Assessing the Influence of 21st Century Skills on the Core Behavioral Competencies of Tuburan 1 Secondary Teachers

ABSTRACT

The research assessed the influence between the teachers' 21st-century skills and level of core behavioral competencies in District 1 of Tuburan, comprising five secondary public schools during the academic year 2023- 2024. A descriptive study process was employed with an adapted tool from the P21 Framework. The 34 teachers across District 1 of Tuburan were the study's respondents. Results revealed a significant relationship between information, media, and technology skills and the six indicators of core behavioral competencies regarding self-management, professionalism, ethics, results focus, teamwork, service orientation, and innovation. Moreover, there is a significant relationship between life and career skills and the core behavioral competencies such as self-management, professionalism and ethics, results focus, teamwork, service orientation, and innovation. Teachers often manifested 21st-century skills as perceived by the school heads, including learning and innovation, information, media and technology, and life and career skills. Teachers' core behavioral competencies, self-management, professionalism, ethics, and teamwork, are rated as often described as competent but would benefit from further training and development. Results focus, service orientation, and innovation are sometimes revealed as relatively competent and need additional training and development. Furthermore, the teachers' 21st-century skills significantly influenced their competence level in their core behavioral competencies. Given the urgency and importance of the issue, the study's findings and suggestions strongly recommend implementing a 21st-century skills and core behavioral competencies-oriented development program for teachers, underscoring the need for immediate action.

Keywords: 21st Century Skills, Core Behavioral Competencies, District 1 of Tuburan, Office Performance and Commitment Review Form, Professional Development

1. INTRODUCTION

Education today is a global endeavor, vastly diverse from decades ago, and it will continue to evolve as we strive to provide a culture of learning and quality education (Burns[1], Gardner[2]). This global perspective is crucial, as countries worldwide are discovering how to prepare students to be at par with the international market standards to lead fulfilling lives, be productive agents in a well-established economy, and prosper in an information and technology-intensive globalized environment (Farrell & Sugrue[3]). (Teo[4]) states that teachers around the globe are recalibrating how they prepare learners for education, employment, and productive roles in a global society that require effective collaboration, creative problem-solving, and lifelong learning. The skills mandatory for triumph in the academe, employment, and lifetime can be generally denoted as 21st-century proficiencies, even though the definite proficiencies differ based on limited circumstances and principles (Kennedy & Sundberg[5], Reimers & Chung[6]). As part of this global educational community, the research findings and recommendations are relevant to the educational policymakers, school heads, and teachers in District 1 of Tuburan.

To address the prevailing conditions, Asia Society's Center for Global Education, a renowned institution in the field of education, organized a working team of leaders from various cities in Asia and North America to deliberate methods to structure education schemes that back up the expansion of 21st-century capabilities (De Wit & Altbach[7]; Patton[8]). Leaders worldwide met in Shanghai to share their methods for producing structures that support students in emerging the proficiencies essential to thrive and concepts for establishing the influence and effect of their work (Shahjahan et al.[9]). Countless intercontinental education leaders and business leaders, and numerous young individuals, too, are ever more inquiring about education structures to prepare students with "21st-century" proficiencies that will

empower them to face intricate encounters (Reaves[10], Lazorenko & Krasnenko[11], Ghafar[12]). (DeJaeghere & Murphy-Graham[13], Joynes et al.[14]), competencies encompassing knowledge, skills, and features that support kids and adolescents in grasping their complete potential are supplementary to the essential foundational skills of knowledge and fundamental education in all subject areas.

A study by (Kiugu[15]) in Kenya shows that technology incorporation boosts students' 21st-century skills, which is too premature in the instruction structure to state. The additional set of courses has yet to integrate IT assessment. This means that the curriculum, as it is designed, has yet to adapt to address 21st-century skills. (Mangubat[16]) posits that teachers are to adjust to contemporary methods incorporating 21st-century abilities, so the government must prioritize technology and how it can be implemented to improve 21st-century skills. To become accustomed to the shifting education setups, students should develop and be fortified with 21st-century learning attitudes and knowledge (Dishon & Gilead[17]). A 21st-century educator's obligations include teaching students in a 21st-century school setting. Students inward bound for the global labor force must entail 21st-century skills for employment and accessible enterprise prospects, job training agendas, and soldierly deals.

In the Philippines, the K-12 program is designed to equip students with essential 21st-century skills. This includes fostering skills in learning and innovation, information literacy, media literacy, technological proficiency, and life and career skills (Pillay & Panth[18], Scoular[19]). (Henderson[20], Barrot[21]), the changes driven by numerous national and global initiatives such as the K to 12 program, ASEAN integration, internationalization, and the evolving needs of 21st-century students necessitate updates and a shift in focus for the National Competency-Based Teacher Standards and the advancement of the Philippine Professional Standards for Teachers. The education delivery system significantly influences the development of 21st-century skills in students. This includes the methods of instruction, the range of courses offered, the overall school policies and environment, the types of assessments used, and the process of benchmarking skill achievement. These critical factors play a pivotal role in advancing and overseeing 21st-century skills in students (Kim et al.[22]).

(Guiaselon et al.[23], Saguin & Ramesh[24]) expound that low National Achievement Test outcomes mirror the low performance that implies poor worth of instruction that has plagued the Department of Education for centuries. Strong indication illustrates the vital role teachers play in raising student accomplishments. In District 1 of Tuburan, Cebu, Philippines, the continued efforts in addressing the mean percentile scores in English and Mathematics are priority improvement areas as reflected in the school improvement plan.

This study explores how teachers' skills and core behavioral competencies can positively influence their ability to help students develop 21st-century learning abilities. The study also identifies barriers and challenges the teachers face and refines teacher quality by employing a professional development design, which is most important for continuing and sustainable nation-building. With the drastic changes and transformation of multiple aspects, the teachers' competencies must meet time demands. Learner-centered means teachers can bring about what is best for the students- and thus, their competencies should level- up and upgrade. Educators are resolute in supporting all students in reaching their full potential. This is no insignificant challenge; our responsibility is to prepare our young generations for the exclusive strains and stresses of a 21st-century world.

