



Twenty-first Century Teaching Skills and Job Satisfaction of Public Senior High School Teachers in Central Philippines

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Authors' contributions

This work was carried out in collaboration among all authors. Author ENE wrote, conducted, and administered the protocol of the study from gathering, analysis and interpretation of data through the guidance and recommendations of her adviser, author JMB. Moreover authors JMB and DVM scrutinized the writing starting from research objectives, framework, methods, results, analysis, interpretation, conclusion and the format for the journal entry, so to check and to address its alignment. All authors read and approved the final manuscript.

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ABSTRACT

Aims: This paper assessed the teachers' practice of 21st-century teaching skills in Central Philippines in terms of critical thinking, collaboration, communication, creativity and innovation, self-direction, making global connections, making local connections, and using technology as a tool for learning relative to age, educational attainment, teaching position, and years of teaching experience. Likewise, it determined their job satisfaction in terms of intrinsic and extrinsic factors. It also investigated the differences in their teaching skills practice and job satisfaction when grouped

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into demographics. Lastly, it correlated the two variables.

Study Design: The study utilized the quantitative design, particularly the descriptive-comparative and correlational approaches.

Place and Duration of Study: The study was conducted among the public senior high school teachers in Central Philippines during 2021-2022.

Methodology: Using the standardized questionnaires, the study was responded to by 242 teachers determined through stratified random sampling. For 21st-century teaching skills practice, it was assessed using the 5-point Likert scale: 5-very great extent, 4-great extent, 3-moderate extent, 2-poor extent, and 1-very poor extent. Meanwhile, job satisfaction was assessed on a scale: 4-very satisfied, 3-satisfied, 2-dissatisfied, and 1-very dissatisfied. Data analysis used mean, standard deviation, Mann Whitney, Kruskal Wallis, and Spearman rho.

Results: Generally, the 21st-century teaching skills ($M=4.28$, $SD= 0.45$) were practiced by teachers to a very great extent. The highest-rated domain was a collaboration ($M=4.43$, $SD= 0.54$) with a very great extent result, while the lowest-rated domain was on making global connections ($M=4.11$, $SD= 0.61$) with a great extent rating. Meanwhile, the teachers' job satisfaction ($M=3.24$, $SD= 0.44$) was rated satisfied. Intrinsic factors ($M=3.31$, $SD= 0.45$) were rated very satisfied, while extrinsic factors ($M=3.13$, $SD= 0.44$) were satisfied. The findings showed no significant difference in their 21st-century teaching skills practice when grouped according to age [$U=6867.5$, $p=0.528$], educational attainment [$U=4610.5$, $p=0.667$], years of teaching experience [$U=6782.0$, $p=0.960$], and teaching position [$\chi^2(4)=5.298$, $p=0.258$]. On the other hand, the findings showed no significant difference in their job satisfaction when grouped according to age [$U=7098.0$, $p=0.838$], educational attainment [$U=4350.5$, $p=0.307$], years of teaching experience [$U=6351.5$, $p=0.383$], and teaching position [$\chi^2(4) =0.755$, $p=0.944$]. Lastly, the result showed a significant relationship between the practice of 21st-century teaching skills and job satisfaction [$\rho(240) =0.450$, $p=0.000$] of teachers.

Conclusion: The findings imply the importance of training and graduate schooling to continuously improve the teachers' practice of 21st-century teaching skills. When these essential aspects are intact among them, the students' quality of learning is ensured. Meanwhile, considering the intrinsic and extrinsic factors to satisfaction is also essential in ensuring the teachers' retention in the profession.

Keywords: 21st century teaching skills; job satisfaction; descriptive-comparative; correlational; public senior high school teachers; Philippines.

1. INTRODUCTION

Teaching skills are essential in meeting the demands of the 21st-century educational landscape [1]. When these skills are intact among teachers, they competently provide quality instruction that is globally competitive and contributes to the learners' preparation for life ahead [2]. Additionally, these skills are also necessary for helping them sustain their chosen career and be responsive to the call and challenges of teaching [3]. Hence, these not only make them conquer the difficulties that may come their way but guarantee their satisfaction with their profession [4].

Meanwhile, the teachers' satisfaction in the profession is critical in advancing their teaching duties and responsibilities [5]. When their contentment in the profession is in place, the quality of instruction is also ensured [6]. In view of this, the more they are satisfied with their jobs, the more they become committed to performing

their teaching tasks [7]. In addition, when there is commitment, there is a continuity of quality teaching and learning [8]. Hence, their contentment in the profession is vital to the success of instruction [9].

However, in the Philippines, the teachers' practice of 21st-century teaching skills is compromised due to their complex tasks and responsibilities [10]. Most are expected to comply with the different paperwork and documentation, attend various trainings and seminars, adapt to the demands of integrating technology, and prepare learning materials and instructional plans [11,12]. With these duties' complexity, most would just resort to the conventional way of teaching [13]. Not to mention the effects of the pandemic circumstance to the instruction, which altered the teaching modality [14-16]. With the shifting instructional modality, most of them find it difficult to integrate these 21st-century teaching skills in their instruction which eventually affect their satisfaction in the profession [17].

