



21st Century Skills of Fourth Year Teacher Education Students of Saint Michael College, Cantilan, Incorporated, Cantilan, Surigao Del Sur

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Authors' contributions

This work was carried out in collaboration between both authors. Author GAO managed the design, and literature searches. Author RAM completed and wrote the protocol, analyses, data gathering, and statistical analysis. Both authors read and approved the final manuscript.

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ABSTRACT

In order to remain competitive, education must adapt to the demands of the 21st century. Saint Michael College, Cantilan Incorporated (SMCCI), a prominent private higher education institution in Surigao Del Sur Mindanao, Philippines, recognizes the importance of equipping its learners with the necessary 21st century skills. This study aimed to assess the extent to which fourth-year Teacher Education students at SMCCI possess and practice these skills. The study utilized a descriptive research design, with the fourth-year students of the 2016-2017 academic year as respondents. Data were collected through a questionnaire adapted from Corpuz and Salandanan (2013) and the 2008 Partnership for the 21st century skills framework. Statistical analysis, including frequency

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count and weighted mean, was applied to the gathered data. The findings revealed that among the five 21st century skills, the SMCCI fourth-year Teacher Education students excelled in Information, Media, and Technology Skills. They also demonstrated proficiency in Life and Career Skills, as well as Social and Cross-Cultural Skills. However, their Communication Skills and Learning and Innovative Skills were identified as areas that require improvement, as they received lower mean scores. Based on these findings, it can be concluded that the SMCCI fourth-year Teacher Education students are well-informed about technological advancements and social media trends. The integration of technology and technological literacy is evident in their life and career skills. Additionally, the students have shown strong skills in their educational practices, but continuous guidance and support from teachers are necessary to encourage the development of their communication skills and innovativeness.

Keywords: 21st century skills; teacher education students.

1. INTRODUCTION

According to 2008 Partnership for 21st century Skills, in an economy driven by innovation and knowledge, in marketplaces engaged in intense competition and constant renewal, in a world of tremendous opportunities and risks, in a society facing complex business, political, scientific, technological, health and environmental challenges, and in diverse workplaces and communities that hinge on collaborative relationships and social networking, the ingenuity, agility and skills are crucial to competitiveness.

Competitiveness demands a fresh approach to education and the bedrock of competitiveness is the 21st century education where every aspect of our education system from K to 12, tertiary and postgraduate education must be aligned to prepare citizens with the 21st century skills. These are the skills of a student who is highly collaborative and a lifelong learner. He is one who is accountable for results and is information, media and technology literate [1-3].

For Saint Michael College, Cantilan, Incorporated to remain relevant at present, Teacher Education graduates must possess the 21st century skills to fully equip them with the knowledge and skills they need in their field of work. They must be cognizant of the rapidly changing technology trends, in tune with the direction of economy and future projected needs for business and industry and aware of their career opportunities [4-7].

With this scenario, fourth year Teacher Education students should prepare to respond to the multiple skills of the 21st century. To become global means to be equipped with a wider range of knowledge of the various educational systems, master skills and competencies to address global

demands and possess attitudes and values that are acceptable to multicultural communities.

Hence, this study was conducted to determine if the SMCCI fourth year Teacher Education students have practiced these skills, namely: Communication Skills; Learning and Innovation Skills; Information, Media and technology Skills; Life and Career Skills, and Social and Cross-Cultural Skills [8-10].

This study is based on Jean Piaget's (1980) "cognitive theory of development. It is a theory of development and learning which includes learning to adopt information and skills. He mentioned that an individual assimilates and takes on new information or skills but does not shift his mind sufficiently and tries to force the new skills to fit the mindset he already has. Accommodation on the other hand also involves expanding a pre-existing mindset in order to make sufficient room for new skills".

Fits and Posner (1967) added that, "there are three learning phases that humans undergo as they develop new skills. The cognitive phase occurs in an individual when he creates a mental image of the skill he wants to learn, the associative phase which involves practicing the different parts of the skill and join them together, this is the phase where individuals may value feedback as he learns a skill and the autonomous phase when the individual has repeated often enough that he does not need to think about it too deeply. This is a phase which requires significant and sustained practice of the new skill".

Due to the rapidly changing dynamics facing the 21st century, new skills will be needed by every man, woman and child to address the economic, social, political, and citizenship challenges that

await them. These are broad set of knowledge, skills, work habits and character traits that are believed by educators, employers and others to be critically important for success in today's world, particularly in college programs and careers and workplaces.

