An Ex Post Facto Study on Student Performance of Elementary Education Students of Initao College during the First Year of Flexible Learning Implementation

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Abstract

COVID-19 pandemic has greatly affected the system of education and distance learning has plunged as the new approach. This ex post facto study has investigated the academic performance of 305 BEEd students of Initao College in offline and online flexible learning modalities. It was found out that amidst the community quarantines, 6% of the enrolled students for the first semester and additional 6% for the second have gone inactive in class activities. Moreover, students in both learning categories had a declining level of student performance in the four quarters of the first new normal school year with -0.0675 and -0.0287 regression slopes for online and offline learners respectively. Inferential statistics at 0.05 level of significance (t-value = 5.6656; p-value = 0.00001) has also revealed that with the same curriculum, offline students have a significantly different average performance which is way lower than the students with online access.

Keywords: Distance learning, Ex post facto, BEEd, flexible learning

1. Introduction

Education has been the pillar of development of every country and it is principal to the development and growth of all countries. However, although out the history, he education system has been affected by several challenges ranging from changes in the education curriculum to closing down the education system due to widespread pandemic diseases (Owusu-Fordjour et al., 2015). Recently, COVID-19 impacted not only the overall economy of many countries and peoples' day to day lives, but also has greatly affected our emotional, mental, and physical health (Niranjan, 2020).

Education is no exception (Onyema et al., 2020).COVID-19 pandemic is overwhelming the functioning and outcomes of education system. This is true across the world and affects all children. Therefore, analysis and planning of future actions for managing the education system and implementation of changes in the approach of educational institutions are essential (McKibbin and Fernando, 2020).

Based on medical researches, there seems to be a global consensus among infectious disease specialists and public health officials to limit face-to-face classes as a means of protecting the students and the community at large from the spread of the pandemic (Micheal and Murphy, 2020). Lockdown and staying home strategies have been put in place as the needed action to flatten the curve and control the transmission of the disease (Sintema, 2020).Several schools, colleges and universities have discontinued face-to-face teaching. Due to the suspension of classroom teaching, a switch to the online teaching for undergraduate and graduate students become effective (Sahu et al, 2020.; Yamin, 2020; Mahdy, 2020). On the other hand, the pandemic has provided an opportunity to pave the way for introducing digital learning (Dhawan, 2020). This form of learning provides an alternative way to minimize either the contact between students themselves or between the students and lecturers (Pragholapati, 2020).

Distance education, which has started its journey as correspondence learning, now has a variety of forms such as web based, online, blended, ubiquitous, mobile and e-learning, and all these terms are used interchangeably (Karatas et al, 2017).In the Philippines, teaching in a traditional manner is the most common practice even until the year 2019. However with the recent outbreak, the system of education of the country from basic to higher education was described to have completely turned when the envisioned national education system with intermediate to advanced 21st century

technology framework for all schools across the country was hastened and plunged in trepidation. Higher Education has provided a framework on flexible learning modalities to avoid any form of hiatus in the system of education.

These guidelines have emphasized on learning competencies, instructional delivery and educational outcomes even in distance education approach. As cited by Bernat & Frailing (2015), distance education has become an essential component of higher education.

As college students, career choice is primarily influenced by parents, peers, gender, media, financial reasons and interest (Khazi and Akhlaq, 2017). These affect their performance in finishing their degrees. In addition, communication, learning, proper guidance and family stress are major factors that affect student performance (Mushtaq and Khan, 2012).

In view of delivering equal learning opportunities regardless of the modes of instruction and submission, this research has investigated the contrast in the average student performance and the trend of student achievement of 305 Bachelor of Elementary Eduction (BEEd) students of Initao College in the two major learning categories which are the online and offline during the four terms of school year 2020 – 2021.

2. Materials and Methods

This ex post facto study has utilized all BEEdstudents (305) of Initao College for school year 2020-2021. In pattern of the method used by Mushtaq and Khan (2012), 4 subject term grades were used to measure student performance for the first school year of flexible learning implementation. The research has made use of the student profile and records for the reference data of the demographics and student performance were analyzed and interpreted using descriptive and inferential statistics. Percent composition was used to describe the demographic profile of the student population. Bar graph was employed to illustrate the comparison in the student performance, T-test was used for statistical difference determination and Regression analysis for the performance trend in the 4 terms of the inclusive school year.

