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The effect of online learning self-efficacy of senior high school students on their academic motivation

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ABSTRACT

The COVID-19 situation challenged the education system across the world and forced educators to shift to an online mode of teaching overnight. Several suggestions for academic institutions have been laid out to deal with the challenges. The study examined the effect of online learning self-efficacy on the academic motivation of senior high school students from Divine Word College of Laoag. The literature was reviewed to deepen the concept and establish the theories of the study, Descriptive assessment, and correlational research design were utilized. The respondents were senior high school students. The data was gathered using validated research questionnaires. Results showed that the online learning self-efficacy and the academic motivation of the students were high. Moreover, a significant relationship was found between online learning self-efficacy and the academic performance of senior high school students.

Introduction

During the COVID-19 pandemic, where face-to-face learning was impossible, online learning was the primary choice. This was delivered through different modalities such as social media platforms, self-learning modules, and virtual classrooms. Not everyone was ready to take the challenge including students and teachers. Learning how to deliver lessons through different online modalities was not easy for the faculty and students. Accessibility to the internet and financial capability were the common problems added to online learning. These concerns became serious tests for the stress tolerance of

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students, teachers, and school administrators. Several reports show that many students commit suicide due to online classes and modules as explained in the Philippine Star Report, Daily Guardian (Cervantes 2020, Pendon, 2021). The study of Balachandran, (2020) supported this claim, as pointed out by the study of Philip (2021) emphasized that suicide occurs worldwide as evident in his study on the increasing rates of school children committing suicide. The Covid-19 pandemic brought about challenges in physical, psychosocial, and psychological well-being.

For example, attending online classes while haunted by fear, distress, anxiety, depression, and other psychiatric disorders (Philip, 2021) can be disturbing and can affect their capability and motivation to pursue their study (Nell, et.al, 2020). This study, therefore, found out if students perceived themselves to be motivated and capable of pursuing their online studies amid the pandemic.

Its objective was to provide the school management with essential information to help motivate students pursue their studies despite the situation. Giving attention to students' problems and providing some advice to them may help reduce their anxiety and motivate them to study. A challenge posed to all school administrators is to provide services that ease anxieties and inspire hope for the students.

This study is divided into several parts. The first part is the introduction that explains the background of the study and its purpose. The literature review comes next, which investigates concepts of the previous studies related to the current study. This in turn establishes the theories as a basis for the investigation. Coming in third is the research methodology, which includes research design, population, the locale of the study, research instruments, data gathering procedure, and statistical treatment. The fourth part consists of the data presentation and analysis. The final part discusses further the finding of the study and its conclusion.

Literature review

The purpose of the literature review is to deepen the understanding of the current study by investigating different works of related literature. Reading previous discussions help the researcher to establish theories that support the investigation. The discussion on this part will be arranged thematically according to the topic of the study.

Online learning and its advantages and disadvantages

The current pandemic made online businesses become popular. This made it cheaper and more convenient for many people. In the same manner, the pandemic also made online education popular (Sarkar, 2020). Online learning is defined as the education process through the internet (Stern, n.d). It is also called e-learning which is another type of distance teaching (Stern, n.d). It is delivered electronically through several social media platforms. They are termed as e-learning, web-based learning, or internet-based learning (Madison & Kumaran, 2017).

Historically, e-learning started a long time ago. Though the term “e-learning" is a new term, slide projectors and television-based classes already started in the 1950s in the USA. The University of Illinois and their students begun learning from computer terminals that were interconnected to form a network before internet was discovered. Subsequently, in 1984, University of Toronto opened a degree course online followed by the University of Phoenix in 1986. The Universities established what is called an "Electronic University Network" in which the computers were interlinked. In the 1990s, the world had the first Open University in Britain to offer distance learning (Sarkar, 2020). It is a form of education that is

delivered through the assistance of technology to facilitate the interaction between teachers and students due to physical distance (Samson, & Berg, 2016). Originally it targeted those who were busy with their work and could not attend a face-to-face classroom interaction. It has several types which included correspondence course that was offered through regular mail with limited interaction. Another type is called telecourses, where the content is delivered through radio or television broadcasts. CD-ROM Course was another type that interacts with static computer content, while internet-base is offered synchronously or asynchronously. The final type was mobile learning which was offered through cellular phones or iPods (Stern, n.d). Among these types of distance learning, the most popular was online learning.