Corpuz and Salandanan (2012) in "2008 Partnership for 21st Century Skills gave the categories of the 21st century skills namely: Communication Skills which include learning, collaboration, interpersonal skills, local, national and global orientedness and interactive communication; Learning and Innovation Skills which emphasize the 3C's creativity, curiosity, critical thinking and problem solving skills; Information, Media and Technology Skills which include visual and information literacy, media literacy, basic, scientific, economic and technological literacy and multicultural literacy; Life and Career Skills which includes flexibility and adaptability, initiative and self-direction, and the socio and cross cultural skills which emphasize productivity and accountability and leadership and responsibility".

According to a web source, "communication is the heart of every organization. Everything you do in the workplace results from communication. Therefore good reading, writing, speaking and listening skills are essential if tasks are going to be completed and goals achieved" [11].

Collaboration is a type of teamwork that requires two or more people to work directly together to make decisions, come up with creative ideas or develop strategies to be used by the group or in parts of a project. It usually involves working directly together to jointly produce an output.

However, teamwork can be completed on an individual basis as long as communication is open to all parts of a team. This of course, it requires excellent and group communication skills.

"In addition, good communication skills are key to success in life, work and relationships. Without effective communication, a message can turn into error, misunderstanding, frustration or even disaster by being misinterpreted or poorly delivered" [12].

According to the 2010 survey by the National Association of Colleges and Employers (NACE) "on communication skills, it says that statistics point to the fact that approximately 85 percent of our success in life is directly attributable to our

communication skills. It means that no matter how ambitious, how committed or how highly educated someone is, he still has a low probability of success unless he develops the right communication skills" [13].

"Another skill that is also recognized in the 21st century is the Learning and Innovation Skill which separate students who are prepared for increasingly complex life and work environments for the 21st century, and those who are not" [14].

According to Beyer (1995), "critical thinking is making clear, reasoned judgment. The National Council for Excellence says, that, critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing and / or evaluating information gathered from or generated by observation, experience, reflection, reasoning or communication, as a guide to belief and action".

As man seeks for development, innovations are inevitable. With the demand brought about by the fast changing society, it is likely that innovation will occur. With this, the constructivist theory (2012) emphasized "the development of intrinsically motivated and independent learners adequately equipped with learning skills for them to be able to construct knowledge and make meaning to them where learners are taught how to learn, how to reason effectively, make judgments and decisions, and solve problems". This is also supported by the theory of Multiple Intelligence (MI) by Howard Gardner in his *Frame of Mind* (1983). He defined intelligence as ability or set of abilities that allow a person to solve a problem or fashion a product that is valued in one or more cultures. He believes that different intelligences may be independent abilities; a person can be low in one domain area but high in another.

Today, we live in a technology and media suffused environment with access to an abundance of information, rapid changes in technology tools, and the ability to collaborate and make individual contributions on an unprecedented scale. To be effective in the 21st century, citizens and workers must be able to create, evaluate, and effectively utilize information, media and technology.

Corpuz and Salandanan (2012), explained that "students at present must be information, media, scientific, economic and technology literate. They further emphasized that students should have the ability to interpret, make meaning from

information presented in the form of image, to identify what information is needed, identify the best sources of information for a given need, locate those sources, evaluate the sources critically and share that information. Furthermore, they should have the ability to critically analyze the message that inform, entertain and sell everyday bringing critical thinking skills to bear in all forms of media”.

Life and work environments require far more than thinking skills and content knowledge. The ability to navigate the complex life and work environments in the globally competitive information age requires students to pay attention to developing adequate life and career skills which includes flexibility and adaptability initiative and self-direction, productivity and accountability, and leadership and responsibility. Adapting to change, being flexible, managing goals and time, working independently and being self-directed are among the skills to be developed.

That is why, today’s greatest success stories are not about people who are necessarily the smartest but those who can communicate a vision to others and lead them in the execution of that vision.

On Social and Cross-cultural skills, Vygotsky’s Socio-Cultural Theory (2012) explains, that “social interaction plays a very important role in cognitive development. He believed that individual development could not be understood without looking into the social and cultural context within which the development happens. He further emphasized that effective learning happens through participation in social activities, making the social context of learning crucial. So there is a need of parents, teachers and other adults in the learners’ environment to contribute to the process by explaining, modeling, assisting, giving directions and providing feedback to the learner”.

Kolb’s (1984) advocates “experiential theory which remains to be one of the most pervasive theories of how managers learn from experience. He continued by saying that to be an effective learner, an individual must have the ability to relate to people with an open mind, value interpersonal relations and perform well in unstructured and ambiguous situations”.

The literature cited articulated the 21st century skills concept which motivated the researchers to

undertake this present study propelled by the belief that teaching students the most relevant, useful, in-demand, and universally applicable skills should be prioritized in today’s school.

