

## 21<sup>st</sup> Century Skills of Teachers and Self-Efficacy of College Students

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**Abstract:** The intention of the study was to determine the influence of the 21<sup>st</sup> century skills of teachers on the self-efficacy of college students. The respondents were 191 fourth year college students of Assumption College of Davao using universal sampling. Two sets of questionnaires on five-point Likert rating scale were prepared. The data obtained were tabulated, analyzed and interpreted utilizing the descriptive-correlation method with mean, Pearson r and linear regression. The researcher concluded that both indicators of the 21<sup>st</sup> century skills of teachers and the self-efficacy of college students are interpreted as high. Also, there is a significant relationship between the 21<sup>st</sup> century skills of teachers and the self-efficacy of college students. Moreover, the creativity and innovation skills, self-direction skills, and using technology was found to have significant influence on the self-efficacy of college students, indicating that there is a need for professional trainings of all teachers on the use of technology as significant contributor to students' learning.

**Keywords:** 21<sup>st</sup> century skills, self-efficacy, education, Philippines

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### Introduction

Students' self-efficacy has received close attention across academic subjects (Fast et. al., 2009). People's attitudes and beliefs in their abilities in performing tasks has long been and still is a growing concern of many who strive for quality American education (Kahle, 2008). In Philadelphia, only 29 percent of the 2,406 over-aged students in their sixth-grade cohort stayed on the graduation path primarily because a high percentage of over-aged students failed (Balfanz, 2007). According to the (Out of School Youth Coalition 2008), the middle school students in New York City places them in a special population of social, emotional, physical, and academic complexity. Since these students' age does not level their classmates' ages, they typically have self-efficacy issues and low academic skills.

Self-efficacy is how people feel about themselves and how much they like themselves, especially socially and academically when it comes to college students. Having one's academic achievement is a major key to most college students' self-esteem. Having a high self-esteem has many positive effects and benefits, especially among college students. Students who feel positive about themselves have fewer sleepless nights, succumb less easily to pressures of conformity by peers, are less likely to use drugs and alcohol, are more persistent at difficult tasks, are happier and more sociable, and most pertinent to this study is that they tend to perform better academically (Yazon, 2014).

Cognizant of the importance of the study on self-efficacy of students, the researchers made a review of literature for possible variables associated with it. 21<sup>st</sup> century skills of teachers were considered to be relevant.

Several researches have shown the positive relation between the self-efficacy and self-regulated learning and the academic achievements (Bouffard-Bouchard, Parent & Larivee 1991; Dopke 2001; Lent, Brown & Larkin 1984; Pajares, 2002; Wigfield, Eccles et. al. 2000, Zimmerman et. al. 1992). But the researchers have not come across with a study that dealt with the 21<sup>st</sup> century skills of teachers. It is in this context which has led the researchers to investigate on the 21<sup>st</sup> century skills of teachers and self-efficacy of college students. This undertaking may be considered as a research of new knowledge on the salient roles of the 21<sup>st</sup> century skills of teachers and on the importance of knowing the self-efficacy of college students.

### Research Objectives

The aim of this study was to investigate which domains of the 21<sup>st</sup> Century Skills of Teachers significantly influence the Self-efficacy of College. Specifically it will deal with the following objectives: To ascertain the level of 21<sup>st</sup> Century Skills of teachers of the Assumption College of Davao; to describe the level of Self-efficacy of College Students of Assumption College of Davao; to determine the significant relationship between the 21<sup>st</sup> Century Skills of Teachers and Self-efficacy of College Students of Assumption College of Davao; to determine which domains of the 21<sup>st</sup> Century Skills of Teachers significantly influence on the Self-efficacy of College Students of Assumption College of Davao.

### Hypothesis

The following hypotheses of the study were tested at 0.05 alpha level of confidence. There is no significant relationship between the 21<sup>st</sup> Century Skills of Teachers and Self-efficacy of College Students of Assumption College of Davao and no domain of the 21<sup>st</sup> Century Skills of Teachers significantly influence on the Self-efficacy of College Students of Assumption College of Davao.

