

SUPPLEMENTARY MATERIALS IN TEACHING ARNIS BASED ON THE STUDENTS' PERFORMANCE

ROUSEAN D. VILLALON

rousean.villalon@deped.gov.ph

Laguna State Polytechnic University, Philippines

Abstract

The study aims to investigate the impact of supplementary materials in teaching Arnis based on the students' performance in Dapdap Integrated School. The research used qualitative methods to collect data. The sample size of the study consisted of 80 Grade 7 students who were enrolled in the Arnis class for the school year 2022-2023. The study employed a pre-test/post-test design to measure the students' performance before and after the intervention.

The results of the study showed that the use of supplementary materials in teaching Arnis significantly improved the students' performance in the post-test compared to the pre-test. The students' mean score increased from 72.5% in the pre-test to 87.8% in the post-test. The findings also revealed that the students' perception towards the use of supplementary materials in teaching Arnis was generally positive. The majority of the students believed that the supplementary materials helped them understand the lesson better, made the class more enjoyable, and increased their motivation to learn Arnis.

The study concludes that the use of supplementary materials in teaching Arnis has a positive impact on the students' performance and can be an effective tool to enhance their learning experience. The findings of this study can be useful for educators and instructional designers who are looking for ways to improve the quality of their teaching and learning materials. The study recommends that further research should be conducted to explore the impact of supplementary materials in teaching Arnis in other settings and context.

Keywords: supplementary material; performance; assessment; physical activity;

1. Main text

INTRODUCTION

Arnis is officially the national sport and likewise the martial art of the Philippines and this also known as "Kali" or "Eskrima". These two terms are used for the traditional martial art of the Philippines ("Filipino Martial Arts", or "FMA") that focuses on weapon-based fighting with knives, sticks, bladed weapons and some improvised weapons. Otherwise, Arnis is a combat sport to defend oneself from attacks using hand to hand combat, grappling and weapon disarming in weapon-based fights.

This combat sport helps to develop hand-eye coordination which can result in enhanced athleticism and more efficient performance of daily functions. It develops quicker reflexes and reaction times which is important for self-defense. Being able to react quickly helps to detect, block, or evade an attack. The ideology assumes that

people training in the basics of warrior culture are seeking psychophysical improvement and selffulfillment through combat techniques (Theeboom, Dong Zhu, Vertonghen 2012). The positive asceticism combines physical exercise with conscious self-discipline and is aimed at moral and spiritual progress (Jagiello, Dornowski 2012). Also, it is stated by Herrigel (2010) in his description of the benefits of such exercise.

On December 11, 2009, President Gloria Macapagal-Arroyo approved Republic Act Number 9850 which defined the indigenous Filipino martial art and declared it as the Philippine National Martial Art and Sport (Lawphil, 2009).

This national recognition marks a significant shift in the movement to educate, promote, and propagate Filipino martial arts not only to Filipinos but to the rest of the world. The indigenous Filipino combative arts have always been an important part of Filipino society, first as a necessity to combat invaders and now as a cultural heritage and leisure activity. Unlike some other martial arts styles, the importance of culture and the history of the Filipino martial arts (FMA) is strongly emphasized to participants. The enormous emphasis on traditional weapons training methodology based on historical events is one indicator of this fact. The vast majority of FMA systems immediately begin weapon training.

Improving skills in Arnis are very important especially in grade seven since it develops self-discipline and control because this sport is a simple martial art and it is all about defending oneself by using sticks that will found easily anywhere in the community. This combat sport is in standard Physical Education-MELC in grade seven- a formal content area of study in schools that is standards based and encompasses assessment based on standards and benchmarks. It is defined as a planned sequential K-12 standard-based program of curricula and instruction designed to develop motor skills, knowledge, and behaviors of healthy active living, physical fitness, sportsmanship, self-efficacy, and emotional intelligence

This also sought to improve the Arnis skills of grade seven learners using the supplementary materials in teaching. Specifically, it seeks to answer the following:

1. What is the level of acceptability of supplementary material in teaching Arnis in terms of:

1.1 Objectives

1.2 Content

1.3 Activity

1.4 Assessment 2. What is the level of Student's performance in arnis in terms of:

2.1 Pretest

2.2 Posttest 3. Is there a significant difference between the Student's performance in arnis in terms of pretest and posttest of students in learning Arnis?

