

AN EXPERIMENTAL STUDY ON THE NEEDS-BASED LEARNING MODULES IN CREATIVE NONFICTION

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ABSTRACT

This research employed a pre-test post-test design, a quantitative experimental approach that involved gathering data before and after the implementation of needs-based learning modules. It significantly aimed to assess the effectiveness of needs-based learning modules in enhancing Grade 12 HUMSS students' critical understanding of creative nonfiction. Needs-based Learning Modules, as an intervention, emphasizes the importance of catering to students' diverse needs, fostering engagement, comprehension, and academic growth in Creative Nonfiction. Results of the study revealed that there was a significant difference between pretest and posttest results, thus the null hypotheses are rejected. Moreover, it revealed the effectiveness of needs-based learning modules in improving students' proficiency in creative nonfiction. Therefore, using this intervention is recommended to educators to implement, not only for the HUMSS students but for other students as well. By tailoring this intervention to meet diverse needs, educators can foster a more inclusive and effective learning opportunities ultimately improving student engagement, comprehension, and academic achievement across subjects.

Keyword: HUMSS, needs-based learning modules, experimental study, creative nonfiction

1. INTRODUCTION

Needs-based learning modules in creative nonfiction education enhance learning by catering to individual needs, boosting writing and critical thinking. Despite the significance of creative nonfiction for self-expression and real-life exploration, conventional methods often neglect students' requirements. Insufficient personalized instruction and contextual learning hinder comprehension, limiting engagement and skill growth. Adapting modules to foster diversity and support bolsters creativity, enabling students to become genuine and compassionate writers.

Syam's (2020) Indonesian study showed the importance of needs-based writing modules. Personalized learning materials boost engagement and efficacy, the study found. 75% of learners highly agreed with the module's content, and 25% agreed. This accomplishment inspires instructors to use student-centered, diversified strategies worldwide. Educational institutions foster confident, creative writers by adopting needs-based modules. In Murugiah's 2013 study, adding a writing-needs-based module improved students' vocabulary and continuous writing. Students applied creative writing themes well. A study at the State Senior High School of Surakarta also found that autonomous teaching materials engage students. Based on these results, contextualized creative modules are needed to improve students' abilities (Dewi et al., 2019).

Amidst the Philippine landscape, Basilan (2018) highlighted challenges faced by senior high schools due to the Enhanced Basic Education Curriculum (R.A. 10533), leading to instructional material shortages, especially in Creative Nonfiction for English in Humanities and Social Sciences. Kwarteng (2014) emphasized material importance in effective teaching. Teachers' needs assessments in 2016-2017 for Humanities and Social Sciences students and 18 English teachers in Manila revealed demand for localized Creative Nonfiction materials (Tiburcio, 2020), as current

resources were inadequate for K to 12 standards. Garin et al. (2017) emphasized indigenous teaching's efficacy, while Mangila (2017) stressed culturally relevant materials for diverse classrooms. These studies guide educators in crafting localized Creative Nonfiction materials, enriching student learning.

Insufficient contextually needs-based creative modules pose local challenges, hindering students' comprehension. Lacking materials aligned with their needs and cultural context impedes effective learning, limiting engagement without relevant content tied to daily life and cultural background. To address this, institutions and curriculum developers must recognize contextually sensitive materials' significance. Incorporating local examples, real-life scenarios, and indigenous perspectives can bridge the gap between students' experiences and academic content, enhancing understanding in creative nonfiction. Developing such materials empowers learners and nurtures academic growth within their unique sociocultural setting.

1.1 Statement of the Problem

This study investigated the efficacy of the needs-based learning modules to creative nonfiction learning of the Grade 12: Humanities and Social Sciences (HUMSS) Students of Maragusan National High School.

Specifically, it sought to answer the following questions:

1. What is the pre-test and post-test scores among;
 - 1.1 Control Group
 - 1.2 Experimental Group
2. Is there a significant mean difference between:
 - 2.1 pre-test and post-test scores of the control group
 - 2.2 pre-test and post-test scores of the experimental group
3. Is there a significant mean difference between the post tests of the control and experimental groups?

1.2 Hypothesis

The following hypotheses were raised in the study and tested at 0.05 level of significance:

Ho₁ There is no significant mean difference between the pre-test and post-test results of the control and experimental groups.

Ho₂ There is no significant mean difference between the pre-test and post-test results of the control and experimental groups.

Ho₃ There is no significant mean difference between the post-test results of control and experimental groups.