### Research Model

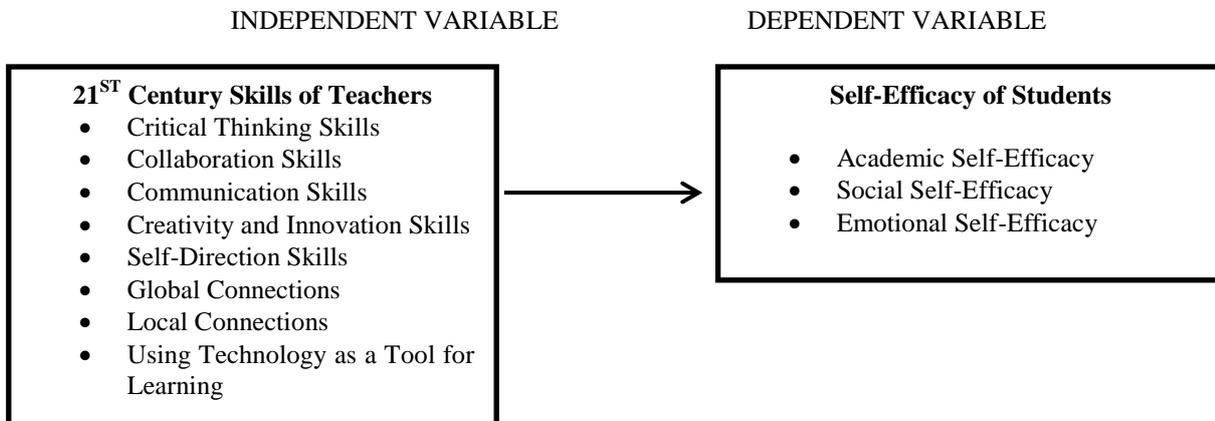


Figure 1. Conceptual Framework Showing the Variables of the Study

### Research Design

This study made use of the non-experimental quantitative research design utilizing correlational method. This method measure the association of variables with varying level of measurement. In certain cases, two variables become related because they are related to, or caused by another variable or variables (Downie, 2010). Hence, two variables generally tend to vary together; or the presence of one also indicates the presence of the other; or even one can be predicted from the presence of the other. This method was used since the focal point of this variable research study is to measure the degrees or relationship between one variable; 21<sup>st</sup> century skills of teachers and self-efficacy of students.

### Research Subjects

The respondents of this study were all 191 fourth year students in college department of the Assumption College of Davao. Hence the researchers used universal sampling. There were 17 BEED, 41 BSED, 25 BSHRM, 30 BSIT, 6 BSWAND 72 BSBA. They were chosen as the respondents because of their enough exposure to the department; therefore they can already discern and come up with a good judgment on the instruments used in this study.

### Research Instrument

There were two instruments used in this study namely; 21<sup>st</sup> century skills of teachers (Ravitz, 2014) and self-efficacy of students (Muris, 2001). The said instruments were modified by the researchers to fit in to the purpose of the study and were subjected to the validation of the experts. A pilot testing using 30 respondents of the same characteristics of the subjects to be used in this study followed after the validation of the experts. After having all these processes, revisions and modifications of some of the items in the questionnaires were done. After incorporating the corrections, comments, and suggestions of the validators, the final questionnaires were prepared and made ready for administration. The instruments were piloted to establish the Cronbach alpha reliability yielding to 0.91. The final form of the questionnaires were constructed which consist of fifty items for independent variable and twenty four items for the dependent variable.

The researchers used the Likert Scale as the basis in determining the level of the 21<sup>st</sup> century skills of teachers and the self-efficacy of college students. According to Encyclopedia Britannica (2007), the Likert Scale requires individuals to tick in the box in response to a large number of items, an attitude, object or stimulus.