The pandemic makes this type of learning convenient, easier, and affordable for students, teachers, and school administrators. The interest in online learning has been growing which covers all levels of education from elementary to graduate programs and is dominated by higher education (Glisson & Secovnie, 2017, Lee & Tettegah, 2016, Means & Roschelle, 2010). The growing interest is accompanied by the pros and cons of online learning. Reviewing these is necessary as they may have certain relations with increasing suicide among students among Marc (2000) pointed out that one of its advantages is its focus on the individual student's need, an important element of the education process. Smedley (2010) added flexibility and place of deliver cording to learning information. As Wagner, et.al (2008) emphasized that it eliminates the barrier that prevents students from talking to other learners which consequently improves the learning environment. While Codone, (2001), Amer, (2007), Klein and Ware, (2003) stated that the-learning allows self-pacing. They take the example of asynchronous learning which allows students to study at one's own pace. This can help improve their learning engagement and reduce stress. Rabah (2005) agreeably mentioned that e-learning can help students finish their studies in a shorter period.

Besides its advantages, it also recognizes its disadvantages as clarified by several researchers. For example, Young, (1997), and Burdman, (1998) indicated the total absence of vital personal interaction between learners and instructors. Collins et al. (1997), Klein and Ware, (2003); Hameed et al, (2008), Almosa, (2002), Akkoyuklu & Soylu, (2006), Lewis, (2000), Scott et al. (1999), and Marc, (2002) highlighted that online learning can bring some problems particularly lack interaction between students and teachers, rampant cheating and plagiarism, the declining role of the administration and the teachers as facilitators of the teaching-learning process, lack of laboratory exercises related to courses that need experiments such as medical sciences, congestion or heavy traffic on the website which cause slow internet access, and the lack of financial resources for efficient connectivity.

Self-efficacy theory and online learning self-efficacy

Bandura (1977) coined the concept of self-efficacy as a self-belief or personal judgment over one's capacity to perform or to succeed in a situation. He defined self-efficacy as "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1995, p. 2). It concerns the individual self- belief in one's ability to succeed in each situation (Lee & Wilder, 2017). Based on the definition of Bandura (1977), different authors have formulated their definition of self-efficacy as Stronge and Xu (2015) defined self-efficacy as "the belief in one's ability to accomplish intended outcomes". Or Walsh (2011), cited from Eachus, and Cassidy, (1997) defined it as "an individual's belief in having the required skills to perform a given task". After Bandura (1977) published his seminal article entitled, "Self-Efficacy: Toward a Unifying Theory of Behavioral Change", then this concept was a prominent construct for many scholars and researchers. Over the years, studies on the effect of self- efficacy on human functioning are not just limited to psychology, but it has been extended to other

fields such as management, education, medicine, athletics, social, and political change (Artino, 2012). Many types of research have been done to measure the effect of self-efficacy on the different aspects of human life. For example, Kolbe (2009) found that self-efficacy helps people persevere and achieve their objectives in life. Possessing high self-efficacy helps overcome any obstacles that block the achievement of goals. Kalicinski and Lobinger (2016) also discovered that self-efficacy has a potential influence on imagery outcome. It helps motivate people to achieve their dreams. Schunk and DiBenedetto (2016) clarified that self-efficacy is a source of motivation to achieve different outcomes and self- regulation. In other words, self-efficacy influences the behavior of a person to achieve their goals in life. Having self-efficacy helps people get engaged in a specific task (Anderman & Gray, 2015) and achieve a specified level of performance (Diefendorff & Seaton, 2015).

Bandura identified several sources of self-efficacy which are past mastery experience, vicarious experience, social persuasion, emotional and physiological state, and imaginal experience/visualization (Lopez-Garrido, 2020). Past mastery experience boosts the self-confidence of doing it again. Vicarious experience is related to the experience of others who have been one's role models in life. While emotional and physiological states influence the self-belief of being able to perform a certain task. Lastly, imaginal experience pertains to visualizing one's self as performing successfully in a particular task. It is noted that self-efficacy is not something innate but is based on experience and social environment.

