

MULTIMODAL LEARNING MATERIAL IN PHYSICAL EDUCATION: A BASIS FOR INDEPENDENT LEARNING

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Abstract

This research was entitled “Multimodal Learning Material in Physical Education: A Basis of Independent Learning. The study aimed to develop a multimodal learning material in Physical Education for grade 10 students. Specifically, the researcher attempted to attain the following objectives (1.) identify the extent of completeness of the multimodal learning material (MLM) in Physical Education; (2.) determine the level of students’ performance in Physical Education in terms of average grades; (3.) find out the significant effect of using Multimodal Learning Material (MLM) on the students’ performance in physical education.

Descriptive quantitative research design was employed by the researcher to obtain the necessary data. The research respondents were composed of one hundred thirty-five (135) grade 10 students. Likewise, twenty (20) teachers were considered as another group of respondents who determined the development and validation of material. The purposive sampling was utilized in selecting the respondents. The instrument of this study is through the development of a series of questionnaires suited for the problems in this study.

The findings revealed that the parts of the multimodal learning material in physical education 10 was interpreted as very high in terms of its components such as; learning objectives, learning contents, learning procedures, and learning assessments. Based on its extent of completeness of characteristics, it was interpreted by the respondents as highly acceptable in its aesthetic value, clarity, organization, relevance and suitability.

Based on the performances of the respondents, the findings show that the multimodal learning material used for the three quarters which was verbally interpreted as outstanding. The findings also indicated that there is no significant relationship between the validity of the multimodal learning material and student’s performance for the three quarters.

Keywords: Multimodal; Learning Material; Independent Learning

1. Introduction

Distance education, is now the trend in the instrumentation in the delivery of instruction just to continue the education despite of the problems brought about by health issues not only in the Philippines but also in the global arena.

Considering the problems posed by pandemic, education sectors opt to distance education which is provided with information-rich materials and evaluations. With the hazard of the present situation, the students have to develop to become independent learning since teacher-student interaction is limited. Physical presence to monitor and guide students as they go on to the lesson cannot be expected as it is used to be. The content of the learning material must provide support for self-regulated learning, it should be adaptable for self-paced instructions, individualized instructions, and student-controlled learning.

According to research, an important motivating factor in independent learning is the encouragement of students’ interests and their desire to learn for the learners to be motivated to learn if teaching is content-

based and meaningful; when knowledge is useful and provides a means of achieving the desired goal. Such learning activities provide a stimulus to reflective inquiry and continuing intellectual development. According to The Gordon Kelley Academic Success Center, students exposed to multiple learning styles (multimodal) can learn quicker, deeper, and also retain more of what they learned. Research has proven that students learn best when educators apply multiple learning styles simultaneously. Multimodal learning creates an exciting learning environment, which leads to increased engagement from the students. Nowadays, reading texts in high school are often multimodal, meaning they incorporate a variety of modes, including images, hypertext, and graphic design elements along with written text (Serafini, 2011). Expanding the perspectives students use to make sense of these multimodal texts is an essential part of comprehension instruction.

Background of the Study

Now that we're facing these challenges of the pandemic, the education system in our country is adapting to what is so-called "the new normal" wherein all schools have been implementing blended or purely online courses. Training in using teaching and learning platforms is available for both teachers and students. Since there is no face-to-face interaction with the students, the researcher fully understands that it is really hard for the learners to learn in the situation wherein the teachers are not physically present to attend to their needs in learning, that is why there is a need to provide multimodal learning material to help the learners have an effective self-regulated learning.

An important motivating factor in independent learning is the encouragement of students' interests and motivate them to learn. Content-based instruction would be meaningful when knowledge is useful and provides a means of achieving the desired goal. One way to attract students' interest and desire to learn is through the use of multimodal text in a material. Walsh (2006) characterizes multimodal texts as texts which consist of more than one "mode" (a kind of meaningful sign or symbol) so that the meaning of the text can be conveyed through a "synchronization of modes". It means that the meaning of multimodal texts can be understood by bringing together all of the different modes included in that text.

