



# Self-efficacy and Learning Strategies in the Context of Online Learning

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**Abstract.** Understanding self-efficacy in the context of online learning is vital to improve learning in the new normal way of education, which can be a key component of academic success in distance education. In an academic situation, it can be assumed that learners with high self-efficacy have higher motivation to learn, resulting in higher academic achievements because those learners believe that they can achieve their goals. This study determined the Self-efficacy and Learning Strategies in the Context of Online Learning. The participants of this study were taken from second-year to fourth-year students of Bachelor of Elementary Education (BEd) with a total of 192 learners in Nueva Ecija University of Science and Technology, Sumacab Campus in Cabanatuan City. This study was conducted following a quantitative-descriptive research design. The process involved conducting a survey or questionnaire checklist with a 4-point Likert scale through an online survey platform for the respondents. Stratified random sampling was utilized to select the respondents mentioned. Descriptive statistics were utilized to describe and analyze the characteristics, frequencies, trends, and categories derived from the data collected. The majority of the respondents were second-year students obtaining a general weighted average of 2.00–2.75. The self-efficacy of the students was divided into personal ability, academic performance ability, and emotional ability. The study revealed that the students are confident in their self-efficacy due to dedication and commitment to studying, accomplishing set goals, and developing skills; prefer to understand materials that are challenging for coping with intellectual demands and also for the certainty of an excellent job on assignments and tests in distance learning; and aside from the inability to ask instructions to faculty due to personal reasons, enjoy online classes. Also, it was revealed that in terms of the verbal, non-verbal, and visual strategies of effective learning communication, the students exert effort in practicing materials, reading out notes, charts, and diagrams taken during online classes over and over, and gathering information from different sources to achieve mastery and retention. It was also found that the students' self-efficacy in personal ability does not affect their verbal effective learning strategy, and finally, aside from the mentioned exception, self-efficacy generally relates to the student's verbal, non-verbal, and visual effective learning strategies in the context of online learning.

**Keywords:** Self-efficacy · learning strategies · online learning · the context of online learning

# 1 Introduction

Understanding self-efficacy in online learning is critical to improving online education, which can be a key component of academic success in distance education. Distance learning is more flexible, learner-centered, and autonomous than face-to-face learning; it requires learners to develop effective learning communication strategies. Students who have a strong sense of efficacy are more likely to take on difficult tasks and be intrinsically motivated. These students will work hard to meet their commitments and will attribute failure to factors within their control rather than external factors. In an academic situation, it can be assumed that learners with high self-efficacy have higher motivation to learn, resulting in higher academic achievements because those learners believe that they can achieve their goals (Huang, 2012).

Virtually all people can identify goals they want to accomplish, things they would like to change, and things they would like to achieve. However, most people also realize that putting these plans into action is not quite so simple. Bandura and others have found that an individual's self-efficacy plays a major role in how goals, tasks, and challenges are approached.

The level of motivation is determined by self-efficacy beliefs, which are reflected in the amount of effort expended in an endeavor and the length of time devoted to a difficult situation. People who have low self-efficacy toward a task are less likely to exert effort and complete the task. Research findings have demonstrated that self-efficacy is a better predictor of academic achievement than other cognitive or affective processes. Therefore, self-efficacy is critical to learning and performance. Understanding self-efficacy in online learning is critical to improving online education, which can be a key component of academic success in distance education.

Researchers Art Van Dinther and a few of his colleagues (2011) examined the relationship between education and self-efficacy. In their conclusion, they claim that self-efficacy is related to things like the techniques pupils employ, the objectives they set for themselves, and their academic success. To put it another way, higher levels of self-efficacy are linked to what is generally seen as positive student life patterns. This implies that folks with higher levels of self-efficacy may perform better academically and be more organized.

It is in the above context that the researchers were prompted to conduct this study to determine the Self-Efficacy and Learning Strategies in the Context of Online Learning.

## 1.1 Statement of the Problem

The purpose of this study was to identify Self-efficacy and Learning Strategies in the Context of Online Learning among Bachelor of Elementary Education students.