In fact, in the public senior high schools in Central Philippines, some factors affect their disposition and contentment towards teaching [18,19]. Some find it difficult to practice their acquired teaching skills from seminars and training since most are not designed and prepared for online and modular instruction [20]. No matter how skillful they are in teaching, the pandemic would limit their skills since they could not meet their students face to face. Some would even have problems using the learning management system since these platforms were mostly new and abruptly implemented [21]. Not to mention the issues with connectivity on both the teacher's and students' ends [22,23]. With these experiences, their satisfaction towards their profession is compromised [24].

Several studies were conducted on 21st-century teaching skills in the Philippines. Tuazon and Sumadsad [25] conducted a study on the 21st-century skills teaching practices and their impact on the student's academic performance; Zamora and Zamora [26] conducted research focusing on the 21st-century teaching skills about the teaching standards competence of teachers, Inocian [27] highlighted on the 21st-century skills in teaching economics, and Boholano [28] conducted on 21st-century teaching skills vis-à-vis smart social networking. On the one hand, several studies were conducted on job satisfaction in the country, especially among public schools: Bona [29] made a study solely focusing on the job satisfaction of public school teachers, Baluyos et al. [30] conducted a study correlating job satisfaction with the work performance of teachers, City [31] studied on K to 12 public teachers using multiple statistical tools, and Tindowen et al. [32] conducted a correlational study on organizational commitment and job satisfaction of senior high school teachers. Given the available studies, there is a dearth of literature, especially correlating the two constructs among public senior high schools. This is the research gap that this study would like to fill in.

1.1 Research Objectives

This paper assessed the practice of the 21st century teaching skills of public senior high school teachers in Central Philippines during the school year 2021-2022 in terms of critical thinking, collaboration, communication, creativity and innovation, self-direction, making a global

connection, making a local connection, and using technology as a tool for learning when they are taken as a whole and grouped according to age, educational attainment, teaching position, and years of teaching experience. Likewise, it determined their job satisfaction in terms of intrinsic and extrinsic factors. Also, it investigated the significant differences in their practice of 21st-century teaching skills and job satisfaction when grouped according to demographics. Lastly, it checked the significant relationship between the two constructs.

1.2 Theoretical Framework

The study theoretically assumed that the teachers' practice of 21st-century teaching skills influences their job satisfaction. This assumption was anchored on the equity theory of Adams [33] where it perceives that the employees' input affects their output. Meaning to say, the successful output is generated from the input these employees exert. In the context of this study, the teachers' input is their practice of the 21st-century teaching skills and their output is their job satisfaction. Hence, their satisfaction in the profession is generated when these 21st-century teaching skills are demonstrated.

2. METHODOLOGY

2.1 Research Design

The study utilized the quantitative research design, particularly the descriptive-comparative and correlational approaches. This design describes the results of the given variables using appropriate statistical tools and procedures [34]. The descriptive approach assessed the teachers' extent of the practice of 21st-century teaching skills and their level of job satisfaction. Meanwhile, the comparative approach investigated the significant differences in the 21st-century teaching skills practice and job satisfaction when grouped according to the demographics. Finally, the correlational approach determined the relationship between the two constructs.

2.2 Respondents

The respondents of the study were the 242 teachers of public senior high schools in Central Philippines during 2021-2022. They were determined using the stratified random sampling and fishbowl technique.

Table 1. Demographic profile of the respondents

Variable	f	%
Division		
School A	61	25.2
School B	34	14.0
School C	55	22.7
School D	36	14.9
School E	26	10.7
School F	30	12.4
Age		
Younger (36 years and below)	136	56.2
Older (37 years and above)	106	43.8
Educational Attainment		
Without graduate degree	50	20.7
With graduate degree	192	79.3
Teaching Position		
Teacher 1	41	17.0
Teacher 2	141	58.3
Teacher 3	47	19.4
Master Teacher 1	11	4.5
Master Teacher 2	2	0.8
Years in Teaching		
Shorter (8 years and below)	153	63.2
Longer (9 years and above)	89	36.8
Total	242	100.0

*Note: Average age=36.5 years old
Average years in teaching =8.4 years*

2.3 Research Instrument

In assessing the practice of 21st-century teaching skills, the standardized questionnaire developed by Ravitz [35] was employed. It has 47 items spread across eight areas, namely: critical thinking, collaboration, communication, creativity and innovation, self-direction, making a global connection, making a local connection, and using technology as a tool for learning. The questionnaire was responded to using a 5-point Likert scale: 5-very great extent, 4-great extent, 3-moderate extent, 2-poor extent, and 1-very poor extent. In terms of the instrument's validity, the author validated the questionnaire using Good and Scates [36] with an index of 4.75. To fit the context of the Philippine teachers, the instrument was pilot tested on 30 non-actual respondents and yielded a reliable Cronbach's Alpha score of 0.979.

