Increasing Grade 9 Students' TLE MPS using a Blended Approach with Manychat

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ABSTRACT

The study used Blended Learning and the Manychat application to improve the TLE MPS of Sto Nino National High School Grade 9 students. Purposive sampling was used to select two groups of grade nine students with the lowest MPS. The term "blended learning" refers to instructional models that combine traditional classroom practice with e-learning solutions. Manychat, on the other hand, is a service that allows you to build chatbots for Facebook Messenger. These chatbots have a wide range of applications, including marketing and customer service.

The study assessed the performance of Grade 9 Dressmaking students in administering the pre-test and post-test for both the experimental and control groups. The study also determined whether there is a significant difference in the pre-test and post-test results for both experimental and conventional groups. In the implementation of the Manychat as an instructional tool in T.L.E. 9 or any subjects interested in the intervention used, an action plan was proposed.

The study used a experimental design. Mean, standard deviation, dependent and independent t - tests were used to assess the performance of students instructed in the intervention program.

The study found that using the Blended Method with Manychat is an effective tool for teaching T.L.E. - Dressmaking to grade 9 students. Using the Blended Method, their performance and scores in the pre-test and post-test had greatly improved. As a result, the study concluded that the Blended Method with Manychat can be used as a tool in teaching TLE for the continuous improvement of proficiency level in TLE subject.

KEYWORDS: *Blended learning method, chatbot, MPS, intervention, Manychat*

I. Context and Rationale

Teachers in the twenty-first century teach twenty-first-century students. Teachers are being summoned and challenged to become 21st-century educators. To be able to do so, teachers must be digitally literate in order to keep up with their students. Artificial Intelligence (AI) is becoming increasingly popular in education (Roos, 2018). The Chatbot system is one of the most prominent AI technologies for supporting teaching and learning activities (Okonkwo & Ade-Ibijola, 2020). In the educational setting, chatbots are being evaluated as a valuable technology to promote learning (Clarizia et al., 2018). Many teachers are now embracing blended learning in the classroom. Blended learning is a model that combines traditional classroom practice with e-learning solutions (Orlanda-Ventayen & Ventayen, 2018).

As a TLE teacher, I strive to be a 21st century educator. However, as the school year progressed, the researcher noticed that every quarterly assessment of my students' performance was extremely poor. Even though she could see a slight improvement with each grading period, it was still not encouraging. Teaching TLE is a difficult task for us as teachers because their performance task accounts for 70% of their grade. Due to the pandemic's limited contact time, teachers are finding it difficult to deliver instructions efficiently. Furthermore, due to their parents' low educational attainment and busy earning a living, some students have no learning facilitator at home. The majority of TLE lessons, particularly those dealing with performance tasks, are tedious, necessitating creative and engaging visual approaches

to delivery. Learners are unable to participate in the teaching and learning process because they are unable to imagine and visualize the concepts of the lessons without the aid of appropriate teaching strategies. Furthermore, one of the major contributory factors to students' poor performance is a lack of tools and equipment in the classroom. As a result, alternative creative approaches must be used. And the use of chatbots in blended learning allows teachers to teach and focus on skills-related classes in this limited time of face-to-face instruction.

Sto. Nino National High School's 3rd quarter summative resulted in 63.9 percent MPS in the TLE subject. The teacher will use blended learning and Manychat to increase the MPS of the Grade 9 students. The teacher will use the two sections with the lowest MPS from the third quarter out of four that she handled. This project aims to actively engage students in their skills-related tasks in the classroom because the theory will be administered asynchronously, allowing them to learn while at home. Manychat chatbots can instantly provide students with standardized details such as course contents (Cunningham-Nelson, Boles, Trouton, & Margerison, 2019), practice questions and answers (Sinha et al. 2020, pp. 55–60); Ranoliya et al. (2017), assignment due dates, and study materials.

According to previous research, blended learning using manychat can help learners improve their academic performance. It allows learners to engage in learning activities and perform exercises in their most convenient location, especially since face-to-face classes were temporarily limited due to the COVID19 pandemic. TLE lessons teach us life skills that are especially important during this difficult time. As a result, learning, understanding, and mastering its competencies is essential for learners to achieve.