It is undeniable that information is communicated in multiple modes. This is attested by the increasing use of blogs, websites, slideshows, webinars, media, cloud computing, and other connectivity tools that have become nearly as common as print-based documents. A great deal of content within these tools is visually encoded. This means that a reader is presented with not only messages in words but also in images, pictures, graphics, and, if reading electronically, other components such as combinations of movement and sound that may be added (Unsworth & Chan, 2010). Multimodal learning materials are designed to deal with the students in distance learning, wherein the content is structured carefully to enhance motivation as well as engagement of the student in the lesson even without the presence of the teacher. Since not all students are capable of a good internet connection, multimodal learning material may suit their needs, lessons and instructions are understandable and progress can be monitored. Apart from motivating learning by making use of interactive activities to foster an element of competition, it can enable the teachers to manipulate their lessons in their unique way, in which they can use their classroom strategies in the learning material. That way the learners may feel the presence of their teachers doing the activities in the learning material.

Apparently, distance learning programs help overcome limited resources in the local educational environment. With this background, multimodal learning materials may serve as potential tools for promoting learners' self-dependence particularly in physical education.

In these premises, the proponent deemed it proper to focus on the multimodal learning material that may help promote independent learning in Physical Education among grade 10 students.

Theoretical Framework

The study is anchored to the following theories and can help analyze the variables related to this study, thus relating them to each other.

The use of multimodal learning material in Physical Education 10 for learning to help students to

become independent learners, especially today in the current situation of the education process. An important motivating factor in independent learning is the encouragement of students' interests and their desire to learn. To have them motivated to learn if teaching is content-based and meaningful; and knowledge is useful in achieving the desired goal. Such learning activities provide a stimulus to reflective inquiry and continuing intellectual development. As Littlewoods (as cited in Takagi & Chu, 2010) suggests: Independent students should take responsibility for their learning. This is both because all learning can in any case only be carried out by the students themselves and also because they need to develop the ability to continue learning after the end of their formal education.

The experts in Education utilize Bloom's scientific categorization that separates between mental abilities levels and points out mastering targets that require more elevated levels of mental abilities, and in this manner, lead to more profound learning and move of information and abilities to a more noteworthy assortment of errands and settings. Blossom's scientific classification contains six classifications of mental abilities going from lower-request abilities that require less mental handling to higher-request abilities that require further mastering and a more noteworthy level of mental handling.

Cognitivism learning hypothesis created by Jean Piaget (1936) expressing that a youngster creates mental pathways in understanding and actual reaction to encounters. In this hypothesis, understudies learn most successfully through understanding text and talk guidance. Subsequently, an understudy who has a multimodal learning material are allowed an opportunity to impart obviously and really to make advancing as simple as feasible for a particular subject or abilities.

Statement of the Problem

The study aimed to develop a multimodal learning material in Physical Education for grade 10 students. Specifically, this sought to answer the following questions:

1. What is the level of completeness of the multimodal learning material (MLM) in Physical Education in terms of:

- Component
 - objectives;
 - content;
 - procedures;
 - assessment;
- Characteristics
 - 1.2.1 aesthetic value;
 - 1.2.2 sequencing and organization;
 - 1.2.3 clarity and facility of presentation;
 - 1.2.4 suitability;
 - 1.2.5 relevance;

2. What is the level of students' performance in Physical Education in terms of average grades?

3. Is there a significant effect of using Multimodal Learning Material (MLM) on the students' performance in physical education?

Research Methodology

The researcher secured first the necessary permits to conduct the study. That includes the validations of the instruments, then the K-12 MELC's of Physical Education for grade 10 students, books, and other resources were used as a guide in constructing the material. Approval was sought from different experts in the field of Education to validate the develop multimodal learning material of the researcher. Then after the approval, the developed material was used by the respondents for the three quarters and was identified according to their grades. The data gathered were tabulated by the researcher.

Since this study aimed to evaluate the perceptions from the experts and focuses only on those

students taking PE 10, purposive sampling technique was used. The respondents of this study are the one hundred thirty-five (135) grade 10 PE students from Lucban Academy for the academic year 2021-2022. Likewise, twenty (20) teachers were considered as another group of respondents who determined the development and validation of the material. The results may serve as basic material to help promote independent learning in physical education.

