencies in their major.

Table 4.2 displays the learners' competency level in Bread and Pastry Production (BPP).

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Table 4.2
Learners' Competency Level in Bread and Pastry Production
N=98

Indicators	WM	VI
1. Select, measure, and weigh required ingredients according to recipe or production requirements and established standards and procedures	3.31	Highly Competent
2. Prepare a variety of pastry products according to standard mixing procedures/formulation/recipes and desired product characteristics	3.55	Highly Competent
3. Use appropriate equipment according to the required pastry products and standard operating procedures	3.69	Highly Competent
4. Bake pastry products according to techniques and appropriate conditions; and enterprise requirements and standards	3.65	Highly Competent
5. Select the required oven temperature to bake goods in accordance with the desired characteristics, standards recipe specifications and enterprise practices.	3.51	Highly Competent
6. Prepare a variety of fillings and coatings/icing, glazes and decorations for pastry products according to standards recipes, enterprise standards and/or customer preferences.	3.61	Highly Competent
7. Fill and decorate pastry products where required and appropriate in accordance with standard recipes and/or enterprise standards and customer preferences.	3.60	Highly Competent
8. Finish pastry products according to desired product characteristics.	3.53	Highly Competent
9. Present baked pastry products according to established standards and procedures.	3.17	Competent
10. Store pastry products according to established standards and procedures	3.35	Highly Competent
11. Select packaging appropriate for the preservation of product freshness and eating characteristics	3.51	Highly Competent
Composite Mean	**3.50**	Highly Competent

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

As revealed in the table, the item "Use appropriate equipment according to the required pastry products and standard operating procedures", got the highest rating of 3.69 and was labeled as "Highly Competent". It showed that learners demonstrated mastery in the skills using the appropriate tools and equipment in baking the different pastry products. Yet, item "Present baked pastry products according to established standards and procedures" had the least rating with an average of 3.17 but was still categorized as "Competent".

Based on their rating, it confirmed that the learners although skillful but need to develop their skills in presenting their baked products. The respondents assessed the overall composite mean of the learner's skill level in bread and pastry production at 3.50 classifying it as "Highly Competent." The results showed that students who specialized in bread and pastry production had a high degree of competency in their area of specialization and could undoubtedly explore a variety of job opportunities soon, including those as a baker, pastry chefs, chocolatiers, and many others.

Table 4.3 reflects the learners' competency level in Cookery. As reflected in the table, the respondents rated "Prepare ingredients according to a given recipe, required form, and time frame, the highest with an average rating of 3.56 classified as "Highly Competent". This indicates that cookery majors demonstrate a very high skill in the preparation of ingredients in a certain recipe. Nonetheless, they assessed the "Prepare suitable sauces and accompaniment in serving vegetable dishes" as the lowest with an average rating of 3.36 classified as "Highly Competent" which means that the competencies on how to prepare sauces in serving vegetable dishes were highly practiced by the students in cookery.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Table 4.3

Learners' Competency Level in Cookery
n=98

Indicators	WM	VI
1. Identify ingredients according to standard recipe	3.43	Highly Competent
2. Prepare ingredients according to a given recipe, required form, and time frame	3.56	Highly Competent
3. Thaw frozen ingredients and wash raw vegetables following standard procedures	3.50	Highly Competent
4. Identify market forms of vegetables	3.51	Highly Competent
5. Select various kinds of vegetables according to a given menu	3.45	Highly Competent
6. Cook variety of vegetable dishes following appropriate cooking methods to preserve optimum quality and nutrition	3.43	Highly Competent
7. Prepare suitable sauces and accompaniment in serving vegetable dishes	3.36	Highly Competent
8. Present vegetable recipes with appropriate sauces and accompaniments	3.42	Highly Competent
9. Store vegetables based on the prescribed location and temperature	3.44	Highly Competent
10. Demonstrate vegetable storage in accordance with FIFO operating procedures	3.43	Highly Competent
11. Follow standard safety and hygiene procedures	3.54	Highly Competent
12. Rate the finished products using rubrics	3.53	Highly Competent
Composite Mean	**3.47**	Highly Competent

The composite mean in cookery resulted in 3.47 and classified as "Highly Competent". It signified that students who are cookery majors had demonstrated a very high level of skills and

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

mastery. This means that they show exemplary performance during their cooking practicum and hands-on activities.