Moreover, online learning as self-efficacy refers to the students' judgment or self-belief in their capability to successfully perform online classes (Yavuzalp & Bahcivan, 2019). It involves their self-assessment of how well they can successfully carry out activities in online learning (Zimmerman, 1995). Zimmerman and Kulikowich (2016) found that students with high online learning self-efficacy are more likely to succeed. Measuring online learning self- efficacy, however, can be difficult because there is no common agreement on the dimensions to measure it. Thus, online learning self-efficacy can be related to many different elements such as students' judgment of their capability to use online technologies, internet self-efficacy, information-seeking self-efficacy, computer self-efficacy, and learning management self-efficacy (Yavuzalp & Bahcivan, 2019). One study related to online learning self-efficacy was developed by Miltiadou and Yu (2000) and it is called Online Technologies Self-Efficacy Survey Scale. This focused on technology self-efficacy such as internet competencies, and synchronous and asynchronous interactions. Zimmerman and Kulikowich (2016) emphasized that such technology is one of the important aspects of an online class, therefore, one must know the related technology. Other researchers measure online learning self-efficacy which encompasses other than technical aspects as Shen, Cho, Tsai, and Marra (2013) measure students' online learning self-efficacy to complete an online course, to interact socially with their classmates for academic purposes, to use a course management system, and to interact with the instructors. While Zimmerman and Kulikowich (2016) developed a scale, which is called OLSES ocusesonly on three dimensions namely: learning in the online environment, time management, and technology use.

This study used the OLSES scale and its dimensions (Zimmerman and Kilikowich, 2016) to measure the online learning self-efficacy of students. This included students' capability to navigate online course materials, communicate with instructors through email, manage time effectively and complete assignment on time, and use new types of technology (Zimmerman & Kulikowich, 2016).

Motivation and academic motivation

Usher & Morris, (2012) define motivation as "a process responsible for the initiation, intensity, and persistence of behavior". It is something that causes a certain level of behavior. The causes of motivation

can be biological, psychological, and environmental which means that the body, brain, mid, material incentives or goals d the world around us contribute to motivation. Everyone moves into action by the push of biological and psychological needs, incentives, or a situation (Souders, 2020). Thus, employees are motivated by money (Griffin, et.al. 2010). Take Abraham Maslow as one of the examples concerning the source of motivation with his five hierarchy needs as motives to fulfill them. Another one is McClelland, wherein he classified motives into achievement, affiliation, and power which are driven intrinsically and extrinsically (Souders, 2020). One's behavior is motivated by inner desire and external demands. In such a case, self-actualization and achievement can be categorized as either intrinsic or extrinsic motivation.

Different researchers have discussed motivation from their theoretical perspectives. For example, Skinner (1978) discussed it from a behavioral perspective, Bandura (1997) fr social, cognitive, and humanistic perspectives. While Maslow (1943) and McClelland (1961) identified a content perspective. On one hand, intrinsic motivation refers to what comes from within the person enjoying the task. On the other hand, extrinsic motivation is explained as when one p forms a task because of certain rewards such as popularity, power, wealth, fame, etc. ((Alan, 2019; Trevino & DeFreitas, 2014). The self-determination theory of motivation (Deci, 1971; Deci and Ryan, 1985; Ryan and Deci, 2000) is achieved when people are motivated by the need to grow and gain fulfillment (Cherry, 2021). These needs are intrinsic. To grow, people need to fulfill needs such as autonomy, competence, and relatedness. These are the motivating factors that drive behavior (Cherry, 2021). In terms of autonomy need, people need to be in control of their life, their work, and their decision, without external influence. While competence need motivates people to gain mastery of certain skills and lastly relatedness needs to motivate people to be associated with or related to certain people or groups. The concept of motivation of self-determination theory has been applied to different fields such as parenting, work, exercise, health, and education (Cherry, 2021).

The main concern of the academic motivation of students is to identify their needs to strive and excel in their studies. It relates to the causes of students' behavior to achieve their objectives (Usher & Morris, 2012). It is one of the important sources of power and determination that direct the intensity of behavior to fulfill such needs (Gottfried, 1990).