It specifically sought to answer the following questions:

1. How can the student's profile be described in terms of;
  - 1.1 Year level; and
  - 1.2 General Weighted Average
2. How can the level of self-efficacy be described in terms of:
  - 2.1 personal ability;

- 2.2 academic performance ability; and
- 2.3 emotional ability
3. How can effective learning communication strategies be described in terms of;
  - 3.1 verbal;
  - 3.2 non-verbal; and
  - 3.3 visual
4. Is there a significant relationship between self-efficacy and learning strategies for effective learning communication in the context of online learning for Bachelor of Elementary Education students?

## **2 Methodology**

### **2.1 Research Design**

This study was conducted following a quantitative method. Quantitative research focuses on numeric, unchanging data and detailed, convergent reasoning rather than divergent reasoning.

This research study is a descriptive one. McCombes (2020) stated that the descriptive method of research design can use a wide variety of research methods to investigate one or more variables. It is an appropriate choice when the research aim is to identify characteristics, frequencies, trends, and categories. The process involved conducting a survey or questionnaire through online to the respondents, selecting data collection techniques, collecting of data, and using the appropriate statistical analysis of the data.

### **2.2 Participants**

The research participants of this study were taken through stratified random sampling from the Second Year to Fourth Year students of Bachelor of Elementary Education (BEEEd) at the College of Education with a total of 192 learners in Nueva Ecija University of Science and Technology.

### **2.3 Instrument**

The survey questionnaire used in this study was a research-made questionnaire that is composed of two (2) parts. PART I focused on the Self-Efficacy of Bachelor of Elementary Education (BEEEd) students which includes: personal ability, academic ability, and emotional ability, and PART II focused on the effective strategies of learning communication, divided into three terms; verbal, non-verbal, and visual. This survey questionnaire was minimally revised for contextualization. To determine the instrument's reliability, the revised survey questionnaire was administered for pilot testing to a group of students, equivalent to the actual participants, and to determine also the consistency of their responses, the internal consistency method, Cronbach alpha was used to compute the reliability coefficients of 0.90.

### 2.4 Data Analysis

The following statistical tool was utilized to analyze the data.

Frequency and percentage were used to analyze the profile of the respondents.

Mean was used as a statistical tool to determine the level of self-efficacy and learning strategies for effective learning communication in the context of online learning of the student using the FBSLG. Four-point Likert scale was used with its corresponding verbal description:

3.26–4.00 – Strongly Agree

2.51–3.25 – Agree

1.76–2.50 – Disagree

1.00–1.75 – Strongly Disagree

Pearson-r moment correlation was conducted to examine the significant relationship between self-efficacy and learning strategies of the respondents.

### 2.5 Ethical Consideration

In conducting this research, ethical concerns were taken into consideration. The involved participants’ permission was requested in the first section of the online survey thru Google Form, along with information about the study’s objectives. It was made clear that even if they participated, their identities would be kept confidential after the responses were analyzed as per the Data Privacy Act of 2012. Each class section’s representative received a link to the online survey for simple distribution. For taking part in the study, the participants got no incentives.

## 3 Results and Discussions

### 3.1 Academic Profile of the Respondents

The majority of BEEd students—139, or 72.40 percent—were in their second year, followed by 39 third-year and 14 fourth-year students, respectively (Table 1).

The figure shows that majority of the respondents were in the second year. Wilson M., Christopher M., & Jessica M. (2018) stated that participation in higher education in the Philippines has, without question, expanded strongly in recent years. The gross tertiary

**Table 1.** Year Level of Respondents

<b>Year Level</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Second Year</b>	139	72.40%
<b>Third Year</b>	39	20.31%
<b>Fourth Year</b>	14	7.29%
<b>Total</b>	<b>192</b>	<b>100%</b>