### Results and Discussions

The data collated from the respondents are presented and discussed in this section based on the objectives raised in the previous section. The specific topics discussed in this study include determining the level of the 21<sup>st</sup> century skills of teachers of Assumption College of Davao; describing the level of self-efficacy

of college students of Assumption of Davao; ascertaining the significant relationship between the 21<sup>st</sup> century skills of teachers and self-efficacy of college students; and determining the domain of the 21<sup>st</sup> century skills of teachers that significantly predict the self-efficacy of college students.

### Level of 21<sup>st</sup> Century Skills of Teachers

Shown in Table 1 are the mean scores of the parameters for 21<sup>st</sup> century skills of teachers which are critical thinking skills, creative and innovative skills, self-direction skills, global connections, local connections, and using technology as a tool for learning.

**Critical Thinking Skills.** The respondents describe their teachers' level of critical thinking skills as high based on the mean score of 4.02. This indicates ability of the teachers to make clear and reasoned judgment concerning classroom practices. In particular, these teachers

**Table 1**

Level of the 21<sup>st</sup> Century Skills of Teachers

Indicator	SD	Mean	Descriptive Level
Critical Thinking Skills	0.53	4.02	High
Collaboration Skills	0.57	4.17	High
Communication Skills	0.53	4.11	High
Creativity and Innovation Skills	0.57	4.08	High
Self-Direction Skills	0.55	3.93	High
Global Connections	0.71	3.91	High
Local Connections	0.66	3.93	High
Using Technology as a Tool for Learning	0.71	4.02	High
<b>OVERALL</b>	<b>0.46</b>	<b>4.02</b>	<b>High</b>

are capable of comparing information from different sources before they complete the tasks, they draw conclusions based on facts or evidences, and they make analysis or interpretation according to what they read or understood, they analyze instructional problems to solve them, and they develop a pervasive argument based on supporting evidence or reason.

This means that the teachers demonstrate ability to think clearly and rationally about what to do or what to believe on things that are related to the job of teaching. It also implies that the teachers display their ability to engage in reflective and independent thinking to objectively respond to the needs of their students. The finding of the study is related to what (Little, 2016) averred, that someone with critical thinking skills is able to understand the logical connections between ideas, identify, construct and evaluate arguments, detect inconsistencies and common mistakes in reasoning, solve problems systematically, identify the relevance and importance of ideas and reflect on the justification of one's own beliefs and values.

**Collaboration Skills.** The responses of the respondents on collaboration skills generated a mean score of 4.17 described as high level. This indicates willingness of the teachers to utilize the knowledge, experience and skills of other teachers who are involved in providing educational services to students. These teachers work in pairs or groups to complete the tasks together, they work with other students to effectively achieve instructional goals, they create joint products contributed by the group members, they present their group work to others, they work as a team to incorporate feedback on group tasks, and they give feedback to peers to improve performances in school.

The data indicate that the teachers promote collaborative decisions and actions in the workplace which add values on how the group of teachers looks at their teaching career. The high level of teachers' collaboration skills also indicates that they are satisfied with their work and are happy while performing their teaching job. This claim is in consonance with what Boyer (2015) said, that collaboration brings meaning and adds value to the way team members perceive their job. Because of this, they feel good about what they do. The sense of team

spirit is felt most strongly when victories can be shared. Employees are more likely to continue working for a business longer when they have strong ties with the people they work with and feel that they are a part of something important.

**Communication Skills.** The respondents describe their teachers' level of communication skill as high whose computed mean value is 4.11. This indicates ability of the teachers to structure data for use in written products or oral presentations, ability to convey the teachers' ideas using media such as video, posters, blogs and other means when presenting or discussing their lessons to students. The data further show that the teachers demonstrate willingness to deliver or share their knowledge and skills to their co-employees, they display willingness to answer questions to clarify students' doubts, and better communication skill is evident among the respondents.

