

## 21st Century Teaching Skills and Teaching Standards Competence Level of Teacher

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**Abstract.** Teachers' roles have changed dramatically over the last decades – from traditional spoon-feeders to facilitators of learning. Teacher education institutions play a huge role in getting them ready for the field. Thus, this study probed the 21st century teaching skills and teaching standards competence level of the CTE graduates of Mindoro State College of Agriculture and Technology (MinSCAT) who graduated in the years 2016, 2017 and 2018. Two hundred and fifteen (215) participating teachers (MinSCAT Graduates) and their immediate supervisors answered a two-part questionnaire through Google Forms exploring the extent of the graduates' skills and competence. The data collected were sorted and subjected to t-Test, ANOVA and multiple linear regression. The results showed that the teachers' skills and competence are of high to very high extent. Specifically, the graduates received high ratings on their effective communication skills, life and career skills, and personal growth and professional development. The teachers showed remarkable performances in the light of these indicators. One way ANOVA revealed that there are significant differences in the level of the graduates' 21<sup>st</sup> century teaching skills and teaching standards competence level in terms of their indicators. The study recommends for the CTE faculty and students to hold frequent dialogues and consultations to ensure the development of potential and acquisition of 21st century teaching skills and teaching standard competence of the CTE students and to address students' challenges. Consistent sensitivity to the needs of the faculty and the students should be given preferential attention to develop the culture of excellence in the department.

**Keywords:** 21st century skills; competence; teacher education

### 1. Introduction

In the phase of an increasingly volatile, uncertain and complex world, changes are inevitably occurring. These dynamics confront and challenge individuals through the explosions of knowledge leading to a growing array of societal

problems. Globalization and expansion of international relations shift the educational standard and measurement across countries. The pervasive outbreak of media technologies results in the bombardment of information that can be readily accessed by any age group and expands students' awareness and knowledge. In the Philippines, in specific, the launch of K to 12 Basic Education Curriculum in 2012 pursued teacher quality reforms, which gave birth to the establishment of a framework of teacher quality assessment response to 21st century learning.

Such scenarios undeniably require teachers to play an imperative role in society. "To establish, maintain and support a complete, adequate, and integrated system of education relevant to the needs of the people and society" (1987 Philippine Constitution Article XIV Sec. 2 Paragraph 1) is one of the goals of the government. Having learners of varying and growing needs and interests in this changing world, teachers must keep up with what is both relevant to the time and to the need of the time. Specifically, learners in the 21st century are raised in an environment that encourages the prominence of fast-paced digitals where all things are just a click away (Boholano, 2017). Educational reforms, likewise aim for students' success and, thus, require teaching to focus on them and make the teachers' performance vital toward students' educational achievement (Roberto & Madrigal, 2018).

Teacher-preparation programs provide future educators with the tools, mechanism and hands-on experiences necessary for the foundation of their beginning career and which stress the need to master content and necessitate the acquisition of pedagogy for an effective and efficient instruction delivery. Pre-service teaching provides a training ground where basic skill requirements crucial in facilitating student learning are developed. Teaching as a multifaceted and demanding profession requires a high-quality teacher development training program for a high-quality teaching force, especially today when 21st century teaching emphasizes standards of teaching practice. As the teaching profession is put on a pedestal that merely examines the quality of products of Teacher Education Institutions (TEIs), pre-service teachers must be totally prepared to respond to the standards set against the competence framework and face the challenge of 21st century learning. However, this can only be possible if young professional teachers have fully acquired the content, pedagogical and technological knowledge and completely attained the necessary skills for entry level during their pre-service teaching. Hence, the attributes and skills of highly effective teachers must be the aim in order to produce a shared direction for effective practice of the profession (Organization for Economic Cooperation and Development [OECD], 2013).

"Quality learning is contingent upon quality teaching" (Department of Education [DepEd] Order No. 42, 2017, p. 1). This is shown by teachers' functions such as curriculum and learning management as well as personal growth, which affects students' academic achievements. Students' academic achievement is significantly and positively affected by curriculum and learning management. Teachers with higher level of curriculum and knowledge

management seem to be able to improve student academic achievement. On another note, student achievement is negatively but significantly affected by a teacher's personal growth. Aside from the major roles and duties played by teachers, such as supplying instructional management, they also function to carry out other tasks, like attending training, seminars or workshops for personal and professional development. This, however, indirectly, affects the instructional duties in schools (Prasertcharoensuka et. al, 2015).

In this light, it is safe to mention that evaluating teacher quality is significant to withstand the transformations brought about by different national and global frameworks such as the K to 12 Reform and the ASEAN integration, globalization, and the evolving character of the 21st century learners. This also imposes assessment of teachers' relevant skills and competency based on the current teacher standards (DO No. 42, 2017). Likewise, as education advances with the help of technology, paradigm shifts to educational trends occur. Teachers today have become facilitators of learning who focus on developing learners of higher order thinking skills, effective communication, collaboration, and relevant skills needed in the 21st century, and who also must exhibit these relevant skills themselves. Teachers also develop new teaching strategies that are radically different and which intensify students' engagement to learning and provide instruction through varied technological methods and pedagogical approaches, proving the act as the most vital factor in learners' development.