The DepEd Cebu Province has been very keen on monitoring schools in Cebu Province and addressing the needs of the teachers and learners. During the school year 2021-2022, one teacher from Tuburan 1 District was awarded the Most Outstanding Secondary Teacher in the province, and a year after that, one of the schools in Tuburan was awarded the Most Outstanding Elementary School in the province. Despite these accomplishments, during these years, some teachers were visited by the division personnel to be given technical assistance and to address their needs regarding competencies. These contrasting elements made the researcher indulge more in aspects of the teaching process to address the need for global empowerment and strengthening of teachers' capacity towards refining the skills of 21st-century learners.

2. LITERATURE REVIEW

21st Century Teaching and Learning

We live in an incredibly complex age with a very complex educational arena. Students are expected to be equally competent with global education ideals and can effectively compare, analyze, synthesize, assess, and impart knowledge to other graduates globally, which is highly esteemed. To be held in such high regard, a student

must possess higher-order intellectual abilities and proficiencies to apply the learnings they acquire in real-life applications among individuals coined "21st-century Learners." (Tan[25]).

To adjust to the ever-shifting academic society, students must possess and be equipped with 21st-century learning skills. This means that teachers must be highly proficient in matters related to 21st-century teaching. Students' prerequisites for the labor force entail 21st-century competencies leading to employment and business prospects, job training agenda, and/or military deals (Zamora & Zamora[26]). 21st-century learning skills are essential for empowering students to navigate the complexities of the modern world. These skills include creativity, communication, critical thinking, and collaboration. By honing these abilities, students can effectively confront their challenges and take responsibility for meeting the expectations of the 21st-century global community. (Jang et al.[27]) stated a negative association between students' academic performance and the 4Cs. Collaboration, critical thinking, and communication positively impact students' academic achievement, but it is figuratively not significant. Creativity has a negative impact, but it is also figuratively not significant.

Performances of Filipino Students in the 21st Century Learning

The teaching and learning processes have changed with the innovations in science and technology. Twenty-first-century learners must cope with and upgrade themselves so the trend will not leave them behind. In recent years, the Philippines has made significant strides in positioning itself to compete globally while adapting to the evolving landscape of education. A notable example of this progress is the complete integration of the K-12 curriculum. For the Philippines to effectively address its complex challenges, it is imperative to regularly assess the knowledge and proficiency of learners in terms of 21st-century skills. This assessment is a crucial indicator of the extent to which educational institutions uphold their commitment to providing quality education and contributing to the country's advancement (Varona[28]).

(Glynn et al.[29]) revealed that the results of majority-recognized schools' National Achievement Tests have deteriorated over the last three years. During a Senate committee meeting, Sherwin Gatchalian seconded this report, the lead Committee on Education, who quoted a weakening in the total NAT average of Grade 6 and 10 students since 2013-2014. He also discussed teachers' diminishing quality and capability inadequacy, which may be some of the noteworthy aspects behind the poor test results in the NAT (Heyder et al.[30]).

Therefore, 21st-century teachers must refine their skills and core behavioral competencies to meet the requirements of dynamic learners and improve their academic performance. Teachers' competencies significantly affect student learning results. An investigation found that personal and professional teacher qualities accounted for 9.2% of student performance differences (López-Martín et al.[31]). Teachers skilled in classroom management, instructional delivery, and formative assessment positively influence student engagement and achievement, demonstrating that the quality of teaching directly correlates with student success. Thus, this study is conceptualized to assess the influence of 21st-century skills on the core behavioral competencies of Tuburan 1 Secondary Teachers.

3. METHODOLOGY

The study employed random sampling, a quantitative data gathering and analysis method. A descriptive survey explored the influence of 21st-century skills on the core behavioral competencies of Tuburan 1 secondary teachers and their core behavioral competencies. These indicators were described, and the significant relationships between and among the studied variables were compared.

3.1. Participants and research setting

The study was conducted in District 1 of Tuburan, comprising five public secondary schools. The respondents were identified according to their population characteristics and the study's research objectives. The teacher respondents were identified to be in the service for at least one RPMS cycle and have been observed during a class observation conducted by the school head.

3.2. Data collection instruments

This research utilized a modified, adapted questionnaire from the P21 Framework (Sumanasinghe & Sethunga[32]) to assess the teacher's 21st-century teaching skills and core behavioral competencies from the Philippine Professional Standards for Teachers, which assessed teachers' competence level along the teaching domains. It is modified because the present study included the sociodemographic profile of the respondents. In the other sense, it is adapted because the P21 framework and PPST indicators are taken in standard form. The questionnaire was sectioned into four parts (I-IV). Part I collected the information on the individual data of respondents, including age, gender, civil status, years of experience, highest educational

attainment, academic rank, number of training attended, school location, the field of specialization, and latest OPCRF/IPCRF rating; part II consisted of questions about 21st-century teaching skills being manifested by the teachers as perceived by the school heads regarding learning and innovation; information, media, and technology; and life and career skills; part III consisted of questions about the level of competence of the respondents along their core behavioral competencies; including; self-management; professionalism and ethics; results focus; teamwork; service orientation; and innovation, while part IV focused on the barriers and challenges, met through the integration of the 21st-century skills in the instruction. Data on classroom the latest OPCRF.IPCRF rating was obtained from the headteacher and/ or principal office.

3.3. Data analysis

To achieve the research objectives, quantitative analysis was utilized on the data, including age, gender, civil status, years of experience, highest educational attainment, academic rank, number of training attended, school location, the field of specialization, and the latest OPCRF/IPCRF rating.

The study aimed to assess the influence of 21st-century teaching competencies demonstrated by teachers as perceived by school administrators in learning and innovation, information, media, and technology, as well as life and career skills. The study also sought to assess the respondents' competence level in their core behavioral competencies, such as self-management, professionalism and ethics, results focus, teamwork, service orientation, and innovation. Additionally, the study aimed to identify and address barriers and challenges faced in integrating 21st-century skills in teaching. The SPSS software was used to analyze the impact of 21st-century skills on the core behavioral competencies of Tuburan 1 Secondary Teachers.

4. FINDINGS AND DISCUSSION

4.1. Profile of the teachers based on age, gender, civil status, school location, highest educational attainment, academic rank, length of service, number of training attended and latest RPMS rating.

The analysis of the teachers' profiles is presented in Table 1.