Table 4.4 indicates the learners' competency level in Dressmaking.

Table 4.4
Learners' Competency Level in Dressmaking
n=98

Indicators	WM	VI
1. Plan garment design.	3.21	Competent
2. Take the client's body measurements.	3.30	Highly Competent
3. Draft basic/ block pattern.	3.26	Highly Competent
4. Cut pattern.	3.25	Highly Competent
5. Prepare materials.	3.40	Highly Competent
6. Lay- out and mark the pattern on the material.	3.22	Competent
7. Cut materials.	3.27	Highly Competent
8. Prepare the cut parts.	3.39	Highly Competent
9. Sew and assemble athletic ladies' skirts.	3.27	Highly Competent
10. Apply finishing touches.	3.37	Highly Competent
11. Press the finished garment.	3.42	Highly Competent
12. Pack the finished garment.	3.40	Highly Competent
Composite Mean	**3.31**	Highly Competent

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

As indicated in the table," Press the finished garment" had the highest average rating of 3.42 categorized as "Highly Competent". This showed that dressmaking majors manifested a high level of skill in pressing and ironing their finished sewn garments as assessed by the respondents. Whereas competency in "Plan garment design", got the lowest average rating of 3.21 categorized as "Competent". Although competent but still they need to be further developed in the planning and designing of garments.

The composite mean for dressmaking was 3.31, categorized as "Highly Competent," indicating that students who majored in the subject had very high levels of expertise and were likely to go on to become professional dressmakers or fashion designers. Human life and society at large depend heavily on clothing. They assert that wearing the attire is an instance of self-expression. Dressmaking as a profession benefits the economy of our nation and benefits designers. In contrast to earlier times, when clothing was made to protect us from the elements and keep us warm, people now choose their attire based on taste and style.

Table 4.5 signifies the learners' competency level in food and beverage services. Based on the results shown in the table, item" Seat guests evenly among stations to control the traffic flow of guests in the dining room" got the highest average weighted mean of 3.62 described as "Highly Competent" which means that students manifest a very high level of competence in facilitating guests to avoid traffic in the dining area. Whereas" Advise promptly colleagues regarding the readiness of items for service" was the lowest with an average rating of 3.23 which belonged to "Competent".

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Table 4.5

Learners' Competency Level in Food and Beverage Services
n=98

Indicators	WM	VI
1. Acknowledge guests as soon as they arrive	3.29	Highly Competent
2. Greet guests with an appropriate welcome.	3.45	Highly Competent
3. Check details of reservations based on an established standard policy	3.42	Highly Competent
4. Escort and seat guests according to the table allocations	3.60	Highly Competent
5. Utilize tables according to the number of parties	3.38	Highly Competent
6. Seat guests evenly among stations to control the traffic flow of guests in the dining room.	3.62	Highly Competent
7. Open cloth napkins for the guests when applicable.	3.47	Highly Competent
8. Serve water when applicable according to the standards of the food service facility	3.38	Highly Competent
9. Present menu to customers, take orders completely, and take note of the special requests	3.27	Highly Competent
10. Repeat back orders to the guests to confirm items	3.28	Highly Competent
11. Provide and adjust tableware's and cutlery appropriate for the menu choices in accordance with established procedures	3.37	Highly Competent
12. Place and send orders to the kitchen promptly.	3.49	Highly Competent
13. Check the quality of food in accordance with established standard	3.52	Highly Competent
14. Check tableware for chips, marks, cleanliness, spills, and drips	3.40	Highly Competent
15. Carry out plates and trays safely	3.54	Highly Competent

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

16. Advise promptly colleagues regarding the readiness of items for service	3.23	Competent
17. Observe work technology according to established standard policy and procedure	3.55	Highly Competent
Composite Mean	**3.43**	Highly Competent

It signifies that the learners were manifesting skillfully in advising promptly colleagues regarding the items to be ready.