The concept of skill has merely focused on technical and professional dimensions such as manipulation skills and the knowledge associated with the techniques of the work process, enhanced via training and experience. For some, skills are a combination of the knowledge, abilities and experience they have obtained both before entering the profession and during their employment. Some tend to define skill as a simple view of the necessities of a job after due analysis and evaluation; and which are normally recognized and rewarded. Skills relate to the use of knowledge and engage in a feedback loop with knowledge (Bialik & Fadel, 2015). Twenty-first century skills comprise a wide range of knowledge, abilities, work habits, and character traits that are believed - by teachers, school reformers, college educators, employers, and others - to be profoundly important to succeed in today's world, particularly in college programs and contemporary careers and workplaces. However, members of the workforce believe that a significant gap exists between what the organization can actually produce and the skills needed for its attainment. It is becoming increasingly clear that, to prepare students to flourish in the world, knowledge is not enough. Employers are speaking out about their newly-hired graduates and their lack of skills in the workplace (Bialik & Fadel, 2015). A survey among members of the American Society for Training and Development (ASTD) reiterated that the workforce is lacking with leadership/executive-level skills, managerial/supervisory skills and profession or industry-specific skills. These three skills are what the society demands from every teacher, especially in carrying out the implemented curriculum (Souza & Fyfe-Mills, 2018). Teachers must possess more than just content and pedagogical knowledge. Creativity, innovation, skills in technology and personal growth play a huge part in the

success of the teaching-learning process. Through these, teachers are able to create activities and learning and teaching materials, and devise new strategies – which aids in the attainment of a successful teaching learning process.

Competency, on the other hand, is defined as “the set of knowledge, skills, and experience necessary for future, which manifests in activities;” it is the “knowledge, skills, attitudes, values, motivations and beliefs people need in order to be successful in a job” (Selvi, 2016). Different phenomena affect the competencies of teachers: other sciences and system of society affect educational systems and teachers’ competencies. Scientific results of educational sciences, psychology, economy, technology, sociology can serve as bases for the educational system. Developing teacher competencies is based on the changes in other systems and is not only associated with personal growth but also professional development. Also, internationalization of curriculum ideas requires teachers to ensure changes by embracing innovative ideas through acquiring more competencies, which are incredibly important in both curriculum implementation and training people. Hence, teachers who are responsible in training of individuals need to be well-equipped to fulfill this responsibility (Bansal & Tanwar, 2021).

There exists a significant difference between the level of teaching standards competence and the actual performance of a teacher. Therefore, pre-service and in-service teacher education should put emphasis on understanding and application of teachers’ competencies. As the development of teachers’ competencies calls for sustainability, it should continuously be the subject of research and the changes and reforms through scientific studies must be reflected through analysis (Selvi, 2016).

With all the mentioned aspects, it cannot be denied that learners’ success greatly depends on the quality of teachers we have. Through the years, it is undeniable that one of the greatest problems in the Philippines is the dwindling quality of education – in which one of the reasons is also the quality of teachers. Quality is assured through assessing the teachers’ competence in line with the national educational standards and the skills relevant to the needs and interests of the learners. Thus, this study is pursued to assess how proficient and adept MinSCAT Teacher Education graduates are in practicing the relevant competencies indicated in the Philippine Professional Standards for teachers and in exhibiting 21st century teaching skills to fulfill duties as Filipino Licensed Professional Teachers. Relationship and differences between and among the indicators of 21<sup>st</sup> century skills and teaching competence will be tested. The study also aims to create a basis for a College of Teacher Education improvement plan upon analyzing the results.

## **2. Methodology**

### **2.1. Research design**

The study used descriptive-correlational comparative methods of research. Descriptive method of research went beyond data gathering and tabulation and involved careful descriptions of educational phenomena. Correlational design

determined mainly the relationship between the 21st century teaching skills and the teaching standard competence level of MinSCAT Teacher Education graduates. It identified the possible patterns of relations that exist among the variables and measured the strength of such association. Comparative design was done through analyzing the contribution of variances paired and differed.

## **2.2. Respondents of the Study**

This study considered 215 MinSCAT Teacher Education graduates of academic years 2016 to 2018 who are already in the field of teaching in K to 12 in public schools in Oriental Mindoro and are professionals, and the heads/ immediate supervisor/ rating officer of the identified graduate-respondents of the respective public school in Oriental Mindoro. CTE graduate-respondents came from the college's three campuses: Bongabong Campus, Main Campus and Calapan City Campus.

To determine the respondents of the study, stratified random sampling was employed for the number of graduates from the three campuses. The list of CTE graduates (2016-2018) was requested from the campus' respective registrar. Updated list of professional teachers who are practicing the profession in public schools was requested from the three campuses of MinSCAT. Survey was also conducted to determine the school of assignment of the graduates.

