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Research Article

Project GOALS: Enhancing Student Learning Using Improved Monitoring Tool in Modular Distance Learning

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Abstract

This study purposefully focused on the use of improved monitoring tool to enhance students learning in modular distance education. The researchers used quantitative methods to compare the level of student learning in the third quarter and fourth quarter using academic grades, such as descriptive statistics, and the paired t-test to determine the significant difference of the performances. The one hundred ninety-two (192) students were chosen using the purposive sampling technique. The results showed that the learners' scores after using the enhanced monitoring tool were higher than their scores prior to the program's implementation, with the learners the learners obtained an average grade of 86.31 (SD = 5.640) while in in the fourth quarter, learners obtained an average of 87.92 (SD = 5.619). The difference was found to be significant with a P-value of 0.0001, which is significant at p > 0.05. In this sense, the improvement in scores was tested significant, and there was enough evidence to claim that the enhanced monitoring tool had a significant influence on students' performance. The study was confined to evaluating the effectiveness of an improved monitoring tool of grade 12 students' learning through modular distance learning at Gen. Emilio Aguinaldo - Bailen Integrated School during the academic year 2021-2022. This study would help teachers better understand the importance of monitoring tools for students' progress. It can be a good reference in school to monitor a modular distance learning environment, where students may not have the same opportunities for in-person interaction with their teachers.

1. Introduction

Since the outbreak of COVID-19, educational system in the Philippines have been deeply impacted. School lockdowns can be seen all over the country. Concerns have been raised about the effects of the suspension of face-to-face instruction in schools during the pandemic on students' learning.

To continue education, the Department of Education launches the Basic Education-Learning Continuity Plan (BE-LCP). In this program, DepEd implemented various learning modalities based on the choices of parents. The parental preferences include modular (printed or digitized) (MDL), online distance learning (ODL), radio and television-based instruction, or a combination of these (blended learning) [1].

Limited face-to-face is being offered in some parts of the Philippines, notably in provinces with a modest number of COVID-19 cases. The pilot phase is still ongoing in Cavite Province. As a result of lack of access to other modalities, most students are still enrolled in modular distance learning programs.

In General Emilio Aguinaldo – Bailen Integrated School,

85.33% (192 out of 225) of grade 12 students in the second semester are under modular distance learning [2]. The school enrollment data reflects that students do not have access to internet or data connections despite having gadgets such as mobile phones, laptops, and computer. Based on the school survey record, financial constraints prevent them from joining online classes.

Although most students are enthusiastic and involved in modular distance learning, the structure and content presentation of the SLMs do not always excite and engage students in learning [3]. Likewise, while self-directed learning modules were inferred to be very effective and very useful in terms of their usefulness for distance learning, there are some challenges, such as difficulties and limitations in theoretical and practical processes; concerns about time constraints and academic workloads; technical issues in learning modules; problems with communication, lessons, and instructions; issues with online learning, connectivity, and learning management system [4].

Student progress monitoring is a method for teachers to use data on student performance to evaluate their teaching effectiveness and make better informed instructional decisions [5]. Monitoring students' learning regularly is quite challenging to teachers for they are bombarded with lots of paper works.

In addition, teachers' ability to assess and provide feedback and formative assistance to students is limited in the modular remote learning modality. Students in distance learning require more help and feedback than those in traditional settings, arguing that organized feedback systems are critical components of formative assessment [6]. However, one of the primary issue in distance learning is finding ways to offer students with timely and relevant feedback to help them improve their performance, actively participate in the learning process, and maintain the relationship between a student and a teacher [7]. Students who do not receive regular feedback from teachers may struggle to retain their present learning levels and build new knowledge and abilities through self-learning, which is essential for their academic growth. This lack of feedback may lead to stress and lose students motivation in finishing their coursework. On other hand, effectively monitoring student progress has a positive effect on student learning and on their growth on the overall learning of a personal, reflective essay [8]. Effective distant learning systems must have focused ways for students to self-monitor their academic progress [9].

The effectiveness of monitoring tools in assessing the students' progress depends on the teachers' preparedness particularly in providing timely interventions for students who need in support early in the learning process. Teachers were concerned that students work consistently on classwork and assessments, and their close monitoring allowed them to handle students who were not doing as expected [10].