The main instruments used in this study are 1. The developed multimodal learning material in Physical Education 10 with the following lessons based on K to 12 MELC's. 2. A modified questionnaire was used in determining the acceptability level of the multimodal learning material.

The following scale was utilized in this study:

Validation of Multimodal Learning Material		Effectiveness of the Multimodal Learning Material	
Scale	Description	Scale	Description
4.15 – 5.00	Strongly Agree	4.20 – 5.00	Excellent
3.35 – 4.14	Agree	3.40 – 4.19	Very Satisfactory
2.55 – 3.34	Moderately Agree	2.60 – 3.39	Satisfactory
1.75 – 2.54	Disagree	1.80 – 2.59	Low Satisfactory
1.00 – 1.74	Strongly Disagree	1.00 – 1.79	Not Satisfactory

The mean and standard deviation was used to determine the ratings of evaluators about the developed multimodal learning material for physical education 10. T-Test was also used to determine the significant relationship between the validity of the material and students' performance.

Results and Discussion

Table 1. Level of Completeness of the Multimodal Learning Material (MLM) in Physical Education in terms of Objectives

<i>The objectives are stated in the Instructional Materials...</i>	<i>Mean</i>	<i>SD</i>	<i>Verbal interpretation</i>
specifies the intent of the course and what it is expected to achieve	4.90	0.31	Strongly Agree
are written at the appropriate developmental level for student success	4.90	0.31	Strongly Agree
allows enough time to implement the steps needed to achieve the necessary skills successfully	4.75	0.44	Strongly Agree
states clearly when students should be able to demonstrate the skill	4.60	0.50	Strongly Agree
Overall Mean	4.79		Very High

Legend:

Scale	Range	Remarks	Interpretation
4	3.25 – 4.00	Strongly Agree	Very High
3	2.50 – 3.24	Agree	High
2	1.75 – 2.49	Disagree	Low
1	1.00 – 1.74	Strongly Disagree	Very Low

Table 1 illustrates the level of completeness of the multimodal learning material (MLM) in Physical Education in terms of Objective. Among the statements above, "specifies the intent of the course and what it

is expected to achieve” and “are written at the appropriate developmental level for student success” yielded the highest mean score ($M=4.90$, $SD=0.31$) and were remarked as Strongly Agree. This is followed by “allows enough time to implement the steps needed to achieve the necessary skills successfully” with a mean score ($M=4.75$, $SD=0.44$) and was also remarked as Strongly Agree.

On the other hand, the statement “states clearly when students should be able to demonstrate the skill” received the lowest mean score of responses with ($M=4.60$, $SD=0.50$) yet was also remarked Strongly Agree.

Overall, the extent of completeness of the multimodal learning material (MLM) in Physical Education in terms of Objective attained a mean score of 4.79 and a standard deviation of 0.71 and was Very High among the students.

Table 2. Level of Completeness of the Multimodal Learning Material (MLM) in Physical Education in terms of Content

<i>The content stated in the Instructional Material...</i>	<i>Mean</i>	<i>SD</i>	<i>verbal interpretation</i>
are based on the prescribed/expected learning competency.	4.95	0.22	Strongly Agree
are arranged logically.	4.80	0.41	Strongly Agree
are appropriate and relevant	4.90	0.31	Strongly Agree
are presented with specific instruction	4.80	0.41	Strongly Agree
are congruent to the objectives of the lesson	4.80	0.41	Strongly Agree
Overall Mean	4.85		Very High

Legend:

Scale	Range	Remarks	Interpretation
4	3.25 – 4.00	Strongly Agree	Very High
3	2.50 – 3.24	Agree	High
2	1.75 – 2.49	Disagree	Low
1	1.00 – 1.74	Strongly Disagree	Very Low

Table 2 illustrates the level of completeness of the multimodal learning material (MLM) in Physical Education in terms of Content. Among the statements above, “are based on the prescribed/expected learning competency” yielded the highest mean score ($M=4.95$, $SD=0.22$) and was remarked as Strongly Agree. This is followed by “are appropriate and relevant” with a mean score ($M=4.90$, $SD=0.31$) and was also remarked as Strongly Agree. On the other hand, the statements “are arranged logically”, “are presented with specific instruction”, and “are congruent to the objectives of the lesson” received the lowest mean score of responses with ($M=4.80$, $SD=0.41$) yet were also remarked Strongly Agree.