According to respondents' scores, the food and beverage services had a composite mean of 3.43 which was classified as "Highly Competent," meaning that students showed excellent skill in the numerous competencies necessary for this specialization.

Table 4.6 displays the learners' competency level in housekeeping. As shown in the table, item "Observe safety procedures in the safekeeping of cleaning tools, equipment, and chemicals following the security standards" got the highest rating of 3.59 categorized as "Highly Competent". Observing safety procedures in safekeeping has always been the priority of every practical laboratory work not only in housekeeping but in all areas. Students demonstrated a high level of competence in the aspect of performing safety safekeeping procedures. Nonetheless, "Perform proper handling of trolleys and other equipment" scored lowest of 2.87 "Competent" manifesting that learners need to develop mastery in the proper handling of trolleys. With a composite mean of 3.35, the respondents assessed housekeeping as "Highly Competent." It demonstrated that students majoring in housekeeping are displaying extremely high levels of skills and competency and could explore possible career opportunities relating to the field of housekeeping in the future.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Table 4.6
Learners' Competency Level in Housekeeping
n=98

Indicators	WM	VI
1. Identify different types and sizes of linens, pillows, and bed sheets	3.11	Competent
2. Correctly follow proper procedures in conducting room check, turn down and make up beds and cots	3.33	Highly Competent
3. Replace bed linen in accordance with establishment standards and procedures	3.24	Competent
4. Identify tools, materials, supplies, and equipment needed in cleaning guest rooms	3.42	Highly Competent
5. Follow standard operating procedures in institutional cleaning	3.41	Highly Competent
6. Identify common insects and pests and their control measures	3.47	Highly Competent
7. Give minor and major hotel room defects and repair	3.32	Highly Competent
8. Observe hotel management safety practices and procedures	3.28	Highly Competent
9. Select appropriate cleaning tools and equipment with their proper uses and functions	2.91	Competent
10. Follow safety and security measures when using cleaning tools and equipment	3.13	Competent
11. Identify and use dry and wet cleaning agents/chemicals for a particular task	3.24	Competent
12. Select and use Personal Protective Equipment based on the task requirement	3.35	Highly Competent
13. Identify cleaning equipment and chemical	3.42	Highly Competent
14. Discuss cleaning techniques on furniture and walling materials	3.35	Highly Competent
15. Follow proper storage of equipment and chemicals	3.46	Highly Competent
16. Perform proper handling of trolleys and other equipment	2.87	Competent

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

17. Observe proper cleaning of tools, materials, and equipment according to standards and procedures	3.58	Highly Competent
18. Practice safekeeping practices in accordance with establishment standards	3.35	Highly Competent
19. identify common problems related to scheduling and performing one's task	3.47	Highly Competent
20. Observe implementing policies and procedures related to cleaning operations	3.38	Highly Competent
21. Practice proper disposal of used chemicals in accordance with manufacturer's instructions and environmental legislation requirements	3.41	Highly Competent
22. Use and maintain cleaning tools, materials, and equipment effectively in accordance with the manufacturer's instructions and hotel standards	3.57	Highly Competent
23. Perform institutional routine maintenance with standard operating procedures	3.55	Highly Competent
24. Identify and report common problems in cleaning tools and equipment	3.52	Highly Competent
25. Observe safety procedures in safekeeping of cleaning tools, equipment, and chemicals following the security standards	3.59	Highly Competent
Composite Mean	**3.35**	Highly Competent

Table 4.7 presents the learners' competency level in wellness massage.