Even though modular distance learning gives students the autonomy to self-learn and self-motivate, some students still struggle to learn lessons on their own. Furthermore, some parents are so preoccupied with their jobs that they don't have time to guide, monitor, or oversee their children's education. In the mid-year evaluation survey conducted in Gen. Emilio Aguinaldo – Bailen Integrated School, parents/guardian cannot help their children in their lesson. In "My parents help me with my lessons", it has an average response of 2.16 which is verbally interpreted disagree, and "My parents check my outputs before submission" has 2.45.

Furthermore, modular distance learning, necessitate rapid changes in teacher's routinary activities, daily tasks, and school practices. Teachers may be asked to devise new alternative to monitor children's learning. Teachers may also find it difficult to assess students' learning levels to identify whether students are on track or any learning gaps.

The modular learning techniques have an impact on student academic performance and stress the need of organized monitoring and evaluation procedures in ensuring that students accomplish learning objectives successfully [11]. Hence, the modular distance learning modality, specifically the learners under it, is the main emphasis of this research study.

This action research focused on the effectiveness of project GOALS, an improved monitoring tool to elevate the checking and listing of students outputs every week of Grade 12 Students in School Year 2021 – 2022.

The main objective of the action research was to determine the effectiveness of project GOALS, enhanced monitoring tools to elevate the checking and listing of students outputs every week of Grade 12 Students in School Year 2021 – 2022.

Specifically, it sought answers to the following:

a. What are the academic performances of the students before and after the implementation of project GOALS?

b. Is there a significant difference between the students' academic performances before and after the implementation of project GOALS?

Hypothesis

There is a significant difference between the students' academic performances before and after the implementation of project GOALS.

2. Innovation, Intervention and Strategy

Project GOALS (Gearing up to an Outstanding Academic Level of Success). This is an enhanced monitoring tool to elevate the checking and listing of students outputs every week.

The action research respondent focuses on students in Grade 12 at Gen. Emilio Aguinaldo-Bailen Integrated School. This program intends to monitor, record, and update students' outputs per learning areas on a regular basis, as well as provide intervention and remediation to students who consistently miss submission deadlines.

The students' output monitoring program is divided into five stages to ensure the teaching and learning process. The stages are as follows:

Stage 1. Distribution of Outputs. Learning Kits will be distributed the day before the start of the week. The Enhanced Weekly Monitoring Checklist of Students' Outputs will be

given together with their learning kits.

Stage 2. Retrieval of Outputs. Parents and students should complete the monitoring checklist of students' outputs before retrieving the outputs.

Stage 3. Evaluation and Recording of the number of submitted outputs. In this stage, teachers should check the submitted outputs on a weekly basis, as well as verify and record the status of the learners' outputs.

Stage 4. Feedbacking. This step, teachers will contact the parents/guardians, and students and provide updates on the number of submitted outputs.

Stage 5. Intervention and Remediation. The students who regularly missed submission of outputs should be given interventions and remediations depending on their needs.
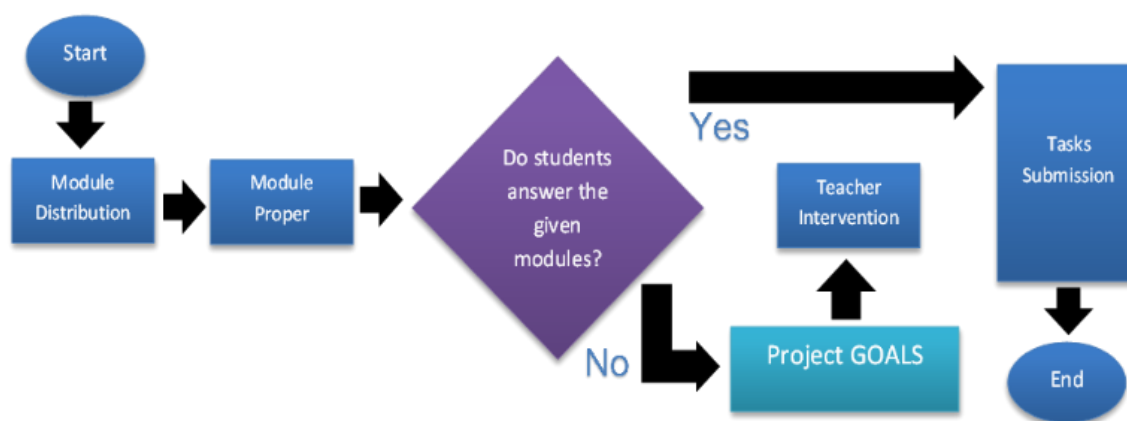
Program's Flow Chart

Figure 1. Teaching and Learning Process for Modular Distance Learning.