Table 1. The teachers' profiles are based on age, gender, civil status, school location, highest education, field of specialization, academic rank, length of service, number of training sessions attended and latest RPMS rating (n=34)

Age	*f*	*%*
25-34	21	62
35-44	10	29
45-54	3	9
55- up	0	--
Gender	*f*	*%*
Male	15	44
Female	19	56
Civil status	*f*	*%*
Single	11	32
Married	23	68
School location	f	%
highland	6	18
lowland	28	82
Highest education	*f*	*%*
Bachelor's Graduate	12	35
Master's Degree	10	29
Master's Degree CAR	7	21
Doctoral Degree	3	9
Doctoral Degree CAR	1	3
Doctoral Degree Graduate	1	3
Field of Specialization	*f*	*%*

TLE	14	41	
Mathematics	7	20	
English	5	15	
Science	3	9	
AP	3	9	
MAPEH	2	6	
Academic Rank	*f*	*%*	
Teacher 1	16	47	
Teacher 2	13	38	
Teacher 3	5	15	
Length of Service	*f*	*%*	
1-5	11	32	
6-10	17	50	
11-15	3	9	
16 and above	3	9	
Number of training attended	*f*	*%*	
1-5	16	47	
6-10	7	20	
11-15	2	6	
16-20	4	12	
21 and above	5	15	
Latest OPCRF Rating	Remarks	f	%
4.50- 5.00	Outstanding	6	18
3.50-4.49	Very Satisfactory	28	82

Table 1 highlights the teacher respondents' socio-demographic information regarding age; the majority are in the age bracket of 25-34, with 21 or 62%. This implies that most teachers are young adults with 21st-century teaching skills. In a related study by (Mason & Chik[33]), the chronological age and gender of the teachers, as well as their educational qualifications and years of experience, were independently correlated with the student's academic achievement. Both indicated a highly positive relationship, which was statistically significant. (Reitman & Karge[34]) pointed out that teachers aged 41 and above are considerably more productive in instruction and have respectable class organization competencies than teachers below 41 in high school. This view is reinforced by (Gralewski[35]), who translated that younger teachers often make more risky choices and do not evaluate the situation cautiously when dealing with students' corrective glitches due to their dearth of exposure and experience equated to older teachers. The discovery is not dissimilar from the inquiry of (Munuhe[36]) in a cross-sectional study in Kenya, which showed that older teachers were more prospective to the intensification of students' learning than their middle-aged and younger teachers. The data also revealed the respondents' gender, wherein 15 or 44 % were male and 19 or 56 % were female. This means that most secondary teachers in District 1 of Tuburan are female and are actively engaged in integrating 21st-century teaching skills. This outcome affirms (Shaukat et al.[37]) that 63% of the nation's teachers are females. (Denessen et al.[38]) stated that teachers' gender toward education was significantly related to students' academic performance because female teachers possess more constructive characteristics toward teaching and were appraised as more productive in classroom practices by their students.

Regarding civil status, 23 or 68% are married, and 11 or 32 % are single. This means that most of the secondary teachers are married. This implies that married teachers perform very well and are productive in integrating 21st-century skills. The related study by (Moyano et al.[39]) specified that married teachers had higher self-efficacy in student engagement and classroom administration than unmarried teachers. They are very good at preparation, invention, flexibility, and perseverance to attain set aims. Conversely, (Greenglass et al.[40]) found that marital status did not significantly influence teachers' job performance. (Akin[41]) also discovered no significant correlation between married and single teachers regarding personal accomplishment levels.

Regarding school location, 28 or 82% are

currently assigned in the lowlands. This implies that most respondents came from the only large school in Tuburan. Most teachers prefer this school because of its resources and urban setup. (Cao et al.[42]) stated that teachers in countryside zones work harder to perform their roles because of infrastructure problems, societal principles, and resource shortages. In various countryside environments, the worth of education could be higher. A rural teacher encourages students to appreciate education's prospects and encourages parents to support their children in earning a degree. Conversely, (Wang et al.[43]) found that the variance between teachers' teaching capabilities in urban and rural zones was insignificant. It is emphasized that teachers in urban and rural zones achieved well despite slight variance in task execution and teaching competencies. This commends that teachers in urban and rural settings progress their teaching proficiencies and exercise more determination to mold their students to become skilled enough to face the standards at the subsequent level of their education. This implies that in the secondary schools of Tuburan 1, location is not a barrier but a factor for the teachers in performing their 21st-century skills and core behavioral competencies in providing quality education to the learners.

Among the 34 teachers respondents, 12, or 35%, are bachelor graduates, and 10, or 29 %, are enrolled in master's degrees. The data implies that teachers are trying to advance professional growth by pursuing master's and doctorate degrees. The related study by (Joram et al.[44]) stated that advanced studies offer teachers a personal impact, improving their teaching practice. It provides an essential perception of the individual and professional profits of master's and doctoral studies. Graduate students believed their education aided them in feeling more dedicated to engaging in research endeavors, being more informed concerning research, and emerging a better understanding of their training and educational policies. Moreover, (Ugwuozor & Ngwoke[45]) exposed five details postgraduate students cross in the threshold of a doctoral or master's degree course: employment scenarios, better remuneration, career development or variation, personal growth, and status or self-actualization. This only shows that the secondary teachers in Tuburan 1 should be recommended to undertake postgraduate studies to refine their 21st-century skills and core behavioral competencies in delivering quality education.

In the field of specialization, 14 or 41 %, specialized TLE, 7 or 20 %, and mathematics, 5 (five), or 15 %. In English, 3 or 9 % in Science and Araling Panlipunan, and 2 (two) or 6 % in MAPEH. This means that the distribution of the teachers' specialization is unequal, but they are given subjects outside their specialty scope. Many secondary teachers in the district specialize in TLE and Mathematics because these were the only specializations offered by the nearest university. Nevertheless, it is imperative to note that these teachers will teach subjects outside their specialization scope. The related study by (Price et al.[46]) stated that many teachers teach outside their expertise. "outside of the comfort zone" teaching - teaching a subject lacking explicit training in that subject is an off-limits practice that all teachers are aware of, and countless have practiced. However, some have vocalized about it due to its ubiquity. (Abella & De Jesus[47]) teachers' experiences teaching outside specialty revealed hitches, problems, and inattention and became a public practice. The question of excellent tutoring has been taken for granted and needs to be addressed accordingly, as teachers and students face crucial issues and challenges. (Hobbs & Törner[48]) these encounters can be attributed mainly to the limited understanding of the subject matter and the lack of exposure to the teacher's pedagogical content knowledge. This knowledge is crucial for laying the foundation and preparing students for real-life scenarios in the teaching-learning environment. They could hardly produce modified activities, were less imaginative, less self-confident, and shadowed the old-style instruction scheme.