## **2.3. Data Gathering Procedures**

A set of procedures was used to guide in gathering pertinent data needed in this research. Mainly, the research sought approval from the Schools Division Superintendent and school administrators/ principals for the distribution of the questionnaire. The instrument was formally administered by using Google Forms with clear directions of answering the instrument. The instrument was retrieved for data sorting, tabulation, analysis, and interpretation. Applicable techniques and statistical tests in research were employed.

## **2.4. Research Instrument**

Two sets of the research survey questionnaire, composed of two major parts served as the vital instrument employed in data gathering of this study. The first part assessed the 21st century teaching skills (P21 Frameworks for 21st Century Learning) (Alberta Government, 2016; Lai & Viering, 2012; Purita et al., 2018; Ravitz, 2014) in terms of effective communication skills; learning and innovation skills; life and career skills; and information, media and technology skills. The second part determined the extent of Teaching Standard Competence-Level (DO 42, 2017) based on the Philippine Professional Standards for Teachers (PPST) in terms of: content knowledge and pedagogy; learning environment; diversity of learners; curriculum and planning; assessment and reporting; community linkages and professional engagement; and personal growth and professional development.

All the data gathered for the study were tabulated, analyzed, and interpreted using a scale that ranges from 1 to 5 with 5 designated as the highest of the numerical scales and 1 as the lowest. To make sure that all the items presented in the questionnaire are reliable, a test and re-test method was taken by the

researcher in a government higher educational institution offering teacher education in Oriental Mindoro. Responses from the respondents from the test-retest were tabulated, analyzed and interpreted. To compute for the reliability coefficients of each variable at 5% level of significance, Cronbach's alpha was utilized.

Validity and feasibility of the instrument were assured through referring to previous studies related to areas of investigation so that all items can be better improved and presented. The questionnaires were also forwarded to five experts in the field for comments and suggestions. The study opted to revise and simplify terms, words and phrases used in the questionnaire to facilitate deep understanding of the respondents.

### **2.5. Statistical Treatment of Data**

Two forms of statistical tools were used in the study to compute and treat all the gathered data. Descriptive statistics included the weighted mean and ranks. Inferential statistics were employed to analyze the degree of relationship between the variables paired and the degree of differences among the respondents' assessment of the indicators and variables paired. This included multiple linear regression, t-test, and One-Way Analysis of Variance, respectively. Rejection and acceptance of null hypotheses was principally based from the computed results of the regression and variance analyses at 5% level of significance.

### **3. Findings**

The results in Table 1 show that the graduates' 21<sup>st</sup> century teaching skills are of high (HE) to very high extent (VHE). The graduates rated their 21<sup>st</sup> century teaching skills with high extent across all the indicators. On the other hand, their immediate supervisors (school principals/ heads) gave Main Campus graduates ratings of very high extent in terms of Life and Career Skills (LCS) and Effective Communication Skills (ECS) and high extent in Learning and Innovation Skills (LIS) and Information, Media and Technology Skills (IMTS). Bongabong and City Campus graduates received ratings of high extent across all indicators, the highest average ratings being in terms of LCS and ECS.

These results imply that the communication skills of the graduates are well-developed and used excellently in their day-to-day activities as teachers. It is imperative to note that communication in the field of education is of utmost importance. Teachers need effective communication skills to efficiently facilitate students and achieve good professional goals (Khan et al., 2017).

Additionally, life and career skills are also important especially in the context of relationships and interactions as teachers deal with many different people - colleagues, superiors, students, parents/ guardians and other stakeholders. Ajala (2012) found that employees or members of an organization who have better rapport consequently make them happier and more successful in their roles in their workplace. Furthermore, Moleenar et al. (2012) found that teachers' social relationships affect their professional development, collective

productiveness, collaborative decision-making, schools' adaptability, innovative climate, and student achievement.

It can be noted that the lowest means got the highest standard deviations, and vice versa. The standard deviation and mean are both easily affected by small and large values or values that veer away from most values in the data set. Thus, it can be said that the graduates' responses regarding IMTS are mostly of high extent (4) with a few of very high extent (5) and other values lower than 4. This suggests that some of the respondents recognize that there is always room for improvement.

**Table 1: 21<sup>st</sup> Century Teaching Skills**

21 <sup>st</sup> Century Teaching Skills		Main Campus		Bongabong Campus		City Campus	
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Effective Communication Skills	Graduates' ratings	4.37 (HE)	0.62	4.44 (HE)	0.59	4.38 (HE)	0.66
	Supervisors' ratings	4.51 (VHE)	0.53	4.40 (HE)	0.63	4.39 (HE)	0.65
Learning and Innovation Skills	Graduates' ratings	4.14 (HE)	0.66	4.29 (HE)	0.63	4.18 (HE)	0.70
	Supervisors' ratings	4.37 (HE)	0.63	4.23 (HE)	0.70	4.22 (HE)	0.69
Life and Career Skills	Graduates' ratings	4.25 (HE)	0.67	4.42 (HE)	0.49	4.28 (HE)	0.67
	Supervisors' ratings	4.56 (VHE)	0.57	4.49 (HE)	0.64	4.36 (HE)	0.67
Information, Media, and Technology Skills	Graduates' ratings	4.01 (HE)	0.89	4.20 (HE)	0.69	4.08 (HE)	0.77
	Supervisors' ratings	4.35 (HE)	0.74	4.27 (HE)	0.78	4.23 (HE)	0.74