**Table 2.** General Weighted Average of Respondents

<b>GWA</b>	<b>Frequency</b>	<b>Percentage</b>
<b>1.00–1.75</b>	48	25%
<b>2.00–2.75</b>	141	73.44%
<b>3.00–5.00</b>	3	1.56%
<b>Total</b>	<b>192</b>	<b>100%</b>

enrollment rate increased from 27.5 percent in 2005 to 35.7 percent in 2014, while the total number of students enrolled in tertiary education grew from 2.2 million in 1999 to 4.1 million in 2015/16. Filipino experts have noted that the number of graduates from higher education programs has recently “exceeded expectations.” The bold decision of President Duterte in 2017 to make education at state universities and colleges tuition-free may help to further boost enrollments, even though critics contend that the costly move will sap the public budget while providing few discernible social benefits. According to the Commission on Higher Education (CHED) due to the implementation of the K+12 Curriculum, there are an increased number of students who are enrolled in the second year compared to the higher year in the year 2018–2019 (Table 2).

One hundred forty-one (141), or 73.44%, of the 192 respondents had a GWA between 2.0 and 2.75. 48 (25%) had a GWA between 1 and 1.75, whereas 3 (1.56%) had a GWA between 3 and 5.00.

The majority of respondents had a general weighted average of 2.00–2.75, according to the results. According to UP Diliman faculty (2013), the Philippines’ tertiary institutions use a variety of grading schemes. The majority of universities [including institutes and colleges], especially public ones, use the 5.00–1.00 grade point scale, where 1.00 is the highest grade available and 5.00 is the lowest. The general weight serves as an evaluation tool and is a representation—often numerical—of pupils’ overall academic standing. GWA is based on the grades in all subjects taken at a particular level including subjects taken outside of the curriculum.

### **3.2 Distance Learning Self Efficacy Scale**

#### **Personal Ability**

The following item statements on personal ability in the level of self-efficacy were described as “agree” by the respondents: “Once I’ve decided to accomplish something important to me, I keep trying to accomplish it, even if it is harder than I thought,” (wm3.20); “I am confident that I achieve the goals that I set for myself,” (wm3.19); “If I study every day, I could develop just about my skills,” (wm3.02); “I can figure out anything if I try hard enough,” (wm3.01), and “I can learn what is being taught in class this year” (wm2.66) (Table 3).

The finding shows that the majority of the respondent gave the highest level of agreeableness on the item statement once they have decided to accomplish something important to them, they keep trying to accomplish it, even if it is harder than they thought.

**Table 3.** Weighted Mean (WM) and Verbal Description (VD) of Personal Ability

<b>Personal Ability</b>	<b>WM</b>	<b>VD</b>
1. I can learn what is being taught in class this year.	2.66	Agree
2. I can figure out anything if I try hard enough.	3.01	Agree
3. If I study every day, I could develop just about my skills.	3.02	Agree
4. Once I've decided to accomplish something important to me, I keep trying to accomplish it, even if it is harder than I thought.	3.20	Agree
5. I am confident that I achieve the goals that I set for myself.	3.19	Agree
<b>Average Weighted Mean</b>	<b>3.02</b>	<b>Agree</b>

Elias (2019) stated that I learned that quote from Wendy Beth Rosen’s Self-Smart. Taking it seriously, Wendy suggests some areas where students’ —and adults’ —self-assessments can lead to greater accomplishments and personal satisfaction. Many distractions and challenges in our lives threaten to throw us off our path or keep us from knowing what our path is. Setting explicit goals for success and tracking our progress toward them is a way to increase our chances of finding the success we hope for.

Furthermore, respondents least “agree” with personal ability in the item statement “I can learn what is being taught in class this year.” The findings indicate that the least of the respondents are confident in their learning in an online class. University of Illinois Springfield (2021) stated that there are many reasons why online programs have become a popular form of distance learning in higher education today. The online environment provides unprecedented opportunities for people who would otherwise have limited access to education, as well as a new paradigm for educators in which dynamic courses of the highest quality can be developed.