Table 4.7
Learners' Learning Competency Level in Wellness Massage
n=98

Indicators	WM	VI
1. Identify vital information of the client	3.29	Highly Competent
2. Explain wellness massage services and products	3.59	Highly Competent

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

3. Discuss the health and healing concept of wellness massage	3.37	Highly Competent
4. Update the clients records a document	3.44	Highly Competent
5. Evaluate the client satisfaction	3.41	Highly Competent
6. Check workplace qualities and procedures	3.36	Highly Competent
7. Schedule clients	3.31	Competent
8. Conduct preliminary services to clients	3.32	Highly Competent
9. Observance of good interpersonal relationship	3.42	Highly Competent
10. Emphasis on standards of policies and procedure	3.44	Highly Competent
11. Accuracy of keeping/updating clients record	3.51	Highly Competent
12. Appropriate use of wellness massage products	3.48	Competent
13. Evaluate the client's satisfaction	3.34	Highly Competent
Composite Mean	**3.41**	Highly Competent

The table shows that" Explain wellness massage services and products" had the highest average rating of 3.59 classified as "Highly Competent" meaning the learners demonstrated very high skill in explaining wellness massage services and products. While "Identify vital information of the client" scored lowest of 3.29 but still categorized as "Highly Competent" which means that learners show very skillfully in getting the important information of their clients.

The composite mean for wellness massage is 3.41, which is classified as "Highly Competent," implying that students demonstrate typical performance in the numerous specialization-related abilities and may eventually pursue a career as a massage therapist.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Table 4.8
Summary of Learners' Competency Level in Home Economics
n=98

Specializations in Home Economics	WM	VI
1. Beauty and Nail Care	3.38	Highly Competent
2. Bread and Pastry Production	3.50	Highly Competent
3. Cookery	3.47	Highly Competent
4. Dressmaking	3.31	Highly Competent
5. Food and Beverage Services	3.43	Highly Competent
6. Housekeeping	3.35	Highly Competent
7. Wellness Massage	3.41	Highly Competent
Over-all Composite Mean	**3.41**	Highly Competent

Table 4.8 shows the summary of learners' competency level in home economics. As shown in the table, bread and pastry production got the highest composite mean of 3.50, followed by cookery with 3.47; food and beverage services 3.43; wellness massage of 3.41; beauty and nail care 3.38; housekeeping 3.35, and dressmaking with 3.31, and were labelled as "Highly Competent". This means that the learners were demonstrating a very high skill competence in all the seven (7) selected areas of specialization in Home Economics.

Table 5.1 reveals the relationship between the teachers' profile and the teachers' level of practice of teaching methodologies.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Table 5.1
Relationship between the Teachers' Profile and the Teachers' Level of Practice of Teaching Methodologies
n=98

Profile	Chi-Square value	df	p-value @ alpha 0.05	Interpretation	Decision
Highest Educational Attainment	3.917	6	.688	**Not Related**	Insignificant, Failed to reject the null hypothesis.
Teaching Experience	3.481	6	.746	**Not Related**	Insignificant, Failed to reject the null hypothesis.
Relevant Training/seminars	5.527	8	.700	**Not Related**	Insignificant, Failed to reject the null hypothesis.

As revealed in the table, the computed p-value of the relationship between the teacher's highest educational attainment, teaching experience, and attendance to relevant training/seminars on their practices of teaching methodologies are 0.688, 0.746, and 0.700 which is higher than 0.05 level of significance. This clearly reveals that there is no significant relationship between teachers' highest educational attainment, teaching experience, and attendance to relevant training/seminars to their practices of teaching methodologies, thus failed to reject the null hypothesis.

It signifies that there are teachers in home economics who employed effective teaching methodologies even if they don't earn advanced professional studies. This also implies that novice

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

teachers could also equate highly seasoned teachers to the use of new and innovative teaching methodologies in the classroom. This is connected to the Mamman and Oyinloye (2016) study, which found that adopting innovative teaching methods positively affects students' development of 21st-century learning skills. When teachers employ fresh, inventive, and creative teaching strategies, students are more likely to acquire critical 21st-century learning abilities.