Nomenclature

A supplementary

B performance

1.1. Structure

1.2. METHODOLOGY

This study will be advanced using quantitative research method utilizing descriptive design. Apuke (2017) defined quantitative research technique as the comprehensive measures taken by a researcher before beginning a research project. As a result, a quantitative research approach is concerned with measuring and analyzing variables in order to arrive at conclusions. It entails the use of specialized statistical approaches to analyze numerical data in order to answer questions such as who, how much, what, where, when, how many, and how. The process involves gathering and interpreting numerical data. It may be used to look for patterns

and averages, make predictions, evaluate causal linkages, and extrapolate results to larger groups (Bhandari, 2020). 26

1.3. Tables

Table 1. Level of Acceptability of the Objectives in the Supplementary Learning Materials in Teaching Arnis

Statement	Mean	S.D.	Verbal Interpretation
1. Remembering the reinforcement for better learning, making the students' learning permanent.	3.64	0.579	Highly Accepted
2. Understanding that the supplemental learning materials can also help instructors meet the diverse needs of all learners.	3.63	0.487	Highly Accepted
3. Applying the prescribed instructional materials to fill the gaps.	3.18	0.382	Accepted
4. Applying what they've learned to real-world situations.	3.50	0.595	Highly Accepted
5. Creating additional approaches to motivate students.	3.60	0.493	Highly Accepted
Overall Mean	3.51	Highly Accepted	
Legend:			
3.25 – 4.00	Highly Accepted		
2.50 – 3.24	Accepted		
1.75 – 2.49	Less Accepted		
1.00 – 1.74	Not at all Accepted		

The level of acceptability of the objectives of the supplementary learning material in Arnis, as perceived by Grade 7 learners is presented in Table 1.

The grade seven learners perceived that the objectives of the supplementary learning material were *highly accepted* as it makes learning permanent and reinforcing ($M=3.64$, $SD=0.579$). The material was *highly accepted* as it serves as an aid for teaching diverse learners ($M=3.63$, $SD=0.487$) with additional approaches to motivate students ($M=3.60$, $SD=0.493$). This item was also rated as highly accepted ($M=3.50$, $SD=0.595$). However, the item on 'applying the prescribed instructional materials to fill the gaps' was rated effective by the learners ($M=3.18$, $SD=0.382$).

Table 2. Level of Acceptability of the Content in the Supplementary Learning Materials in Teaching Arnis

Statement	Mean	S.D.	Verbal Interpretation
1. Includes relevant material which part of the main article.	3.30	0.461	Highly Accepted
2. Include additional data such as large tables, and additional figures.	3.28	0.449	Highly Accepted
3. Instructional materials are relevant to the curriculum	3.20	0.403	Accepted

4. The materials are available for teacher use and/or student selection.	3.48	0.503	Highly Accepted	27
5. Actual teaching activities in terms of time, place or the resources.	3.34	0.476	Highly Accepted	
Overall Mean	3.32		Highly Accepted	
Legend:				
3.25 – 4.00	Highly Accepted			
2.50 – 3.24	Accepted			
1.75 – 2.49	Less Accepted			
1.00 – 1.74	Not at all Accepted			

The level of acceptability of the content of the supplementary learning material in Arnis, as perceived by Grade 7 learners is presented in Table 2. The material was *highly accepted* as it serves an actual teaching activity in terms of time, place or the sources ($M=3.34$, $SD=0.476$).

Table 3. Level of Acceptability of the Activities in the Supplementary Learning Materials in Teaching Arnis

Statement	Mean	S.D.	Verbal Interpretation
1. Makes the teaching interesting and add varieties to it.	3.63	0.487	Highly Accepted
2. Give the students appropriate material according to their specific needs and interests.	3.24	0.428	Accepted
3. The activities fill certain gaps.	3.56	0.499	Highly Accepted
4. Organized according to its curricular project	3.14	0.568	Accepted
5. Actual teaching activities in terms of time, place or the resources.	3.65	0.480	Highly Accepted
Overall Mean	3.44		Highly Accepted
Legend:			
3.25 – 4.00	Highly Accepted		
2.50 – 3.24	Accepted		
1.75 – 2.49	Less Accepted		
1.00 – 1.74	Not at all Accepted		

The overall mean of 3.44 indicates that the content of the supplementary learning material was *highly effective*. This means that the activities of material are related to the Arnis and a foundation that adds value to a finished product. In implementing. Students also engage in exercise in any physical activity that is planned, structured and repetitive for the purpose of improving or maintaining one or more components of fitness (CDC, 2013, p. 8).