Overall, the extent of completeness of the multilingual learning material (MLM) in Physical Education in terms of Content attained a mean score of 4.85 and a standard deviation of 0.36 and was Very High among the students.

Table 3. Level of Completeness of the Multimodal Learning Material (MLM) in Physical Education in terms of Procedures

<i>The instructional strategies in the module...</i>	<i>Mean</i>	<i>SD</i>	<i>Verbal interpretation</i>
provides the students with clear learning targets	4.70	0.47	Strongly Agree
encourages the students to bring their own experience and knowledge throughout the lessons	4.65	0.49	Strongly Agree
provides real-life tasks applicable to the student's actual work	4.75	0.44	Strongly Agree
helps the students develop a positive attitude towards the lesson	4.80	0.41	Strongly Agree

Offers the learners the opportunity to practice concepts and develop an understanding	4.80	0.41	trongly Agree
provides detailed and appropriate feedback for the practice opportunities	4.45	0.60	Strongly Agree
provides an opportunity for learners to check their mastery of the lesson before they proceed to the next step	4.60	0.60	Strongly Agree

Overall Mean **4.68** **Very High**

Legend:

Scale	Range	Remarks	Interpretation
4	3.25 – 4.00	Strongly Agree	Very High
3	2.50 – 3.24	Agree	High
2	1.75 – 2.49	Disagree	Low
1	1.00 – 1.74	Strongly Disagree	Very Low

Table 3 illustrates the level of completeness of the multimodal learning material (MLM) in Physical Education in terms of Procedures. Among the statements above, “helps the students develop a positive attitude towards the lesson” and “Offers the learners the opportunity to practice concepts and develop an understanding” yielded the highest mean score ($M=4.80$, $SD=0.41$) and were remarked as Strongly Agree. This is followed by “provides real-life tasks applicable to the student's actual work” with a mean score ($M=4.75$, $SD=0.44$) and was also remarked as Strongly Agree. On the other hand, the statement “provides detailed and appropriate feedback for the practice opportunities” received the lowest mean score of responses with ($M=4.45$, $SD=0.60$) yet was also remarked Strongly Agree.

Overall, the extent of completeness of the multilingual learning material (MLM) in Physical Education in terms of Procedures attained a mean score of 4.68 and a standard deviation of 0.50 and was Very High among the students.

Table 4. Level of Completeness of the Multimodal Learning Material (MLM) in Physical Education in terms of Assessment

STATEMENT	Mean	SD	Verbal interpretation
The number of questions is adequate from the topic.	4.60	0.50	Strongly Agree
The assessment develops higher-order thinking skills.	4.85	0.37	Strongly Agree
Questions are easy to understand	4.80	0.41	Strongly Agree
Key answers for the assessment are clear and easy to understand	4.75	0.44	Strongly Agree
The evaluation matched the content of the topic.	4.80	0.41	Strongly Agree
Provides a real-world scenario	4.90	0.31	Strongly Agree
Overall Mean	4.78	Very High	

Legend:

Scale	Range	Remarks	Interpretation
4	3.25 – 4.00	Strongly Agree	Very High
3	2.50 – 3.24	Agree	High
2	1.75 – 2.49	Disagree	Low
1	1.00 – 1.74	Strongly Disagree	Very Low

Table 4 illustrates the level of completeness of the multilingual learning material (MLM) in Physical Education in terms of Assessment. Among the statements above, “Provides a real-world scenario” yielded the

highest mean score ($M=4.90$, $SD=0.31$) and was remarked as Strongly Agree. This is followed by “The assessment develops higher-order thinking skills” with a mean score ($M=4.85$, $SD=0.37$) and was also remarked as Strongly Agree. On the other hand, the statement “The number of questions is adequate from the topic” received the lowest mean score of responses with ($M=4.60$, $SD=0.50$) yet was also remarked Strongly Agree.

Overall, the extent of completeness of the multimodal learning material (MLM) in Physical Education in terms of Assessment attained a mean score of 4.78 and a standard deviation of 0.41 and was Very High among the students.