The Minnesota Satisfaction Questionnaire by Weiss et al. [37] assessed teachers' job satisfaction. It has 20 items spread across two areas: intrinsic and extrinsic. This was responded to using a 4-point Likert scale: 4-very satisfied, 3-satisfied, 2-dissatisfied, and 1-very dissatisfied. The questionnaire was subjected to face

validation in the study of Ballarta and Roberto [38] and established an index rating of 4.92. A pilot test was conducted on 30 non-actual respondents, yielding a reliable Cronbach's Alpha score of 0.895.

2.4 Data Analysis

In analyzing the data, descriptive-comparative and correlational analyses were employed. The Descriptive analysis was used in analyzing the practice of 21st-century teaching skills and job satisfaction of teachers using mean and standard deviation. Meanwhile, Kolmogorov-Smirnov was used to determine the normality test results of the variables. The normality test revealed that the variables 21st-century teaching skills [KS=0.068, p=0.008] and job satisfaction [KS=0.095, p=0.000] were not normally distributed. Since the variables were not normally distributed, hence the use of non-parametric statistical tools. The comparative analysis compared the two variables when the teachers were grouped according to the demographics using the Mann-Whitney U test and Kruskal Wallis. Lastly, using Spearman rank correlation, the correlational analysis was employed to correlate the two constructs.

3. RESULTS AND DISCUSSION

3.1 Practice of the 21st Century Teaching Skills of the Public Senior High School Teachers

The 21st-century teaching skills are the competencies the teachers must demonstrate to ensure quality instruction, learning acquisition, and global competitiveness among learners. Here are the teaching skills which the teachers should perform in as far as the 21st century education is concerned: critical thinking, collaboration, communication, creativity, and innovation, self-direction, making global connection, making local connection, and using technology as a tool for learning [35]. Table 2 presents the extent of the practice of the 21st-century teaching skills of public senior high school teachers in Central Philippines. Generally, 21st-century teaching skills ($M=4.28$, $SD= 0.45$) are practiced by teachers to a very great extent. The highest-rated domain is a collaboration ($M=4.43$, $SD= 0.54$) with a very great extent result, while the lowest-rated domain is on making global connections ($M=4.11$, $SD= 0.61$) with a great extent rating.

Generally, the very great extent rating indicates that public senior high school teachers always demonstrate 21st-century teaching skills. The exceptional rating of the teaching skills practice among these public school teachers manifests their competencies in delivering 21st-century instruction. This outstanding rating could be attributed to the regular in-service training and seminars conducted among public school teachers to ensure the quality delivery of the curriculum of the Department of Education [39]. Part of this in-service training is the essential skills they need to acquire to successfully advance the 21st-century lessons to the learners [40]. Aside from this, these teachers are consistently monitored and evaluated if their instructional pedagogies adhere to the DepEd's expectations [41].

Meanwhile, the Department of Education's Results-Based Performance Management System (RPMS), which is aligned with the Philippine Professional Standards for Teachers (PPST), is also helpful in evaluating the performance of public school teachers [42,43]. These performance standards are regularly conducted among these teachers to ensure the alignment of their skills in delivering 21st-century

instruction [44,39]. Aside from this, some studies assessed the teaching competence of teachers using the Philippine Professional Standards for Teachers (PPST), which also gave empirical data on the public school teachers' embodiment of 21st-century teaching skills [45].

In support, these attributions signify how important teachers' regular monitoring and evaluation are, aside from training and seminars, in ensuring their practice of 21st-century teaching skills. According to Bha and Ye [5], teacher evaluation is essential to check whether they adhere to the standards of teaching vis-à-vis the quality of education. Standards are potential indicators to measure the quality performance of the profession [43]. Meanwhile, in-service training and seminars are also necessary among these teachers to acquire the essential skills in teaching [46,47]. For example, during this pandemic, these training and seminars among public schools played a major role in providing the teachers with the mechanism to cope with the shift of instructional modality [48]. With this, they were taught how to utilize technology in delivering instruction to their learners [28].

Given the Table 2 results, the great extent rating could also be influenced by the outnumbering teachers with graduate degrees. A study claims that those with graduate degrees practice more the 21st-century teaching skills than their counterpart [49]. This indicates that graduate school is also critical for teachers to practice their teaching skills. In fact, according to Pañares et al. [45], graduate education is a potential avenue for teachers to develop the knowledge, skills, and attitude in teaching. Hence, this implies the importance of graduate schooling among teachers to grow professionally and practice 21st-century teaching skills.