According to Self-Determination Theory (SDT), their learning engagement is a manifestation of their academic motivation (Koyuncuoğlu, 2021). Their participation in academic activities is one way of fulfilling their hidden needs or psychological needs as Sünbül, Kesici, & Bozgeyikli, (2003a) as cited by Koyuncuoğlu, (2021) asserted that the more they are motivated, the more they engage in activities to satisfy their needs. Their interest or enthusiasm in academic activities can be explained by the concept of academic motivation. It is students' desire which is reflected in their persistence and level of interest to participate in academic endeavors (McClelland, 1953 cited by Olowo et al., 2020; Serhan, 2019)).

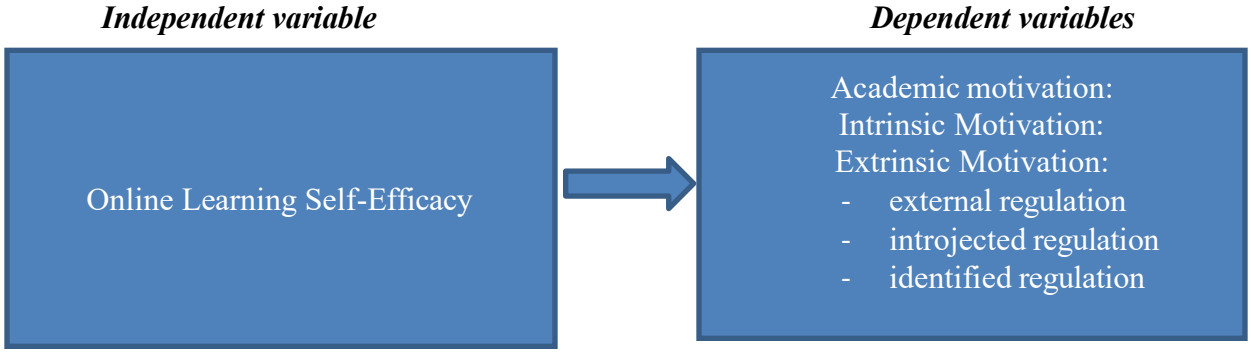
Identifying factors that motivate them to engage in academic activities is necessary. Studies are pointing out different reasons why students actively participate in academic exercises. McInerney and Liem (2008) identified several factors that motivate students to engage in academic activities which are classified as internal and external factors. Internal factors include students' characteristics such as social class, expectations, and students' beliefs such as control, learning, and mastery. While external factors consist of related academic factors such as course, examination, assignment-related characteristics, rewards, and feedback. It also includes social factors such as instructors, family members, peers, and lastly college general environment which is identified as the physical environment, academic associations, internship/volunteer opportunities, extracurricular such as fraternities, and sports participation. While

Vallerand, et.al (1992) discussed academic motivation within the concept of self-determination theory. There are two types of motivation: intrinsic and extrinsic. The needs or factors that motivate students under intrinsic motivation are the need to know, to accomplish things, and to experience stimulation. While extrinsic motivation includes external, introjected, and identified regulation. The extrinsic motivations may include external factors such as family, peers, culture, rewards, that influence the behavior of students. Students participate in academic activities to meet the external demands which have been taken by students to be very important.

Ayub (2010) conducted a study concerning the effect of intrinsic and extrinsic motivations on the academic performance of students. His study found that intrinsic and extrinsic motivations affect the academic performance of students. While the study of Zaccone and Pedrini (2019) identified intrinsic motivation as the only one that affects learning effectiveness. The study stressed that the higher the students' intrinsic motivation, the higher the learning effectiveness becomes and there are gender differences in motivation and academic performance (Naz, et.al. 2020). More studies have been done concerning the positive effect of intrinsic and extrinsic motivation of students on academic performance such as Adamma, et.al (2018), Liu, et.al (2020), Bishop, (2010), and Dev (1997).