Table 5. Level of Completeness of the Multimodal Learning Material (MLM) in Physical Education in terms of Aesthetic Value

STATEMENT	MEAN	SD	VERBAL INTERPRETATION
colorful	4.45	0.51	Strongly Agree
attractive	4.70	0.57	Strongly Agree
has appropriate designs	4.65	0.59	Strongly Agree
has proper spacing	4.60	0.60	Strongly Agree
suitable to the learners	4.75	0.44	Strongly Agree
Overall Mean	4.63		Very High

Legend:

Scale	Range	Remarks	Interpretation
4	3.25 – 4.00	Strongly Agree	Very High
3	2.50 – 3.24	Agree	High
2	1.75 – 2.49	Disagree	Low
1	1.00 – 1.74	Strongly Disagree	Very Low

Table 5 illustrates the level of completeness of the multimodal learning material (MLM) in Physical Education in terms of Aesthetic Value. Among the statements above, “suitable to the learners” yielded the highest mean score ($M=4.75$, $SD=0.44$) and was remarked as Strongly Agree. This is followed by “attractive” with a mean score ($M=4.70$, $SD=0.57$) and was also remarked as Strongly Agree. On the other hand, the statement “colorful” received the lowest mean score of responses with ($M=4.45$, $SD=0.51$) yet was also remarked Strongly Agree. Overall, the extent of completeness of the multilingual learning material (MLM) in Physical Education in terms of Aesthetic Value attained a mean score of 4.63 and a standard deviation of 0.54 and was Very High among the students.

Table 6. Level of Completeness of the Multimodal Learning Material (MLM) in Physical Education in terms of Clarity

STATEMENT	MEAN	SD	VERBAL INTERPRETATION
simple	5.00	0.00	Strongly Agree
understandable	4.95	0.22	Strongly Agree
clear	4.85	0.37	Strongly Agree
has proper directions	4.90	0.31	Strongly Agree
based on users' vocabulary	4.80	0.41	Strongly Agree
Overall Mean	4.90		Very High

Legend:

Scale	Range	Remarks	Interpretation
4	3.25 – 4.00	Strongly Agree	Very High
3	2.50 – 3.24	Agree	High
2	1.75 – 2.49	Disagree	Low
1	1.00 – 1.74	Strongly Disagree	Very Low

Table 6 illustrates the level of completeness of the multimodal learning material (MLM) in Physical Education in terms of Clarity. Among the statements above, “simple” yielded the highest mean score ($M=5.00$, $SD=0.00$) and was remarked as Strongly Agree. This is followed by “understandable” with a mean score ($M=4.95$, $SD=0.22$) and was also remarked as Strongly Agree. On the other hand, the statement “based on users’ vocabulary” received the lowest mean score of responses with ($M=4.80$, $SD=0.41$) yet was also remarked Strongly Agree.

Overall, the extent of completeness of the multilingual learning material (MLM) in Physical Education in terms of Clarity attained a mean score of 4.90 and a standard deviation of 0.30 and was Very High among the students.

Table 7. Level of Completeness of the Multimodal Learning Material (MLM) in Physical Education in terms of Organization

STATEMENT	MEAN	SD	VERBAL INTERPRETATION
arranged according to parts	4.70	0.47	Strongly Agree
sequenced based on the competencies of the curriculum	4.85	0.37	Strongly Agree
arranged from easy to difficult	4.65	0.49	Strongly Agree
organized according to the level of the learners	4.70	0.47	Strongly Agree
the parts are congruent to each other	4.80	0.41	Strongly Agree
Overall Mean	4.74		Very High

Legend:

Scale	Range	Remarks	Interpretation
4	3.25 – 4.00	Strongly Agree	Very High
3	2.50 – 3.24	Agree	High
2	1.75 – 2.49	Disagree	Low
1	1.00 – 1.74	Strongly Disagree	Very Low

Table 7 illustrates the extent of completeness of the multimodal learning material (MLM) in Physical Education in terms of Organization. Among the statements above, “sequenced based on the competencies of the curriculum” yielded the highest mean score ($M=4.85$, $SD=0.37$) and was remarked as Strongly Agree. This is followed by “the parts are congruent to each other” with a mean score ($M=4.80$, $SD=0.41$) and was also remarked as Strongly Agree. On the other hand, the statement “arranged from easy to difficult” received the lowest mean score of responses with ($M=4.65$, $SD=0.49$) yet was also remarked Strongly Agree.