The rating of collaboration as the highest-rated domain indicates that the teachers well demonstrate this skill among all the dimensions of 21st-century teaching skills. The teachers' collaborative experiences could influence its exceptional rating, especially during the pandemic. In public schools, teachers have collaborative opportunities, like the Learning Activity Cell (LAC) session, which encourages them to participate in improving the teaching and learning processes [44]. During this pandemic circumstance, most of the teachers were affected by the shift in the instructional modality, but with the teachers' collaboration, they were able to cope with the paper works, compliances, and

instructional preparations [50,22]. Indeed, this circumstance strengthened the teachers' teamwork to survive the demands of the new normal teaching [20]. This event has even allowed them to collaborate in establishing continuity plans and feedback on methods of instruction which helped develop their collaborative skills [51].

Demographically, younger, shorter years of teaching experience and graduate degree teachers mostly responded to the assessment. These contexts could influence the outstanding rating of collaboration. A study perceives that the younger the teachers and the shorter teaching experience are more collaborative than those older and longer in teaching [52]. The older and longer the teachers are in teaching, the more they are resistant to changes and collaborative activities [53]. On the one hand, those with graduate degrees are much more acquainted with the importance of collaboration as one of the 21st-century skills, which possibly affected the rating. Darling-Hammond et al. [54] would agree that those with graduate degrees are more collaborative than those without.

Meanwhile, making global connections as the lowest-rated domain shows that this needs improvement among all 21st-century teaching skills. Its great extent result does not mean low, but for the teachers to outstandingly demonstrate this skill, this aspect needs attention among public schools. On the one hand, its great extent

rating could be influenced by the outnumbering teachers with graduate degrees. Their engagement in research, international conferences, and publications has allowed their global connection skills to be demonstrated. In support, the study of Vykhreshch et al. [49] found that graduate education allows teachers to widen their horizons from local to international levels. It also allows them to situate themselves in the context of other cultures and backgrounds, which helps them improve their knowledge, skills, and attitude in life [45]. Hence, these findings imply the importance of graduate schooling among public senior high school teachers to guarantee the exceptional practice of the global connection skill.

3.2 Job Satisfaction of Public Senior High School Teachers

Job satisfaction is perceived as the teachers' general feeling and impression of happiness and contentment towards their work which could be an interconnection of their personal and job-related factors [8]. Table 3 presents the level of job satisfaction of public senior high school teachers in Central Philippines. Generally, the teachers' level of job satisfaction (M=3.24, SD= 0.44) is rated satisfied. Intrinsic factors (M=3.31, SD= 0.45) are rated very satisfied, while extrinsic factors (M=3.13, SD= 0.56) are satisfied.

Table 2A. Extent of practice of the 21st century teaching skills

Variables	Critical Thinking			Collaboration			Communication		
	M	SD	Int	M	SD	Int	M	SD	Int
Age									
Younger	4.25	0.51	VG	4.46	0.51	VG	4.28	0.53	VG
Older	4.23	0.53	VG	4.40	0.58	VG	4.22	0.61	VG
Educational Attainment									
With Graduate Degrees	4.24	0.49	VG	4.34	0.57	VG	4.22	0.53	VG
Without Graduate Degrees	4.24	0.53	VG	4.46	0.53	VG	4.26	0.58	VG
Years of Teaching Experience									
Shorter	4.25	0.52	VG	4.43	0.53	VG	4.23	0.54	VG
Longer	4.22	0.51	VG	4.44	0.56	VG	4.29	0.61	VG
Teaching Position									
Teacher 1	4.25	0.62	VG	4.35	0.60	VG	4.17	0.79	GE
Teacher 2	4.25	0.49	VG	4.45	0.53	VG	4.23	0.49	VG
Teacher 3	4.12	0.50	GE	4.43	0.53	VG	4.31	0.54	VG
Master Teacher 1	4.66	0.41	VG	4.47	0.60	VG	4.56	0.53	VG
Master Teacher 2	4.07	0.10	GE	5.00	0.00	VG	4.70	0.14	VG
As a whole	4.24	0.52	VG	4.43	0.54	VG	4.25	0.57	VG

Table 2B. Extent of practice of the 21st century teaching skills

Variables	Creativity and Innovation			Self-Direction			Making global connection		
	M	SD	Int	M	SD	Int	M	SD	Int
Age									
Younger	4.31	0.53	VG	4.31	0.53	VG	4.15	0.63	GE
Older	4.25	0.56	VG	4.27	0.53	VG	4.05	0.59	GE
Educational Attainment									
With Graduate Degrees	4.28	0.53	VG	4.28	0.54	VG	4.04	0.56	GE
Without Graduate Degrees	4.29	0.54	VG	4.29	0.53	VG	4.12	0.63	GE
Years of Teaching Experience									
Shorter	4.27	0.56	VG	4.29	0.54	VG	4.13	0.63	GE
Longer	4.31	0.50	VG	4.30	0.51	VG	4.07	0.59	GE
Teaching Position									
Teacher 1	4.27	0.62	VG	4.25	0.59	VG	4.11	0.63	GE
Teacher 2	4.29	0.52	VG	4.27	0.52	VG	4.11	0.61	GE
Teacher 3	4.22	0.54	VG	4.31	0.52	VG	4.04	0.60	GE
Master Teacher 1	4.69	0.44	VG	4.51	0.45	VG	4.23	0.69	VG
Master Teacher 2	4.10	0.14	GE	4.50	0.51	VG	4.42	0.59	VG
As a whole	4.29	0.54	VG	4.29	0.53	VG	4.11	0.61	GE