2. CONCEPTUAL FRAMEWORK

This study is anchored on the concept that the 21st century skills are the skills needed to address students’ preparedness for work and competitiveness in the global market relative to ASEAN 2015. Corpuz and Salandanan in their “The 21st Century Teacher” said, that to remain relevant and interesting, the teacher must possess the 21st century skills. These skills are categorized into four namely: communication skills, which includes teaming, collaboration, interpersonal skills, local, national and global orientedness and interactive communication; learning and innovation skills which are the 3C’s namely: creativity, curiosity, critical thinking problem solving skills and risk taking; information, media and technology skills which deals with visual and information, media basic, scientific, economic and technological literacies; life and career skills which embrace flexibility and adaptability, leadership and responsibility, initiative and self-direction, productivity and accountability and ethical, moral and spiritual values. However, the framework of the 2008 Partnership for 21st century separated another important skill under the Life and Career skills, the Social and Cross-cultural skills; hence, in the present research, the five skills are being studied.

Table 1 on the next page illustrates the flow of the study. Box 1 to the left shows the extent the SMCCI fourth year Teacher Education students practiced the 21st Century Skills namely: Communication Skills, learning and innovation skills, information, media and technology skills, life and career skills and social and cross-cultural skills.

21st Century Skills: These refer to a broad set of knowledge, skills, work habits, and character traits of the fourth year students. It includes communication skills, learning and innovation skills, information, media and technology skills, life and career skills, and social and cross-cultural skills.

Communication Skills: These are skills which use an individual’s ability to express thoughts and reasons to others. In this study, it means the ability to use language, articulate thoughts and

ideas, listen effectively, interpret and understand information, among others.

Learning and Innovation Skills: These are skills that separate students who are prepared for increasingly complex life and work environments in the 21st century. As used in this study, it means the skill to analyze, synthesize, interpret information and draw conclusions and evaluate ideas.

Information, Media and technology Skills: These are skills which exhibit a range of functional and critical skills related to information and technology. These include among others the use of accurate information, utilize the most appropriate media tools and use technology as a tool to research, organize, evaluate and communicate information.

Life and Career Skills: These refer to skills that require far more than thinking skills and content knowledge of an individual. In this study it means the ability to adapt to varied roles, job responsibilities, set goals, monitor, define, prioritize and complete tasks and demonstrate commitment to learning.

Social and Cross-Cultural Skills: These are skills that emphasize the importance of social interaction in the cognitive of an individual. As used in the study it includes knowing when it is appropriate to listen and when to speak, set and meet goals and demonstrate abilities to work positively manage time, multi task, collaborate and cooperate effectively with teams.

Box 2 to the right contains the implications to the Teacher Education Curriculum.

The findings of the study will contribute new information to the fund of knowledge in Education. These will benefit specifically the following persons or groups:

Teacher Education Teachers: Result of this study will provide them feedback as to which skills need to be given more attention to prepare better the students before they graduate.

Teachers Education Program Coordinators: This study will make them aware of the competencies and skills that must be enhanced and so insure their inclusion in the syllabi of the courses/subjects.

Researchers: They can use the result of this study as baseline data for research they may undertake or as related literature for similar studies.

3. METHODOLOGY

3.1 Research Design

The descriptive survey research design was used because the study focused on a current condition, particularly the 21st Century Skills of the fourth year Teacher Education students of Saint Michael College, Cantilan, Incorporated, Cantilan, Surigao del Sur as of academic year 2017-2018.

3.2 Research Respondents

Total population or 100 %of the fourth year students enrolled in the Teacher Education program were used in the study. Table 1 shows the distribution of the participants.

Table 1. Distribution of participants

Program		Number of Participants	Percent (%)
Teacher Education	Male:	7	15
	Female	39	85
Total		46	100

3.3 Research Instrument

The study used the adopted questionnaire from Corpuz and Salandanan 2013 and from the framework of the 2008 Partnership for the 21st century skills. The questionnaire uses a 5-point scale as follows:

Scale	Parameter	Verbal Interpretation	Qualitative description
5	4.21 – 5.00	Always (A)	Very Good (VG)
4	3.41 – 4.20	Often (O)	Good (G)
3	2.61 – 3.40	Sometimes (S)	Fair (F)
2	1.81 – 2.60	Rarely (R)	Poor (P)
1	1.00 – 1.80	Never (N)	Very Poor (VP)

3.4 Data Gathering Procedure

The researchers wrote a letter of request asking permission from the College Dean and the Program Coordinators for the administration of the questionnaire to the participants. Upon approval, the researchers administered the questionnaire to the participants and retrieved them after these were accomplished. A 100% retrieval of accomplished questionnaire was obtained.

3.5 Statistical Treatment

The data gathered, were treated using the following statistical tools: Frequency Count and the weighted mean.

4. RESULTS AND DISCUSSION

This chapter presents the results and discussion of the study. The presentation follows the sequence of the problems posed in chapter 1.

What extents have the SMCCI fourth year Teacher Education students practiced the 21st century skills, namely: Communication skills, learning and innovation skills, information, media and technology skills, life and career skills, and social and cross-cultural skills?