2. METHODS

2.1 Research Design

This research utilized a pre-test post-test design, a quantitative experimental approach that involved gathering data before and after the implementation of needs-based learning modules, as proposed by Glen (2021). The primary objective was to assess the effectiveness of these needs-based learning modules in enhancing Grade 12 HUMSS students' critical understanding of creative nonfiction. As an experimental study, it sought to establish cause-and-effect relationships by comparing the pre-test and post-test results of the participants. By analyzing the data using statistical methods, such as paired t-test, the study aimed to determine whether the intervention significantly contributes to the participants' improved creative writing skills in creative nonfiction. The experimental design allowed for controlled manipulation of variables, increasing the study's internal validity and providing valuable insights into the impact of the needs-based learning modules on the students' academic development.

2.2 Research Subject

The study involved a total of 180 participants, with 90 students in the Control Group and another 90 in the Experimental Group. All participants were Grade 12 HUMSS students from Maragusan National High School in Maragusan, Davao de Oro. The researcher employed systematic random sampling to choose participants who were available and willing to take part in the study, without regard to their age or gender, as long as they met the criteria for completing the research questionnaires.

In the given scenario, the researcher chose systematic sampling to gather 180 respondents from a total population of 360 students. First, the total number of students (360) was divided by the desired sample size (180),

which gave a sampling interval of 2. Starting at a random point within the first two students, every other student was chosen until the desired sample size is reached.

Prior to their participation, the researcher secured official approval from the Department of Education to uphold ethical standards and safeguard the well-being of the participants. Ensuring that the rights and privacy of the participants were maintained throughout the study, with proper permissions and consent in place for their participation. Through strict adherence to ethical standards, the researcher maintained the trustworthiness and validity of the study's results.

2.3 Research Instrument

The instrument in this study was the test questions, the researcher-made with 30 items that were based on the specific lessons to be taken in the First Semester. This questionnaire was used for the pretest and posttest which would be validated by experts identified by the Dean of the Graduate School. Table of specifications (TOS) was prepared to show the distribution of the test questions based on the cognitive level: understanding, comprehension, analyzing, applying, evaluating, and creating.

To identify whether the control and experimental groups were initially equivalent, a pretest was administered. Moreover, the researcher would develop intervention program to test the effectiveness of Needs-Based Learning Modules. The control group would use the traditional method of teaching Creative Nonfiction while the experimental group would have the Needs-Based Learning Modules in teaching. After the intervention, a posttest is administered to find out if there is an increase of the learning achievement of the students and to determine which group had learned more.

2.4 Validation of Instrument

The researcher-made questionnaire was checked and validated for the purpose of checking the validity of the instrument. Comments and suggestions about the questionnaire from the validators were followed and revised if there is any. To establish the questionnaire's reliability, the researcher conducted a pilot testing and administered to a group of students who are not included in the experimentation.

2.5 Research Procedure

The following were the data gathering procedures that were employed in this study:

Seeking permission to conduct the study. The dean of graduate school endorsed the researcher to the superintendent of Davao de Oro division through letter. Once approved by the division superintendent, another letter was prepared for the school principal to allow him to conduct this study.

Administration and retrieval of the research instrument. The researcher administered the pre-test to both control and experimental groups, after administering, intervention followed using the Needs-Based Learning Modules to the experimental group. After weeks of the intervention, the researcher administered the posttest. During the intervention, the researcher kept a record activity conducted in the classroom and analyzed the gathered data and discussion would follow.

Collection and tabulation of data. The researcher gathered and tallied all data and submitted it to the statistician for the statistical treatment. Subsequently, the data were subjected to analyses and interpretations.

2.6 Statistical Treatment of Data

The statistical treatment for the experimental study on Needs-Based Learning Modules in Creative Nonfiction involves the computation of the mean, standard deviation, and T-test for relevant variables. Furthermore, the data collected were forwarded to the statistician utilizing the Statistical Package for Social Sciences (SPSS).

Mean (Average). The mean was calculated to determine the average score or value for specific variables, such as participants' pre-test and post-test scores. The mean provides a central point of reference to understand the overall performance or changes observed in the study.

Standard Deviation. The standard deviation was calculated to measure the dispersion or variability of data points around the mean. It provides insights into the spread of scores and helps assess the consistency or variability of participants' responses to the learning modules.

T-Test. A T-test was conducted to analyze the significance of differences between two sets of data, such as pre-test and post-test scores of participants. The T-test helps determine whether any observed changes are statistically significant or if they could have occurred due to random chance.