Mean Range: 1.00-1.80=Very Poor Extent (VP), 1.81-2.60=Poor Extent (PE), 2.61-3.40=S Moderate Extent (ME), 3.41-4.20=Great Extent (GE), 4.21-5.00=Very Great Extent (VG)

Table 2C. Extent of practice of the 21st century teaching skills

Variables	Making local connection			Using Technology as a Tool for learning			21 st Century Teaching Skills		
	M	SD	Int	M	SD	Int	M	SD	Int
Age									
Younger	4.20	0.60	GE	4.40	0.57	VG	4.30	0.43	VG
Older	4.29	0.60	VG	4.31	0.61	VG	4.25	0.46	VG
Educational Attainment									
With Graduate Degrees	4.21	0.58	VG	4.34	0.57	VG	4.25	0.45	VG
Without Graduate Degrees	4.25	0.60	VG	4.36	0.59	VG	4.29	0.45	VG
Years of Teaching Experience									
Shorter	4.18	0.60	GE	4.41	0.56	VG	4.28	0.46	VG
Longer	4.34	0.58	VG	4.27	0.62	VG	4.28	0.43	VG
Teaching Position									
Teacher 1	4.13	0.59	GE	4.21	0.66	VG	4.22	0.53	VG
Teacher 2	4.20	0.61	GE	4.41	0.54	VG	4.28	0.43	VG
Teacher 3	4.33	0.55	VG	4.25	0.64	VG	4.25	0.42	VG
Master Teacher 1	4.67	0.42	VG	4.56	0.52	VG	4.54	0.40	VG
Master Teacher 2	4.70	0.42	VG	5.00	0.00	VG	4.56	0.18	VG
As a whole	4.24	0.60	VG	4.36	0.59	VG	4.28	0.45	VG

Mean Range: 1.00-1.80=Very Poor Extent (VP), 1.81-2.60=Poor Extent (PE), 2.61-3.40=S Moderate Extent (ME), 3.41-4.20=Great Extent (GE), 4.21-5.00=Very Great Extent (VG)

The overall rating indicates that the teachers' impression of contentment towards their profession is within the expected level only. This means to say that despite its high rating, there is a need for public schools to continuously improve in terms of their programs for faculty to increase their satisfaction and hit the highest mark. With

the satisfied rating, improvement is critical because the teachers' satisfaction with their work highly dictates their commitment to stay in the profession and perform the expected tasks and responsibilities. In fact, Baluyos et al. [30] and Ballarta and Roberto [38] highly perceived teachers' job satisfaction as an essential element

in the continuity of quality teaching and learning. When highly satisfied, they will not just teach but unreservedly give their lives for the profession to be successfully advanced [32].

Demographically, the fact that most of the teachers who responded with graduate degrees satisfied the overall assessment rating could be attributed to this. The result shows that those with graduate degrees are very satisfied than those without. In support, some studies claim that those with graduate degrees are more satisfied than their counterpart [55]. Their attainment of the highest educational degrees makes them find more meaning and satisfaction in their profession [56]. In fact, according to Nyamubi [57], graduate degrees potentially provide a sense of direction and contentment to teachers in the performance of their profession.

Meanwhile, the very satisfied rating of intrinsic factors over extrinsic factors with a satisfied rating only indicates that the public schools' programs for improving teachers' satisfaction should be focused more on external factors. The very satisfied rating means that their satisfaction in the profession is mostly governed by the internal factors which motivate them to teach. The satisfied rating of the extrinsic factors does not mean low but suggests the need for continuous improvement to sustain the teachers' satisfaction. Most of the studies agree that the teachers who embrace teaching are already aware of the complexity of their chosen work. However, they cannot control those factors that affect their disposition towards work externally [8,47].

Most of the external factors that need improvement to guarantee the teachers' satisfaction are the financial, environmental, professional development, and support system, as supported by Bona [29], Akram et al. [58], and Baluyos et al. [30]. These elements are also critical in sustaining their profession aside from their inner choice to stay in teaching. In fact, according to City [31], these external factors are potential aid to the teachers' intrinsic motivation to perform their complex tasks and responsibilities.

Elaboratively, the very satisfied rating of the intrinsic factors indicates that the teachers are internally driven and motivated to perform their profession. Despite the complexity of their work, they still have the inner desire to teach. Suryani et al. [59] agree that teaching entails deeper

introspection and motivation. One can only survive teaching when it is perceived as a ministry. With a very satisfied rating, it could be that most of them see teaching as a vocation. Nyamubi [57] and Jahan and Ahmed [8] perceive that teaching is not just a profession but a vocation since the job requires teachers to perform beyond what is expected. In the case of public teachers, despite the low salary and the complex duties and responsibilities, they continue to teach because most see their profession as ministry; hence, their intrinsic motivation and satisfaction are also in place [60]. With these, the findings imply the importance among public schools of providing programs that elicit the teachers' high recognition of their profession as a calling.

