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## Research Article

### Learning Motivation During COVID-19 Pandemic and the Academic Performance Among Agriculture Students of a State College

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## ABSTRACT

Learning motivation has been known to be a basic determinant of academic achievement, and this can be negatively affected by a disease outbreak and a shift in teaching approach. This study aimed to determine the significant relationships among perception of learning motivation during the COVID-19 pandemic, learning motivation level, and academic performance of Bachelor of Science in Agriculture students of Camiguin Polytechnic State College. It used the explanatory-correlational design with a modified adapted questionnaire as the main data gathering instrument. The data were analyzed using descriptive statistics and Pearson correlation tool in the context of the theories of social learning, protection motivation, operant conditioning, goal-setting, and achievement motivation. Results revealed that respondents perceived their learning motivation during the COVID-19 pandemic as highly enhanced, just as they assessed their learning motivation level as high, although their intrinsic motivation was slightly higher than their extrinsic motivation. The correlation test yielded a significant positive relationship between the respondents' perception of their learning motivation during the pandemic and their intrinsic motivation. However, their learning motivation level had not proven significantly related to their academic performance, and neither had their learning motivation during the pandemic.

**Keywords:** Academic performance, Agriculture students, Learning Motivation

## Introduction

Motivation is a desire to learn, try, work, and persevere. Specifically, a learner's motivation is a learner's desire to participate in the learning process. It is the meaningfulness, value, and benefits that an academic task has to the learner. Motivation is the key to a learner's

school success. It is the driving force behind successful learning. For a learner to be motivated, he/she needs to have a positive attitude towards learning (Gredler et al., 2004). Many factors affect learners' motivation to learn, such as their interest in the subject, their fear of failure, why the information is useful to them, a

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general desire to achieve, their self-esteem, and self-confidence. Along with these factors are external factors, such as disasters or pandemic outbreaks, which could affect learning motivation and lead to a temporary closure of the school.

A global pandemic starting back in March 2020, COVID-19 has disrupted activities across various sectors, including education. Schools all over the world need to change their learning approach to adapt to the new normal we have today to prevent the spread of the virus in local communities and academic populations. In response to this call, the Philippine educational system has embarked on a modular distance learning approach which constitutes the abrupt change from the traditional face-to-face classroom teaching method.

This modular distance learning approach, however, has brought about certain relevant concerns among students in laboratory courses who have projects to be completed. They raise questions about being unable to meet whatever deadlines are set. On the other hand, teachers have raised the issue of poor level of broadband in some areas of the country which could affect learners accessing the learning technology tools, and this could lead to de-motivation. Also, there have been concerns as to whether or not some students have been able to concentrate at home especially if a parent has lost his/her job, or if students have been expected to look after younger siblings while their parents are at work.

The available research, however, has focused on classroom environment contexts, teachers' skills and attitudes, students' self-efficacy, task, value, self-determination, learning motivation, and academic performance. Challenging conditions like the COVID-19 pandemic and the required change in teaching approach to modular distance learning have not yet been taken into account.

This study aimed to determine the learning motivation during the COVID-19 pandemic in relation to the academic performance of Bachelor of Science in Agriculture students in Camiguin Polytechnic State College. Perception on the COVID-19 pandemic was likewise explored to find out its role in learners' learning motivation and academic performance.

This study sought to answer the following questions: (1) What is the perception of grade 5 learner respondents on learning motivation during the COVID-19 pandemic? (2) What is their learning motivation level? (3) What is their academic performance during the school year 2020-2021? (4) Is there a significant relationship between the learner respondents' perception on learning motivation during the COVID-19 pandemic and their learning motivation level? (5) Is there a significant relationship between their learning motivation and academic performance? (6) Is there a significant relationship between the learner respondents' perception on learning motivation during the COVID-19 pandemic and their academic performance?

## Methods

### **Respondents and Sampling Design**

Complete enumeration of all the third year and fourth year BS Agriculture students of Camiguin Polytechnic State College, Tangaro, Catarman, Camiguin who were officially enrolled during the school year (SY) 2020-2021, composed of Animal Science, Crop Science and Agroforestry majors

**Profile of respondents.** One hundred forty-one 3rd year and 4th year BS Agriculture participated in this study as respondents; with males outnumbering the females reflecting the Agriculture program population pattern.

Their parents were in their prime years, with their fathers slightly older than their mothers, at an average of about 44.1 years old and 38 years old, respectively, and with their mothers being better educated than their fathers. Their mothers were mostly high school graduates, while most of their fathers achieved high school-level education.