3. Results and Discussion

3.1 Student Profile and Activity

Bachelor of Elementary Education is a 4-year degree program for aspiring elementary teachers in the basic education. With the Philippine Republic Act 10533 of 2013, S.Y. 2020 – 2021 has no fourth-year students due to the 2-year transition of K12 basic education. 82% of the entire student population in the elementary education program for 2020-2021 were female and only 18% were male. Majority of them are in the age range of 17 to 20 (46%) and 21 to 25 (38%). The remaining 16% are in the age range of 26 to 45 years old. Many of the older students are those who went back to college in advantage of the Unified Financial Assistance System for Tertiary Education Act or the Philippine Republic Act 10687 of 2015.

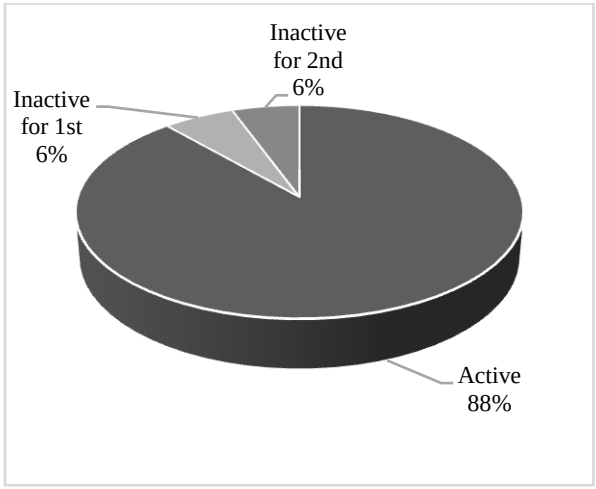

Figure 1. Student Activity for S.Y. 2020 – 2021

Other than student performance in the modes of flexible learning available to the students, employment, partnership and student parentship profiles have also been taken into consideration to describe possible causes of inactivity in their enrolled subjects for two semesters. 6% of the population has gone inactive for the first semester and another 6% for the second semester of the same school year. Out of the total 35 inactive students, only 11% are with their common-

law spouses, 4% are parents, and 3% are employed full-time. The remaining number of the inactive population were found to be full-time students.

3.2 Student Learning Modalities and Achievement

Initao College, a local public college of a third-class municipality in Northern Mindanao, has adopted 2 major flexible learning modalities: online and offline, to cater the needs of its community where students are situated in more than 10 neighboring cities and municipalities. Although almost all have the means for phone calls, students with no cellular signals, internet, data connection, laptop, tablet or smartphone were provided with printed module kits for their learning activities. Furthermore, instructors were assigned to different municipal stations in a given schedule to distribute and collect relevant learning materials in observation of existing health protocols. On the other hand, online students access learning materials and instruction, interact and submit through Google and Facebook platforms at the comfort of their homes.

54% of the active population was online learners and 46% were receiving their lessons and relevant instructions with printed learning materials. The lowest passing mark in the institution's grading system is 3.0. With a reverse increment by 0.1, the highest mark in numerical equivalent is 1.0. An additional retention policy was imposed in the elementary education program as a board-course, requiring a general average in a given semester to be not lesser than 2.0.