3. Materials and Methods

a. Participants and/ or other Sources of Data and Information

The participants of the action research were the 192 Grade 12 modular students in Gen. Emilio Aguinaldo-Bailen Integrated School for SY 2021-2022.

b. Data Gathering Methods

In gathering the data for this study, the following steps were undertaken:

i   Getting the third quarter grade in the selected learning areas

ii Program Implementation for fourth Quarter of the School Year (Two Months)

iii Getting the Fourth Quarter Grades in the selected learning areas

c. Ethical Issues

i   A letter of request was approved by the school principal for the researcher to formally conduct the study.

ii The researcher maintained the anonymity of the respondents and confidentiality of the data.

d. Data Analysis Plan

Problems 1: Quantitative - descriptive statistics such as mean, standard deviation, frequency, and percentage were used to determine the level of performance in third and fourth quarters.

Problems 2: T- Test of Dependent Mean for Significance was used to determine the significant difference of the mean

scores on pretest and posttest of the respondents.

4. Results

Problem 1: What is the performance of the respondents in the third quarter and fourth quarter.

Table 1. Academic Performance of Students before and after the implementation of Project GOALS.

Indicator	N	Mean	Standard Deviation
Third Quarter	192	86.31	5.640
Fourth Quarter	192	87.92	5.619

The level of performance in first quarter and second quarter is presented in Table 1.

In the third quarter, the learners obtained an average grade of 86.31 (SD = 5.640) while in in the fourth quarter, learners obtained an average of 87.92 (SD = 5.619). Though the data between the third and fourth quarters are almost the same in terms of dispersion of the data from the mean.

Problem 2: Is there a significant difference between the academic performances of the students?

Table 2. Significant Difference of between the Third and Fourth Quarter Grades of the Respondents.

Indicator	P-Value	Decision	Conclusion
Academic Grades	0.0000	Reject H_0	Highly Significant

Table 2 shows the significant difference in respondents' academic grades in the third and fourth quarters. At p<.05 significance level, the P-value is 0.0001, indicating that it is highly significant. As a result, we can conclude that there is a significant difference between the grades in two different quarters.

5. Discussion

The academic performance of the learners improved after utilizing the monitoring tool to all students from 86.31 to 87.92. This improvement simply shows that the utilization of enhanced monitoring tool in students' progress is effective in increasing the learning under modular learning modality. Student progress monitoring is a strategy that enables teachers to utilize student performance data to continuously assess the efficacy of their education and make better informed instructional decisions [5]. Furthermore, to achieve academic success among the students, teachers must have effective tools to monitor students' progress and identify who is at risk to change techniques to match the students' needs.

Monitoring tools can also be utilized by both instructors and pupils. Teachers will be better aware of all students' academic standing and will give the essential strategies to properly impart learning to students, particularly those who require further aid and guidance. Similarly, pupils will become acquainted with their own strengths and shortcomings. Furthermore, monitoring reports assist in identifying not just kids who require extra assistance from teachers, but also pupils whose skills should be developed further [12]. Furthermore, effective monitoring systems can increase student engagement and accountability in modular remote learning by the increase in submission rates which is associated with higher academic achievement [13]. Likewise, consistent monitoring is crucial for identifying students' needs and ensuring they meet their academic goals during distance learning [14]. Likewise, in online learning, student support is critical for overcoming barriers, engaging learners, and ensuring success [15]. These studies collectively suggest that effective monitoring tools and techniques lead to students' progress and achievements in modular distance learning.

6. Conclusions

The results of the action research project suggest that the utilization of enhanced monitoring tools in students' progress

is effective in increasing learning under a modular learning modality. This is an important finding as it highlights the potential for teachers to use monitoring tools to continuously assess the effectiveness of their education and make more informed instructional decisions. Furthermore, the study supports the idea that effective tools to monitor students' progress and identify those at risk are necessary for achieving academic success among students.