Table 5.2 indicates the relationship between the teachers' profile and the learners' level of competence. The data in the table signified that there is no significant relationship between the teachers' highest educational attainment, teaching experience and attendance to relevant training and seminars to the learners' competence being computed the p-values of 0.197, 0.294, and 0.495 which are greater than the tabular value at 0.05 level of significance. Therefore, failed to reject the null hypothesis.

Table 5.2
Relationship between the Teachers' Profile and the Learners' Level of Competence
n=98

Profile	Chi-Square value	df	p-value @ alpha 0.05	Interpretation	Decision
Highest Educational Attainment	8.611	6	.197	**Not Related**	Insignificant, Failed to reject the null hypothesis.
Teaching Experience	7.299	6	.294	**Not Related**	Insignificant, Failed to reject the null hypothesis.
Relevant Training/seminars	7.396	8	.495	**Not Related**	Insignificant,

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

					Failed to reject the null hypothesis.

This interrelates to Basal (2020)'s study which found out that teacher's profile has no impact on his or her instruction in terms of subject matter mastery. It depends on the teacher's knowledge, skills, attitude, and ability. A competent and knowledgeable teacher creates interesting, engaging classes that make learning enjoyable and promote students' academic success. Nevertheless, according to Podolsky et al. (2019), when teachers gain experience, their students are more likely to perform better on measures of success other than test scores. Teaching experience is positively associated with student accomplishment gains and competence.

Table 5.3 depicts the relationship between teachers' practices of teaching methodologies and the identified variables.

Table 5.3
Relationship Between Teachers' Practices on Teaching Methodologies and Identified Variables
n=98

Variables	Spearman Rank	p-value @ alpha 0.05	Interpretation	Decision
Teachers' Practice of Teaching Methodologies and Learners' 21st-Century Learning Skills	0.172	0.00	**Related**	Significant, Reject the null hypothesis.
Teacher's Practice of Teaching Methodologies and Learners' Competence	0.082	0.00	**Related**	Significant,

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

				Reject the null hypothesis.
Learners' 21st-century Learning Skills and Learners' Competence	0.168	0.00	**Related**	Significant, Reject the null hypothesis.

As displayed in the table, the computed p-value of the relationship between the teachers' practice of teaching methodologies and the learners' 21st-century learning skills is 0.000 which is lower than a 0.05 level of significance. It clearly depicts that there is a significant relationship between them since the p-value is below the 0.05 level. Teachers' teaching methodologies and learners' 21st-century learning skills are related to each other. This indicates that students would be more successful in the twenty-first century if they were taught using effective and innovative teaching methodologies. According to Yamin and Purwati (2021), when teachers employ current, creative, and innovative teaching strategies, students are more likely to acquire critical 21st-century learning abilities. The utilization of innovative teaching techniques and improvised teaching pedagogies improves students' social and academic skills and has a beneficial impact on their performance.

Additionally, Caena (2017) asserted that teachers are expected to act as catalysts for meaningful learning by using their creativity to choose from a wide range of teaching methods to determine the conditions and provide opportunities for in-depth learning experiences which could show and strengthen students' capacities in the 21st century. The flexibility, passion, ingenuity, and inventiveness of the teachers have a big impact on their ability to teach. Only teachers with

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

these abilities can effectively address students' needs and help diverse learners achieve considerably more difficult learning objectives.

Moreover, the calculated p-value for the relationship between the teachers' practice of teaching methodologies and the learner's competence is 0.000, which is lower than the 0.05 level of significance thus, clearly showing that the two variables are significantly correlated. It indicates that they are connected, therefore, rejected the null hypothesis.

This means that learners demonstrated a high level of competence in their areas of specialization in home economics if their teachers exhibit high quality teaching methodologies. Further, Seechaliao's (2017) research demonstrated that innovative teaching methods encourage students to use questions, class discussion, inductive and deductive thinking, media, or social media to develop creative and innovative educational strategies to engage students in learning activities.