Sixteen, or 47 %, were teacher 1, 13, or 38 %, were teacher 2, and 5 or 15% were teacher 3, respectively. This illustrates that most of the respondents had entry-level rank. This implies that most of the teachers have yet to be promoted. They are still in the entry-level position, performing the same function as those promoted but receiving different compensation. In a study by (Pagayanan[49]), she found out that the teacher who is not promoted feels unhappy and has little self-worth, affecting her momentum to advance within the organization. Individuals similar to this will find themselves in a similar career for a long time, and even if they do not like the line of work they are assigned, they will find it hard to leave. Conversely, the study by (Phytanza & Burhaein[50]) stated that teachers who got consistent promotions were more inspired to upsurge their levels of work performance than those who were not. This implies that secondary teachers in the district must have a career progression to improve their 21st-century skills and core behavioral competencies. This can be achieved through meeting the new standards based on the Merit Selection Plan, including conducting action research and innovations, enrolling in graduate studies, and attending training.

Eleven, or 32%, have 1-5 years of experience; 17, or 50 %, have 6-10, 3 (three); 9% have 11-15 and 3 (three), or 9 % more than 15 years in teaching. The overall mean years of teaching experience is sufficient and relevant to demonstrate 21st-century skills and core behavioral

competencies. This implies that most secondary teachers in the Tuburan district are equipped with the necessary expertise to perform their functions for improved academic performance among the learners. A related study by (Burroughs et al.[51]) stated that teaching experience positively correlates with student accomplishment and improvement throughout a teacher's profession. The increases in beginning experience are highest in teachers' early years but continue for teachers in the second and often third decades of their careers. Moreover, teaching competencies are a by-product of a long process from several years of repetition that enhances proficiency and professionalism so the teachers can steadily manifest their skills (Nebbou[52]). Conversely, (Daniel[53]) stated that linking teacher efficiency to years of experience is very enticing, constructed on the craftwork impression that beginner teachers apprentice at the hands of a master teacher. However, this correspondence is unsuitable for the reality of teaching, which is repeatedly a solitary profession in which the majority of learning by the teacher is grounded on philosophical practice—reflection-on-action and reflection-in-action, respectively.

Table 1 also shows that 16, or 47 %, had attended 1-5 training, 7, or 20 %, had 6-10 training, 2 or 6 %, had 11-15 training, 4 or 12 % had 16-20 training and 5 or 15 % had more than 20 training. This means that most respondents have attended less than ten trainings, which is necessary to keep them updated on the latest trends in educational setup. This implies that there is a need for the teachers to take more substantial training. Attending training is a valued practice for secondary teachers to improve their 21st-century teaching skills and core behavioral competencies. A related study by (Fischer & Hänze[54]) emphasized that teacher training is essential in choosing the best teaching method and improving students' academic achievements and interests. Moreover, well-trained teachers efficiently guide students' learning by identifying their potential and needs, leading to an ideal instruction routine (Çetin & Bayrakcı[55]).

Regarding the latest Office Performance and Commitment Review (OPCR) evaluation, 28, or 82%, of the 34 respondents had a very satisfactory rating, and 6, or 18 %, were outstanding. This implies that the teachers exhibited a very acceptable teaching performance. Their performance surpassed minimal expectations. Altogether, the goals, objectives, and targets exceeded the recognized standards. However, it is essential to note that only a few were rated outstanding. This means there is room for improvement for the teachers in delivering 21st-century skills. The Results-Based Performance Management System has been employed to appraise teacher performance and parallel it with the objectives of key result areas set by the Department of Education standards. Teachers' growth and observance of performance commitments are often supervised and appraised. Tutoring and response reinforcement are on condition to aid teachers in improving their instructional approaches and addressing possible barriers and challenges (Cohen et al.[56]). Constant monitoring and feedback mechanisms strengthen the teachers' certainty that their hard work and development in performance will reap improved products and appreciation. Operative learning happens when teachers ensure their students have variable development marks and are experts at attaining achievement. To be effective, (Barkley & Major[57]) point out that teachers must meet the variable students' diverse needs by leveling up innumerable teaching happenings and approaches that stimulate and encourage them to accomplish endeavors in their definite ways.

4.2. The 21st-century skills manifested by the teachers as perceived by the school heads include learning and innovation, information, media and technology, and life and career skills (n=34).

Table 2. The 21st-century skills are manifested by the teachers as perceived by the school heads, including learning and innovation, information, media and technology, and life and career skills. (n=34)

Learning and Innovation Skills	**X**	**Interpretation**
1. Uses various idea-creation techniques, such as brainstorming.	3.24	Sometimes
2. Develop, implement, and communicate new ideas to others efficiently.	3.35	Sometimes
3. Demonstrates originality and inventiveness in work and understands the real-world limits to adopting new ideas.	3.35	Sometimes
4. Use communication to inform, instruct, motivate, and persuade in diverse environments.	3.59	Often
5. Demonstrates ability to work effectively and respectfully with diverse teams	4.00	Often
Average Weighted Mean	3.51	Often

Information, Media, and Technology Skills	**X**	**Interpretation**
1. Accesses information efficiently (time) and effectively (sources).	3.76	Often
2. Applies a fundamental understanding of the ethical/legal issues surrounding the access and use of information.	3.59	Often
3. Examines how individuals interpret messages differently, how values and points of view are included or excluded, and how media can influence beliefs and behaviors.	3.47	Sometimes
4. Understand and utilize the most appropriate media creation tools, characteristics, and conventions.	3.35	Sometimes
5. Uses digital technologies (computers, PDAs, media players, GPS, etc.), communication/networking tools, and social networks appropriately to access, manage, integrate, evaluate, and create information to function successfully in a knowledge economy.	3.59	Often
Average Weighted Mean	3.55	Often