II. Innovation, Intervention and Strategy

The researcher used the Manychat program to implement a blended learning intervention. Manychat were added into TLE instruction in addition to the learning exercises. The teacher will begin by introducing the application and providing instructions and demonstrations on how to use it properly. The students will be given the opportunity to explore while also being given the opportunity to complete the activity sheet that is integrated within the manychat application.

Following the themes in the first two weeks, sets of worksheets were planned and developed using the blended learning technique for the TLE subject in Grade 9. The worksheets are based on the Philippine Department of Education's list of the most essential learning competencies. Pre-test and post-test

worksheets are the two sorts of worksheets that must be created. The pre-test worksheets are intended to examine students' understanding of concepts from the materials provided prior to the implementation of the intervention, whereas the post-test will assess their conceptual understanding following the implementation of the intervention.

The worksheets will be validated by three TLE education professionals. A worksheet validation checklist will be used by the validators. Examine the worksheets that have been created. A 5-point Likert scale is used. In terms of content, language, and style, the checklist was employed and the overall appearance Validators' suggestions for improving the worksheets will be taken into consideration. When the worksheets have been validated and the communication letter for the study's conduct is approved, the researcher will begin the student and parent orientation, as well as the consent form will be provided. The blended learning approach will be used in the first two weeks of the Grade 9 TLE class. The asynchronous session is held twice a week at their own convenient time because they only have two meetings per week due to the school's limited face-to-face schedule. Then, post-test will be administered after the conduct of the study to measure their gain of learning after the intervention is employed. Post-test is a way for the researcher to measure the difference between the pre-test and post-test score of the subject.

III. Action Research Questions
This study aims to answer the following questions:
1. What is the performance of the T.L.E. Grade 9 Dressmaking students (conventional group) in the administration of pre-test and post-test?
2. What is the performance of the T.L.E. Grade 9 Dressmaking students (experimental group) in the administration of pre-test and post-test?
3. Is there is a significant difference in the performance of the T.L.E. Grade 9 Dressmaking students who received instruction using blended learning with Manychat from those that were taught using traditional lecture method?
4. What is the effect size of the intervention?

IV. Action Research Methods
This study employed an experimental design to determine whether incorporating Manychat into blended learning improves MPS in grade 9 TLE in the fourth quarter. This design included two groups of students: the experimental group and the conventional group. Participants in this study are Grade 9 Fortitude A and Fortitude B students. A pre-test and a post-test will be given to each group. In this study, the research instrument will be the Unified Test Questionnaire in TLE in the Division of Surigao del Sur.

A. Participants, Other Sources of Data and Information

The subjects of the study are the Grade 9 learners enrolled in Sto. Niño National High School SY 2021-2022. Grade 9 level is composed of 8 sections, 1 class is under Science, Technology, and Engineering (STE) program, while the 7 classes are under the Basic Education Curriculum (BEC). Among the 8 sections, only section Fortitude A and Fortitude B will be the participants of the study. Fortitude A is composed of 14 males and 11 females for a total of 25 learners, while section Fortitude B is composed of 13 males and 12 females for a total of 25 learners.

B. Data Gathering Methods

Purposive sampling will be used by the researcher. To ensure that the two groups are comparable, only two of the four sections handled by the teacher will be used, with the lowest MPS in TLE in the third quarter of this school year (2021-2022).

The pre-test results will be used as the baseline data to determine whether the students' MPS and mastered learning competencies improved after the intervention. The activity's output from the students will be strictly monitored. Furthermore, students' attendance will be strictly monitored to ensure their participation. Following the administration of the post-test, the data will be compared to the data from the pre-test result.

In accordance with student data privacy, the teacher will seek permission from the school principal to carry out the planned intervention. In addition, parental and student consent will be obtained. Prior to the intervention's implementation, the learners and their parents will be briefed on the study's flow.

V. Discussion of Results and Reflection

This section addresses the following issues: " What is the performance of the T.L.E. Grade 9 Dressmaking students (conventional group) in the administration of pre-test and post-test?" ", " What is the performance of the T.L.E. Grade 9 Dressmaking students (experimental group) in the administration of pre-test

and post-test?" ", as well as "Is there a significant difference in the performance of T.L.E. Grade 9 Dressmaking students who received instruction using blended learning with Manychat versus those who received instruction using the traditional lecture method?" " It should be noted that in this study, student performance refers to the post-test or achievement test given after the instruction using blended with Manychat in T.L.E. 9 - Dressmaking and using traditional lecture method. The following tables and figures summarized the students' performance.