Overall, the extent of completeness of the multilingual learning material (MLM) in Physical Education in terms of Organization attained a mean score of 4.74 and a standard deviation of 0.44 and was Very High among the students.

Table 8. Level of Completeness of the Multimodal Learning Material (MLM) in Physical Education in terms of Relevance

STATEMENT	MEAN	SD	VERBAL INTERPRETATION
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			ON
essential to the learners and teachers	4.70	0.47	Strongly Agree
suited to all schools	4.00	1.45	Agree
can contribute to the teachers	4.65	0.49	Strongly Agree
can contribute to the learners	4.75	0.44	Strongly Agree
has the ability to make students discover	4.75	0.44	Strongly Agree
Overall Mean	4.57	Very High	

Legend:

Scale	Range	Remarks	Interpretation
4	3.25 – 4.00	Strongly Agree	Very High
3	2.50 – 3.24	Agree	High
2	1.75 – 2.49	Disagree	Low
1	1.00 – 1.74	Strongly Disagree	Very Low

Table 8 illustrates the extent of completeness of the multimodal learning material (MLM) in Physical Education in terms of Relevance. Among the statements above, “can contribute to the learners” and “has the ability to make students discover” yielded the highest mean score ($M=4.75$, $SD=0.44$) and was remarked as Strongly Agree. This is followed by “essential to the learners and teachers” with a mean score ($M=4.70$, $SD=0.47$) and was also remarked as Strongly Agree. On the other hand, the statement “suited to all schools” received the lowest mean score of responses with ($M=4.00$, $SD=0.47$) yet was remarked Agree. Overall, the extent of completeness of the multilingual learning material (MLM) in Physical Education in terms of Relevance attained a mean score of 4.57 and a standard deviation of 0.81 and was Very High among the students.

Table 9. Level of Completeness of the Multimodal Learning Material (MLM) in Physical Education in terms of Suitability

STATEMENT	MEAN	SD	VERBAL INTERPRETATION
suitable to the users	4.80	0.41	Strongly Agree
based on the k-12 curriculum	4.85	0.37	Strongly Agree
correct contents	4.90	0.31	Strongly Agree
properly included topics	4.85	0.37	Strongly Agree
Overall Mean	4.85	Very High	

Legend:

Scale	Range	Remarks	Interpretation
4	3.25 – 4.00	Strongly Agree	Very High
3	2.50 – 3.24	Agree	High
2	1.75 – 2.49	Disagree	Low
1	1.00 – 1.74	Strongly Disagree	Very Lo

Table 9 illustrates the level of completeness of the multimodal learning material (MLM) in Physical Education in terms of Suitability. Among the statements above, “correct contents” yielded the highest mean score ($M=4.90$, $SD=0.31$) and was remarked as Strongly Agree. This is followed by “based on the k-12 curriculum” and “properly included topics” with a mean score ($M=4.85$, $SD=0.37$) and was also remarked as Strongly Agree. On the other hand, the statement “suitable to the users” received the lowest mean score of responses with ($M=4.80$, $SD=0.41$) yet was also remarked Strongly Agree.

Overall, the level of completeness of the multimodal learning material (MLM) in Physical Education

in terms of Suitability attained a mean score of 4.85 and a standard deviation of 0.36 and was Very High among the students.

Table 10. Level of Students' Performance in Physical Education in terms of Average Grades

RANGE	POST TEST		VERBAL INTERPRETATION
	FREQUENCY	PERCENTAGE	
90-100	109	80.74	Outstanding
85-89	6	4.44	Very Satisfactory
80-84	12	8.89	Satisfactory
75-79	8	5.93	Fairly Satisfactory
Below 75	0	0.00	Did Not Meet Expectations
Total	135	100.00	
Overall Mean	92		Outstanding

Table 10 illustrates the level of students' performance in physical education in terms of average grades.