The analysis of the data also indicates that the teachers are used to articulate their thoughts or insights to others for better understanding of information. In the classroom, the teachers do not only say the lessons to the students, they provide a lot of audio-visual materials to motivate students to learn and to ensure better learning experiences of students. These teachers believe that effective communication in the workplace or classroom is important to make things clear. This idea is related to what Owens (2014) said, that communication skills are needed to exchange information, persuade, or explain something. With effective communication skills, everyone in the workplace is given the chance to interact with one another.

**Creativity and Innovation Skills.** The itemized responses of the respondents as shown in the appended table resulted to a mean score of 4.08 or high level. This means that the teachers express their creativity and innovation through having a brainstorming or concept mapping when introducing the lessons where everyone in a class is given the chance to express his/her ideas or thought about the concept, these teachers are able to generate ideas on how to solve problems, they display ability in testing out different ideas to improve them, and they create solutions to problems related to instruction. This indicates that the teachers demonstrate capability of conceiving something original or unusual in the class and they implement them to make their learning interventions more effective to students.

The high level of the teachers' creativity and innovation implies willingness to have a favorable impact on the learning behaviors of their students. Since students are exposed to creative and innovative teachers, they are likely to increase their level of motivation towards studies. This further indicates greater propensity that the students will also be more determined in their studies since they find their learning interesting and enjoyable with their teachers who implement new teaching approaches, methods and techniques appropriate to their learning styles, motivation and interest. It is furthermore noticed in the study that the teachers possess important leadership quality as instructional leaders since they have displayed high level of creativity and innovation in addressing the learning needs of the students. This claim is similar to the research finding of 1,500 chief executive officers worldwide which identified creativity and innovation as the most important leadership quality of the future Linnenbrink, E. and Pintrich, P. (2002).

**Self-Direction Skills.** The responses of the respondents on self-direction skills indicator generated a mean score of 3.93 or high level. This means that the teachers take initiative when confronted with difficult problems, they spend time for planning in accomplishing a complex task, they choose whatever is considered better instructional resources, they monitor their own progress, they assess their work performance based on criteria, and they use feedback from other individuals to improve their work. This indicates that the teachers display high level of work independence, thus they are said to be able to handle things or whatever instructional problems on their own. Furthermore they are secured with who they are and what they believe in as teachers.

The high level of the teachers' self-direction skills indicates that they have the ability to make decisions concerning classroom practices for the good of students. This idea is supported by Hunter (2016) who pointed out that teaching requires making and implementing decisions, before, during, and after instruction to increase the probability of learning. If what a teacher does is consonant with what is now known about cause-effect relationships in learning, and if that teacher's decisions and actions reflect awareness of the current state of the learner and the present environment, then learning will predictably increase.

**Global Connections.** The mean score for global connection parameter is 3.91 described as high level. This means that the teachers are concerned about cultures and other information from other countries, they use information of people from other countries, they discuss global issues like climate change, global warming, global market economy and others, they understand cultural differences across countries, and they reflect on how their own experiences connected with the global issues. This indicates that they are interested with the

cultures of other people and they would want to relate these cultures to their own practice of the teaching profession.

It is also evident that they are concerned with the global issues believing that they and their students are part of the said issues. The said teachers find them important to integrate their lessons with the global issues to improve their understanding on how these issues affect their work efficiency and life. It is also indicated in the study that they recognize the need to understand global classroom issues, practices or cultures because students need relevant learning and because classrooms are now increasingly diverse, thus teachers need to be aware on these issues. This idea is related to what Obama (2015) said, that individuals who learn about global issues are more than twice as likely to see the importance of personally taking social action. Global learning encourages awareness and critical thinking about issues such as poverty, climate change, religious and cultural differences, world trade and politics.

**Local Connections.** Computations yield a mean score of 3.93 or high level for local connection indicator. This means the teachers investigate topics or issues relevant to their family and community, they apply what they learned to the local situations, they analyze the views of different stakeholders of the school, and they show willingness to respond on issues related to family and community. This indicates that they are highly aware on their cultures and the practices of the community where they belong. This means better understanding of the respondents on the importance of knowing one's own culture and the diverse cultures of the classroom to appropriately respond to the individual learning needs in the class.