In terms of the satisfied rating of the extrinsic results, this indicates that this needs more attention between the two dimensions of job satisfaction. The satisfied rating means that these teachers are less satisfied with the external factors which motivate them to teach. The result is high. However, by improving this, it can strengthen the full job satisfaction of the teachers. Most literature agrees that external factors are normally rated lower than intrinsic factors because these are beyond their control [60,8,29,30]. In Hidayatullah et al. [47], schools should investigate the environment, administrative support, and reward system because these elements are potential external factors to make the teachers highly satisfied with their profession. Tiwa et al. [61] believe teachers perform and excel in everything they do in a favourable atmosphere. Meanwhile, Renata et al. [62] perceive that when the teachers are supported, they become satisfied and go beyond what is expected. The same goes for the reward system. When teachers are appreciated and properly compensated, they see teaching as life and not just as a profession, as supported by City [31].

Regarding the teaching profession, the results show that teacher 1 instructors and master teachers 1 and 2 are more satisfied than their counterparts. This could be because the teacher 1 instructors are normally very satisfied since they are happy to be accepted in the teaching profession regardless of their promotions. They also have the hype of teaching as novices, supported by Alufohai and Ibhafidon [53]. On the one hand, master teachers 1 and 2 are also very satisfied because they have already somehow reached the pedestal of their

careers as highly-ranked teachers. In support, Jahan and Ahmed [8] agree that the more the teachers are promoted, the more they find satisfaction in their profession. All these findings imply the importance among public schools to consider both the intrinsic and extrinsic factors to encourage and ensure the satisfaction of the teachers to stay and teach.

3.3 Difference in the Practice of the 21st-Century Teaching Skills of Teachers

Table 4 presents the difference in the extent of the practice of the 21st-century teaching skills of public senior high school teachers in Central Philippines when grouped according to age, educational attainment, years of teaching experience, and teaching position. Using the Mann Whitney U Test, the findings showed no significant difference in their practice of 21st-century skills when grouped according to age [U=6867.5, p=0.528], educational attainment [U=4610.5, p=0.667], and years of teaching experience [U=6782.0, p=0.960]. Hence, the null hypotheses are accepted. Using Kruskal Wallis, there is no significant difference when grouped according to teaching position [$\chi^2(4) = 5.298$, p=0.258]. Hence, the null hypothesis is accepted.

The no difference results found when grouped according to their age, educational attainment,

years of teaching experience, and teaching position indicates that these demographics have nothing to do with the teachers' practice of 21st-century teaching skills. Aside from this, the result shows that these teachers given their demographics, have similar views on teaching skills practice. These public senior high school teachers may not have varied perceptions because their practice of 21st-century teaching skills does not depend much on how old and longer they have been in the profession. This also does not rely on their education level and teaching position [63].

The no difference in results on the assessment could be attributed to the fact that all the teachers in the public schools are expected to perform the teaching skills to cater to the needs of 21st-century learners. They do not have varied views of the assessment because this call to demonstrate these skills in teaching is not based on their age, educational attainment, years of teaching experience, and teaching position. Meaning to say, all should be practicing these since the demands of 21st-century instruction are not limited to these demographics [63]. During this pandemic, where there is a change in instructional modality, all the teachers, regardless of these demographics, are tasked to shift their way of teaching, employing varied skills in teaching to cater to the needs of the students at home [50,22].

Table 3. Level of job satisfaction of the public senior high school teachers

Variable	Intrinsic Factors			Extrinsic Factors			Job Satisfaction		
	M	SD	Int	M	SD	Int	M	SD	Int
Age									
Younger	3.31	0.43	VS	3.14	0.58	S	3.25	0.42	S
Older	3.31	0.49	VS	3.11	0.55	S	3.23	0.47	S
Educational Attainment									
With Graduate Degrees	3.35	0.54	VS	3.14	0.61	S	3.27	0.53	VS
Without Graduate Degrees	3.31	0.43	VS	3.13	0.55	S	3.23	0.42	S
Years of Teaching Experience									
Shorter	3.31	0.44	VS	3.17	0.58	S	3.26	0.44	S
Longer	3.31	0.47	VS	3.06	0.54	S	3.21	0.45	S
Teaching Position									
Teacher 1	3.27	0.45	VS	3.29	0.50	VS	3.28	0.40	VS
Teacher 2	3.31	0.46	VS	3.11	0.60	S	3.23	0.46	S
Teacher 3	3.35	0.44	VS	3.03	0.46	S	3.22	0.39	S
Master Teacher 1	3.32	0.59	VS	3.24	0.63	S	3.29	0.55	VS
Master Teacher 2	3.50	0.12	VS	3.19	1.15	S	3.38	0.53	VS
As a whole	3.31	0.45	VS	3.13	0.56	S	3.24	0.44	S

Mean Range: 1.00-1.75=Very Dissatisfied (VD), 1.76-2.50= Dissatisfied (D), 2.51-3.25= Satisfied (S), 3.26-4.00= Very Satisfied (VS)

The call to practice these skills is manifested in the seminars and training of the public school teachers where young and old, with graduate degrees or none, have been staying shorter or longer. Whatever teaching positions, all are requested to attend and participate as mandated by the Department of Education [50,51]. With these training and seminars, all are expected to demonstrate these skills in delivering their teaching and performing their tasks and responsibilities to address the effect brought by the circumstance [40,30].