Life and Career Skills	**X**	**Interpretation**
1. Adapts to varied roles, job responsibilities, schedules, and contexts.	3.71	Often
2. It goes beyond the essential mastery of skills and curriculum to explore and expand one's learning and opportunities to gain expertise.	3.41	Sometimes
3. Respect cultural differences and work effectively with people from various social and cultural backgrounds.	3.65	Often
4. Set and meet goals, even in the face of obstacles and competing pressures.	3.41	Often
5. Inspires others to reach their very best via example and selflessness.	3.71	Often
Average Weighted Mean	3.58	Often

Legend: 1.00 – 1.49=Never; 1.50-2.49=Rare ; 2.50-3.49=Sometimes; 3.50-4.49=Often; 4.50-5.00=Always

Table 2 illustrates the 21st-century skills demonstrated by the teachers as perceived by the school heads; in learning and innovation, it revealed that out of five learning and innovation skills, three were rated *Sometimes*, which means reasonably competent and need further training and development. These include "using a wide range of idea creation techniques" such as brainstorming; "developing, implementing, and communicating new ideas to others effectively" with a weighted mean of 3.35; and "demonstrating originality and inventiveness in work and understanding the real-world limits to adopting new ideas." The table further revealed that the respondents rated two items as Often, which means competent but would benefit from further training and development. These were "uses communication for a range of purposes" (e.g., to inform, instruct, motivate, and persuade) in diverse environments and "demonstrates ability to work effectively and respectfully with diverse teams" with a weighted mean of 4.00. This implies that teachers are competent but would benefit from further training and development. Secondary teachers in the district are diverse and inclusive. However, they are reasonably skilled in inventiveness, originality, and creativity.

In an analogous view, the study by (Yuan et al.[58]) stated that teachers can use their creativity among students by encouraging inherent motivation and problem-solving. They should promote consistent classroom brainstorming setups, which permit students to produce many thoughts and create an inspiring learning atmosphere. Students are more confident and participate more if they notice that their opinions are encouraged and acknowledged; they will be more likely to be creative, leading to potential innovation in the classroom. Culture in learning and innovation skills are positively interrelated to personal growth and professional development, which comprises features on teachers' proficiencies for keeping well-informed of current educational expansions. Teachers should constantly be efficient on diverse educational innovations and up-to-date matters as far as education matters are concerned. It is also seen in the curriculum domain, indicating teachers' capability to generate circumstances that inspire students to use higher-order thinking skills. The same applies to communication and teamwork skills, which speak of teachers' part in individual and cooperative situations and events to communicate higher learning opportunities to each learner (Alghamdy[59]).

Regarding information, media, and technology skills, three were rated *Often*, which means competent but would benefit from further training and development. These were "accessing information efficiently (time) and effectively (sources)"; "applying a fundamental understanding of the ethical/legal issues surrounding the access and use of information" and "using digital technologies (computers, PDAs, media players, GPS, etc.), communication/networking tools and social networks appropriately to access, manage, integrate, evaluate, and create information to function in a knowledge economy successfully." The table furthermore revealed that two items were rated by the respondents as Sometimes which means reasonably competent and need further training and development. These include, "examining how individuals interpret messages differently, how values and points of view are included or excluded, and how media can influence beliefs and behaviors" and "understands and utilize the most appropriate media creation tools, characteristics, and conventions." This implies that the district's secondary teachers can utilize digital tools to access information and maintain netiquette. However, they are reasonably competent in interpreting messages and understanding the media's influence on beliefs and behaviors. Similarly, (Chu et al.[60]) stated that the consumption of technology deviations the part of the teacher from an outmoded information provider to an implementer supervising the students' learning progressions and engaging in shared problem-solving. With technology, innovative customs have been revealed to

support the collaboration between the education arena and the world of work. Information, media, and technology skills ideals are also in the domain of the set of courses. This encompassed the teachers' proficiencies in choosing, formulating, and employing technology in teaching and learning. (Audrin & Audrin[61]) state that technology knowledge is computer skills and the aptitude to manipulate computers and other technology to advance education, output, and performance.

In life and career skills, three were rated *Often*, which means that teachers are competent but would significantly benefit from immediate and focused training and development. These were "adapting to varied roles, jobs responsibilities, schedules, and contexts,"; "respecting cultural differences and working effectively with people from a range of social and cultural backgrounds," and "inspiring others to reach their very best via example and selflessness." The table revealed that the respondents rated two items as Sometimes, which means reasonably competent and needing further training and development. These were" goes beyond essential mastery of skills and curriculum to explore and expand one's learning and opportunities to gain expertise" and "sets and meets goals, even in the face of obstacles and competing pressures." This implies that the secondary teachers in the district are competent in being adaptive, selfless, and respectful but reasonably competent in meeting goals and curriculum exploration. This is supported by the statement by (Ronkainen et al.[62])) that to keep being appropriate and exciting, the teacher must have life skills. They also emphasized that the 21st-century teacher is sufficiently equipped with these skills, highly cooperative, a lifetime learner, and held responsible for results. Life and career skills have more significant cohesions with community connections. This contains the teachers' demonstration of launching a learning atmosphere that responds to the community's aspirations by using community resources to enhance learning, participating in community endeavors that encourage learning, and encouraging students to spread classroom knowledge to the community (Istiyono[63]).