The high level of the teachers' local connections indicates that they keep on projecting their values with others which is considered helpful in establishing better relationship with the people in the community especially the parents who are considered partners in the education of the learners. This is related to what Thiederman (2016) said that awareness of one's own culture is important, because it can keep him/her from projecting his/her values onto others. By projecting, it means the universal tendency to think that other people are doing something for the same reasons they would. This can happen when people are unaware of the values that drive them and unable to distinguish them from those held by other cultures.

**Using Technology as a Tool for Learning.** The responses of the respondents on using technology as a tool for learning generated got a mean value of 4.02 or high level. This means that the teachers use technology or internet for learning, they select technology tools that are appropriate to their learners, they evaluate the credibility and relevance of the technology used, they utilize technology to analyze information, they share information to students using technology, they encourage teamwork and collaboration in the use of technology, they use technology to interact directly with experts or members in the local or global communities, and they utilize technology to keep track of their work on extended tasks or assignments. This means that they extensively use technology in the class to increase learning motivation and improve learning among students.

The high level of technological use in the classroom implies that the teachers are equipped with the knowledge and skills on how to use technology in the classroom. This also means better understanding of the respondents on the necessity of using technology when presenting lessons to students. These teachers believe that using technology reinforces their lessons making them more understandable and interesting to students, thus students are more likely to involve highly during the learning process. This finding is similar to the research finding that 74% of teachers agree that technology enables them to reinforce their lessons. Curriculums, learning trends, and student engagement can rise or fall on the basis of teacher support. Technology in the classroom would never flourish without the support of the instructors, and an overwhelming percentage of teachers are eager to use even more technology in the classrooms (Medrano, 2015).

On the whole, the teachers are equipped with the 21<sup>st</sup> century skills which are essential in providing quality educational services to students. In particular, these teachers demonstrate critical thinking skills, they collaborate with students and other employees, they are properly communicated with the present trends and information related to the practice of the teaching profession, they are creative and innovative in providing teaching practices, they can work independently and can make better decisions with their own, they are concerned with the global issues, they are highly aware of their cultures and the culture of their students in the class, and they extensively use technology as a tool for learning.

The high level of the teachers' 21<sup>st</sup> century skills indicates that they are ready to provide relevant education to meet the challenges and opportunities of today's world. This means that the teachers are capable of translating their knowledge and skills to students to make them successful both in work and real-life situations which is related to what Crowser (2008) emphasized, that 21<sup>st</sup> century individuals must have the ability to manage and adapt the complexity of real life.

**Level of Self-Efficacy of College Students**

One important variable of the study is self-efficacy of college students measured in terms of academic self-efficacy, social self-efficacy and emotional self-efficacy as indicators, data of which are shown in Table 2. The data of these indicators are presented and discussed below.

**Academic Self-Efficacy.** The responses of the respondents on academic self-efficacy generated a mean score of 3.82 described as high level. This means that the students ask for help from others when they are stuck with school work, they can still find time to study even if they are tasked with other interesting thing to do, they find time to study their lessons, they finish their daily homework, they pay attention during class discussions, they demonstrate understanding of the daily lessons presented by their teachers, they make their parents satisfied with their schoolwork performance, and they pass in the test.

The analysis of the data shows that the students have a high level of academic self-efficacy indicating that they display desirable attitude towards academics through engaging in various activities in the school.

**Table 2**

Level of Self-Efficacy Of College Students

Indicator	SD	Mean	Descriptive Level
Academic Self-Efficacy	0.63	3.82	High
Social Self-Efficacy	0.61	3.94	High
Emotional Self-Efficacy	0.59	3.92	High
<b>OVERALL</b>	<b>0.52</b>	<b>3.89</b>	<b>High</b>

The data also indicate that the students are very much concerned with their academics thus, they are willing to seek assistance from others in time of difficulties and they are capable of managing their time to perform their responsibilities in school. The said students find time to study and do their daily homework to comply all the requirements required in their subject. It is also evident that the students are academically determined to perform their responsibilities to pass the subjects and to make feel better with their academic standing.