The finding shows that the respondents “agree” on the level of self-efficacy in terms of personal ability in distance learning. According to Bunn (2004), although goal attainment is a powerful motivator for online students, daily personal resolve and determination contribute significantly to persistence. Students who have high personal expectations and self-efficacy as well as those who enjoy the challenge of online learning will also tend to be more persistent. Students who have an internal locus of control are more likely to persist. These characteristics may encourage the student to participate more in class, ask probing questions, and work constructively through problems (Table 4).

**Academic Performance Ability**

The following item statements on academic performance ability in the level of academic self-efficacy were described as “agree” by the respondents: “In distance learning, I prefer course material that challenges me so I can learn new things,” (wm2.75); “I can cope up with the intellectual demands in distance learning,” (wm2.62); “I can do an excellent job on the assignments and tests in the distance,” (wm2.59), and “I’m certain I can understand the most difficult material presented in distance learning,” (wm2.58).

Findings indicate that the respondents in distance learning prefer course material that truly challenges them to learn new things. According to Erin Walton (2021), it’s not

**Table 4.** Weighted Mean (WM) and Verbal Description (VD) of Academic Performance Ability

<b>Academic Performance Ability</b>	<b>WM</b>	<b>VD</b>
<b>1.</b> I am certain I can understand the most difficult material presented in distance learning.	2.58	Agree
<b>2.</b> I can do an excellent job on the assignments and tests in distance learning.	2.59	Agree
<b>3.</b> I can cope with the intellectual demands of distance learning	2.62	Agree
<b>4.</b> In distance learning, I prefer course material that challenges me so I can learn new things.	2.75	Agree
<b>5.</b> It is easy for me to follow/catch up on the lessons in distance learning.	2.39	Disagree
<b>Average Weighted Mean</b>	<b>2.59</b>	<b>Agree</b>

so great in the classroom - neither for you nor your students. The opposite is true: the call of a challenge can incites, enliven, and add to the act of learning and teaching.

In addition to this, Responsive Classroom.org (2021) stated that children were experiencing “struggle” as they worked, and seemed happier, and even more focused, on it. At their core, great teachers hope to instill skills and strategies that will empower students to thrive in their schooling (and life). We impart soliloquies about the importance of “grit” and the power of “growth mindsets,” in the hopes that these keys to lifelong learning will manifest in our students.

Kohn (2014), added Learning by doing, a common shorthand for the idea that active participation helps students to understand ideas or acquire skills, is an established principle of progressive education. Much less attention, however, has been paid to the complementary possibility that teachers are most effective when they show rather than just tell.

However, the item statement that was described as “disagree” by the respondents was “It is easy for me to follow/catch up on the lessons in distance learning” (wm2.39).

Findings show that the respondents had a difficulty in following the lessons through distance learning. According to the University of Illinois Springfield (2021), the main advantage of asynchronous online learning is that it allows students to participate in high-quality learning situations when distance and schedule make on-ground learning difficult to impossible. Students can participate in classes from anywhere in the world, provided they have a computer and Internet connection. In addition, the online format allows physically challenged students (and teachers) more freedom to participate in class.

The finding shows that the respondents “agree” on the level of self-efficacy in terms of academic performance ability in distance learning. Wu, Tennyson, and Hsia (2010) have suggested that, according to the social cognitive theory, encouraging students’ interaction and the use of interactive tools leads to an increase in the students’ satisfaction with blended learning. Constructive dialogues and interactive activities have been shown to encourage a deep approach to learning (Kember, McNaught, Chong, Lam, & Cheng, 2010). Moreover, Ginns and Ellis (2007) have suggested that a deep approach to learning is directly related to the student’s interaction in learning. The students’ interactive

**Table 5.** Weighted Mean (WM) and Verbal Description (VD) of Emotional Ability

<b>Emotional Ability</b>	<b>WM</b>	<b>VD</b>
1. I am confident when I go to the online class.	2.69	Agree
2. I enjoy being in <i>online classes</i> .	2.38	Disagree
3. I have an optimistic view toward studying distance learning.	2.70	Agree
4. I enjoy acquiring new knowledge.	3.04	Agree
5. I feel shy to ask the instructor.	3.17	Agree
<b>Average Weighted Mean</b>	<b>2.80</b>	<b>Agree</b>

usage of the learning management systems affects the students’ achievement (Mijatovic, Cudanov, Jednak, & Kadijevich, 2013).