4.3. The teachers' level of competence in their core behavioral competencies: self-management, professionalism and ethics, results focus, teamwork, service orientation, and innovation (n=34)

Table 3. The teachers' level of competence in their core behavioral competencies

Self-Management	**X**	**Interpretation**
1. Sets personal goals and directions, needs and development.	3.67	Often
2. Undertakes clear and purposive personal actions and behaviors and considers personal goals and values congruent with those of the organization.	3.59	Often
3. Displays emotional maturity and enthusiasm for and is challenged by higher goals.	3.65	Often
4. To achieve goals, Prioritize work tasks and schedules (through Gantt charts, checklists, etc.).	3.53	Often
5. Set high-quality, challenging, realistic goals for self and others.	2.41	Sometimes
Average Weighted Mean	3.57	Often

Professionalism and Ethics	X	Interpretation
1. Demonstrates the values and behavior enshrined in the Norms of Conduct and Ethical Standards for public officials and employees (RA 6713).	4.12	Often
2. Practices ethical and professional behavior and conduct considering the impact of their actions and decisions.	4.18	Often
3. Maintains a professional image by being trustworthy, regular in attendance and punctuality, good grooming, and communication.	4.00	Often
4. Make personal sacrifices to meet the organization's needs.	3.88	Often
5. Acts with a sense of urgency and responsibility to meet the organization's needs, improve systems and help others improve their effectiveness	4.00	Often
Average Weighted Mean	4.04	Often

Results Focus	X	Interpretation
1. Achieves results with optimal use of time and resources most of the time.	3.47	Sometimes
2. Avoids rework, mistakes, and wastage through effective work methods by placing organizational needs before personal needs.	3.41	Sometimes
3. Delivers error-free outputs most of the time by conforming to standard operating procedures correctly and consistently.	3.41	Sometimes
4. Expresses desire to improve and may express frustration at waste or inefficiency.	3.35	Sometimes
5. Make specific changes in the system or your work to improve performance.	3.29	Sometimes
Average Weighted Mean	3.39	Sometimes

Teamwork	X	Interpretation
1. Willingly does his/her share of responsibility.	3.94	Sometimes
2. Promotes collaboration and removes barriers to teamwork and goal accomplishment across the organization.	3.71	Sometimes
3. Applies negotiation principles in arriving at win-win agreements.	3.65	Sometimes
4. Drives consensus and team ownership of decisions.	3.53	Often
5. Works constructively and collaboratively with others and the organization to accomplish organizational goals and objectives.	3.53	Often
Average Weighted Mean	3.51	Often

Service Orientation	X	Interpretation

	3.35	Sometimes
1. Can explain and articulate organizational directions, issues, and problems.	3.41	Sometimes
2. Takes personal responsibility for dealing with and correcting customer service issues and concerns.	3.11	Sometimes
3. Initiates activities that promote advocacy for men's and women's empowerment.	3.59	Often
4. Participates in updating office vision, mission, mandates, and strategies based on DepEd strategies and directions.	3.53	Often
5. Develop and adopt service improvement programs through simplified procedures to enhance service delivery.	3.40	Sometimes
Average Weighted Mean		

Innovation	**X**	**Interpretation**
1. Examine the root cause of problems and suggest practical solutions. Fosters new ideas and processes and suggests better ways to do things (cost and operational efficiency).	3.41	Sometimes
2. Demonstrates an ability to think "beyond the box". Continuously focuses on improving personal productivity to create higher value and results.	3.06	Sometimes
3. Promotes a creative climate and inspires co-workers to develop original ideas or solutions.	3.47	Sometimes
4. Translates creative thinking into tangible changes and solutions that improve the work unit and organization.	3.12	Sometimes
5. Uses ingenious methods to accomplish responsibilities. Demonstrates resourcefulness and the ability to succeed with minimal resources.	3.18	Sometimes
Average Weighted Mean	3.25	Sometimes

Legend: 1.00 – 1.49=Never; 1.50-2.49=Rare ; 2.50-3.49=Sometimes; 3.50-4.49=Often; 4.50-5.00=Always

As elaborated in Table 3, 4 relates the teachers' level of competence in their core behavioral competencies: self-management, professionalism and ethics, results focus, teamwork, service orientation, and innovation; findings revealed that four were rated Often, which means competent, but would benefit from further training and development. These were "setting personal goals and directions, needs and development"; "undertaking personal actions and behaviors that are clear and purposive and consider personal goals and values congruent to that of the organization"; "displaying emotional maturity and enthusiasm for and is challenged by higher goals" and "prioritize work tasks and schedules (through Gantt charts, checklist, etc.) to attain goals. " The table furthermore revealed that one item was rated by the respondents as Sometimes, which means reasonably competent and needs further training and development. This is "setting high quality, challenging, realistic goals for self and others." This implies that the secondary teachers in the district are competent in setting priorities, mature, enthusiastic, and responsible in self-management. This is supported by (Runhaar et al.[64]), which discovered that the more teachers professed that their schools take on activities to strategy and supervise teachers' careers, such as corresponding individual careers to school requirements, employing informal activities, including giving prospects for professionalization or promotion and career advice—the higher teachers' appointment in career self-management was. (Niu et al.[65]) indicated that self-management skills service

students establish their learning and performance. Self-management activities must complement detailed class assignments and function broadly transversely to courses. For instance, including a planning phase can be a valuable supplement to course assignments such as writing a research paper or accomplishing a science project. This implies that teachers' self-management has a constructive influence on the students' learning outcomes.

Regarding professionalism and ethics competencies, all were rated as often competent but would benefit from further training and development. These were "demonstrating the values and behavior enshrined in the Norms of Conduct and Ethical Standards for public officials and employee (RA 6713)"; "practicing ethical and professional behavior and conduct considering the impact of his/her actions and decisions"; "maintaining professional image: being trustworthy, regularity of attendance and punctuality, good grooming, and communication"; "making personal sacrifices to meet the organization's needs" and "acting with a sense of urgency and responsibility to meet the organization's needs, improves systems and help others improve their effectiveness." This implies that the secondary teachers in the district are excellent role models for the learners, exemplifying good manners and proper conduct. This is braced by the investigation of (Morrison et al.[66]), which revealed that most teachers habitually educate students concerning projected performance during their development. These directions have intricate features of competence, such as humanism, responsibility, and morality.

(Dickerson[67]) stated that strengthening the teacher-student relationship allows students and teachers to aim and realize their incredible goal lines. This way, teachers will perform efficiently, and learners will learn well in a safe school promoting ethical standards. Ethics and standards must be considered and improved for effective teaching and learning in school environments. The researcher also discussed the prevailing professional misconduct of teachers in schools that has affected learning outcomes. This implies that teachers' professionalism promotes quality learning. Teachers and learners must feel safe to absorb implicitly and accomplish their visions in school. As such, creating a positive and wide-ranging school environment is significant. Building an influential school nation is indispensable to teachers and students.