Tables 2 to 6 present the extent the SMCCI fourth year Teacher Education students practiced the 21st Century Skills.

Table 2 in particular presents the participants' extent of practice of the communication skills.

Table 2 reveals that the SMCCI fourth year Teacher Education students of academic year 2015-2016 rated their communication skills with an average mean of 3.33 which is verbally interpreted as "Sometimes" and qualitatively described as "Fair". This indicates that the SMCCI fourth year Teacher Education students have fairly practiced communication skills.

Rated with the three highest means are "Exercise flexibility and willingness to be helpful in accomplishing a common goal" (M=3.86), "Listen effectively to get meaning" (M=3.7), "Assume shared responsibility for collaborative work and value the individual contributions made by each team members" (M=3.7). These responses are verbally interpreted as Often Practiced and qualitatively described as Good. This finding implies that the SMCCI fourth year Teacher Education students have acquired good collaborative and listening skills.

Table 2. Communication skills

A. Communication Skills	Always	Often	Sometimes	Rarely	Never	WM	VI	QD
1. Demonstrate the ability to use language to read, write, listen and speak.	.71	2.29	.43			3.43	O	G
2. Apply knowledge, attitudes, behaviors and skills discipline in appropriate and effective ways.	.71	2.57	.21			3.49	O	G
3. Articulate thoughts and ideas effectively using oral, written, and nonverbal communication skills.	.71	1.71	.86			3.28	S	F
4. Listen effectively to get meaning.	1.79	1.71	.21			3.7	O	G
5. Use communication to inform, instruct, motivate, and persuade in diverse environments.		2.86	.43			3.29	S	F
6. Demonstrate ability to work effectively and respectfully with diverse teams.	.36	2	.64			3	S	F
7. Exercise flexibility and willingness to be helpful in accomplishing a common goal.	2.86	.57	.43			3.86	O	G

A. Communication Skills	Always	Often	Sometimes	Rarely	Never	WM	VI	QD
8. Assume shared responsibility for collaborative work and value the individual contributions made by each team member.	1.78	1.71	.21			3.7	O	G
9. Demonstrate the ability to interpret, recognize, appreciate and understand information presented through visible actions, objects and symbols, natural or man –made.	.71	2.29	.43			3.43	O	G
10. Demonstrate ability to reason with numbers and other mathematical concepts.	.36	.29	1.93	.14		2.72	S	F
11. Demonstrate the capacity to pose and evaluate scientific arguments based on evidence and to apply conclusions from such arguments appropriately.	.36	1.43	1.07			2.86	S	F
12. Utilize multiple media and technologies, and know how to judge their effectiveness and their impact.	.36	2	.86			3.22	S	F
Average						3.33	S	F

Legend:

Scale	Parameter	Verbal Interpretation (VI)	Qualitative description (QD)
5	4.21 – 5.00	Always (A)	Very Good (VG)
4	3.41 – 4.20	Often (O)	Good (G)
3	2.61 – 3.40	Sometimes (S)	Fair (F)
2	1.81 – 2.60	Rarely (R)	Poor (P)
1	1.00 – 1.80	Never (N)	Very Poor (VP)

However, rated with the two lowest means are “Demonstrate the ability to reason with numbers and other mathematical concepts” (M=2.72), “Demonstrate the capacity to pose and evaluate scientific arguments based on evidence and to apply conclusions from such arguments appropriately” (M=2.86). These responses are verbally interpreted as Sometimes Practiced and qualitatively described as Fair. This finding implies that the SMCCI fourth year Teacher Education students have not fully acquired the skills of reasoning, evaluating and generalizing particularly on mathematical and scientific concepts.

Table 3 presents the participants’ extent of practice of the learning and innovation skills.

Table 3 shows that the SMCCI fourth year Teacher Education students rated their learning and innovation skills with an average of 3.27 which is verbally interpreted as “Sometimes” and

qualitatively described as “Fair”. This means that the fourth year Teacher Education students have practiced only fairly their learning and innovation skills.

Considered by the participants as the highest Often Practiced Skills and described as Good are “Understand the real world limits to adopting new ideas” (M=3.85), “View failure as an opportunity to learn” (M=3.71) and “Understand that creativity and innovation is a long–term, cyclical process of small successes and frequent mistakes” (M=3.57) and “Identify and ask significant questions that clarify various points of view and lead to better solutions” (M=3.57”. This finding shows that the fourth year SMCCI Teacher Education students have developed the skills of recognizing limitations, of accepting that one makes mistakes and experiences failures through the process of learning and innovating. But at the same time, they have acquired the skill

of identifying and asking questions and of clarifying in order to have good results.