VHE - Very High Extent

HE - High Extent

Regarding the graduates' teaching standard competence level, it is shown in Table 2 that they gained ratings of high extent across all campuses - the highest averages being in terms of Learning Environment and Personal Growth and Professional Development. These results indicate that the graduates do well in setting a cohesive learning environment to foster effective learning. According to Kember et al. (2010), enhancing the learning motivation of students will take a learning environment with eight supportive conditions which are: establishing relevance, establishing interest, allowing choice of courses, learning activities, teaching for understanding, assessment of learning activities, good teacher-student relationships and a feeling of belonging between classmates.

Furthermore, the results suggest that the teachers are exerting efforts to continue learning for their own improvement and for the improvement in the teaching and learning process. Riveros et al. (2012) stated that initiatives for school development focused on peer collaboration need to reflect deeper regarding the culture and practices in schools, especially those that focus on professional

growth and learning. In order to work toward school improvement, they suggest for teachers to enact their understanding of professional knowledge in their practices.

Standard deviation is also presented in Table 2. In terms of Learning Environment (LE), the averages of the responses of MBC graduates and their immediate supervisors are equal but have different SDs. This suggests that the responses of the graduates are more closely distributed around the mean whereas their immediate supervisors' responses are more scattered. On the other hand, in terms of Diversity of Learners (DoL), the responses of MMC graduates and their immediate supervisors have different averages but share the same SD. This means that the responses from both groups are equally distributed around the means. Notably, the averages and standard deviations of MCC graduates' responses and their immediate supervisors' responses are very close and actually equaled in terms of DoL.

**Table 2: Teaching Standards Competence Level**

Teaching Standard Competence		Main Campus		Bongabong Campus		City Campus	
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Content Knowledge and Pedagogy	Graduates' ratings	4.28 (HE)	0.65	4.37 (HE)	0.57	4.27 (HE)	0.67
	Supervisors' ratings	4.46 (HE)	0.59	4.34 (HE)	0.71	4.34 (HE)	0.65
Learning Environment	Graduates' ratings	4.35 (HE)	0.56	4.41 (HE)	0.57	4.29 (HE)	0.66
	Supervisors' ratings	4.55 (VHE)	0.59	4.41 (HE)	0.73	4.35 (HE)	0.65
Diversity of Learners	Graduates' ratings	4.18 (HE)	0.67	4.31 (HE)	0.64	4.15 (HE)	0.74
	Supervisors' ratings	4.38 (HE)	0.67	4.23 (HE)	0.74	4.15 (HE)	0.74
Curriculum and Planning	Graduates' ratings	4.31 (HE)	0.64	4.36 (HE)	0.58	4.29 (HE)	0.66
	Supervisors' ratings	4.46 (HE)	0.60	4.35 (HE)	0.70	4.36 (HE)	0.68
Assessment and Reporting	Graduates' ratings	4.20 (HE)	0.65	4.29 (HE)	0.58	4.20 (HE)	0.67
	Supervisors' ratings	4.42 (HE)	0.61	4.28 (HE)	0.75	4.27 (HE)	0.73
Community Linkages and Professional Engagement	Graduates' ratings	4.28 (HE)	0.63	4.36 (HE)	0.58	4.28 (HE)	0.66
	Supervisors' ratings	4.49 (HE)	0.57	4.45 (HE)	0.65	4.33 (HE)	0.68
Personal Growth and Professional Development	Graduates' ratings	4.29 (HE)	0.59	4.41 (HE)	0.58	4.34 (HE)	0.62
	Supervisors' ratings	4.49 (HE)	0.58	4.59 (VHE)	0.60	4.42 (HE)	0.65

VHE - Very High Extent

HE - High Extent

One-Way Analysis of Variance in Table 3 showed that a significant difference exists in the level of 21st Century Skills as assessed by both the graduates and their immediate supervisors. This showed that the graduates have varying 21st century skills by which variations may be attributed to the individual differences of the graduates and the level of their acquisition of knowledge and skills, exposure to different faculty, their specialization, learning environment, peers, and experiences. According to Baeten et al. (2010), students in different specializations differ in the learning approach that they adopt. Moreover, their teachers (faculty) play a role in changing the students' conceptions, which results in an inclination to use deeper learning approaches.

**Table 3: ANOVA of the 21<sup>st</sup> Century Teaching Skills Indicators**

Variables		df	Computed F-value	F-critical
21 <sup>st</sup> Century Skills	Graduates	856	12.45*	2.62
	Supervisors	852	5.86*	2.62

A significant difference also exists among the indicators of Teaching Competence – as shown in Table 4, which implies that the level of the graduates' teaching competence varies. Such variations may be attributed to the graduates' unique personalities and experience and the fact that they graduated in different years (2016, 2017, and 2018). Vermunt and Endedijk (2011) stated that teachers differ in the learning patterns they adopt. These learning patterns are distinct depending upon the quality of professional learning and development in the sense of transformation to adapt to the changes and innovations in education.