Data show that the students highly believed about their ability and capacity to accomplish academic tasks or to deal with the challenges related to academics. It can be inferred that the high level of the respondents' academic self-efficacy helps them to perform various responsibilities in school to ensure better academic performance. This claim is related to what Bandura (1997) said, that self-efficacy is an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments. Self-efficacy reflects confidence in the ability to exert control over one's own motivation, behavior, and social environment. These cognitive self-evaluations influence all manner of human experience, including the goals for which people strive, the amount of energy expended toward goal achievement, and likelihood of attaining particular levels of behavioral performance.

**Social Self-Efficacy.** The students' social self-efficacy level is described as high with a mean score of 3.94. This means high level of students' ability to express their opinions when their classmates disagree with them, they make friends with others, they can talk with unfamiliar persons, they can work harmoniously with others, they are willing to give advices to others who do not do good in school, they play jokes with others, they treasure their friends, and they try their best to preserve the friendships among students by avoiding quarrels.

The analysis of the data indicates that the respondents establish favorable relationship with other people and they find enjoyment with having friends. This also indicates that the students are highly capable of dealing with the behaviors of the group members. The ability of the students to associate with others helps them to become more engaged in class activities and they become more responsible towards performing schoolwork. This claim is in consonance with the idea of Milteer, Ginsburg and Mulligan (2012) who averred that engaging in peer relationships can help students improve their social skills, increase school engagement, and help them create a positive outlook about school, the relationships formed, and the learning process. The development of communication based social skills that focus on conflict resolution and coping mechanisms help children succeed in peer relationships, and improve the likelihood of a positive school trajectory.

**Emotional Self-Efficacy.** The responses of the respondents concerning students' efficacy level resulted to a mean score of 3.92 or high. This means that the students feel successful in cheering themselves up when

unpleasant events happened, they succeed in becoming calm when they are scared, they are able to regulate their feelings, they can give a pep-talk when they feel low, they share their feelings with their friends, they are able to suppress unpleasant thoughts, and they succeed in not worrying about things that may happen. This indicates that the students understand their own feelings and the feelings of other people, hence, they can easily regulate their emotions or feelings when confronted with problems.

The data cited above further indicate that the students are emotionally matured individuals, they find joy and satisfaction in life, and they are capable of dealing with situations in a composed and rational way. This claim is in consonance with what Kelley (2015) said that when people are emotionally matured, they are able to extract more joy and satisfaction from life. Emotionally matured people are better able to respond to the ebbs and flows of life. They enjoy the good times but they do not get carried away with them. Also, when they experience bad times, being emotionally matured allows them to deal with the situation in a calmer, more rational way. Rather than react dramatically, the emotionally matured person calmly determines the correct course of action and with a few gentle changes, the situation is dealt with.

### Correlation between Measures

Shown in Table 3 are the results of the correlation between 21<sup>st</sup> century skills of teachers and self-efficacy of college students. Computations yield r-value of 0.436 and p-value of zero or significant for the correlation between critical thinking skills of teachers and self-efficacy of students, r-value of 0.434 and p-value of zero or significant for collaboration skills versus self-efficacy, r-value of 0.446 and p-value of zero or significant for the communication skills of teachers versus self-efficacy of students, r-value of 0.542 and p-value of zero for creativity and innovation skills versus self-efficacy, r-value of 0.590 and p-value of zero or significant for self-direction versus self-efficacy, r-value of 0.494 and p-value of zero or significant for global directions versus self-efficacy, r-value of 0.439 and p-value of zero or significant for local connections versus self-efficacy, r-value of 0.544 and p-value of zero for using technology as a tool for learning versus self-efficacy, and the correlation between overall 21<sup>st</sup> century skills of teachers and overall self-efficacy of college students yields r-value of 0.653 with an associated probability of zero or significant.