On the other hand, these concerned students only Sometimes “Effectively analyze and evaluate evidences, arguments, claims and beliefs” (M=2.79), and “create new and worthwhile ideas” (M=2.86). These responses

are qualitatively described as Fair. They feel that fourth year SMCCI Teacher Education students have not so much developed the skills of analyzing, evaluating, and creating. This finding corroborates the skill limitations of the students in their communication skills which disclosed that they have not fully developed their evaluating skills among others.

Table 3. Learning and innovation skills

B. Learning and innovation skills	Always	Often	Sometimes	Rarely	Never	WM	VI	QD
1. Use of various types of reasoning appropriate to the situation.	.36	2	.86			3.32	S	F
2. Analyze how parts of a whole interact with each other to produce overall outcomes.	1.07	2	.43			3.5	O	G
3. Effectively analyze and evaluate evidence, arguments, claims and beliefs.	.36	.29	2.14			2.79	S	F
4. Synthesize and make connections between information and arguments.	.36	1.43	1.29			3.08	S	F
5. Interpret information and draw conclusions based on the best analysis.	.71	1.71	.86			3.28	S	F
6. Reflect critically on learning experiences and processes	2.5	.29	.21			3	S	F
7. Solve different kinds of non-familiar problems in an innovative way.		2	1.07			3.07	S	F
8. Identify and ask significant questions that clarify various points of view and lead to better solutions.	1.07	2.29	.21			3.57	O	G
9. Use a wide range of idea creation techniques (such as brainstorming)	.36	1.71	1.07			3.14	S	F
10. Create new and worthwhile ideas	.36	.57	1.93			2.86	S	F
11. Elaborate, refine, analyze, and evaluate ideas in order to improve and maximize creative efforts	.36	1.43	1.29			3.08	S	F
12. Demonstrate imagination and curiosity	1.43	1.14	.64	.14		3.21	S	F
13. Communicate new ideas to others effectively.		2	1.07			3.07	S	F
14. Be open and responsive to new and diverse perspectives	1.07	2	.43			3.5	O	G
15. Incorporate group input and feedback into the work	.71	.86	1.5			3.07	S	F
16. Demonstrate originality	.71	2.29	.43			3.43	O	G

B. Learning and innovation skills	Always	Often	Sometimes	Rarely	Never	WM	VI	QD
and inventiveness in work								
17. Understand the real world limits to adopting new ideas	2.5	1.14	.21			3.85	O	G
18. View failure as an opportunity to learn.	2.5	.57	.64			3.71	O	G
19. Act on creative ideas to make a tangible and useful contribution to the field in which the innovation will occur.	1.07	1.43	.86			3.36	S	F
20. Understand that creativity and innovation is a long- term, cyclical process of small successes and frequent mistakes.	1.79	1.14	.64			3.57	O	G
Average						3.27	S	F

Legend:

Scale	Parameter	Verbal Interpretation (VI)	Qualitative Description (QD)
5	4.21 – 5.00	Always (A)	Very Good (VG)
4	3.41 – 4.20	Often (O)	Good (G)
3	2.61 – 3.40	Sometimes (S)	Fair (F)
2	1.81 – 2.60	Rarely (R)	Poor (P)
1	1.00 – 1.80	Never (N)	Very Poor (VP)

Table 4 presents the participants’ practice of their Information, Media and Technology Skills.

Table 4 reveals that Information, Media and Technology Skills were rated by SMCCI fourth year Teacher Education students with an average mean of 3.34 which is verbally interpreted as “Sometimes” and qualitatively described as “Fair”. This means that the students fairly practiced their information, media and on technology skills.

Top Skills practiced by the participants Often and described as Good are “Use technology as a tool

to research, organize, evaluate, and communicate information” (M= 3.78), “Understand and utilize the most appropriate media creation tools, characteristics and conventions” (M=3.50), and “Understand and effectively utilize the most appropriate expressions and interpretations in diverse multi-cultural environments” (M=3.50). This finding discloses that the SMCCI fourth year Teacher Education students have learned to a desirable level appropriate use of technology and media. This implies that they are equipped with two of the most important 21st century tools- research tools and creation tools.