**Table 4: ANOVA of the Teaching Standards Competence Indicators**

Variables		df	Computed F-value	F-critical
Teaching Competence Level	Graduates	1498	2.30*	2.10
	Supervisors	1491	4.11*	2.10

In Table 5, significant difference exists between the level of 21st Century Teaching Skills as assessed by the graduates and by their immediate supervisors. Their perceptions varied in terms of Life and Career Skills and Information, Media and Technology Skills. Though the graduates rated themselves a little lower, the supervisors observed that they are performing a little better in the field. This might be attributed to the longer teaching experience of the immediate supervisors (school principals/ heads/ TIC) and their experiences in supervising and rating teachers, which gave them an edge in evaluating them.

**Table 5: t-Test on the Difference of the Level of the 21st Century Teaching Skills of the Graduates as Assessed by the Graduates and by their Immediate Supervisors**

Indicators	Graduates		School Principals		T	P
	Mean	SD	Mean	SD		
ECS	4.40	0.48	4.43	0.51	-0.43	0.67
LIS	4.20	0.56	4.27	0.59	-1.09	0.27
LCS	4.32	0.51	4.47	0.53	-2.42	*0.016
IMTS	4.10	0.64	4.28	0.65	-2.75	*0.006

\*Significant at 5% level of significance

There is a significant difference in the Teaching Standard Competence Level of the graduates as assessed by the graduates and by their immediate supervisors. As shown in Table 6, the difference lies in the indicator Personal Growth and Professional Development. According to Bills et al. (2016), improving teachers' learning is an ongoing embodied process. The graduates, who have been in the field for no longer than four years, still have more to learn whereas their immediate supervisors perceived their growth to be exceptional.

**Table 6: t-Test Results on the Difference of the Teaching Standards Competence Level of the Graduates as Assessed by the Graduates and by their Immediate Supervisors**

Indicators	Graduates		School Principals		t	P
	Mean	SD	Mean	SD		
CKP	4.31	0.50	4.38	0.53	-1.33	0.18
LE	4.35	0.55	4.44	0.58	-1.46	0.14
DoL	4.21	0.61	4.25	0.66	-0.35	0.73
CaP	4.32	0.53	4.39	0.59	-1.29	0.20
AaR	4.23	0.57	4.32	0.67	-1.33	0.18
CLPE	4.31	0.55	4.42	0.58	-1.57	0.12
PGPD	4.35	0.52	4.50	0.57	-2.41	*0.02

*\*Significant at 5% level of significance*

The results of the multiple linear regression in Table 7 on the responses of the graduates show 60.05% to 72.20% of the variance in the level of the graduates' teaching standards competence, considering all of its indicators, and can be explained by the level of the graduates' 21st century skills. The remaining 27.80% to 39.95% can be attributed to other factors which were not considered in the study.

Amongst the indicators of 21<sup>st</sup> century teaching skills, effective communication skills and life and career skills have the biggest effect on the graduates' teaching standards competence. An increase of one unit in ECS and LCS, while holding other factors constant, will result to an increase of 19.26% to 47.85% and 29.61% to 55.70%, respectively, in the teaching standards competence of the graduates.

On the responses of the immediate supervisors, results revealed that 64.70% to 79.49% of the variation in the graduates' teaching standards competence level can be associated to their level of 21<sup>st</sup> century teaching skills. The remaining 20.51% to 35.30% may be attributed to other factors which were not considered in this study. ECS and LCS also turned out to be the best predictor of the graduates' teaching standard competence level as assessed by their immediate supervisors. An increase of one unit in ECS and LCS, while holding other factors constant, will result to an increase of 18.18% to 52.36% and 14.96% to 37.54%, respectively, in the graduates' teaching standards competence.

Life and Career Skills are one's ability to set learning, career, and wellness goals to strive for personal excellence. This includes taking continuous professional development courses. It ensures that teachers continually grow in the profession and helps update their knowledge and skills. This also guarantees that the content knowledge and teaching strategies of the teachers improve. In a study

conducted by Goldschmidt and Phelps (2010), they found that teachers attending Professional Development Institutes showed growth in their knowledge.

Khan et al. (2017) stated that effective teaching not only depends upon the content knowledge of a teacher but also the teacher's communication styles, method and skills. Content knowledge must always come with pedagogical knowledge because only then will content be effectively relayed to students.