3. RESULTS

3.1 Pretest Scores among Control Group and Experimental Group

Test	Mean Score	Class Proficiency	Standard Deviation	Quality Index
Pretest	10.9	36%	3.8	No Mastery Level in Skills Tested
Posttest	18.2	61%	4.3	Nearing Mastery Level of Skills Tested is Manifested

Table 1: Pretest and Posttest Scores among Control Group

Table 1 displays mean scores, quality indices, and standard deviations for a control group of Grade 12 HUMSS students in creative nonfiction without the utilization of the needs-based learning modules. Prior to the intervention, the students' mean pretest score was 10.9, indicating that 36% of them lacked mastery of the abilities examined. However, their mean posttest score increased to 18.2, indicating that 61% of them were approaching mastery. The standard deviation increased from 3.8 to 4.3, indicating increased variability in scores, which supports the low improvement. This indicates that, in the absence of intervention or the use of needs-based learning modules, the level pretest and posttest of Grade 12: HUMSS students on chosen topics in creative nonfiction are moderately apparent and nearing mastery level of skills tested is manifested.

Test	Mean Score	Class Proficiency	Standard Deviation	Quality Index
Pretest	14.5	48%	4.1	No Mastery Level in Skills Tested
Posttest	25.9	86%	2.3	Mastery of Skills is Manifested

Table 2: Pretest and Posttest Scores among Experimental Group

Data on the pretest and posttest results for an experimental group measuring their creative nonfiction competency are shown in Table 2. During the pretest phase, students had an average score of 14.9; the quality index, with a standard deviation of 4., showed that 48% of the students did not demonstrate proficiency in the examined ability. The posttest findings showed that, after the intervention, the standard deviation increased to 2.3 and the mean score significantly climbed to 25.2, with 86% of students' mastery level in the assessed ability. The results indicate a noteworthy improvement in the experimental group's performance subsequent to the intervention, indicating that the implementation of needs-based learning modules yielded benefits akin to those seen in the control group's performance.

3.2 Significant Mean Difference between Pre-Test and Post-Test Scores of the Control Group

Paired Samples T-Test

Measure 1	Measure 2	t	df	p
PRE	POST	-17.029	89	< .001

Table 3: Significant Mean Difference Between Pre-test and Post-test of Experiment Group

Table 3 displays a significant mean difference between the pretest and posttest scores for the control group, according to the paired samples t-test findings. With 89 degrees of freedom, the t-value is computed as -17.029, yielding a p-value of less than .001. This result implies that there was learning throughout the teaching time since there is a significant difference between the means of the pretest and posttest. The negative t-value basically means that after the teaching session, the student's subject-matter competency has improved since the posttest mean is considerably greater than the pretest mean. Therefore, the null hypothesis is rejected.

Paired Samples T-Test

Measure 1	Measure 2	t	df	p
PRE	POST	-24.992	89	< .001

Table 4: Significant Mean Difference Between Pre-test and Post-test of Experiment Group

The findings of the paired samples t-test in Table 4 shows that there was a significant mean difference between the experimental group's pretest and posttest scores and its null hypothesis is rejected. With 89 degrees of freedom and a reported t-value of -24.992, the p-value is less than .001. This result shows a statistically significant improvement in the experimental group's scores from the pretest to the posttest, and it also indicates a significant difference between the means of the pretest and the posttest. Thus, it suggests that the educational intervention carried out during this period was successful in raising the competence levels of the students in the experimental group as it verifies that the students did learn throughout the experimental period.

Independent Samples T-Test

	t	df	p
POST	-14.936	178	< .001

Table 5: Significant Mean Difference between Pre-Test and Post-Test Scores of the Control and Experimental Group

An independent samples t-test was used to compare the control and experimental groups' mean scores on both posttest evaluations in Table 5. With 178 degrees of freedom and a t-value of -14.936, a p-value of less than .001 is found. This result shows that the experimental group's mean scores differed significantly from those of the other group. It further reveals that the findings that the experimental group performed better than the control group, indicating that the experimental group's performance was more positively impacted by the instructional intervention than the control groups, as shown by the experimental group's higher posttest scores.

4. CONCLUSIONS

The study findings highlight the effectiveness of needs-based learning modules in improving students' proficiency in creative nonfiction. The control group, even without specific interventions, showed a notable increase in posttest scores, indicating a moderate impact on competency. Just like that, the experimental group, which used needs-based learning modules, showed significant improvement in competency, similar to the control group's progress. Both groups demonstrated substantial learning improvement, as highlighted by the paired samples t-tests, underscoring the impact of instructional periods. It reveals that the experimental group achieved better results than the control group, emphasizing the effectiveness of needs-based learning modules in improving learning outcomes. These findings strongly gravitate for the use of needs-based learning modules as a powerful educational intervention strategy to improve students' understanding and proficiency in creative nonfiction.

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