Students use different kinds of learning strategies to reach the same goal: gaining academic success. Which learning strategies are most beneficial and which strategies are detrimental to academic success has been widely investigated over the past three decades (for meta-analyses, see Credé & Phillips, 2011; Richardson, Abraham, & Bond, 2012) (Table 5).

**Emotional Ability**

The following item statements on emotional ability in the level of academic self-efficacy were described as “agree” by the respondents: “I feel shy to ask the instructor,” (wm3.17); “I enjoy acquiring new knowledge,” (wm3.04); “I have an optimistic view toward studying in distance learning” (wm2.70), “I am confident when I go to the online class.,” (wm2.69), and “I enjoy being in *the online class*,” (wm2.38).

Findings indicate that in distance learning, the respondents feel shy to ask the instructor. According to Alex Case (2012), all teachers have experienced students who have questions about the class or their homework but don’t ask even when given the opportunity and the same can be true for whole classes. Reasons, why they might be reluctant to ask questions, are mainly connected to shyness, language problems, relevance, and the teacher’s and students’ roles.

In addition to this, Gerritsen (2018), stated that all my colleagues like to talk to students. Sometimes, we cannot, at least not straight away, because of other commitments. When a student is a bit nervous, an “I cannot talk to you right now” can feel like a rejection, particularly when the professor is a bit preoccupied.

Mary Batt (2011) added Encouraging students to participate can be tricky when it comes to the kid who seems to actively avoid speaking up. I know I find it to be especially complicated when the student who never raises their hand has the most insightful, compelling ideas to share when I meet with them one-on-one. I had one student, Vanessa, who barely spoke at the beginning of the year, even though I knew she had a lot to share. I wanted to figure out how to get her to participate more. But putting a shy, introverted kid on the spot in class, begging them to participate, can be traumatic and most likely won’t achieve the outcome you’re looking for.



On the other hand, the item statement that was described as “disagree” by the respondents was “I enjoy being in *the online class*” (wm2.38).

Findings show that respondents in online classes seem to least enjoy it. Vicky Phillips (2021) stated that Online learning degrees don’t always come with the snazziest or most user-friendly web-based courses. **Creating a great online learning course takes time, money, and talent in user interface and aesthetic design alike – things some universities may not be quite willing to splurge on.** Online students are noticing problems in the overall quality of course materials and the integration of instructional materials with testing protocols. “Where’s my professor?” is the most frequent and vitreous complaint when it comes to the context of online learning. **Students sometimes feel online learning is impersonal, isolating, and non-interactive.** They sometimes feel their online teachers are not particularly interested in either them or the instructional process.

The finding shows that the respondents “agree” on the level of self-efficacy in terms of emotional ability in distance learning. According to Garrison, Anderson, & Archer, (2001) interaction in online learning environments has been found to have a close positive relationship with students’ higher order thinking and cognitive learning outcomes. Interaction between people, defined as dialogue, facilitates deep and reflective learning to achieve learning goals in social learning environments, which functions as a decisive factor in decreasing transactional distance.

### 3.3 Strategies for Effective Learning Communication in Distance Learning

#### Verbal Strategies

The following item statements on verbal strategies in the level of academic self-efficacy were described as “agree” by the respondents: “When I study in an online class, I practice the material to myself over and over,” (wm3. 08); “I read faster,” (wm2. 99); “I prefer to read instructions about how to do something rather than have someone show me.” (wm2.98), and “When studying for an online class, I read my class notes and the course