Out of one hundred thirty-five (135) students, one hundred nine (109) or 80.74% of the total population gained an average of 90-100 which was outstanding. This was followed in frequency by those who had an average of 80-84 which twelve (12) students or 8.89% of the population was identified to perform on a satisfactory level. On the other hand, only six (6) respondents gained grades of 85-89 which was very satisfactory.

Overall, the level of students' performance in physical education in terms of average grades was outstanding with a mean grade of 92 and a standard deviation of 5.77.

Table 11. Significant Effect of Using Multimodal Learning Material (MLM) on the Students' Performance in Physical Education

MLM	Performance	Beta Coefficient	F value	p-value	Analysis
Objectives	Grades in PE	0.035	0.518	0.982	Not Significant
Content		0.001		1.000	Not Significant
Procedures		0.007		0.997	Not Significant
Assessment		0.002		0.999	Not Significant
Aesthetic Value		0.003		0.997	Not Significant
Clarity		0.064		0.975	Not Significant
Organization		-0.007		0.995	Not Significant
Relevance		0.001		0.999	Not Significant
Suitability		-0.010		0.997	Not Significant

Table 11 presents the significant effect of using multimodal learning material (MLM) on the students' performance in physical education.

The MLM was observed to have no significant effect to the grades in Physical Education of the students as implied by the p-values that are greater than the significance value 0.05. As it can be seen that all of the descriptors of MLM have a positive effect on the grades, besides organization and clarity which have a negative effect, there is still a lacking of significant values.

From the findings above, it can be inferred that at 0.05 level of significance, the null hypothesis stating that "there is no significant effect between the component of multimodal learning material (MLM) and students'

academic performance” is accepted. Hence, there is no significant effect observed. Thus, there is no significant relationship between the validity of the multimodal learning material in physical education and students’ average grades.

Summary of Findings

This research was entitled “Multimodal Learning Material in Physical Education: A Basis of Independent Learning. The study aimed to develop a multimodal learning material in Physical Education for grade 10 students. Specifically, the researcher attempted to attain the following objectives (1.) identify the extent of completeness of the multimodal learning material (MLM) in Physical Education; (2.) determine the level of students’ performance in Physical Education in terms of average grades; (3.) to find out the significant effect of using Multimodal Learning Material (MLM) on the students’ performance in physical education.

Descriptive quantitative research design was employed by the researcher to obtain the necessary data. The research respondents were composed of one hundred thirty-five (135) grade 10 students. Likewise, twenty (20) teachers were considered as another group of respondents that determined the development and validation of material. The purposive sampling was utilized in selecting the respondents. The instrument of this study was done through the development of a series of questionnaires suited for the problems in this study.

The findings revealed that the parts of the multimodal learning material in physical education 10 was interpreted as very high in terms of its components such as; learning objectives, learning contents, learning procedures, and learning assessments. Based on its extent of completeness of characteristics, it was interpreted by the respondents as highly acceptable in its aesthetic value, clarity, organization, relevance and suitability.

Based on the performances of the respondents, the findings show that the multimodal learning material used for the three quarters was verbally interpreted as outstanding. The findings also indicated is no significant relationship between the validity of the multimodal learning material and student’s performance for the three quarters.

In the light of the findings presented it can be concluded that: There is no significant relationship that exists between the validity of the developed multimodal learning material in physical education 10 and student’s performance for the three quarters

Conclusion

In the light of the findings presented it can be concluded that, there is no significant relationship that exists between the validity of the developed multimodal learning material in physical education 10 and student’s performance for the three quarters.

Recommendations

Based on the findings, the researcher recommended the following:

1. The multimodal learning material can be used to help the students to be independent learners in achieving the prescribed standards of physical education 10 during distance learning.
2. The multimodal learning material can be paired with a monitoring booklet to track the students’ performances.
3. Studies with the same nature may be made with other scope of learning competencies in physical education.
4. Teachers and educational developers may design and offer an multimodal learning material to enhance student’s success across their junior high school experience.
5. In order to regularly assess and evaluate the effectiveness of the different learning materials used by students, school heads may require those teachers handling physical education subjects to submit

results of school learning material evaluation as well as the grades of student per grading period.

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