Table 1 Performance of the Traditional Lecture Method (Conventional Group)

Group	MPS	
	Pre-Test	Post-Test
Conventional Group	26.4	68.48

Table 1 shows that the traditional lecture group had a pre-test MPS score of 26.4 and a post-test MPS score of 68.48. The MPS increased by 42.08 points between pre-test and post-test. The Department of Education, on the other hand, considers all of these results to have 'failed.'

Table 2 Performance of the Blended Method using Manychat (Experimental Group)

Group	MPS	
	Pre-Test	Post-Test
Experimental Group	25.6	86.4

Table 2 shows the performance of students taught using the blended method using Manychat, with a pre-test MPS of 25.6 and a post-test MPS of 86.4. The MPS difference of 60.8 has clearly increased dramatically. This demonstrates that the intervention has an effect positively on the students based on their score.

The table below compares the performance of students who were taught using the blended method with Manychat in T.L.E. 9 - Dressmaking to those who were taught using the traditional lecture method.

Table 3. Comparison between Lecture Method (Conventional Group) and Blended Method using Manychat (Experimental Group)

Variable	Mean	Std Deviation	t - value	df	Sig(2-tailed)
Conventional	17.12	3.63	4.59	48	0.000
Experimental	21.60	2.75			

T-Test

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Score	Experimental	25	21.60	1.936	.387
	Conventional	25	17.12	4.494	.899

		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference		Lower	Upper
Score	Equal variances assumed	11.798	.001	4.578	48	.000	4.480	.979		2.512	6.448
	Equal variances not assumed			4.578	32.617	.000	4.480	.979		2.488	6.472

The table indicates that the level of significance is 0.000, which is less than the confidence level of 0.05. As a result, the null hypothesis is rejected in favor of the alternative hypothesis, "There is no significant difference in the performance of T.L.E. Grade 9 ICT students who received instruction using blended learning with Manychat versus those who received instruction using traditional lecture method." The result implies that there is a difference in the performance rate before and after the intervention, with the after results being more favorable.

Table 4 Effect Size of Intervention

Independent Samples T-Test ▼

Independent Samples T-Test

	t	df	p	Cohen's d
Score	4.578	48	< .001[a]	1.295

Note. Student's t-test.

[a] Levene's test is significant (p < .05), suggesting a violation of the equal variance assumption

Legend:
0.00 < 0.20 – very small
0.20 < 0.50 – small
0.50 < 0.80 – medium
0.80 or more – large

Table 4 demonstrates that the difference in their performance after the intervention has a large effect size in favor of the experimental group. This means that using the Blended Method with Manychat has a significant impact on students' performance in T.L.E. 9 - Dressmaking. Furthermore, students who are exposed to this blended method have a better chance of improving their performance in the subject.

Reflection

The study's findings indicate that using the Blended Approach with Manychat was effective in improving the academic performance of Grade 9 - Dressmaking students, as evidenced by the increase in the MPS rating. Periodic evaluation and/or further validation of the proposed learning modality may be implemented to further provide teachers' strengths in blended learning.

After conducting research for this paper, I discovered that no research is ever completely finished. It is always an ongoing process. There are always new discoveries and questions to be answered. We make every effort to stay current on developments in our field. We are constantly researching, reading new material, and speaking with experts in order to stay current in our field. It is critical not to be discouraged by this, but rather to view it as an opportunity to better understand the world around us and our place in it.

VI. Action Plan

Objectives	Activities	Target Beneficiaries	Time Frame	Resources Needed	Persons Responsible	Sources of Funds			Expected Outcome
						Human	Materials	Financial	
Spread the intervention throughout the school and district.	Inform the school head and district in-charge about the intervention	All teachers in the school and in the district	SY 2022-2023	Human resources	Researcher	None	None	None	The intervention was adopted and cascaded in the school and district.

VII. References

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