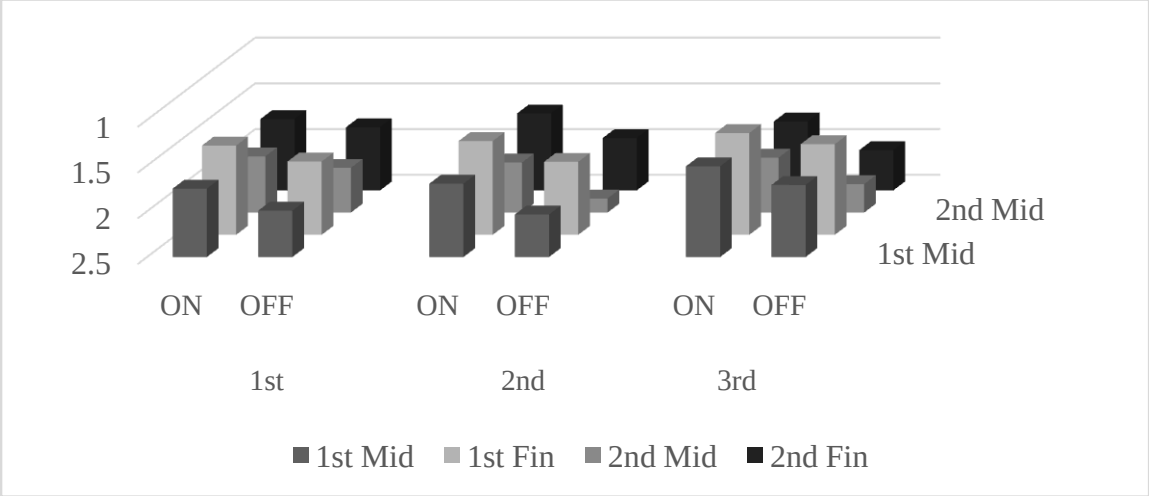

Figure 2. Online and Offline Student Performance for S.Y. 2020 - 2021

Figure 2 presents the average term performance of offline and online learners. It can be observed that for two semesters, students in both learning categories have lower achievement average during midterms. In range, the lowest average student performance in all terms and year levels is 2.346.This is the average achievement of second year offline students during the midterm ofsecond semester.The highest contrastingly is 1.387 of the third year online students during the final term of first semester.

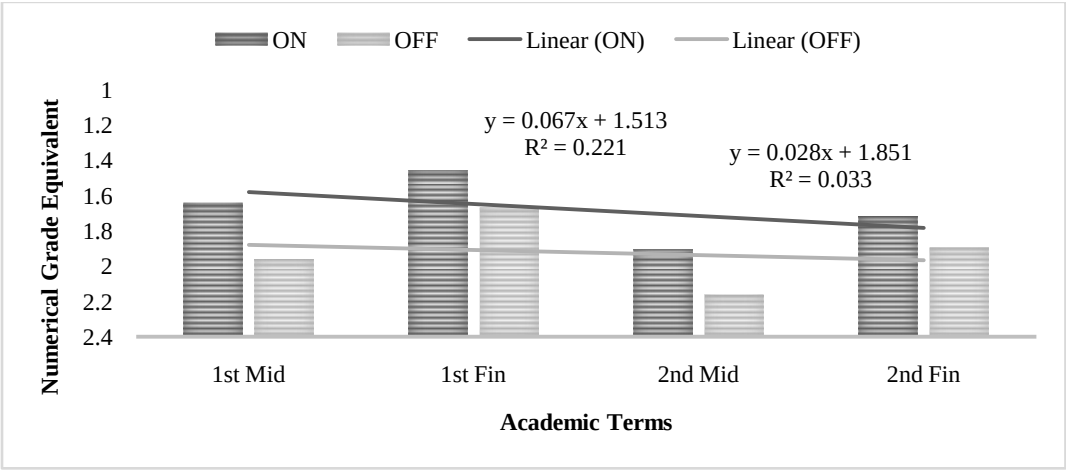

Figure 3. Regression Graph of Online and Offline Student Performance for S.Y. 2020 - 2021

Using a regression line to determine the correlation of average student performance with respect to the school year terms, it was found out that both online and offline learners have a negative correlation. Moreover, online learners have a steeper slope (reverse m= 0.0675, $R^2 = 0.2216$) than the offline learners (reverse m= 0.0287, $R^2 = 0.0331$).

With graphical comparison, offline learners have observable lower performance for all four terms of S.Y. 2020 2021. This is affirmed by employing T-test at 0.05 level of significance that online and offline learners have a significantly different average student performance.

Table 1. The Significant Difference Between Average Academic Performance of Online and Offline Learners (T-test)

	Mean	Mean Difference	t-value	p-value	Remarks
Online	1.6603				
		-0.2471	5.6656	0.00001	Significant
Offline	1.9074				

4. Conclusions and Recommendations

It is an undeniable fact that not all students have equal access to learning resources. Hence, the institution has intensified the availability and flexible access to learning support and student services. Following strict guidelines of treating all learners equal regardless of learning category, institutional and program outcomes cascaded to course and desired learning outcomes have been designed to maximize learning activities and assessments uniformly with few considerations on various limitations.

With these efforts however, this study concludes that there is a negative correlation between the increasing number of terms and average student performance for both online and offline learners. In addition, there is a significant difference between the average student performance of online and offline learners with offline learning performance in the lower range. Thus, these results are recommended to be a research-based report for the 2021 – 2022 annual strategic planning of the institution.

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