**Table 6.** Weighted Mean (WM) and Verbal Description (VD) on Verbal

Verbal	WM	VD
1. When I study in the online class, I practice the material to myself over and over.	3.08	Agree
2. When studying for an online class, I read my class notes and the course readings over and over again.	2.97	Agree
3. I enjoy doing schoolwork that requires the use of words.	3.01	Agree
5. I read faster.	2.99	Agree
5. I prefer to read instructions about how to do something rather than have someone show me.	2.98	Agree
<b>Average weighted mean</b>	<b>3.00</b>	<b>Agree</b>

readings over and over again,” (wm2. 97). Findings show that as the majority of the respondent’s study in an online class, they practice the material to themselves over and over. According to Jeffrey Karpicke (2011) in his research that it sits at the interface between cognitive science and education to identify effective strategies that promote long-term learning and comprehension (Table 6).

Specifically, recent work has shown that retrieval is critical for robust, durable, long-term learning. Perhaps most surprisingly, practicing retrieval has been shown to produce more learning than engaging in other effective encoding techniques (Karpicke & Blunt, 2011). Findings show that the least of the respondents agree that when they study in an online class, they often read the class notes and the course readings over and over again. The finding shows that the respondents “agree with” verbal communication in terms of strategies for distance learning (Table 7).

**Non-verbal Strategies**

The following item statements on non-verbal strategies in the level of academic self-efficacy were described as “agree” by the respondents: “I usually study in a place where I can concentrate on my course work,” (wm3. 14); “When I study in an organized place, then I will be able to learn the material in the course in an online class,” (wm3. 07); “My posture changes depending on the difficulty of my performance task,” (wm3. 01); “During the online class, I am only silently listening and does not speak,” (wm2. 99), and “When I study in an online class, I make up questions to help focus my reading,” (wm2. 93). Findings indicate that in distance learning, the respondents usually study in a place where they can concentrate on their course work. Demsey (2020) stated that studying is tough. Whether you’re a veteran student getting a Ph.D. or someone starting high school, figuring out how to stay focused while studying is a challenge that we all face. Whether your biggest challenge is social media, procrastination, time management, or a combination of all three, we’ve got a variety of tools and techniques that can help minimize the stress of studying and keep you focused on what matters.

Finding where you work best is an essential part of any successful studying session.

Findings indicate that the least “agree” with the item-statement in distance learning, the respondents, when they study in an online class, they make up questions to help focus their reading. Findings indicate that the least agree with the item-statement in distance

**Table 7.** Weighted Mean (WM) and Verbal Description (VD) of Non-Verbal

<b>Non-Verbal</b>	<b>WM</b>	<b>VD</b>
1. When I study in an organized place, then I will be able to learn the material in the course in an online class.	3.07	Agree
2. I usually study in a place where I can concentrate on my coursework.	3.14	Agree
3. My posture changes depending on the difficulty of my performance task.	3.01	Agree
4. When I study in an online class, I make up questions to help focus my reading.	2.93	Agree
5. During the online class, I am only silently listening and do not speak.	2.99	Agree
<b>Average weighted mean</b>	<b>3.03</b>	<b>Agree</b>

learning, the respondents, when they study in an online class, they make up questions to help focus their reading. Terada (2020) stated that in a virtual classroom, much of this information is lost. Does a student look confused because they do not understand the material or because they cannot figure out how to unmute themselves in Zoom? Is eye contact meaningful when there's no way to tell if the student is watching funny videos instead? If a student cannot hear the teacher, a simple, "speak up" would not solve anything unless a few seconds are spent determining the source of the problem. There are additional limitations to online environments.

Teachers cannot pace around the room to glance at student work and check progress. The finding shows that the respondents "agree" with non-verbal communication in terms of strategies for effective learning in the context of online learning. According to Littlejohn & Foss (2009), despite the prevailing belief that nonverbal communication is absent from online courses, a quick investigation of the terms "body language," "paralanguage," and "nonverbal" reveals the underlying reason behind this misconception (Table 8).