The concept of intrinsic and extrinsic motivation and its effect on educational performance have been hot topics for educational researchers to investigate. The Self-determination theory concerning intrinsic and extrinsic motivation has been used to investigate the academic motivation of students. Under the Self-Determination Theory, intrinsic motivation is defined as doing an activity for its inherent satisfaction rather than for other ends or purely for the sake of enjoyment (Deci & Ryan, 2000). Intrinsically motivated activities are not dependent on external pressures but on someone's interest in pleasure or enjoyment. The study of Taylor, et.al (2014) found that intrinsic motivation is significantly correlated to the academic achievement of students. It has been associated with high academic performance. While extrinsic motivation is concerned with behaviors that are motivated externally such as reward and punishment, it is controlled and non-autonomous. One pursues an activity to achieve a separable outcome (Ryan & Deci, 2000). It has multidimensional constructs such as external regulation, introjected regulation, identified regulation, and integrated regulation. External regulation is concerned with behaviors that are externally imposed and because of reward and punishment. Introjected regulation refers to behaviors that are originally external. One pursues activities for internal rewards such as self-esteem, avoidance of anxiety, shame, guilt, or failure. Activities or behaviors are internally controlled. Identified regulation refers to the person who can identify with or personally endorses the value of an activity that motivates the person to do things on his own. A person who has reached identified regulation experiences a high degree of volition or willingness to act (Ryan & Deci, 2020). On one hand, integrated regulation refers to the person who is not only recognizing and identifying with the value of the activity, but finds it congruent with his core interest and values. Integrated regulation becomes autonomous extrinsic motivation, hence, it shares with intrinsic motivation's quality of being highly volitional, but are not based on interest and enjoyment (Ryan & Deci, 2020). On the other hand, integrated motivation sees the value of an activity sans enjoyment. According to Ryan and Deci (2020), autonomous forms of motivation affect students' engagement, learning, and wellness. Since integrated regulation shares similarities with intrinsic motivation, this study investigates the other three dimensions of extrinsic motivation.

Conceptual framework



Source: Zimmerman and Kulikowich (2016), Kenon (n.d). Abun, et al. (2018).

Figure 1: The framework reflects the influence of online learning self-efficacy toward academic motivation of freshmen students of the Divine Word College of Laoag.

Statement of the problems

The study examined the effect of online learning self-efficacy on the academic motivation of freshmen students. It specifically answered the following questions:

1. What is the online learning self-efficacy of freshmen students?
2. What is the academic motivation of students in terms of:
   2.1 intrinsic motivation;
   2.2 extrinsic motivation in terms of external, introjected, and identified regulations?
3. Is there a relationship between online learning self-efficacy and the academic motivation of Senior High School students?

Assumptions

The study assumed that self-efficacy affects the academic motivation of freshmen students and that this can be measured.

Hypothesis

Studies have been conducted concerning the effect of online learning self-efficacy on students' engagement and the results concluded that it affects academic engagement. Based on such findings, the current study hypothesized that online learning self-efficacy correlates to the academic motivation of freshmen students.

Scope and delimitation of the study

The study limited its investigation to the Senior High School students at the Divine College of Laoag (DWCL) and it was delimited to academic motivation along with intrinsic and extrinsic motivations. Under the self-determination theory, there are four elements of extrinsic motivation: external regulation, introjected regulation, identified regulation, and integrated regulation. Since integrated regulation is similar to intrinsic motivation, the study investigates only three external dimensions of extrinsic motivation introjected and identified regulations.

Research methodology

As a general standard for scientific research, it must follow the research methodology. The current research followed a specific method of investigation or research methodology. Wilkinson (2000) and Leedy (1974) opined that research methodology is an established process for conducting the inquiry. It applies certain methods to determine, select, and analyze the data related to the concerned topic. This study then, utilized methods of investigation namely research design, data gathering instruments method, the population of the study, the locale of the study, data gathering procedures, and the statistical treatment of data.

Research design of the study

The research design of the study was descriptive correlational. Ariola (2006) argued that a descriptive correlation study is to determine the relationship among variables without seeking to establish a causal connection. Descriptive research is simply describing a population, a situation, or a phenomenon. It describes profiles, frequency distribution, characteristics of people, and situations or phenomena (McCombes, 2020).

The locale of the study

The locale of the study was the Divine Word College of Laoag. This college is in Laoag City, the capital of Ilocos Norte.

Population

The respondents of the study were the DWCL Senior High School students. Total enumeration sampling was used due to its small population.

Data gathering instruments

The study utilized questionnaires that were adopted from the OLSES of Zimmerman and Kulikowich (2016) and SRQ_A of Kennon (n.d) from the University of Columbia. The questionnaires were distributed to DWCL Senior High School students.

Data gathering procedures

To preserve the integrity of scientific study the questionnaires were distributed only after the President of the college approved them. The researcher sent a letter to the president and after the letter of the request was approved, the questionnaires were distributed by the researcher's representative. After this, they collected the data and submitted it to the researcher for tabulation.