The analysis of the data implies that the ability of teachers to make clear and reasoned judgment about the activities in the class helps their students to believe in their capacity to perform better in the class. These teachers used to collaborate with other individuals in the school and these behaviors made the students feel that they can do better in the class as they are assured with support from their teachers. This claim is related to what Onuigbo et al (2016) research findings that collaborative instructional strategy significantly enhances the academic self-efficacy belief of students.

It is also established in the study that the ability of the teachers to convey their ideas using media such as video, posters, blogs and other means when presenting or discussing their lessons favorably influences their students' willingness to perform highly in the class, making them more confident of their potentials. This is in consonance with what Ozkan and Dalli (2016) found, that there is a positive significant correlation between the teachers' communication skills and the self-efficacy levels of their students. The data further imply that being creative and innovative, and having the ability to make decisions concerning classroom practices have strengthened the students' motivations towards learning which eventually contributed to the high level of students' belief of performing various tasks in schools.

**Table 3**

*Significance of the Relationship between the 21<sup>st</sup> Century Skills of Teachers and Self-Efficacy of College Students*

21 <sup>st</sup> Century Skills	Self-Efficacy			
	Academic Self-Efficacy	Social Self-Efficacy	Emotion Self-Efficacy	Overall
Critical Thinking Skills	.345** (.000)	.445** (.000)	.333** (.000)	<b>.436** (.000)</b>
Collaboration Skills	.364** (.000)	.452** (.000)	.328** (.000)	<b>.434** (.000)</b>
Communication Skills	.372** (.000)	.422** (.000)	.356** (.000)	<b>.446** (.000)</b>
Creativity and Innovations Skills	.461** (.000)	.492** (.000)	.446** (.000)	<b>.542** (.000)</b>
Self-Direction Skills	.473** (.000)	.537** (.000)	.512** (.000)	<b>.590** (.000)</b>

Global Connections	.339** (.000)	.474** (.000)	.466** (.000)	<b>.494** (.000)</b>
Local Connections	.310** (.000)	.411** (.000)	.414** (.000)	<b>.439** (.000)</b>
Using Technology as a Tool for Learning	.387** (.000)	.554** (.000)	.464** (.000)	<b>.544** (.000)</b>
<b>Overall</b>	<b>.503** (.000)</b>	<b>.626** (.000)</b>	<b>.556** (.000)</b>	<b>.653** (.000)</b>

In addition, the teachers' attitude of being connected globally and locally increases students' understanding on the importance of integrating their lessons with the global issues which encourage them to believe on their potentials that they can contribute something for the betterment of the global and local communities. Furthermore, the use of technology as a tool for learning gives students an opportunity to think that they can learn better as they are continuously exposed to technology which serves as a vehicle for favorable learning experiences of students. This finding is similar to what Murphy (2016) found that one learning strategy that can be implemented throughout the curriculum that can help students succeed in their lessons is the use of technology in the pedagogy of the classroom.

On the whole, the research found significant relationship between 21<sup>st</sup> century skills of teachers and self-efficacy of college students. This implies that the teachers' broad set of knowledge, skills, work habits, and character traits which are critically important to success in today's world have favorable impact on students. These students tend to believe on their potentials to perform better in academics since they are exposed to the 21<sup>st</sup> century learning environment. This finding is supported by Beers (2015) who averred that the 21<sup>st</sup> century skills do not only contribute to a well-prepared workforce of the future but also give all individuals life skills that help them succeed which eventually increases the likelihood of believing on their capacity to function better in the society.