### Visual Strategies

The following item statements on visual strategies in the level of academic self-efficacy were described as "agree" by the respondents: "When I study for an online class, I pull together information from different sources, such as lectures, readings, and discussions," (wm3. 11); "When I study for an online class I prefer to learn more when there are pictures and images in the screen," (wm3. 07); "I make lists of important terms in the course and memorize the lists," (wm3. 02); "When I study the course in an online class, I go through my class notes and try to find the most important ideas," (wm2.90), and "I make simple charts, diagrams, or tables to help me organize course material," (wm2. 74). Findings show that in online learning, the respondents pull together the information from different sources, such as lectures, readings, and discussions. Kevin Yee (2020) states that techniques have multiple benefits: the instructor can easily and quickly assess if students have mastered the material (and plan to dedicate more time to it, if necessary), and the process of measuring student understanding in many cases is also practice for

**Table 8.** Weighted Mean (WM) and Verbal Description (VD) of Visual

Visual	WM	VD
1. When I study for an online class I prefer to learn more when there are pictures and images on the screen.	3.07	Agree
2. I make lists of important terms in the course and memorize the lists.	3.02	Agree
3. I make simple charts, diagrams, or tables to help me organize course material.	2.74	Agree
4. When I study the course in an online class, I go through my class notes and try to find the most important ideas.	2.90	Agree
5. When I study for an online class, I pull together information from different sources, such as lectures, readings, and discussions.	3.11	Agree
<b>Average weighted mean</b>	<b>2.97</b>	<b>Agree</b>

the material—often students do not learn the material until asked to make use of it in assessments such as these.

The item statement “I make simple charts, diagrams, or tables to help me organize course material” (wm2. 74). Findings show that in online learning, it is very time-consuming to make charts and graphs. According to Enotes.com (2021), graphs and charts provide major benefits. First, they can quickly provide information related to trends and comparisons by allowing for a global view of the data. It also allows members of the audience who may be less versed in numerical analysis to follow the information and understand the presentation more fully. Secondly, graphs and charts provide a visual version of data, which can be helpful for visual learners.

The major disadvantage of using charts and graphs is that these aids may oversimplify data, which can provide a misleading view of the data. Finally, it is important to use the correct chart and/or graph when presenting information, though this can be difficult to identify for ambiguous data. In addition to this, Reference.com (2020) stated graphs and charts are visual aids that allow you to convey data and statistics to your audience during a presentation.

The finding shows that the respondents “agree” with the visual strategies in terms of learning strategies in the context of online learning.

### 3.4 Relationship Between Self-efficacy and Learning Strategies of Students

The table shows the significant relationship between the self-efficacy (personal ability, academic performance ability, and emotional ability) and learning strategies (verbal, nonverbal, and visual) of the respondents (Table 9).

The data reveals that the personal ability of the respondents is significantly related to their nonverbal ( $r = 0.234$ ) and visual strategies ( $r = 0.285$ ).

**Table 9.** Relationship between Self-Efficacy and Learning Strategies of Students.

Correlations		Verbal	Non-verbal	Visual
<b>Personal</b>	Pearson Correlation	-.017	.234*	.285*
	Sig. (2-tailed)	.813	.001	.000
	N	192	192	192
<b>Academic</b>	Pearson Correlation	.053	.211*	.144*
	Sig. (2-tailed)	.466	.003	.046
	N	192	192	192
<b>Emotional</b>	Pearson Correlation	.218*	.233*	.172*
	Sig. (2-tailed)	.002	.001	.017
	N	192	192	192

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

As to personal ability and non-verbal strategies, based on the responses gathered from the students, their ability and non-verbal strategies are interrelated with one another. The students described this interrelation with their ability in executing a performance task through distance learning by finding a perfect place to focus and concentrate on studying.

As to personal ability and visual strategies, based on the responses gathered from the students, their ability and visual strategies are interrelated with one another. The students described this interrelation with their ability in studying through distance learning by skimming the lesson ahead of time to be able to follow the lesson.

The data reveal that academic performance ability is significantly related, to nonverbal ( $r = 0.211$ ), and visual ( $r = 0.144$ ) strategies.