Hence, these findings imply that the call to practice 21st-century skills is not limited to the teachers' demographics. In addition, this also signifies how important it is for public schools to encourage their teachers to attend training and seminars to acquire and demonstrate these skills in meeting the demands of 21st-century instruction. However, with the limitation to the four demographics, perhaps further studies are encouraged to validate the claims of this study.

3.4 Difference in the Job Satisfaction of Public Senior High School Teachers

Table 5 presents the difference in the level of job satisfaction of public senior high school teachers in Central Philippines when grouped according to age, educational attainment, years of teaching experience, and teaching position. Using Mann Whitney U Test, the findings showed no significant difference in their job satisfaction when grouped according to age [U=7098.0, p=0.838], educational attainment [U=4350.5, p=0.307], and years of teaching experience [U=6351.5, p=0.383]. Hence, the null hypotheses are accepted. Using Kruskal Wallis, there was no significant difference when grouped according to teaching position [$\chi^2(4) = 0.755$, p=0.944]. Hence, the null hypothesis is accepted.

The no difference found when grouped according to age, educational attainment, years of teaching, and teaching position indicates that the teachers' assessment vis-à-vis the demographics has nothing to do with their job satisfaction. In

addition, they have similar views of satisfaction considering the demographics employed. The results of this study agree with the findings of Romo [56] that their satisfaction with their jobs does not vary according to these demographics.

Perhaps, the teachers do not have varied perceptions because it might be that their satisfaction with teaching does not primarily depend on how old they are, how long they have been teaching, how high the level of their education, and how high they have been promoted to a certain teaching position [56,38].

Interestingly, some studies claim that the teachers' satisfaction in the profession does not come from these demographics. The findings of Suryani et al. [59] argue that teachers become satisfied with teaching when they are motivated and encouraged. In addition, they find satisfaction in teaching when they are provided with a conducive environment to perform their work and are supported by their administrators [7].

Jahan and Ahmed [8] and Nyamubi [57] perceived that a favourable school environment elicits higher job satisfaction among the teachers because, with this, they are allowed to share their expertise. On the one hand, the studies of Nyamubi [57] and Suryani et al. [59] strongly believe that the support of the administrators is one factor that can develop the disposition and satisfaction of the teachers to teach and perform their complex duties and responsibilities.

These findings mean that their satisfaction could strongly come from their motivation to teach. According to Bona [29] and Afshar and Doosti [60], motivation is a potential stimulus for teachers to continue performing their profession, which may result in greater job satisfaction when in place. However, to validate these claims, further studies are encouraged. These findings imply the importance of a favorable atmosphere and administrators' unreserved support among the public senior high school teachers to guarantee their motivation and satisfaction with their teaching profession.

Table 4. Difference in the practice of the 21st century teaching skills

Variables	U	z	p
Age	6867.500	-0.630	0.528
Educational Attainment	4610.500	-0.430	0.667
Years in Teaching	6782.000	-0.050	0.960
Variables	χ^2	df	p
Teaching Position	5.298	4	0.258

Note: difference is significant when $p \leq 0.05$

Table 5. Difference in the job satisfaction of public senior high school teachers

Variables	U	z	p
Age	7098.000	-0.204	0.838
Educational Attainment	4350.500	-1.021	0.307
Years in Teaching	6351.500	-0.872	0.383
Variables	χ^2	df	p
Teaching Position	0.755	4	0.944

Note: difference is significant when $p \leq 0.05$

3.5 Relationship between the Practice of 21st-Century Teaching Skills and Job Satisfaction

Table 6 presents the relationship between the extent of the practice of 21st-century teaching skills and the job satisfaction of public senior high school teachers in Central Philippines. Using Spearman rank correlation, the result showed a significant relationship between the practice of 21st-century teaching skills and job satisfaction [ρ (240) =0.450, $p=0.000$] of teachers. Hence, the null hypothesis is rejected.

The significant relationship between the two constructs shows that the teachers' practice of 21st-century teaching skills influences their satisfaction with the teaching profession. In other words, practicing these skills among these public senior high school teachers may result in their greater teaching contentment. Additionally, this implies the need for these schools to provide their teachers with the essential training and programs that elicit the acquisition and practice of these 21st-century teaching skills to guarantee their satisfaction with their work.