#### Linear Regression Analysis of 21<sup>st</sup> Century Skills of Teachers and Self-Efficacy of College Students

Table 4 presents the regression coefficients to test the significant influence of the overall 21<sup>st</sup> century skills of teachers on self-efficacy of college students. Using the Simple Linear Regression, the data reveal F-ratio of 17.744 and  $p < 0.001$  or significant. This means that the 21<sup>st</sup> century skills of teachers significantly influence students' self-efficacy. The  $R^2$  value of 0.472 implies that 47.2% of the self-efficacy of students was influenced by 21<sup>st</sup> century skills of teachers. It is also presented in the table that critical thinking skill has 0.092 and 0.094 unstandardized and standardized coefficients respectively with t-value of 1.214 and p-value of 0.227 or not significant. The obtained unstandardized and standardized coefficients for collaboration skills are -0.021 and -0.023 respectively with t-value of -273 and p-value of 0.786 or not significant. In addition, communication skill has unstandardized coefficient of 0.009 and standardized coefficient of 0.009 with t-value of 0.108 and p-value of 0.914 or not significant. Creativity and innovations indicator have unstandardized coefficient of 0.183, standardized coefficient of 0.200, t-value of 2.318, and p-value of 0.022 or significant. Self-direction skill has unstandardized coefficient of 0.242 and standardized coefficient of 0.254 with t-value of 2.917 and p-value of 0.004 or significant. The global connections indicator has unstandardized coefficient of 0.045 and standardized coefficient of 0.060, t-value of 0.672 and p-value of 0.503 or not significant. The local connections measure has unstandardized coefficient of 0.015, standardized coefficient of 0.019, t-value of 0.223 and p-value of 0.823 or not significant. Lastly, the unstandardized coefficient of using technology as a tool for learning is 0.191, standardized coefficient of 0.258, t-value of 3.566, and  $p < 0.001$  or significant. The analysis of the data shows that among the parameters of the 21<sup>st</sup> century skills of teachers, creativity and innovative skills, self-direction skills and using technology as a tool for learning significantly influence the self-efficacy level of their students. This implies that being creative or innovative in presenting the lessons will be considered very important in improving understanding of students on the lessons or concepts which eventually make them feel that they can do better in the class. Also, data imply that the use of technology as a tool for learning is beneficial to students' acquisition of knowledge and skills. This gives assurance to students that they can effectively learn on concepts with the aid of technologies like computer, internet and other technological devices.

#### Recommendation

Based on the findings and conclusions, the following recommendations are offered: The teachers may sustain or improve their practices on using the 21<sup>st</sup> century skills in school such as engaging in activities that develop their critical thinking skills, collaboration skills, communication skills, creativity and innovation skills, self-direction skills, global connections, local connections, and using technology as a tool for learning; The

college students can continuously engage in learning activities for them to enhance their potentials in areas of academic, social and emotional efficacy. They should continuously believe that they are capable

**Table 4**

*Significance of the Influence of 21<sup>st</sup> Century Skills of Teachers on the Self-Efficacy of College Students*

21 <sup>st</sup> Century Skills (Indicators)	Self-Efficacy			
	B	B	t	Sig.
Critical Thinking Skills	.092	.094	1.214	.227
Collaboration Skills	-.021	-.023	-.273	.786
Communication Skills	.009	.009	.108	.914
Creativity and Innovations Skills	.183	.200	2.318	.022
Self-Direction Skills	.242	.254	2.917	.004
Global Connections	.045	.060	.672	.503
Local Connections	.015	.019	.223	.823
Using Technology as a Tool for Learning	.191	.258	3.566	.000
R	.687			
R <sup>2</sup>	.472			
F	17.744			
P	.000			

of performing better just like other students; Since 21<sup>st</sup> century skills of teachers significantly relate with the self-efficacy of students, hence the school head may strengthen monitoring activities to ensure that the teachers are continuously engaged in activities in which 21<sup>st</sup> century skills are emphasized or considered; Since creativity and innovations, self-direction skills, and using technology as a tool for learning significantly influence the self-efficacy of students, it is recommended that teachers may consider daily use of technology and multimedia in their classes to ensure meaningful learning and the school administration may conduct professional development trainings to all teachers regarding the use of technology and their significant contributions on students' learning to equip their teachers with the knowledge and skills necessary for effective teaching and learning.

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