Prior to the pandemic, the respondents' fathers were mainly engaged in providing labor services, while their mothers did not have gainful work as most of them were non-working housewives. During the pandemic, a slight reduction occurred among their fathers who worked as laborers as some shifted to farming or fishing while others had no job at all. In the case of their mothers, most of them remained non-working wives, while a few engaged in business, in farming, or obtained employment.

### Research Design

This study used the explanatory-correlational research design with questionnaire as the principal data gathering instrument. The questionnaire mainly consisted of close-ended items on perception on COVID-19 pandemic and learning motivation among the respondents.

### Research Instrument

In this study, the questionnaire on learning motivation that Regina M. Shia (2016) developed was adopted with modifications. Three parts comprised the research instrument: part 1 on respondents' demographic profile, part 2 on perceptions on learning motivation during the COVID-19 pandemic, and part 3 on learning motivation level. The learning motivation questionnaire had two sets of questions: (a) intrinsic motivation and (b) extrinsic motivation. The questions were answerable by using a 1-5 point Likert scale, where: 5-means always, 4-means most of the time, 3-means sometimes, 2-means rarely, and 1-means never. The Cronbach's alpha reliability tests of the questionnaire indicated that all the three parts were reliable; part 1 = 0.716, part 2 = 0.852, and part 3 = 0.811.

### Data Gathering Procedure

Because face-to-face was strictly prohibited and the students were allowed to claim the modules in their respective municipal halls, the copies of the questionnaire were distributed together with the modules during the first semester of the school year 2020-2021, as soon as it was approved, validated and passed the reliability test. The questionnaires were retrieved after a week together with the distribution and collection of the modules, which was done weekly. With respect to the respondents'

academic performance during the first semester of the school year 2020-2021, the data were obtained with their consent from the College Registrar.

### Statistical Treatment

The descriptive statistics were used to describe the socio-demographic profile of the respondents, their perception of the learning motivation during the COVID-19 pandemic, motivation level, and academic performance. Pearson's product-moment correlation was used to determine the significant relationship between perception of learning motivation during the COVID-19 pandemic and learning motivation level of the respondents, and between the learning motivation level and academic performance

## Results and Discussion

### *Perception of Learning Motivation During the COVID-19 Pandemic*

In this study, perception of learning motivation (LM) during the COVID-19 pandemic referred to the pattern of learners' cognitive assessment of the risks or scare that the COVID-19 pandemic posed to their life, including their health, studies, future, family, and the entire humanity. The pattern of perception was further described in terms of the level of threat or danger to health, and the level of perceived hindrance to learning motivation.

Indicators of perception of learning motivation were classified as either enhanced or reduced, and were measured on a five-point scale representing a continuum of agreement/disagreement which was translated into a continuum of enhanced/reduced learning motivation, with five as the highest and one as the lowest.

*Table 1. Mean Scores on Perception of Respondents' Learning Motivation During COVID-19*

Category	Average Mean	Qualitative Description	Interpretation
<i>Enhanced Learning Motivation</i>	3.75	<i>Agree</i>	<i>Highly Enhanced</i>
<i>Reduced Learning Motivation</i>	3.58	<i>Agree</i>	<i>Highly Reduced</i>
<b>Total measure</b>	<b>3.86±0.42</b>	<b><i>Agree</i></b>	<b><i>Highly Enhanced/ Reduced</i></b>

Comparing the two categories of perception of learning motivation during the pandemic,

the enhanced learning motivation indicators outweighed the reduced learning motivation

(see Table 1). This implied that respondents' learning motivation was perceived to have increased amidst fear of the COVID-19 disease outbreak and its effect on their learning motivation and the change in teaching approach. This further meant that the pandemic may have been perceived as a challenge to their learning, and to their life as a whole.

### **Learning Motivation Level**

The extent to which a person, specifically a learner desired to acquire knowledge and understanding that would energize, guide and maintain goal-oriented behavior was what was referred to as learning motivation level (Myers, 1995) particularly during the school year 2020-2021. Learning motivation level was examined in terms of two categories of indicators: extrinsic and intrinsic. Extrinsic motivation was a need or desire to perform a behavior or to engage in an activity to earn a reward, or avoid punishment, while intrinsic motivation

meant a desire to perform a behavior for its own sake and to be effective (Myers, 1995). Learning motivation level indicators were measured on a five-point scale where: 5 meant always, 4 meant most of the time, 3 meant sometimes, 2 meant rarely, and 1 meant never.