Table 4. Information, media and technology skills

C. Information, media and technology skills	Always	Often	Sometimes	Rarely	Never	WM	VI	QD
1. Access information efficiently (time) and effectively (sources)	.71	2.57	.21			3.49	O	G
2. Evaluate information critically and competently	.36	2	.86			3.22	S	F
3. Use information accurately and creatively		2.86	.43			3.29	S	F
4. Apply a fundamental understanding of the	1.43	.86	1.07			3.36	S	F

C. Information, media and technology skills	Always	Often	Sometimes	Rarely	Never	WM	VI	QD
ethical/legal issues surrounding the access and use of information.								
5. Understand both how and why media messages are constructed and for what purposes.	.71	2	.64			3.35	S	F
6. Examine how individuals interpret messages differently,, how values and points of view are included or excluded and how media can influence beliefs and behaviors.		1.71	1.29			3	S	F
7. Understand and utilize the most appropriate media creation tools, characteristics and conventions	1.43	1.43	.64			3.5	O	G
8. Understand and effectively utilize the most appropriate expressions and interpretations in diverse multi-cultural environments.	1.43	1.43	.64			3.5	O	G
9. Use technology as a tool to research, organize, evaluate, and communicate information	2.14	1.43	.21			3.78	O	G
10. Use digital technologies (e.g. computers, PDAs, media players, GPS, etc.) communication networking tools and social networks appropriately to access, manage, integrate, evaluate, and create information to successfully function in a knowledge economy.	.36	1.71	.86			2.93	S	F
Average						3.43	S	F

Legend:

Scale	Parameter	Verbal Interpretation (VI)	Qualitative Description(QD)
5	4.21 – 5.00	Always (A)	Very Good (VG)
4	3.41 – 4.20	Often (O)	Good (G)
3	2.61 – 3.40	Sometimes (S)	Fair (F)
2	1.81 – 2.60	Rarely (R)	Poor (P)
1	1.00 – 1.80	Never (N)	Very Poor (VP)

Findings, however, reveal that the participants only Sometimes practice “Use digital technologies (e.g. computers, PDAs, media players, GPS, etc) communication networking tools and social networks appropriately to access, manage, integrate, evaluate, and create information to successfully function in a knowledge economy” (M= 2.93), and “Examine how individuals interpret messages differently,

how values and points of view are included or excluded and how media can influence beliefs and behaviors” (M=3.0). These responses are qualitatively described as Fair. The finding indicates that the SMCCI fourth year teacher Education students have not developed much their skills in applying digital technologies to function successfully in this generation of networking. Furthermore, the finding discloses

that these concerned students have not fully acquired the skill of examining the effects of media and technology on values, point of view, beliefs and behavior. This implies that use and value of the information, media and technology skills are for the students' immediate educational needs not so much for their long term effect. Table 5 presents the participants' extent of practice of life and career skills.

Table 5 reveals that the SMCCI Teacher Education students rated their Life and Career Skills with an average mean of 3.14 which is verbally interpreted as "Sometimes" and qualitatively described as "Fair". This means that the students fairly practiced their life and career skills.

Table 5. Extent of practice of life and career skills by the participants

D. Life and career skills	Always	Often	Sometimes	Rarely	Never	WM	VI	QD
1. Adapt to varied roles, job responsibilities, schedules and contexts.	1.43	2	.21			3.64	O	G
2. Work effectively in a climate of ambiguity and changing priorities	.36	1.43	1.07	.14		3	S	F
3. Incorporate feedback effectively	1.07	2	.43			3.5	O	G
4. Deal positively with praise, setbacks and criticism	1.78	.29	.64			2.71	S	F
5. Understand, negotiate and balance diverse views and beliefs to reach workable solutions particularly in multi-cultural environments.	1.43	.86	1.07			3.36	S	F
6. Set goals with tangible and intangible success criteria		2.29	.64	.14		3.07	S	F
7. Balance short term and long term goals		1.71	1.07	.14		2.92	S	F
8. Utilize time and manage workload efficiently	1.07	1.71	.64			3.42	O	G
9. Monitor, define, prioritize, and complete tasks without direct oversight	.71	1.43	.86			3	S	F
10. Go beyond mastery of skills to explore and expand one's own learning and opportunities to gain expertise.	1.07	.86	1.29			3.22	S	F
11. Demonstrate initiative to advance skill levels towards a professional level	1.78	.29	.64			2.71	S	F
12. Demonstrate commitment to learning as a lifelong process.	2.14	.86	.64			3.64	O	G
13. Reflect critically on past experiences in order to inform future progress	2.14	.86	.64			3.64	O	G
14. Apply entrepreneurial skills to enhance workplace productivity and career options related to alternative solutions to issues	.36	.29	1.5			2.15	R	P

D. Life and career skills	Always	Often	Sometimes	Rarely	Never	WM	VI	QD
15. Participate actively in civic life through knowing how to stay informed and understanding governmental processes	1.07	1.43	.86			3.36	S	F
16. Demonstrate understanding of environmental issues as a result of knowledge and interaction with the environment	1.07	.29	1.07			2.43	R	P
Average						3.14	S	F

Legend:

Scale	Parameter	Verbal Interpretation (VI)	Qualitative Description(QD)
5	4.21 – 5.00	Always (A)	Very Good (VG)
4	3.41 – 4.20	Often (O)	Good (G)
3	2.61 – 3.40	Sometimes (S)	Fair (F)
2	1.81 – 2.60	Rarely (R)	Poor (P)
1	1.00 – 1.80	Never (N)	Very Poor (VP)

The top three rated skills with the same weighted mean of 3.64, verbally interpreted as Often practiced and qualitatively described as Good are “Adapt to varied roles, job responsibilities, schedules and context”, “Demonstrate commitment to learning as a lifelong process” and “Reflect critically on past experiences in order to inform future progress”. This means that the students have acquired enough skills of adaptability or flexibility, commitment to learning, and reflection. This implies their capability to adjust to different situations and environments, their realization that learning does not end during graduation but continues on throughout one’s life time and their realization that lessons learned through one’s experiences in years past are valuable foundations for future endeavors.