As to academic performance ability and non-verbal strategies, based on the responses gathered from the students, their academic performance ability and non-verbal strategies are interrelated with one another. The students described this interrelation with their ability in understanding the lesson through distance learning by making up questions that are related to the lesson to help them to focus on studying.

As to academic performance ability and visual strategies, based on the responses gathered from the students, their academic performance ability and visual strategies are interrelated with one another. The students described this interrelation with their ability in coping up to the intellectual demand of distance learning by memorizing keywords in the lessons to remind them of the important concepts.

The data reveal that the emotional ability is significantly related to verbal ( $r = 0.218$ ), nonverbal ( $r = 0.233$ ), and visual ( $r = 0.172$ ).

As to emotional ability and verbal strategies, based on the responses gathered from the students, their emotional ability and visual strategies are interrelated with one another. The students described this interrelation with their ability to enjoy distance learning and performing task that is new to them.

As to emotional ability and non-verbal strategies, based on the responses gathered from the students, their emotional ability and non-verbal strategies are interrelated with one another. The students described this interrelation with their ability because they enjoy acquiring new knowledge in distance learning by making sure that they keep up with the weekly readings and assignments for the courses.

As to emotional ability and visual strategies, based on the responses gathered from the students, their emotional ability and visual strategies are interrelated with one another. The students described this interrelation with their ability to be proud of their capacity in distance learning since they are making lists of the important term in the course and memorizing the lists.

## 4 Conclusions

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

1. The majority of the responders, with a weighted average of 2.00–2.75 were BEED second-year students at Nueva Ecija University of Science and Technology, according to the researchers' findings.

2. The researchers conclude that in terms of self-efficacy level in personal ability, the students were determined to accomplish the tasks given to them. Hence, in academic performance ability, the students were being challenged if the tasks are kind a bit hard. Meanwhile, in emotional ability, the students were not confident during online classes because of the feeling of being shy.
3. The researchers then conclude that in terms of strategies for effective learning communication in verbal, the students have shown diligence in terms of their studies. Hence, in non-verbal, the students prefer a silent and quiet place to concentrate on studying. Meanwhile, in visual, the students were organized in terms of their worksheet materials.
4. The researchers then conclude that self-efficacy and learning strategies for effective learning communication were connected and essential for success in the context of online learning.

### **Recommendations**

Based on the findings and conclusion presented, the following recommendations are suggested:

1. The researchers recommend that the Supreme Student Government (SSG) of the College of Education (COED) should initiate peer centered program which will serve as core groups, motivated to help and assert the second-year students to improve and elevate the average grade they indicate. The core groups shall focus on academic help and emotional motivation to achieve this goal. The core group should be headed by higher-year students who have sufficient experience to share.
2. The researchers recommend the students through the help of SSG or PEER Group shall initiate meetings with the faculty to seek assistance for extra consultation hours for students who are struggling in understanding lessons, especially during this time of the pandemic.
3. The researchers recommend that students should give extra effort to make learning more fun and enjoyable for them despite the new environment of education which is online or distance learning like scheduling to 2–3 h studying every day except for their class hours. It might improve their learning skills or capabilities and make them more advanced in their lessons.
4. The researchers recommend the academic communities of the College of Education (COED) can give more training and seminars that focus on self-efficacy during this time of pandemic to improve the ability of students to cope with the online classes, especially now for there are still no definite answers on when the pandemic will end. These seminars and training shall be incorporated with even more strategies for effective learning because self-efficacy and learning strategies for effective learning complement each other for the success of online learning.

**Acknowledgments.** The researchers would like to express their deepest gratitude to Dr. Angelica O. Cortez, the Dean of the College of Education, NEUST, for sharing her pearls of wisdom during this research, and also, to all the participants who willingly and actively engaged in this research endeavor.

**Authors' Contributions.** Adigue, A.P., Tumacder, J.O., and Urbano, J.M. contributed to the design and implementation of the research, the analysis of the results, and the writing of the manuscript.

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