Table 2 displays the consolidated findings on the learning motivation level of the grade 5 learner respondents. Results showed that both intrinsic and extrinsic motivation indicators were rated "most of the time" or "high" by the learners with mean scores of 3.90 and 3.50, respectively. Looking at their ratings more closely, intrinsic motivation was slightly higher with a mean = 3.9, SD =  $\pm 0.49$  than extrinsic motivation with a mean of 3.50 and SD  $\pm 0.60$ . This finding indicated that most of the respondents were motivated both intrinsically and extrinsically, even in this time of pandemic, although intrinsic motivation was higher than extrinsic

*Table 2. Consolidated Findings on the Learning Motivation Level*

<b>Learning Motivation</b>	<b>Mean <math>\pm</math> SD</b>	<b>Qualitative Description</b>	<b>Interpretation</b>
Intrinsic Motivation	3.90 $\pm$ 0.49	<i>Most of the time</i>	<i>High</i>
Extrinsic Motivation	3.50 $\pm$ 0.60	<i>Most of the time</i>	<i>High</i>
<b>Total Measure</b>	<b>3.70<math>\pm</math>0.48</b>	<b><i>Most of the time</i></b>	<b><i>High</i></b>

### *Academic Performance of Respondents*

By academic performance, it operationally referred to the respondents' academic achievement across academic subjects, particularly during the first semester of the school year 2020-2021. Their overall academic performance during the said period, was satisfactory with an average grade of 2.24 and standard

deviation of 2.41 as shown in Table 3. This result implied that 3 out of every 4 students or three-fourths, had satisfactory performance. This was a category or step lower than their perception of their enhanced learning motivation during the pandemic which was high, and so with their intrinsic and extrinsic learning motivation level which were both high.

*Table 3. Academic Performance of the Respondents During the School Year 2020-2021*

<b>Numerical Grade</b>	<b>Qualitative Description of Academic performance level</b>	<b>Frequency</b>	<b>Percent</b>
<b>1.00-1.25</b>	Outstanding	0	0
<b>1.50-1.75</b>	Very Satisfactory	35	25
<b>2.00-2.25</b>	Satisfactory	106	75
<b>2.50-2.75</b>	Fairly Satisfactory	0	0
<b>Below 3.00</b>	Did not meet the Expectation	0	0
<b>Total</b>		<b>141</b>	<b>100.0</b>
<i>Mean (SD)</i>	<i>2.24 (2.41)</i>		

### **Significant Relationship Between the Learner Respondents' Perception of Learning Motivation during the COVID-19 Pandemic and Learning Motivation level**

Using the Pearson's product-moment correlation test analysis, results as shown in Table 4, registered that it was only the intrinsic motivation that was significantly related to the

learner respondents' perception of learning motivation during the pandemic. This implied that perception of enhanced learning motivation during the pandemic could be accounted for the high intrinsic motivation level of respondents. A positive relationship thus existed between enhanced learning motivation and intrinsic motivation.

*Table 4. Analysis of Pearson's Product-Moment Correlation Test of Significant Relationship Between the Respondents' Perception of Learning Motivation During the COVID-19 Pandemic and their Learning Motivation Level*

Perception of Learning Motivation During the Pandemic (Mean)	Learning Motivation	Correlation Coefficient		Decision	Remarks
		r-value	p-value ( $\alpha \leq 0.01, 0.05$ )		
<b>Enhanced Learning Motivation</b> (3.75 – Highly Enhanced)	<b>Intrinsic</b> (3.9-High)	0.275	0.001	<i>Reject H<sub>0</sub></i>	<b>Significant</b>
<b>Reduced Learning Motivation</b> (3.58 – Highly Reduced)	<b>Extrinsic</b> (3.5-High)	0.074	0.385	<i>Do not Reject H<sub>0</sub></i>	<i>Not Significant</i>
<b>Total Measure</b>		<b>0.186</b>	<b>0.027</b>	<b><i>Reject H<sub>0</sub></i></b>	<b>Significant</b>

This further implied that just as the learners' perceived their learning motivation level during the pandemic as highly enhanced, so did they also assess their intrinsic motivation as high during the pandemic. This meant that perceived enhanced learning motivation may explain away the learners' need or desire to acquire knowledge and understanding for their own sake or to become effective learners.

### **Significant Relationship Between Learning Motivation Level and Academic Performance of Grade V Learner Respondents**

As disclosed in Table 5, results of the analysis of significant relationship between learning motivation level both intrinsic and academic performance using the Pearson's product-moment correlation tool, the learning motivation of the respondents was not significantly correlated with their academic performance ( $r=0.087$ ,  $p=0.304$ ) at 0.05 significance level. Specifically, both the intrinsic and the extrinsic motivations were not significantly related to their academic performance. Both categories of motivations did not contribute significantly to the learners' academic performance.