**Table 7: Multiple Linear Regression Results**

Independent Variable (Teaching Standard Competence)		Constant		Dependent Variable (21 <sup>st</sup> Century Teaching Skills)								r <sup>2</sup>
				ECS		LIS		LCS		IMTS		
		$\beta_i$	P> t	$\beta_i$	P> t	$\beta_i$	P> t	$\beta_i$	P> t	$\beta_i$	P> t	
CKP	Gr	0.4393	0.0125	0.3047	0.0000*	0.1459	0.0182*	0.2961	0.0000*	0.1543	0.0013*	0.7220
	Su	0.5129	0.0006	0.2352	0.0004*	0.2874	0.0000*	0.1496	0.0288*	0.2173	0.0000*	0.7949
LE	Gr	0.2692	0.1991	0.3053	0.0001*	0.1223	0.0975	0.4682	0.0000*	0.0451	0.4272	0.6586
	Su	0.1248	0.4678	0.1818	0.0178*	0.2678	0.0001*	0.3754	0.0000*	0.1584	0.0053*	0.7731
DoL	Gr	-0.1506	0.5416	0.1926	0.0345*	0.1725	0.0478*	0.5570	0.0000*	0.0909	0.1751	0.6266
	Su	-0.4028	0.0541	0.1081	0.2427	0.3826	0.0000*	0.3539	0.0003*	0.2209	0.0014*	0.7402
CaP	Gr	0.3580	0.0714	0.3170	0.0000*	0.0170	0.8074	0.4616	0.0000*	0.1217	0.0241*	0.6738
	Su	-0.0240	0.8945	0.4153	0.0000*	0.1991	0.0060*	0.2489	0.0031*	0.1452	0.0149*	0.7563
AaR	Gr	0.0229	0.9129	0.2698	0.0005*	0.2285	0.0021*	0.3079	0.0001*	0.1779	0.0019*	0.6887
	Su	-0.5747	0.0060	0.5236	0.0000*	0.2174	0.0088*	0.1247	0.1918	0.2548	0.0002*	0.7493
CLPE	Gr	0.3851	0.0936	0.3069	0.0003*	0.0977	0.2258	0.4325	0.0000*	0.0718	0.2486	0.6005
	Su	0.1918	0.3283	0.3288	0.0002*	0.2062	0.0086*	0.3528	0.0001*	0.0711	0.2691	0.7027
PGPD	Gr	0.5762	0.0056	0.2961	0.0001*	0.0699	0.3358	0.4355	0.0000*	0.0729	0.1931	0.6248
	Su	0.4645	0.0270	0.4785	0.0000*	0.0608	0.4639	0.3022	0.0019*	0.0695	0.3103	0.6470

\*Significant relationship

Gr-Graduates' response  
responses

Su- Supervisors'

#### 4. Conclusion

This study explored how well the graduates of MinSCAT CTE are doing in the teaching field a few years after they graduated. It can be concluded that a few years into the profession, the graduates are thriving and fairing excellently. This is well-observed by their immediate supervisors. Based on the results, the graduates are excellent in effective communication skills, life and career skills, and personal growth and professional development. All other skills and competencies were rated with high extent but they must strive to do better in terms of information, media and technology skills and diversity of learners.

Based on the results of the multiple regression analysis, the graduate respondents must strive to become more adept in effective communication skills and life and career skills as these two positively affect all indicators of teaching standards competence.

It seems that the graduates of MMC often tend to underestimate their skills - an opposite of the MBC graduates. On the other hand, the graduates of MCC seem to have a good judgment of their own skills. Also, as it is shown in the results,

the immediate supervisors of MMC graduates appear to have a very good impression about their 21st century skills and teaching standards competence level. Their responses portray the idea that they have ultimate confidence in these teachers.

Teachers are an integral part of the society. Hence, it is important that teacher education is of high quality. Teacher education curriculum and teachers' performance should be constantly evaluated to determine what to improve and to meet the current demands of the society. With the constant changes that the world is undergoing, teachers must also evolve to keep up with the pace.

## 5. Recommendation

In the light of the findings and the conclusions, the research forwards this recommendatory statement.

Dialogue and consultations among the CTE faculty and officials should be held more often to ensure the development of potential and acquisition of 21st century teaching skills and teaching standard competence of the CTE students. Consistent sensitivity to the needs of the faculty and the students should be given preferential attention to develop the culture of excellence in the department. Conduct/Adaption of the proposed basis for CTE improvement is also recommended.

Replication of this study to integrate other variables not included in the study and a follow-up study necessitates the strengthening of the MinSCAT CTE Program.

## 6. References

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## APPENDIX 1

### QUESTIONNAIRE

- I. **21<sup>st</sup> Century Teaching Skills** ((P21 skills Framework; Bilbao, et.al., 2018; Lai & Viering, 2012; Alberta Government, 2016; Ravitz, 2014). These are teaching practices exhibiting 21<sup>st</sup> century skills and supporting students' learning of the 21<sup>st</sup> century skills.

5 - Very High Extent (The teacher/respondent always observed the given statements. He/she observed it every day in class with no exception.)

4 - High Extent (The teacher/respondent frequently observed the given statements. He/she observed it many times in class.)

3 - Moderate Extent (The teacher/respondent sometimes observed the given statements. He/she observed occasionally rather than all of the time in class.)

2 - Low Extent (The teacher/respondent rarely observed the given statements. He/she observed it not occurring very often in class.)

1 - Very Low Extent (The teacher/respondent never observed the given statements. He/she never observed it in class.)

**A. Effective Communication Skill.** This refers to the ability to organize thoughts, data and findings and share these effectively through a variety of media.