Ethical procedures

This research was conducted after the research ethics committee examined and approved the content without violating ethical standards and without causing harm to human life and the environment.

Statistical treatment of data

To analyze the data, descriptive and inferential statistics were used. The weighted mean was applied to determine the level of online learning self-efficacy, and academic motivation of students. Pearson r Product Moment of Correlation was used to measure the correlation between online learning self-efficacy and academic motivation. The following ranges of values with their descriptive interpretation were used:

Statistical Range	*Descriptive Interpretation*
4.21-5.00	*strongly agree/ Very High*
3.41-4.20	*Agree / High*
2.61-3.40	*somewhat agree/ Moderate*
1.81-2.60	*Disagree/Low*
1.00-1.80	*Strongly disagree/Very Low*

Data presentation and analysis

The data presentation and analysis follow the statement of the problem of the study.

Problem 1: What is the online learning self-efficacy of senior high school students?

Table 1: Online learning self-efficacy of senior high school students (n=204).

Indicators	Weighted Mean	Descriptive Interpretation
1. Navigate online course materials efficiently	3.62	**A**
2. Find the course syllabus online	3.54	**A**
3. Communicate effectively with my instructor via e-mail	3.40	**SWA**
4. Communicate effectively with technical support via live online chat	3.71	**A**
5. Submit assignments to an online dropbox	3.78	**A**
6. Overcome technical difficulties on my own	3.41	**A**
7. Navigate the online grade book	3.36	**SWA**
8. Manage time effectively	3.75	**A**
9. Complete all assignments on time	4.14	**A**
10.. Learn to use a new type of technology efficiently	3.86	**A**
11. Learn without being in the same room as the instructor	3.29	**SWA**
12. Learn without being in the same room as other students	3.28	**SWA**
13. Search the Internet to find the answer to a course-related question	3.43	**A**
14. Search the online course materials	3.62	**A**
15. Meet deadlines with very few reminders	3.45	**A**
16. Complete a group project entirely online	3.39	**SWA**
17. Use synchronous technology to communicate with others	3.94	**A**
18. Focus on schoolwork when faced with distractions	3.32	**SWA**
19. Develop and follow a plan for completing all required work on time	3.82	**A**
20 Use the library's online resources efficiently	3.39	**SWA**
21. When a problem arises, promptly ask questions in the appropriate forum (e- mail, discussion board, etc	3.66	**A**
Overall Mean	**3.58**	**A**

Source: Zimmerman and Kulikowich (2016), Kennon (n.d).

Legend:

Range of Mean Values	*Descriptive Interpretation*
4.21-5.00	*Strongly Agree/ Very High*

3.41-4.20	*Agree / High*
2.61-3.40	*Somewhat Agree/ Moderate*
1.81-2.60	*Disagree/Low*
1.00-1.80	*Strongly Disagree/Very Low*

Based on the data available, it shows that overall the online learning self-efficacy of the senior high school students obtained an overall mean rating of 3.58 which is considered "agree or high". The online learning self-efficacy of the students is high which means that they have the online learning capability. They can navigate online course materials, find resources online, overcome technical difficulties, communicate effectively with instructors and friends online, manage time and complete assignments on time, find the answer to course-related questions and use synchronous technology to communicate with others.

However, students also indicate that their online learning self-efficacy along with navigating the online grade book and learning without being in the same room with the teacher and other students is moderate. This suggests that online learning ability is to a moderate extent only. A recent study by Fulgencio, et al (2021) suggests that online learning self-efficacy affects the academic motivation of students. This is supported by the study of Chang, et al (2014) which concurs that online learning self-efficacy of students, both male and female, affects their academic motivation. The study underscores that the students who have high internet self-efficacy outperformed the students who have low ones.

Problem 2: What is the academic motivation of students in terms of:

2.1 Intrinsic motivation;

2.2 Extrinsic motivation in terms of external regulation, introjected regulation, and

2.3 identified regulation?