The study also highlights the potential for monitoring tools to be used by both teachers and students. This could be beneficial for both teachers, who can have a better understanding of all students' academic standing, and for students, who can become familiar with their own strengths and weaknesses. Additionally, the study suggests that monitoring reports can assist in identifying not only students who require extra assistance from teachers but also students whose skills should be developed further.

In conclusion, this study supports the importance of monitoring student progress to achieve academic success among students and suggests that the utilization of enhanced monitoring tools is an effective strategy to achieve this goal. As a result, it is important for teachers to be aware of and equipped with effective monitoring tools to support student learning.

Furthermore, the study also suggests that monitoring tools can be used by both teachers and students, which can help teachers to have a better understanding of all students' academic standing and provide the necessary strategies to effectively impart learning, particularly for those who need additional help and guidance. Additionally, students will become familiar with their own strengths and weaknesses, which can help them to better understand their own progress and set goals for improvement.

Abbreviations

SD   Standard Deviation

Author Contributions

Edwin de Taza: Conceptualization, Methodology, Writing

Data Availability Statement

The data is available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare no conflicts of interest.

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Biography
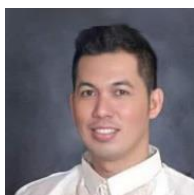
Edwin de Taza is a seasoned educator with extensive expertise in Mathematics education. He holds a Bachelor of Secondary Education (BSE) in Mathematics, a Master of Arts in Teaching Mathematics, and a Master's in Educational Management. Currently a Teacher III, Mr. de Taza specializes in teaching Senior High School Mathematics, focusing on subjects such as General Mathematics and Statistics and Probability. His dedication to student development and academic excellence is evident through his teaching practice. In addition to his teaching responsibilities, Mr. de Taza is an active member of the Cavite Association of Research Educators, where he contributes to educational research initiatives aimed at enhancing teaching strategies and outcomes. His academic and professional journey reflects a commitment to both pedagogy and continuous learning, making him a respected figure in the field of Mathematics education.
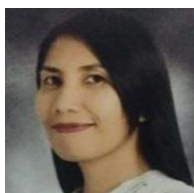
Haileen de Jesus, 38, is a dedicated educator currently working at the Department of Education in the Philippines. She serves as a senior high school teacher at Trece Martires City Senior High School, specializing in the Accountancy, Business, and Management (ABM) strand. Haileen earned her degree in Bachelor of Business Administration, majoring in Management, from the prestigious Polytechnic University of the Philippines. With a strong foundation in business and management, she brings real-world insights to her students, equipping them with the knowledge and skills necessary for their future careers in the business world. Haileen's professionalism and expertise have made her a respected figure among colleagues and students alike, shaping the next generation of business leaders in her community.

Yehlen Zaragoza is a dedicated educator and experienced professional with a rich background in both the corporate and educational sectors. She earned her Bachelor of Science in Business Management, majoring in Marketing, from Cavite State University in 2001. Following her graduation, she worked for almost 13 years in a private company, gaining extensive experience in various departments, including purchasing, human resources, and marketing. In 2016, she transferred to the education sector, taking up units in Professional Education and pursuing her passion for teaching. She became a licensed professional teacher in 2017 and has since dedicated herself to shaping young minds as a senior high school teacher in the Department of Education, specializing in ABM (Accountancy, Business, and Management) subjects for Grades 11 and 12. She has also served as the work immersion coordinator and career guidance coordinator for almost five years, supporting students in their career paths. Currently, she is pursuing a Master's degree in Business Administration at Philippine Christian University in Dasmariñas, Cavite, further advancing her knowledge and skills.

Research Field

Edwin de Taza: Mathematics Education, Teaching Strategies, Student Engagement, Problem Solving in Mathematics, Statistics and Probability, Quantitative Research Methods, Data Analysis, Statistical Education, Research in Education, Action Research, and Educational Innovation

Haileen de Jesus: Business Education, Entrepreneurship Education, Financial Literacy, Accounting Education, Research in Education, Action Research, and Educational Innovation

Yehlen Zaragoza: Business Education, Entrepreneurship Education, Financial Literacy, Accounting Education, Research in Education, Action Research, and Educational Innovation