



## DESIGNING COMIC-LADEN SELF-LEARNING MODULES

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### KeyWords

Self-Learning Modules, Reading Comprehension Skills, Engagement, Distance Learning

### ABSTRACT

In the onset of the pandemic, majority of the Filipino students in the Department of Education were exposed to modular distance learning due to limited access to other learning modalities. Teachers then used designed Self-Learning Modules (SLM), which were purely print-based. However, problems arose specifically with the students' engagement in their reading activities. Hence, this study incorporated comics into the English Learning Modules of the Grade 9 learners from a public national high school in Region X, for school year 2021–2022. The research and development (R&D) design was thus utilized, following the Successive Approximation Model (SAM). As needs assessment, the respondents' reading profile was determined alongside an evaluation of their reading engagement level. The Online Student Engagement Scale (OSE) was modified and used to determine students' engagement level before and after giving the developed intervention material. The results revealed that most of the students were frustration-level readers due to their reading engagement problems. This low engagement level of the respondents was caused by varying factors ranging from the unavailability of a learning facilitator, decreasing level of motivation due to the learning set-up, and an uninteresting learning module content. To address this concern, the researchers designed two comic-laden self learning modules. These met the Division standards after it went a thorough evaluation of the select subject matter experts. Moreover, the developed learning packets improved the students' engagement level. Hence, the intervention product of this paper maybe useful for other Language teachers in addressing students' reading engagement difficulties.

### INTRODUCTION

In the height of the pandemic, most Filipino students preferred modular distance learning for a continuous and uninterrupted learning program. Thus, Self-Learning Modules were then developed. However, [1] cited a study conducted by Desire to Learn which reported that 66% of Filipinos have difficulties in staying engaged and motivated. The paper further revealed that one in every two of the 202 Filipinos polled, considered dropping out and or deferring their studies due to distance learning brought by the COVID19 pandemic. Yet, this reading engagement problem is not unique in the Philippines. Even during on site classes, the problem had persisted and worsened during the implementation of distance learning program.

In the research locale of this study, it produced a data of 93.10% student-population in Grade 9 level who submitted incomplete worksheets and activities. Empty English answer sheets were returned. These were accordingly due to the difficulties encountered in comprehending their Self-Learning Modules (SLM) and the absence of a teacher-facilitator. Text-based discussions and story-reading were likewise skipped as these were found boring and uninteresting. This statistics was taken from an initial investigation and a conducted focus group discussion among the level-teachers and the learner-respondents. It was also discovered that 68% of the learners were frustration-level readers; a result taken from the conducted Philippine Informal Reading Inventory (PHIL-IRI). These data imply that engaging students in the conduct of print distance learning modality, is found as one of the most prevailing problems in the school-based context. These initial findings are similar to the study of [2] which revealed that more students in Region X fall under frustration level in reading, and with [3] which found that students' interest in reading was still low. Hence, these academic circumstances led the researcher to design and develop two sets of comic-laden self-learning modules in English 9.

According to [4], comics can teach students to infer meaning from the visual first for they include pictures. He further states that

the benefits of using these in learning are certainly beneficial. It increases literacy and addresses the educational needs of differentiated learners. This result was based from a quasi-experimental study conducted to the fifth graders of Adyahksa Kota Jambi. Meanwhile, in the study of [5] on Online English Comics as Reading Materials for English Language Education Department Students, a descriptive qualitative study conducted among fourth year university students, the benefits of online English comics as reading materials were shown. These include adding language knowledge such as vocabulary and grammar, enhancing reading comprehension, building critical thinking, increasing creativity, and developing reading motivation.

Although comics are concluded to help engage and improve students reading skills, there is no research yet that has explored the integration of comics to self-learning modules. Hence, this study showed how the incorporation of comics influence students' engagement level.

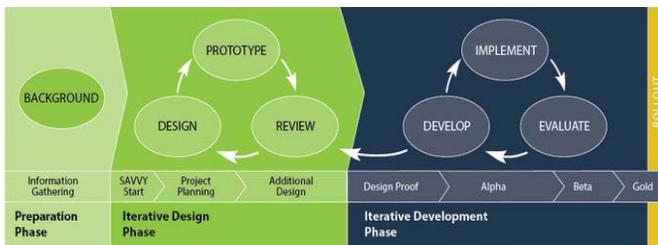
## METHODOLOGY

This study employed a research and development (R&D) research design. The research output composed of comic-laden self-learning modules; were designed, developed, and evaluated for its effectiveness. In the evaluation part, a Quasi-Experimental pretest-posttest control group design was done to see the designed prototypes' impact to students' engagement. Two groups from two intact sections were assigned as Control and Experimental groups. Control group utilized the original issued module, while the comic-laden self-learning module was used in the Experimental Group. A pretest, through the modified Online Student Engagement Scale, was conducted before distributing the modules, and a posttest was administered after the quarter.

The Successive Approximations Model (SAM) was also employed. The implementation of its three phases: preparation phase, iterative design phase, and iterative development phase.