*Table 5. Analysis of Pearson's Product-Moment Correlation Test of Significant Relationship Between Learning Motivation and Academic Performance of the Respondents*

Learning Motivation	Academic Performance Ave. %	Correlation Coefficient		Decision	Remarks
		r-value	p-value ( $\alpha \leq 0.05$ )		
<b>Intrinsic</b> (3.9-High)		0.080	0.344	<i>Do not Reject H<sub>0</sub></i>	<i>Not Significant</i>
<b>Extrinsic</b> (3.5-High)		0.074	0.385	<i>Do not Reject H<sub>0</sub></i>	<i>Not significant</i>
<b>Total Measure</b>	<b>82.94</b>	<b>0.087</b>	<b>0.304</b>	<b><i>Do not Reject H<sub>0</sub></i></b>	<b><i>Not Significant</i></b>

The findings of this study contradicted the empirical studies conducted by Arbabisarjou et al. (2016) and Yazıcı and Altun (2013) which indicated that intrinsic and extrinsic motivation were positively associated with academic achievement. Moreover, the results of the current study were not consistent with several published tests of the self-determination theory. It must be taken into account, however, that the findings of such studies occurred before the COVID-19 pandemic; Thus the circumstances within which these were undertaken were different from that of the current study.

Results of this study further indicated that students with higher intrinsic and extrinsic motivation could not be expected always to obtain higher academic performance. This is supportive of the findings of Davis (2009) and Htoo (2014) which found that there was no statistical significant relationship between motivation (intrinsic and extrinsic) and academic achievement. In the context of the self-determination theory the perspective of relatedness may affect academic achievement because relatedness means having safe and satisfying connections with others or a need to feel related to others is one of the significant psychological

needs or a personal goal pursuit (Ryan & Deci, 2000). This implied that motivation was not enough to improve one's academic performance during COVID-19 pandemic. The research found out that during the pandemic, the learning motivation of learners still existed but they were likewise concerned with their safety and interaction with others, which were hardly visible during the pandemic. This probably negatively influenced their learning motivation, and thus, academic achievement.

### **Significant Relationship Between Perception of COVID-19 Pandemic and Academic Performance of Respondents**

As reflected in Table 6, with the r-value -0.010 and p-value 0.903, the learners' perception of COVID-19 pandemic and their academic performance were not significantly related at 0.05 significance level. This result suggested that how learners perceived the COVID-19 pandemic did not influence their academic performance, contrary to Fritz Heider's (Luthans, 1995) argument that the determinants of human behavior were the perceived, and not the actual.

*Table 6. Analysis of Pearson's Product-Moment Correlation Test of Significant Relationship Between Learning Motivation and Academic Performance of the Respondents*

<b>Perception of Learning Motivation During the Pandemic</b>	<b>Academic Performance</b>	<b>Correlation Coefficient</b>		<b>Decision</b>	<b>Remarks</b>
		Ave. %	r-value		
<b>Enhanced Learning Motivation</b> (3.75, Highly Enhanced)	82.94	-0.010	0.903	<i>Do not Reject H<sub>0</sub></i>	<i>Not significant</i>
<b>Reduced Learning Motivation</b> (3.58, Highly Reduced)					

### **Conclusion**

As postulated under the protection motivation theory by Ronald Rogers (1975, 1983), the students' perception of COVID-19 during the pandemic may have been influenced by their fear of getting infected by COVID-19, which may have made them uncomfortable to learn and thus reduced their interest and motivation

to learn or to maximize their learning capacity. This subsequently contributed to their reduced capacity to learn. Their fear may have likewise been aggravated by the challenges or difficulties that they have experienced with the sudden change in teaching and learning approach from the conventional face-to-face classroom to modular distance learning at home, in which

learning is supposed to be independent and self-work without the close guidance and facilitation of a teacher. Similarly, the findings of this study provided some evidence of Bandura's social learning theory (1977), postulating that social environmental factors influence cognitive and behavioral dimensions of learning process and outcomes. The result suggested that learners would achieve their best work in a quiet, comfortable, and space devoted to learning. A conducive learning environment at home during modular distance learning would help learners become more effective and more active.

Thus, this study concludes that learners' learning motivation, both extrinsic and intrinsic, cannot be attributed solely for their academic performance, thus, indicating certain deficiencies of Herzberg's two-factor model of motivation (Davis & Newstrom, 1985). Other dimensions of social environment and individual concerns need to be factored in such as observing and modeling the behaviors, attitudes, and emotional reactions of others (Bandura, 1977), including co-learners and teachers or facilitators. These "others" are not visible under the modular distance learning approach that has been made operational during the COVID-19 pandemic. Other factors that may be taken into account are self-efficacy, metacognitive knowledge, or metacognition skill (Noar et al., 2005).

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