Table 2: Academic motivation

Academic motivation	***Weighted mean***	***Descriptive Interpretation***
***A. Intrinsic* motivation**		
I do my homework because it's fun	3.32	***SWA***
I do my homework because I enjoy doing homework	3.34	***SWA***
I do my classwork because I enjoy doing my classwork	3.41	***A***
I try to answer hard questions in class because I enjoy answering hard questions	3.06	***SWA***
I try to answer hard questions in class because it is fun to answer hard questions.	3.04	***SWA***
I try to do well in school because I enjoy doing schoolwork well.	3.62	***A***
Composite Mean	3.30	***SWA***
B. Extrinsic motivation		
B.1: External regulation		
I do my homework because I will get in trouble if I don't	3.91	***SWA***
I do my homework because that is what I'm supposed to do	4.25	***A***
I do my classwork so that teacher won't yell at me	3.34	***SWA***
I do my classwork because that's the rule	3.96	***A***
I try to answer hard questions in class because that's what I am supposed	3.46	***A***

to do		
I try to answer hard questions in class because I want the teacher to say nice things about me	3.07	***SWA***
I try to do well in school because that's what I am supposed to do	4.06	***A***
I try to do well in school because I will get in trouble if I don't do well.	3.73	***A***
I try to do well in school because I might get a reward if I do well	3.66	***A***
Sub-Mean	**3.72**	***A***
B.2: Introjected regulation		
I do my homework because I want the teacher to think I'm a good student	3.38	***SWA***
I do my homework because I feel bad about myself if I don't do it	4.26	***A***
I do my classwork because I want the teacher to think I'm a good student	3.34	***SWA***
I do my classwork because I'll be ashamed of myself if I didn't get done.	4.00	***A***
I try to answer hard questions in class because I want other students to think I'm smart	2.61	***SWA***
I try to answer hard questions in class because I feel ashamed of myself when I don't try	3.50	***A***
I try to do well in school so that my teacher will think I'm a good student.	3.20	***SWA***
I try to do well in school because I feel really bad about myself if I don't do well	3.94	***A***
I try to do well in school because I feel proud of myself if I do well	4.20	***A***
Sub-Mean	**3.60**	***A***
B.3: Identified regulation		
I do my homework because I want to understand the subjects	4.14	***A***
I do my homework because it is important to me to do homework	4.17	***A***
I do my classwork because I want to learn new things	4.08	***A***
I do my classwork because it's important to me to work on my classwork.	4.07	***A***
I try to answer hard questions in class to find out if I'm right or wrong	3.72	***A***
I try to answer hard questions in class because it is important to me to try to answer hard questions in class	3.59	***A***
I try to do well in school because it's important to me to try to do well in the school	4.08	***A***
Sub.Mean	**3.98**	***A***
Composite Mean	**3.76**	***A***
Academic Motivation Overall Mean	**3.53**	***A***

Source: Abun, et al (2018).

As indicated by the data in the table, it reveals that the academic motivation of the students obtained an overall mean rating of 3.53 which is considered "agree or high". This indicates that students have high academic motivation. However, when the academic motivation is taken singly, then the result shows that intrinsic motivation obtained a composite mean of 3.30 which is interpreted as "somewhat agree or moderate". Comparing the extrinsic academic motivation along the three dimensions namely external regulation, introjected regulation, and identified regulation, this obtained the sub-mean ratings of 3.72, 3.60, and 3.98 respectively, interpreted as "agree or high". This also suggests that the extrinsic academic motivation of students is high with a composite mean of 3.76. This demonstrates that the extrinsic academic motivation of students is higher than intrinsic academic motivation. This implies that the

academic motivation of students is influenced more by external factors than the enjoyment of study itself. They are motivated to achieve high academic performance because they expect something from others like praise from teachers, parents, or classmates, they are compelled to do it because of rules, or they want to understand more about the subject. Therefore, they do not enjoy studying. Chiefele (1991) explained that intrinsic academic motivation is an inner force that motivates students to engage in academic activities as they are interested in the learning process. While extrinsic academic motivation refers to students' learning engagement influenced by external reasons (Schiefele, (1991). Studies have been conducted on the effect of motivation on academic performance namely Adamma, et al. (2018), Ghaonta (2017), and Ayub (2010). They found a significant correlation between academic motivation and academic performance, while there was a gender difference in motivation.

Problem 3. Is there a relationship between online learning self-efficacy and the academic motivation of senior high school students?