The least two rated skills which are verbally interpreted as Sometimes and qualitatively described as Fair are “Apply entrepreneurial skills to enhance workplace productivity and career options related to alternative solutions to issues” (M= 2.15), and “Demonstrate understanding of environmental issues caused as result of human interaction with the environment (M=2.43). This means that the students have not developed much their entrepreneurial skills and their awareness of environmental concerns. This indicates that the students are not so conscious of entrepreneurship since they are still studying and so, are not yet immersed in the world of work where productivity is required. Moreover, they

have not yet reached a high level of consciousness for environmental issues even if the school exposes them to environmental problems through the community extension program, since their priority concern is their academic activities and other school issues and other requirements. Corpuz and Salandanan (2012) said that students should know how to adapt to change, manage time effectively, be self-directed and go beyond mastery of skills.

Table 6 presents the Social and Cross – Cultural Skills of the participants.

Table 6 reveals that the SMCCI fourth year Teacher Education students rated their social and cross-cultural skills with an average mean of 3.61 which is verbally interpreted as “Often and qualitatively described as “Good”. This means that the students often practiced social and cultural skills.

Rated with the highest means and verbally interpreted Often and qualitatively described as Good are “Collaborate and cooperate effectively with teams” (M=3.95), “Conduct oneself in respectable, professional manner” (M=3.93), and “Respond open-mindedly to different ideas and values” (M=3.93). This finding implies that the students have developed desirable people skills - are able to work effectively with teams, are open to others’ ideas and values, and are professional in their dealings.

Table 6. Social and cross- cultural skills

E. Social and cross-cultural skills	Always	Often	Sometimes	Rarely	Never	WM	VI	QD
1. Know when it appropriate to listen and when to speak	2.86	.29				3.15	S	F
2. Conduct oneself in a respectable, professional manner.	1.43	.229	.21			3.93	O	G
3. Respect cultural difference and work effectively with people from a range of social and cultural backgrounds	2.86	.86				3.72	O	G
4. Respond open-mindedly to different ideas and values	2.86	.86	.21			3.93	O	G
5. Leverage social and cultural differences to create new ideas	1.07	2	.43			3.5	O	G
6. Set and meet goals even in the face of obstacles and competing pressures	.71	2.57	.21			3.49	O	G
7. Prioritize, plan, and manage work to achieve the intended result	1.07	2	.43			3.5	O	G
8. Demonstrate additional attributes associated with producing high quality products including the abilities to:								
8.1. Work positively and ethically	1.78	1.71	.21			3.7	O	G
8.2. Manage time and projects effectively	.36	2.29	.64			3.29	S	F
8.3 . Multi-task	1.07	1.71	.64			3.42	O	G
8.4 . Participate actively, as well as be reliable and punctual	1.07	2	.43			3.5	O	G
8.5. Present oneself professionally and with etiquette	1.78	1.43	.43			3.64	O	G
8.6. Collaborate and cooperate effectively with teams	2.86	.86	.21			3.95	O	G
8.7. Be accountable for results	2.14	1.71				3.85	O	G
9. Use interpersonal; and problem solving skills to influence and guide others toward a goal	1.43	1.43	.64			3.5	O	G
10. Inspire others to reach their very best via example and selflessness	2.5	.57	.21	.29		3.57	O	G
11. Act with interests of the larger community in mind	2.14	1.43		.14		3.71	O	G
Average						3.61	O	G

Legend:

Scale	Parameter	Verbal Interpretation (VI)	Qualitative Description (QD)
5	4.21 – 5.00	Always (A)	Very Good (VG)
4	3.41 – 4.20	Often (O)	Good (G)
3	2.61 – 3.40	Sometimes (S)	Fair (F)
2	1.81 – 2.60	Rarely (R)	Poor (P)
1	1.00 – 1.80	Never (N)	Very Poor (VP)

Least rated skills with verbal interpretation of Sometimes and qualitatively described as Fair are “Know when it is appropriate to listen and when to speak” (M= 3.15), and “Manage time and projects effectively” (M= 3.29). This finding implies that the students have not fully mastered the skill of tact, saying the right thing at the right time and in the right place. They also lack the skill of time management and project management.