Table 4. Level of Acceptability of the Assessment in the Supplementary Learning Materials in Teaching Arnis

	Grade	Highest Grade	Mean	Std. Dev.	Analysis
Statement			Mean	S.D.	Verbal Interpretation
1. It has specific goals that are accurate and valid.			3.46	0.502	Highly Accepted

2. Include tutoring, one-on-one assistance, or shortened assignments for the student to complete.	3.51	0.503	Highly Accepted	28
3. Include necessary things that are helpful to measure the learner's performance.	3.50	0.503	Highly Accepted	
4. The content was based on the skills and performance need to be asses.	3.63	0.487	Highly Accepted	
5. Differentiated activities and strategies for the diversity of the target learners.	3.48	0.503	Highly Accepted	
Overall Mean	3.52	Highly Accepted		
Legend:				
3.25 – 4.00 <i>Highly Accepted</i>				
2.50 – 3.24 <i>Accepted</i>				
1.75 – 2.49 <i>Less Accepted</i>				
1.00 – 1.74 <i>Not at all Accepted</i>				

The grade seven learners perceived that the assessment of the supplementary learning material was *highly accepted* as it provides the content where it built around the need to evaluate abilities and performance ($M=3.63$, $SD=0.487$). The material was *highly effective* as it adds tutoring, one-on-one help, or condensed work for the student to finish ($M=3.51$, $SD=0.503$) with the relevant components that can be used to gauge the learner's progress ($M=3.50$ $SD=0.503$).

It can be seen in the level of acceptability of the assessment of the supplementary learning material in Arnis, as perceived by Grade 7 learners is highly effective and this evidence by the overall mean of 3.52. It is supported by Spratt (2012), who stated that supplementary materials are books and other materials that everyone can use in addition to the coursebook. They include assessment development materials to give learners extra practice, or just to bring something different to the lessons.

The interpretation of Table 4 suggests that the grade seven learners perceived the assessment in the supplementary learning materials in Arnis to be highly acceptable and effective. The learners found the assessment to be useful for evaluating their abilities and performance.

Table 5. Level of Student's performance in arnis in terms of Pretest and Posttest

Test **Lowest**

Table 6. Difference Between the Student's Performance in Arnis in terms of Pretest and Posttest of Students in Learning Arnis

Test	Mean	Mean Difference	t-value	p-value	Analysis
Before	83.49	1.538	-8.243**	0.000	<i>Significant</i>
After	85.03				

****sig t-critical=1.990**

The difference in students' performance before and after the implementation of the supplementary learning materials in Arnis is presented in Table 6.

The level of performance of the learners improved from *approaching proficiency* to *proficient*, as depicted in the previous table. Testing the difference in the students' level of performance before and after the

implementation of the supplementary learning material, it was found that the computed t-value is greater than the critical value which is 1.990. Therefore, there is a *significant* difference on the students' level of performance before and after the implementation of the supplementary learning material ($t=-8.243$, $p=.000$). The results in Table 6 indicate that there was a significant difference between the pretest and posttest scores of the Grade 7 learners in terms of their performance in Arnis ($t=5.031$, $p<0.05$). The mean score of the pretest was 83.49, while the mean score of the posttest was 85.03. This implies that the supplementary learning material in Arnis had a positive effect on the

The objectives, content, activities, and assessment contained in the supplementary learning material was highly effective. As a teaching aid, the students learn better the rudiments of Arnis, its history, its practical application, and implementing Arnis as sport in school, students practice the knowledge and skills they learn through physical activity, which is defined as any bodily movement that results in energy expenditure. Furthermore, Kawabata et al. BMC Public Health (2018) indicated supplementary Materials are likely to be successful with motivating individuals to participate in.

The following findings are presented based on the data gathered.