Table 3. Coefficients of correlation obtained on the test of relationships between online learning self-efficacy and the academic motivation of senior high school students (n=204)

Academic motivation		Online learning self-efficacy
A. Intrinsic Motivation	r	**.418****
	(Sig. 2-tailed)	.000
B. **Extrinsic Motivation**		
1. External Regulation	r	.132
	(Sig. 2-tailed)	.060
2. Introjected Regulation	r	**.257****
	(Sig. 2-tailed)	.000
3. Identified Regulation	r	**.387****
	(Sig. 3-tailed)	.000

* Significant at .05 level of significance (2-tailed)
** Significant at .01 level of significance (2-tailed)
Source: SPSS Software.

Online learning self-efficacy and intrinsic motivation of the students

The online learning self-efficacy and the academic motivation in terms of intrinsic motivation of the Senior High School students were significantly and positively related at a .01 level of significance (r=.418).

The positive relationship denotes that as the online learning self-efficacy of the Senior High School students increases their academic motivation, in terms of their intrinsic motivation, increases. Therefore, the variations observed in the academic intrinsic motivation of the respondents are attributed to the differences in their online learning self-efficacy. Hence, the online learning self-efficacy of Senior High School students is a correlate of their academic intrinsic motivation.

Online learning self-efficacy and extrinsic motivation of the students

The test of relationships between the online learning self-efficacy and the extrinsic motivation of the Senior High School students in terms of introjected regulation (r=.257), and identified regulation (r=.387) indicated that positive significant relationships at .01 level of significance exist between the variables

tested.

The direct relationships signified that a unit increase in the Senior High School students online learning self-efficacy results in a corresponding unit increase in their academic extrinsic motivation in terms of introjected and identified regulations. Furthermore, the differences observed in the ratings exhibited by the Senior High School students along these variables are due to the differences in their online learning self-efficacy. Hence, the online learning self-efficacy of the respondents is a correlate of their academic extrinsic motivations in terms of introjected and identified regulations.

However, the correlation analysis revealed that the online learning self-efficacy and the academic extrinsic motivation of Senior High School students in terms of external regulation are not significantly related (r=.132). This indicates that the online learning self-efficacy of Senior High School students is not a correlate of their academic extrinsic motivation to external regulation. Nevertheless, the variations observed in the academic extrinsic motivation in terms of external regulation of the students are not caused by their online learning self-efficacy. Hence, the differences noted in the students' extrinsic motivation as to external regulation are due to chance only.

Results and discussion

The result of the study leads to a deeper discussion on the effect of online learning self-efficacy on the academic motivation of students. A positive increase in online learning self-efficacy affects the intrinsic and extrinsic academic motivation of students. This finding suggests that developing the academic motivation of students during the pandemic requires the management or the school administrators to help the students develop their capability to navigate courses online. In this regard, training in computer and internet self-efficacy must be conducted. Other studies have shown the results that computer self-efficacy affects students' academic engagement (Wolverton, et al, (2020) and their intrinsic motivation (Li, et al., 2017). This is also supported by the study of Chiung, et al. (2013) about the effect of online college students' internet self-efficacy on learning motivation and performance which found that students with higher internet self-efficacy outperformed the students with low internet self-efficacy.

The result of the current study underscores computer and internet self-efficacy concerns to be given much attention by school administrators as recommended by Abun, et al (2021). Notably, wider knowledge of computers and the internet will lead to better learning engagement. Moreover, the management should consider the fact that generation Z youth are digital natives. They can readily use the computer and the internet. Unfortunately, guided by the results of the study, not all students have the same level of computer and internet knowledge which affects their academic motivation, too. Equipping the students with the appropriate computer and internet knowledge will improve their academic performance.

The current study contributes to the discussion on the effect of online learning self-efficacy and academic motivation. There are not many studies on this particular concern. This study help widens views about the role of computer and internet knowledge in self-efficacy, motivation, and performance. and improve motivation and performance. Since the study is limited to the Senior High School Students of the Divine Word College of Laoag, a similar study with a wider coverage may be undertaken.

Conclusions

The study examined the effect of online learning self-efficacy on the academic motivation of senior high

school students. The study found that the students have high online learning self-efficacy and overall academic motivation. In terms of the correlation between online learning self-efficacy and academic motivation, the Pearson r correlation determined a significant correlation between online learning self-efficacy and academic motivation. This suggests that the higher the online learning self-efficacy is, the higher the academic motivation becomes.

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