Table 7 presents the summary of the extent of practice of 21st century skills of SMCCI fourth year Teacher Education students.

Table 7 summarizes the extent of practice of the 21st century skills by the fourth year Teacher Education students. The total weighted mean of all the five (5) skills is 3.34 with verbal interpretation of “Sometimes” and qualitatively described as “Fair”.

The table also reveals that of the five skills, the social and cross-cultural skills has the highest weighted mean of 3.61 and the lowest is life and career skills with a weighted mean of 3.14. This indicates that the students have practiced and

demonstrated the social and cross-cultural skills more pronouncedly than the other 21st century skills such as Communication Skills, Learning and Innovation Skills, Information, Media and Technology Skills, most especially Life and Career Skills.

Based on the Findings, what are the implications to the Teacher Education Curriculum?

The following are some implications to the Teacher Education Curriculum:

1. The implementation of the Teacher Education Curriculum in SMCCI lacks force inasmuch as it has not so fully equipped the Teacher Education students the 21st Century skills.
2. The teacher Education syllabi may not have provided enough lessons and activities that develop the 21st century skills of the Teacher Education students.
3. Delivery of the lesson in the classroom may have to be more technology assisted and interactive.

Table 7. Summary of the extent of practice of the 21st century skills by the SMCCI fourth year teacher education students

21 st Century Skills	Over all Weighted Mean	Verbal Interpretation	Qualitative Description
Communication Skills	3.33	S	F
Learning and Innovation skills	3.27	S	F
Information, Media and Technology Skills	3.34	S	F
Life and Career Skills	3.14	S	F
Social and Cross- Cultural skills	3.61	O	G
Average	3.34	S	F

Legend:

Scale	Parameter	Verbal Interpretation (VI)	Qualitative Description (QD)
5	4.21 – 5.00	Always (A)	Very Good (VG)
4	3.41 – 4.20	Often (O)	Good (G)
3	2.61 – 3.40	Sometimes (S)	Fair (F)
2	1.81 – 2.60	Rarely (R)	Poor (P)
1	1.00 – 1.80	Never (N)	Very Poor (VP)

5. CONCLUSION

Based on the findings of the study, the following conclusions were drawn:

The SMCCI fourth year Teacher Education students have good social and cross-cultural skills but have only fair communication, learning and innovation, information, media and technology, and life and career skills. They have strongly demonstrated flexibility, acceptance of limitations, use of technology, adaptability, commitment to learning, critical reflection, collaboration, cooperation and teamwork. They have poorly demonstrated reasoning with numbers, analyzing and evaluating, using digital technology, networking tools and social networks, entrepreneurial skills and appropriate timing in listening and speaking (tact).

On the basis of the foregoing findings and conclusions, the following recommendations are given:

1. Program Coordinators of the Teacher Education Program should review the curriculum to ascertain that the courses offered equip the students with the 21st Century Skills.
2. Teacher Education instructors should review the course syllabi of the subject assigned to them every semester to ensure that the 21st century skills are incorporated in these guide for classroom instruction.
3. Program Coordinators and instructors of the Teacher Education Programs should discuss and make a plan of action to address the skills poorly demonstrated by the students, namely: reasoning, analyzing, evaluating, networking, entrepreneuring, and correct timing in listening and speaking.

This paper has determined the parental involvement of indigenous parents in elementary schools. With the findings used as groundwork, the following inferences are considered:

Majority of IP parents fall to marginal classification in terms of educational background, yet not merely different with common parents in terms of monthly income. The background of IP parents entails their capability of determining and understanding the support needed by their children. Regardless of race and background, IP parents' instincts are the same with common

parents in terms of supporting their children in schools related activities. The responses of the parents give a positive outlook that despite their background, most are aware of their contributory role to their children. However, there are still areas that need to be improved because of incongruence to the responses from the communication, learning at home, and financial support extended to their children.

IP parents are involved in terms of disciplining their children but not as often as expected. The respondents enforce a slight participation in terms of their involvement on their children's behavior. Despite their educational background and economic status, IP parents are aware on their role as parents but not fully responsive on the responsibility behind shaping the future of their children. IP parents have faced dilemmas in terms of priorities, whereby, they want to fully support the academic performance of their children but they also need to exert more effort for their living and survival. The study helps shape the lives of the indigenous people, awakens them to have a better future and uplift their lives by helping their children in school. The identified gaps correspond to Piaget's cognitive development theory that parents play a critical role in shaping young minds. Concisely, the results also support Vygotsky's socio-cultural theory that teachers and parents' partnership should go hand in hand for close monitoring of the students' educational accomplishments. Capability building for IP parents is still necessary to further enhance awareness of the IP parents in the importance of parental full support and guidance to their children school performance.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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