Finally, the relationship between learners' 21st-century learning skills and the learners' competence had a computed p-value of 0.000, which is lower than 0.05 level of significance. It signifies that there is a meaningful relationship and a strong correlation between learners' 21st-century learning skills and their level of competence. It implies that learners who have high levels of 21st-century skills also have high levels of competence. Sural (2017), stressed that the skills, knowledge, and expertise that students need to learn to succeed in their personal and professional development should be the focus of 21st-century education. Therefore, teachers must adapt their instructional and teaching strategies to better meet the needs of 21st-century learners. This interrelates with the cognitive developmental theory developed by Piaget (1954) which asserted that students learn via discovery. With learner-centered teaching methodologies, teachers become facilitators of learning. For this, learners can acquire the most essential needed skills in 21st-century learning if they are more actively and rigorously involved in the learning process.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

The result confirmed that the competencies embodied in the K to 12 curricula are already aligned with the skills in the 21st century. With this, home economics teachers need to be reshaped and be guided with the skills in the 21st-century teaching.

Chapter 3

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

This chapter covers the summary of the study's findings which were analyzed and interpreted in the previous chapter. These findings serve as the bases for the formulation of conclusions and recommendations. Moreover, it serves as a reference in the action plan that has been developed to intensify the teachers' practice on teaching methodologies, 21st-century learning skills, and competence in home economics.

Summary

The core of the study was to determine the teachers' practices on teaching methodologies, learners' 21st-century learning skills, and the competencies of the selected public secondary schools in the Division of Bohol for the school year 2022-2023.

Furthermore, the study sought to determine the respondents' profile in terms of highest educational attainment, teaching experience, and relevant training/seminars attended, and if the profile is related to the level of teacher's practices on teaching methodologies, learners' level of acquisition of 21st-century learning skills, and competencies in home economics.

The descriptive-correlational research design was used for this study. This study was conducted using both online and in-person distribution of questionnaires. With 98 teachers and 1,930 learners as respondents.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Finally, the weighted mean and the percentage formula were used to treat the collected data. The Chi-square and Spearman's Rank Correlation Coefficient were employed by the researcher to identify the relevant relationship between variables.

Based on the results of the data gathered which have been statistically tested, the following findings are revealed:

1. **Respondent's Profile**

   1.1. **Highest Educational Attainment.** Out of 98 respondents, 35, or (36%) hold a bachelor's degree, and there were 63, or 64 % were able to continue their advanced professional education.

   1.2. **Number of Years in Teaching Experience.** Out of 98 respondents, 40 (41%) had 6-10 years of teaching experience while 26, or 27 % had a teaching experience of more than 10 years.

   1.3. **Relevant training or seminars attended.** There were 30 respondents (31%) who reported attending at least three training/seminars during the past three years, while 64 out of 98 or 65% of the respondents had attended four or more relevant training and seminars.

2. **Teachers' Practices on Teaching Methodologies**

   The lecture method had a composite mean of 3.41 classified as "Always Practiced". Meanwhile, the discussion and dialogue had also a composite mean of 3.40 classified as "Always Practice". Likewise, the practical demonstration method had a composite mean of 3.38 and was described as "Always Practiced". Collaborative and discovery learning methods had a similar composite mean of 3.33 and were described as "Always Practiced".

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

Moreover, the project-based method gained a composite mean of 3.42 also classified as "Always Practiced". Lastly, the technology-based method garnered a composite mean of 3.06 also categorized as "Sometimes Practiced".

3. Learners' 21st-century learning skills

The learning and innovation had a composite mean of 3.26, which manifests "Highly Acquired" learning skills. While communication and collaboration also had a composite mean of 3.38 and were categorized as "Highly Acquired" 21st-century learning skills. In terms of information, media, and technology, it had a composite mean of 3.24 described as "Moderately Acquired". And for life and career skills, it gained a composite mean of 3.31 and was also described as a "Highly Acquired" 21st-century learning skill.