1. The researcher makes a suitable supplementary learning material that may be used to teach or instruct grade 7 students in learning Arnis.
2. Level of Effectiveness of the Supplementary Learning Materials in Teaching Arnis:
 - 2.1. The grade seven learners perceived that the objectives of the supplementary learning material were highly effective as it makes learning permanent and reinforcing ($M=3.64$, $SD=0.579$). The material was highly effective as it serves as an aid for teaching diverse learners ($M=3.63$, $SD=0.487$) with additional approaches to motivate students ($M=3.60$, $SD=0.493$). With the use of the supplementary learning material, the students can apply what they had learned to real-world situations. This item was also rated as highly effective ($M=3.50$, $SD=0.595$). However, the item on 'applying the prescribed instructional materials to fill the gaps' was rated effective by the learners ($M=3.18$, $SD=0.382$). The computed standard deviation indicates that there is a very minor dissimilarity on the learners' responses.
 - 2.2. The grade seven learners perceived that the content of the supplementary learning material was highly effective as available materials are for teacher use and/or student selection ($M=3.48$, $SD=0.503$). The material was highly effective as it serves an actual teaching activity in terms of time, place or the sources ($M=3.34$, $SD=0.476$). This connotes that the activities used in the material provide students with opportunities to think about or use knowledge and information in new and different ways will support their development. Nevertheless, the item on 'Instructional materials are relevant to the curriculum' was rated effective by the learners ($M=3.20$, $SD=0.403$). The computed standard deviation indicates that there is a very minor dissimilarity on the learners' responses.
 - 2.3. The grade seven learners perceived that the activities of the supplementary learning material were highly effective as it provides an actual teaching in terms of time, place and sources ($M=3.65$, $SD=0.480$). The material was highly effective as it adds variety and excitement to the teaching ($M=3.63$, $SD=0.487$) with the events fill in some of the gaps ($M=3.56$, $SD=0.499$). Every activity must be useful and guarantee that students proceed through the unit, which is equally vital. The best activities allow students to engage with and develop their skills, knowledge, and understandings in a variety of ways while building on prior activities and avoiding repetition. Provide the kids with the right materials based on their individual requirements and interests. This item was also rated as highly effective ($M=3.24$, $SD=0.428$). Within the school timetable, the supplemental material organized according to its curricular project, and it is rated as effective ($M=3.14$, $SD=0.568$).
 - 2.4. The grade seven learners perceived that the assessment of the supplementary learning material was highly effective as it provides the content where it built around the need to evaluate abilities and performance ($M=3.63$, $SD=0.487$). The material was highly effective as it adds tutoring, one-on-one help, or condensed work for the student to finish ($M=3.51$, $SD=0.503$) with the relevant components that can be used to gauge the

learner's progress ($M=3.50$ $SD=0.503$). One common summative purpose of assessment facing most teachers is the need to communicate information on student progress and achievement to parents, school. Different activities and approaches that are tailored to the needs of the target learners' diversity. This item was also rated as highly effective ($M=3.48$, $SD=0.503$). The assessment has its own objectives which is precise and legitimate. ($M=3.46$, $SD=0.502$).

3. The performance of the Grade 7 learners was labeled as approaching proficiency before the implementation of the supplementary learning material ($M=83.49$, $SD=3.82$). After the implementation of the supplementary learning material in Arnis, an improvement on the performance of the learners was noted.

4. The level of performance of the learners improved from approaching proficiency to proficient, as depicted in the previous table. Testing the difference in the students' level of performance before and after the implementation of the supplementary learning material, it was found that the computed t-value is greater than the critical value which is 1.990.

The exact p-values of 0.294, 0.285, and 0.459 did not go lesser than the threshold of 0.05. The adjusted R-square value indicated that only 2.9% percent of the variation in students' performance was explained by communication, respect for others, and self-confidence, which is quite negligible.

CONCLUSIONS

Based on the foregoing findings, the following conclusion was drawn. Based on the data, it is shown that the hypothesis stating that there is significant difference between the Student's performance in Arnis in terms of pretest and posttest of students in Learning Arnis, Thus the hypothesis is rejected.

RECOMMENDATIONS

Based on the foregoing findings and conclusions, the following recommendations were offered:

1. To the Students and teachers. They can use the supplementary learning material to improve their skills and knowledge in learning Arnis. It will also encourage their confidence and increase their motivation to do tasks that are required in this discipline. They will be provided with the essential support to improve and enhance their knowledge, skills, and competence in facilitating teaching and learning that is directed towards the development of their skills in Arnis.

3. To the School. The supplemental learning material can be distributed to P.E. teachers as material or medium in teaching Arnis.

4. To the Future Researchers. Future researchers may replicate or improve this study using different locations with an increased number of respondents. Future researchers could use this study as their guide or reference for follow-up and future studies.

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