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. Use Mother Tongue, Filipino and English to convey messages to students, parents, co-teachers, and higher authorities. | 5 | 4 | 3 | 2 | 1 |
| 2. Express messages or information through a variety of media i.e., verbal, written and/or emailed.                      | 5 | 4 | 3 | 2 | 1 |
| 3. Give concise and clear feedback and suggestion after students' assessment and evaluation.                             | 5 | 4 | 3 | 2 | 1 |
| 4. Keep parents informed of the student's  | 5 | 4 | 3 | 2 | 1 |

achievements and learning challenges.

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 5. Collaborate with co-teachers to assess teaching performance and seek advises from them. | 5 | 4 | 3 | 2 | 1 |
|--|---|---|---|---|---|

**B. Learning and Innovation Skills.** This refers to one's ability to think beyond and develop new ideas.

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. Compare and evaluate information from different sources/references before asking students to complete a task.                                      | 5 | 4 | 3 | 2 | 1 |
| 2. Use idea creation techniques such as brainstorming or concept mapping and consider students' different learning styles and multiple intelligences. | 5 | 4 | 3 | 2 | 1 |
| 3. Create an original product or performance to engage students in expressing their ideas.  | 5 | 4 | 3 | 2 | 1 |
| 4. Encourages students to think out-of-the-box and discover solutions to complex problems.  | 5 | 4 | 3 | 2 | 1 |
| 5. Provide activities that promotes critical thinking and creativity among students.  | 5 | 4 | 3 | 2 | 1 |

**C. Life and Career Skills.** This refers to one's ability to set learning, career and wellness goals which strive for personal excellence.

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. Identify interests, values or skills to set learning, life and career goals.  | 5 | 4 | 3 | 2 | 1 |
| 2. Explore, select and adapt strategies and resources that support personal growth in life school and career paths i.e., attending seminars and taking graduate studies. | 5 | 4 | 3 | 2 | 1 |
| 3. Make choices or take action promoting safety and well-being of others i.e., community extensions and services.  | 5 | 4 | 3 | 2 | 1 |
| 4. Build healthy relationship among students, parents, co-teachers, higher authorities and the community.  | 5 | 4 | 3 | 2 | 1 |
| 5. Demonstrate optimism, flexibility and resilience in adapting to new situations and transitions.   | 5 | 4 | 3 | 2 | 1 |

**D. Information, Media and Technology Skills.** This refers to one's ability of effective utilization of technologies as a tool for teaching.

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. Introduce technologies and develop students' skills in using them as a tool for learning.   | 5 | 4 | 3 | 2 | 1 |
| 2. Use technology to create instructional materials i.e., handouts & tests and to deliver the lesson i.e., Geogebra, LanguageLab, Encarta.           | 5 | 4 | 3 | 2 | 1 |
| 3. Evaluate the credibility and relevance of online resources and technologies before selecting technology tools or resources for completing a task. | 5 | 4 | 3 | 2 | 1 |
| 4. Encourage students to share ideas and knowledge through multimedia presentations like sound or video, presentation software, blogs, podcasts.     | 5 | 4 | 3 | 2 | 1 |
| 5. Manage students' learning and produce products using appropriate information and communication technologies.                                      | 5 | 4 | 3 | 2 | 1 |

II. **Teaching Standards Competence Level (DO 47 s. 2017; PPST).** This refers to the practices exhibit by teachers as reflected in the Professional Standards for Teacher.

**A. Content Knowledge and Pedagogy.** This refers to the depth of one's understanding of the subject matter and of the appropriate methods to use in the delivery of instruction.

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. Demonstrate content knowledge and its application within and/or across curriculum teaching areas.                 | 5 | 4 | 3 | 2 | 1 |
| 2. Demonstrate an understanding of research-based knowledge and principles of teaching and learning                  | 5 | 4 | 3 | 2 | 1 |
| 3. Show skills in the positive use of ICT to facilitate the teaching and learning process.                           | 5 | 4 | 3 | 2 | 1 |
| 4. Demonstrate knowledge of teaching strategies that promote literacy and numeracy skills                            | 5 | 4 | 3 | 2 | 1 |
| 5. Apply teaching strategies that develop critical and creative thinking, and/or other higher-order thinking skills. | 5 | 4 | 3 | 2 | 1 |
| 6. Use Mother Tongue, Filipino and English to facilitate teaching and learning.                                      | 5 | 4 | 3 | 2 | 1 |
| 7. Demonstrate an understanding of the range of verbal and non-verbal classroom                                      | 5 | 4 | 3 | 2 | 1 |

communication strategies that support learner understanding, participation, engagement and achievement.

**B. Learning Environment.** This refers to the teacher's ability to provide an environment that promotes safe, security, fairness and support.