4. Learner's Competence Level

The learners demonstrated "Highly Competent" in beauty and nail care with a composite mean of 3.38. Likewise, the learners' composite mean of 3.50 indicated that they are "Highly Competent" in bread and pastry production. For cookery specialization, it garnered a composite mean of 3.47 described as "Highly Competent". The learners achieved a composite mean of 3.31 in dressmaking, which is deemed to be "Highly Competent." However, this area got the lowest among other areas. In food and beverage services, it had a composite mean of 3.43, which is defined as "Highly Competent." The obtained composite mean of 3.35 in housekeeping, which is also considered as "Highly Competent". Finally, the obtained composite mean of wellness massage was 3.41 which is considered "Highly Competent" in the field of home economics.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

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5. Correlation between teachers' practice of teaching methodologies, learners' 21st Century learning skills, learners' level of competence, and Respondents' Profile

No significant correlation was observed between teachers' profiles (highest educational attainment, teaching experience, relevant training/seminars) and their practice of teaching methodologies, as well as between their profiles and the learners' level of competence. The p-values were all above the 0.05 level of significance, indicating that the teachers' practice of teaching methodologies and the learners' competence are not dependent on their profile.

The study found a significant relationship between the teachers' practice of teaching methodologies and learners' 21st-century learning skills since the computed p-value of 0.00 is below the 0.05 level of significance, therefore, correlated. Also, it was revealed that the p-value for the relationship between teachers' teaching methodologies and learners' level of competence was below the 0.05 level of significance ($p<0.05$), indicating a significant relationship. Moreover, a significant relationship was found between learners' 21st-century learning skills and their level of competence since the computed p-value of 0.00 is below the 0.05 level of significance ($p<0.05$) hence, related.

Conclusion

The study concludes that home economics teachers in general, employ various teaching methodologies in their classrooms. Teachers' practices on teaching methodologies influence the learners' acquisition of 21st-century learning skills. Also, the teachers' practice of teaching methodologies affects the learners' level of competence. The use of effective teaching methodologies would make learners' competence relevant in the 21st-century world of work.

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INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

The acquisition of 21st-century learning skills affects the learners' competence level signifying that the competencies embodied in the K to 12 Curriculum are aligned with the skills in the 21st century. Thus, the efficient practice of teaching methodologies plays a vital role in acquiring the learners' 21st-century skills and the learners' competence.

Recommendations

Based on the revealed findings of the study, the following recommendations were given:

1. The Department of Education (DepEd) is called to provide home economics teachers and learners with essential technology resources such as computers, tablets, and the internet, along with training and support for them to effectively access, analyze, and use digital information and other media creation tools.
2. Education Program Specialists and/or school administrators may provide seminars and workshops to home economics teachers to effectively incorporate technology-based teaching methods in their classroom instructions.
3. School administrators may provide additional training and seminars to home economics teachers, focused on new practical demonstration methods that are more interactive, engaging, and relevant to students' interests and experiences.
4. Teachers may undergo training on plan garment designs to enhance their skills in dressmaking specialization.
5. Future researchers may conduct further studies with the inclusion of technology-driven teaching methodologies.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

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PROPOSED ACTION PLAN FOR THE SUSTAINABILITY PROGRAM IN ENHANCING TEACHING SKILLS ON TECHNOLOGY-BASED, PRACTICAL DEMONSTRATION, DRESSMAKING, INFORMATION, MEDIA, AND TECHNOLOGY LEARNING SKILLS FOR THE 21ST-CENTURY LEARNERS

Rationale

The challenges and possibilities for education have changed in the twenty-first century. Traditional methods of teaching may no longer be adequate to prepare learners for the demands of the modern world as technology continues to advance at an exponential rate. To ensure that our learners are equipped with the skills they need to thrive in the 21st century, teachers need to adopt teaching methodologies that are better aligned with the skills of the 21st century.

Technology-based teaching methodologies can help students to develop the knowledge, skills, and attitudes required for success in the 21st-century workplace. In addition, learners need to be equipped with the skills to navigate, evaluate, and use digital information. These are essential for learners to succeed in the academic and professional world.