Regarding result focus competencies, all were rated Sometimes, which means reasonably competent and needs further training and development. These were "achieving results with optimal use of time and resources most of the time,"; "avoiding rework, mistakes, and wastage through effective work methods by placing organizational needs before personal needs,"; "delivering error-free outputs most of the time by conforming to standard operating procedures correctly and consistently"; " expressing the desire to do better and may express frustration at waste or inefficiency"; and "makes specific changes in the system or own works to improve performance." This indicates that secondary teachers are reasonably competent and need further training and development to meet the goals and objectives and achieve desirable results in the teaching and learning process. Result-focus is vital because it can lead to improved teacher and learner performance. Evaluating teacher effectiveness and providing information about it can improve learners' education. This is reinforced by (Desombre et al.[68]), which revealed that efficiency profoundly affects teachers' professional attitudes toward teaching. Teachers' enhanced efficiency also positively affected their attitudes toward teaching, together with improved self-efficacy and relevance principles and reduced apprehension. Conversely, (Janssen et al.[69]) explained that focusing on the process in the classroom can harvest many profits for students, including nurturing a progress outlook, producing a student-centered atmosphere, and reducing student strain. He added that test results and ratings may not precisely replicate a learner's accomplishment or failure. However, parents and students devote massive amounts of time, dynamism, and money-dashing ratings and scores to the fact that they have confidence that these are actual learning parameters. Hence, great teachers stimulated by great educational leaders must preserve students' interest in the procedure, not the grades. Students dashing scores and grades will misplace their view of learning development and their progress and development.

As to teamwork competencies, they were rated often, which means they were competent but would benefit from further training and development. These were "willingly does his/her share of responsibility,"; "promotes collaboration and removes barriers to teamwork and goal accomplishment across the organization,"; "applies negotiation principles in arriving at win-win agreements,"; "drives consensus and team ownership of decisions," and "works constructively and collaboratively with others and across the organization to achieve organizational goals and objectives." This implies that the secondary teachers are competent but would benefit from further training and development in teamwork, cooperation, and collaboration, which are needed to achieve organizational goals and objectives. (Miesera et al.[70]), regression analysis showed that teamwork is significantly related to innovative work behavior. This aligns with the study of (Munir & Beh[71]), wherein collective communication in a supportive environment and linkage between colleagues may reassure the generation of imaginative concepts.

Positive collaboration inspires team affiliates to navigate and explore new approaches to progress work efficiency, advance best practices, proactively resolve difficulties, welcome modifications, implement inventions, and foster inspiration (Kremer et al.[72]). This implies that solid teacher coordination produces academically robust schools. This notion explains why teacher-learning teams supporting teacher-to-teacher are prevalent in competitive schools. Moreover, teamwork should also come from learners and external stakeholders, including parents, alums, the community, the local government unit, and other associations affecting the school.

In service orientation competencies, three were rated Sometimes, which means reasonably competent and needs further training and development. These were "can explain and articulate organizational directions, issues, and problems,"; "takes personal responsibility for dealing with and correcting customer service issues and concerns," and "initiates activities that promote advocacy for men and women empowerment." The table furthermore revealed that respondents rated one item as Often, which means competent but would benefit from further training and development. These were "participates in updating office vision, mission, mandates & strategies based on DepEd strategies and directions" and "develops and adopts service improvement programs through simplified procedures that will further enhance service delivery." This implies that the secondary teachers are competent but would benefit from further training and development in providing service improvement programs instead of the department's mandates. Moreover, secondary teachers are relatively competent and need additional training and development in initiating services and articulating organizational barriers and challenges. (Egert et al.[73]) detailed that service orientation has positively impacted teachers' professional development. It enhances teachers' intercultural competence, global educational perspectives, and foreign language skills. Additionally, it promotes the development of graduate professional standards in teachers and enhances their personal and professional skills. Furthermore, a professional development program combining a multiplier system with school-based in-service training has positively affected teachers' attitudes and classroom practices. (Hargreaves & Woods[74]) service is a distinctive feature of a teacher's job and the goal, emphasizing the most macro product. He added that we increase strength and perception from helping others in service-oriented teaching, leading to others' growth, including, on a wide-ranging level, the construction of individual and professional matters that can withstand the challenges and barriers of teaching.

On the competency of result focus competencies, all were rated Sometimes, which means reasonably competent and needs further training and development. These were "examines the root cause of problems and suggests effective solutions,"; "demonstrates an ability to think beyond the box,"; "promotes a creative climate and inspires co-workers to develop original ideas or solutions,"; "translates creative thinking into tangible changes and solutions that improve the work unit and organization" and "uses ingenious methods to accomplish responsibilities." This implies that the district's secondary teachers are reasonably competent and need further training and development in assessing and identifying problems and creating solutions. Innovation is significant, especially since the needs of a dynamic society call for solutions custom-made to the requirements of the learners. (Ovbiagbonhia et al.[75]) stated that innovation is imperative in renovating and restructuring the learning atmospheres, curricula, the role of the teacher, and teacher training. Unlike traditional educational situations, innovation in the educational arena will generate students from knowledge customers into knowledge builders by engaging them as the focus of advanced educational learning situations. (Grannäs & Stavem[76]) label innovative educational schemes as teachers' accountability to increase alternatives in methodology. Innovation is generating substitutes or innovative conducts to current systems or procedures. When a need for transformation or a need for substitutes demands consideration, it can be held that innovative educational methods are taking place. This implies that innovation in educational set-ups can enrich the complications in practice now. Taking education approaches to an inventive level of practice necessitates teachers to stop the outdated habits and upgrade their longstanding or old-style beliefs for the unconventional students, learning surroundings, and societal life at hand today.

4.4. Significant relationship between the 21st century skills and core behavioral competencies.

This section uses the Pearson R coefficient to represent the significant relationship between 21st-century skills and core behavioral competencies. The quantitative data for this question are presented in Table 4.