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. Demonstrate knowledge of policies, guidelines and procedures that provide safe and secure learning environments.  | 5 | 4 | 3 | 2 | 1 |
| 2. Demonstrate understanding of learning environments that promote fairness, respect and care to encourage learning.   | 5 | 4 | 3 | 2 | 1 |
| 3. Demonstrate knowledge of managing classroom structure that engages learners, individually or in groups, in meaningful exploration, discovery and hands-on activities within the available physical learning environments. | 5 | 4 | 3 | 2 | 1 |
| 4. Demonstrate understanding of supportive learning environments that nurture and inspire learner participation.   | 5 | 4 | 3 | 2 | 1 |
| 5. Demonstrate knowledge of learning environments that motivate learners to work productively by assuming responsibility for their own learning.   | 5 | 4 | 3 | 2 | 1 |
| 6. Demonstrate knowledge of positive and non-violent discipline in the management of learner behavior.   | 5 | 4 | 3 | 2 | 1 |

**C. Diversity of Learners.** This refers to the ability to address student diversity and individual differences.

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. Demonstrate knowledge and understanding of differentiated teaching to suit the learners' gender, needs, strengths, interests and experiences. | 5 | 4 | 3 | 2 | 1 |
| 2. Implement teaching strategies that are responsive to the learners' linguistic, cultural, socio-economic and religious backgrounds.            | 5 | 4 | 3 | 2 | 1 |
| 3. Use strategies responsive to learners with disabilities, giftedness and talents.  | 5 | 4 | 3 | 2 | 1 |
| 4. Demonstrate understanding of the special educational needs of learners in difficult circumstances, including: geographic isolation;           | 5 | 4 | 3 | 2 | 1 |

chronic illness; displacement due to armed conflict, urban resettlement or disasters; child abuse and child labor practices.

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 5. Demonstrate knowledge of teaching strategies that are inclusive of learners from indigenous groups. | 5 | 4 | 3 | 2 | 1 |
|--|---|---|---|---|---|

**D. Curriculum and Planning.** This refers to one's ability of interacting with national and local curriculum requirement and translating content to relevant learning experiences.

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. Prepare developmentally sequenced teaching and learning process to meet curriculum requirements.   | 5 | 4 | 3 | 2 | 1 |
| 2. Identify learning outcomes that are aligned with learning competencies.  | 5 | 4 | 3 | 2 | 1 |
| 3. Demonstrate knowledge in the implementation of relevant and responsive learning programs.  | 5 | 4 | 3 | 2 | 1 |
| 4. Seek advice concerning strategies that can enrich teaching practice.   | 5 | 4 | 3 | 2 | 1 |
| 5. Show skills in the selection, development and use of a variety of teaching and learning resources, including ICT, to address learning goals. | 5 | 4 | 3 | 2 | 1 |

**E. Assessment and Reporting.** This refers to one's ability to use processes associated with a variety of assessment tools and strategies in monitoring, evaluating, documenting and reporting learners' needs, progress and achievement.

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. Demonstrate knowledge of the design, selection, organization and use of diagnostic, formative and summative assessment strategies consistent with curriculum requirements. | 5 | 4 | 3 | 2 | 1 |
| 2. Demonstrate knowledge of monitoring and evaluation of learner progress and achievement using learner attainment data.  | 5 | 4 | 3 | 2 | 1 |
| 3. Demonstrate knowledge of providing timely, accurate and constructive feedback to improve learner performance.  | 5 | 4 | 3 | 2 | 1 |
| 4. Demonstrate familiarity with a range of strategies for communicating learner needs, progress and achievement.  | 5 | 4 | 3 | 2 | 1 |

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 5. Demonstrate an understanding of the role of assessment data as feedback in teaching and learning practices and programs. | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|

**F. Community Linkages and Professional Engagement.** This refers to one's ability to establish school-community partnerships aimed at enriching the learning environment, as well as the community's engagement in the educative process.

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. Demonstrate an understanding of knowledge of learning environments that are responsive to community contexts.  | 5 | 4 | 3 | 2 | 1 |
| 2. Seek advice concerning strategies that build relationships with parents/guardians and the wider community.   | 5 | 4 | 3 | 2 | 1 |
| 3. Demonstrate awareness of existing laws and regulations that apply to the teaching profession, and become familiar with the responsibilities specified in the Code of Ethics for Professional Teachers. | 5 | 4 | 3 | 2 | 1 |
| 4. Demonstrate knowledge and understanding of school policies and procedures to foster harmonious relationship with the wider school community.   | 5 | 4 | 3 | 2 | 1 |

**G. Personal Growth and Professional Development.** This refers to one's ability of personal growth and professional development.

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. Articulate a personal philosophy of teaching that is learner-centered.  | 5 | 4 | 3 | 2 | 1 |
| 2. Demonstrate behaviors that uphold the dignity of teaching as a profession by exhibiting qualities such as caring attitude, respect and integrity. | 5 | 4 | 3 | 2 | 1 |
| 3. Seek opportunities to establish professional links with colleagues.   | 5 | 4 | 3 | 2 | 1 |
| 4. Demonstrate an understanding of how professional reflection and learning can be used to improve practice.   | 5 | 4 | 3 | 2 | 1 |
| 5. Demonstrate motivation to realize professional development goals based on the Philippine Professional Standards for Teachers.                     | 5 | 4 | 3 | 2 | 1 |