In today's world, digital information and media are universal, and the ability to access, analyze, and utilize them effectively has become a critical skill for learners of all ages. On the one hand, digital media and tools offer opportunities for learning, communication, and creativity. They allow learners to connect with people and resources from around the world, engage with complex ideas and concepts, and express themselves in new and innovative ways.

Similarly, the practical demonstration methods of teaching are an effective way to engage students and help them understand complex concepts. It is important to enhance these methods to keep up with changing times and ensure that students have a better learning experience.

This study proved how the learners' 21st-century skills and competency were positively influenced by the teachers' teaching methodologies. For this reason, the researcher firmly

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INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

considered the necessity to enhance technology-based teaching methodologies and equip students with the necessary skills to succeed in the 21st century.

Objectives

The implementation of this action plan concerns the following aims:

1. To provide teachers with professional development opportunities to improve their technology-based teaching methodologies.
2. To develop new practical demonstration methods that are more interactive, engaging, and relevant to students' interests and experiences.
3. To enhance learners' skills in information, media, and technology and enable them to effectively access, analyze, and utilize digital information, and other media creation tools.

Mechanics of Implementation

After the approval of this study by the members of the examining tribunal, the researcher will present this proposed action plan to the School Principal, Schools District Supervisor, and to Education Program Specialists. Before the suggested plan is finally presented to the Schools Division Superintendent, a comprehensive discussion of it will be held with the Technical Working Group. After receiving the necessary approval from the appropriate authority, the suggested plan will next be presented to the teachers.

The following are the areas of focus during the implementation:

1. Provide professional development opportunities: Teachers need training to use technology-based teaching methodologies effectively. Professional development opportunities should be provided to help teachers improve their skills in this area.
2. Integrate technology into the curriculum: Technology should be integrated into the curriculum to enhance student learning. This can be done using multimedia presentations, online resources, and other technology-based tools.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

3. Train teachers on how to effectively use the new demonstration methods in their classrooms. This can be done through workshops, online training modules, and peer-to-peer coaching.
4. Provide access to technology: Learners should have access to technology, such as computers, tablets, and the internet, to enable them to practice their skills and access digital information.
5. Provide training and support: Learners should be provided with training and support to develop their skills in using technology and accessing digital information. This can be done through workshops, online tutorials, and one-on-one support.
6. Evaluate the effectiveness of the program: The effectiveness of the program should be evaluated regularly to ensure that it is achieving its objectives. Evaluative measures should include assessments of student learning outcomes, teacher feedback, and observations of classroom practices.

Schedule of Implementation

The implementation of the proposed action plan will start by the next school year 2023-2024 after the approval from the Schools Division Superintendent and aims to continue in the upcoming years, open to adjustment or changes as needed to meet the demands of the 21st century.

Evaluative Measures

An evaluation must be done to ascertain the plan's efficacy. The evaluation procedure must consider the following:

1. The proposed plan will be assessed at the end of each quarter throughout the academic year 2023–2024 to gauge the program's efficacy. This indicates that four evaluations will

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
Available online at https://www.instabrightgazette.com

take place over the course of a year. Additionally, the Technical Working Group will need to convene a meeting during this period to get feedback from teachers, learners, parents, and other stakeholders. This assessment will enable the TWG to make necessary improvements to the plan.

2. The success of the program will be evaluated in this study using an assessment tool. The strengths and shortcomings of the program will probably be assessed using the same instrument tool. The TWG, which oversees the entire program, will be able to view the full picture of its implementation as a result. It includes the following:
   2.1. Student Learning Outcomes: Student learning outcomes should be measured to evaluate the effectiveness of the program. These measures should include assessments of information, media & technology.
   2.2. Teacher Feedback: Teachers should be surveyed to gather feedback on the effectiveness of the program.
   2.3. Classroom Observations: Classroom observations should be conducted to evaluate the implementation of technology-based teaching methodologies and practical demonstration.
   2.4. Continuously evaluate and refine the methods to ensure ongoing improvement.

3. The researcher herself shall conduct the evaluation of the (3) Congressional Districts over the entire Bohol Division.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue I
August 2023
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