The significant correlation result of this study is congruent with the findings of Raharhaya et al. [6], Bha and Ye [5], and Akram et al. [58], whom all agreed that the teachers' practice of teaching skills has something to say with their disposition and satisfaction towards work.

Some studies claim that the more the teachers demonstrate their skills in teaching, the more they see the beauty in performing the profession [8,32]. Aside from this, some of their greatest struggles in teaching is the delivery of the instruction considering the diversity and disposition of the learners, where some are eager to learn, and some are not [64]. Some find it difficult to integrate technological pedagogy into teaching. However, conquering these

responsibilities and successfully delivering the instruction to the students increases their satisfaction and eagerness to teach [22,4]. Given this, teaching skills are essential for them to find meaning in what they do [60]

There are also some studies arguing that when teachers are skilful in teaching, they find themselves qualified and committed to staying in the profession because they believe they can exemplify the expected complex instructional tasks and responsibilities [3,7,8]. One finds it difficult to stay committed and satisfied when one does not have the essential skills to survive the teaching call, most especially when they are expected to embrace and perform 21st-century instructions [19]. The findings of Martinez [3] and Eliyana et al. [9] claim that 21st-century skills in teaching are critical elements for teachers to stay longer in the profession, considering the changing instructional landscape.

These findings imply how essential the acquisition and practice of these 21st-century teaching skills among public senior high school teachers are in finding meaning and satisfaction in their work. This also signifies the importance of training them to successfully demonstrate these skills to increase their disposition, eagerness, and contentment in the profession.

The study perceived that the practice of teaching skills of public senior high school teachers influences their job satisfaction. With the correlation between the extent of the practice of 21st-century teaching skills and their level of job satisfaction, the theory of equity by Adams [33] is validated. In other words, the result of this study supports the veracity of the equity theory that the practice of teaching skills strongly affects job satisfaction. With this, continuous improvement of these skills among these teachers are essential in practicing 21st-century teaching skills and satisfaction with their profession.

Table 6. Relationship between 21st century teaching skills and job satisfaction

Variable	ρ	df	p
21st Century Teaching Skills x Job Satisfaction	0.450*	240	0.000

Note: *correlation is significant when $p \leq 0.05$

4. CONCLUSION

The great extent rating of the practice of the teaching skills clearly shows that the public senior high school teachers of Central Philippines demonstrate the essential skills expected of them to perform in delivering 21st-century instruction. However, despite the exceptional rating, continuous improvement is still necessary to ensure sustainable quality instruction in making their learners competitively meet the global educational demands. With this practice of skills intact, they not only improve their performance and disposition towards their profession but also see that their learners best acquire the competencies that will prepare them for life ahead. That is why it is implied how important training is to boost these skills and successfully advance the quality of 21st-century teaching and learning. Aside from this, it is noteworthy that graduate schooling is essential for teachers to be aware of and practice these skills. By submitting to this professional development, they are allowed to grow professionally and upscale their knowledge, skills, and attitude in their teaching profession.

The satisfied ratings of the teachers' job satisfaction signify the importance of considering the intrinsic and extrinsic factors that affect their contentment in the teaching profession to meet a very satisfactory result. By continuously improving these aspects, the public schools establish a sustainable assurance of preventing them from leaving. By preventing their attrition, their commitment and continuity of quality instruction among the learners are also guaranteed. Meanwhile, validating the theory, as supported by the correlation of the two constructs, shows the essentials of the teachers' practice of 21st-century teaching skills in establishing their satisfaction. That is why necessary provisions of programs that develop their skills acquisition and practice are important since they influence their disposition towards their profession.

5. LIMITATIONS OF THE FINDINGS

The study has several limitations. Considering the method used, the study is only limited to

quantitative research, particularly the descriptive-comparative and correlational approaches. In terms of the variables, this paper is limited to the point of view of the public senior high school teachers among selected schools, especially in the context of 21st-century skills. Regarding the demographics, the study is limited to four demographics, namely: age, educational attainment, teaching position, and years of teaching experience.

6. DIRECTIONS FOR FUTURE RESEARCH

Considering the limitations, further studies are encouraged. Concerning the method used, future researchers are encouraged to employ qualitative and mixed-method approaches to validate and deepen the findings of the study. Additionally, further studies could be conducted focusing on the learners' point of view, specifically on 21st-century skills. Regarding the demographics, they can also replicate the study using the same variables to validate the claims of this study, or they can employ other demographic variables to further the findings. Finally, future researchers can also conduct studies using a large scale of participants, perhaps provincial or nationwide, to check the veracity of these findings.

CONSENT

As per international or university standards, the authors collected and preserved the respondents' written consents.

ETHICAL CONSIDERATIONS

The study ensured the ethical soundness of the paper in adherence to the general principles of respect for persons, justice, and beneficence by the Philippine Health Research Ethics Board (PHREB). Lastly, it ensured the privacy of the respondents and the confidentiality of all the data gathered.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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