Table 4. A significant relationship between the 21st-century skills and behavioral competencies.

	learning and innovation skills	information, media, and technology skills	life and career skills	self-management	professionalism and ethics	results focus	teamwork	service orientation	innovation
learning and innovation skills	1								
information, media, and technology skills	.550**	1							
life and career skills	.844**	.655**	1						
self- management	.903**	.461**	.766**	1					
professionalism and ethics	.800**	.551**	.888**	.826**	1				
results focus	.821**	.582**	.722**	.875**	.812**	1			
teamwork	.649**	.562**	.804**	.736**	.908**	.640**	1		
service orientation	.640**	.820**	.603**	.500**	.504**	.442**	.593**	1	
innovation	.833**	.803**	.947**	.807**	.834**	.765**	.816**	.715**	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 4 shows the relationship between the teachers' 21st-century skills and core behavioral competencies; the result revealed between learning and innovation skills and the six indicators of core behavioral competencies as to self-management (r=.903), professionalism and ethics (r=.800), results focus (r=.821), teamwork (r=.649, p>0.05), service orientation (r=.640, p>0.05), and innovation (r=.833) are significant. This implies that teachers' learning and innovation skills can affect their ability to perform quality teaching. The relationship between information, media and technology skills and the six indicators of core behavioral competencies as to self-management (r=.461), professionalism and ethics (r=.551), results focus (r=.582), teamwork (r=.562), service orientation (r=.820), and innovation (r=.803) are significant. This implies that teachers' digital skills can help them deliver the lessons and content. The relationship between life and career skills and the six indicators of core behavioral competencies as to self-management (r=.766), professionalism and ethics (r=.888), results focus (r=.722), teamwork (r=.804), service orientation (r=.603), and innovation (r=.947) are significant. This implies that teachers' life and career skills can help improve the soft and hard skills of the learners.

The result reveals that teachers' 21st-century skills can affect their core behavioral competencies. This implies that the 21st-century skills of secondary teachers in District 1 can significantly affect the teaching and learning procedure delivery. Teachers must polish these skills to improve the learners' academic performance and experience. Their skills must be enhanced to be competitive, effective, and efficient teachers to address the shifting necessities of the learners in the 21st century. Teachers need to advance higher-order thinking skills to transmit knowledge to everyday routines. These skills are considered compulsory for individuals to evolve and acquire the 21st Century Learning Skills. (Apriyanti[77]). These skills significantly affect the teachers' performance in the delivery of their lessons. According to (Susilowati & Suyatno[78]), the teacher-centered education structure has been substituted by a student-centered education arrangement in the previous. Regarding 21st-century skills, teachers must guide and aid their students' production enthusiasm, interest, problem-solving skills, and higher-order critical thinking.; these aspects certainly contribute positively to students' future. Therefore, learning approaches and approaches addressing the 21st century should be stimulated.

Table 5. Issues and Concerns Encountered by the Teachers (n=34)

Barriers and Challenges	f	Ranking
Multi-tasking is stressful.	23	1
Innovative strategies in teaching are limited due to the pandemic.	20	2
Communication among the learners through social media is burdensome.	17	3
Accessing information from different applications and sites is laborious.	16	4.5
Providing learning modalities among the learners is limited.	16	4.5
Expanding one's own learning and professional growth is rigid.	13	6
Originality and inventiveness in teaching are difficult.	11	7.5
Using digital technologies in teaching takes much work.	11	7.5

Less adaptive to varied roles, job responsibilities, schedules, and contexts.	9	9
Being a leader and collaborator is hard.	8	10
Others	5	11

As shown in this table, the first in rank of the issues and concerns met was “multi-tasking is stressful.” The second issue was that “innovative strategies in teaching are limited due to the pandemic.” The third was “communication among the learners through social media is burdensome.” The fourth concern was “accessing information from different applications and sites is laborious” and “providing learning modalities among the learners is limited” “The sixth concern was “expanding one’s own learning and professional growth is rigid.” The seventh concern was “originality and inventiveness in teaching is difficult” and “using digital technologies in teaching is tough.” The ninth issue was “less adaptive to varied roles, jobs responsibilities, schedules, and contexts.” The tenth concern was “being a leader and collaborator is hard.” The last problem was other barriers and challenges the respondents experienced, including research skills and knowledge. This implies that due to the multiple ancillary services and designations that the secondary teachers in the district have, they tend to see these multitasking activities as stressful. Furthermore, interfering activities that require teachers to train or coach learners sum up these stressors.

(Mark[79]) stated that academic research demonstrates the profound adverse effects of multitasking on teachers' productivity. However, multitasking is shabby as a symbol of principle. Research shows that multitasking teachers suffer an inclusive display of adverse outcomes from deteriorating creative time while converting responsibilities to experiencing a sensitive susceptibility to distractions. Teachers have core and exterior problems when utilizing innovations and ingenuity in classroom settings. The exterior determinants include difficulties of a quantifiable object and practical landscape, such as inefficient means of scientific and methodological literature, deficiency of required technical circumstances and lack of compensation for innovative undertaking, problems caused by the particulars of pedagogical activity such as dependence on innovation on its awareness by students, refusal of innovation by parents or their lack of interest, dearth of understanding of colleagues, administration, nonexistence of support from school psychologists, etc.); complications related with the specifics of innovation (Upadhyaya & Vrinda[80]).

5. CONCLUSION

The researchers concluded that initiating and fully implementing an instructional development program will improve teachers’ 21st-century skills in the Tuburan 1 secondary teachers. In this way, teachers’ core behavioral competencies and performance can be monitored and mentored for baseline information for improvement. This ensures that every teacher is given structured guidance, support, and professional development opportunities. Enhancing the skills and competencies of educators is crucial for improving the quality of teaching and learning in the 21st century, ultimately benefiting students and ensuring their success in an ever-changing world. The study demonstrates that integrating 21st-century skills into educational practices enhances academic performance and significantly boosts positive behavioral competencies among students. It is a crucial area for ongoing attention and development in education reform. Considering the discoveries and implications uncovered by the study, it is recommended that 21st-century skills and core behavioral competencies-oriented development design be initiated. Specifically, the following recommendations have been developed: to upgrade teachers’ comprehension with the class observation tools and classroom demonstration indicators; to enable teachers to support each other to uninterruptedly improve their knowledge, practice, skills, familiarity and attitude; to capacitate teachers on basic writing research proposals and innovation using Department of Education standards; and, to provide online and printed copies of the activities and tools to address issues like class observation tools, classroom demonstration indicators, integration of ICT in the 21st-century education, enabling teachers to support each other to continuously improve their knowledge, practice, skills, and attitude, gain a deeper understanding on how to deal with different stressors, and other needs of the teachers that will help them cope with the challenges in the educational system of the 21st century.

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