During the preparation phase, the students' reading comprehension level was examined as stipulated in the result of Philippine Informal Reading Inventory (PHIL-IRI). Engagement of students in their reading activities were likewise investigated. This was done by conducting a Focus Group Discussion among the teachers, reading coordinators, and school head of the research locale. A modified Online Student Engagement Scale (OSE) was also floated in this phase for the researchers to distinguish the students' own analysis of their engagement level.

Figure 1. The Phases of Successive Approximations Model (SAM)



In the Iterative Design Phase; based from the information gathered, the researchers incorporated comics into the self-learning modules (SLM) of the learners. The learning competencies for the particular quarter of the study was implemented. Learning competencies were based from the Most Essential Learning Competencies (MELCS) as mandated in the interim guidelines given by the Department of Education. The literary piece presented in comics was Miller's The Death of the Salesman. The design of the prototype using Canva followed. This prototype was then iteratively reviewed by the researchers in terms of its readability, use of visuals, typographical errors, and appropriateness.

The pre-evaluation of the prototype was likewise done. Thirty English teachers were invited to assess the designed prototype using the Module Evaluation Tool for Alternative Delivery Mode (ADM) DepEd-developed Modules.

For the Iterative Development Phase, improvement of the designed comic-laden self-learning modules were determined for the suitability of the comics to substitute the literary pieces' textual presentation. The designed prototype was modified based on the assessment results of the evaluators before its distribution to the students. The evaluators' comments and recommendations for the development of the prototype were carefully analyzed and considered. After this, the designed prototype was considered to have reached its Alpha version. It was then implemented to the experimental group and concurrently, was distributed again to the evaluators for the post-evaluation. The alpha version of the prototype was iteratively improved based from the comments, suggestions, and recommendations about the designed comics-laden self-learning modules given by the thirty English teachers or subject matter experts resulting it to have reached the gold level.

## RESULTS AND DISCUSSION

Discussed as follows are the results of the study.

The Preparation Phase shows The reading comprehension level of the respondents.

Table 1. Reading Profile of the Grade 9 Learners

Reading Level	Number of Students
Frustration	40
Instructional	17
Independent	2
TOTAL	59

It is shown in the table that 68% of the Grade 9 students in the research locale are frustration-level readers, 29% of them are instructional readers, and only 3% of them are independent readers. This data manifests that there is a problem in reading among these respondents. This agrees to the study of [7] where they found that majority of the learners are at the frustration level according to the 4216 English reading profiles of Grade 1 to Grade 7 Filipino students. Similar result was displayed in the study of [2] where

the majority of respondents in the divisions of Northern Mindanao were still in the frustration reading level category, and a substantial percentage are non-readers.

A modified Online Student Engagement Scale (OSE) was likewise administered to identify the engagement level of the respondents when it comes to their reading activities in their printed Self-learning modules. Table 2 below shows the engagement level of our students in reading.

**Table 2. Students' Engagement Level in Reading Activities in their Modules (Pre-Test)**

Group	N	Mean	SD	Interpretation
Control	29	2.30	.77	Slightly Engaged
Experimental	30	2.14	.62	Slightly Engaged

Two groups of students, Control and Experimental, were administered with the modified Online Student Engagement questionnaire and Table 2 shows the Mean, Standard Deviation (SD) and the interpretation of their scores. Both groups have very low engagement in the reading activities in their Self-learning modules. With a mean of 2.30, the control group have a bit higher engagement compared to the experimental group, with a mean of 2.14. The Standard Deviation scores also shows that the scores in the control group are a bit more dispersed than the experimental group. These data stand as the pretest to the quasi-experimental part of this study. Both groups are shown to have very low engagement in their reading activities and an intervention is necessary to engage them in their reading activities despite the printed distance learning modality. The need of intervention to increase students' engagement was also recommended by [8]. They emphasized that it is important to take action to encourage pupils to read for pleasure and to develop a habit of doing so. Moreover, [9] also discussed the paramount of studying engagement as they found that despite being acknowledged as vital for reading, student engagement was still rarely measured as part of intervention initiatives.

For the Iterative Design Phase, the incorporation of comics into the English 9 SLM of the respondents was considered. In this research, the selection of literary piece was carefully studied. The researchers referred to the Most Essential Learning Competencies (MELC) as mandated by the Department of Education. The figure shown below presents the learning competencies for the fourth quarter of English 9. It is evident that there are two competencies to be covered for the whole quarter. These competencies were used as the bases in identifying the literary piece to be used. Since there was no specific literary piece mentioned in the MELC, the researchers referred to the curriculum guide where content and performance standard show that the learner should demonstrate understanding of how Anglo-American literature and other text types serve as means of preserving unchanging values in a changing world; also, how to use the features and competently perform a play. Hence, a play-based literature was taken into account.

Q4	Judge the relevance and worth of ideas, soundness of author's reasoning, and the effectiveness of the presentation		EN9RC-IVf-2.22
Q4	React to lay value judgment on critical issues that demand sound analysis and call for prompt actions		

*Figure 2. Most Essential Learning Competencies for the Fourth Quarter*

*Miller's Death of a Salesman* was utilized in this study. This play is divided into two acts. Since there are two learning competencies for the fourth quarter, the two parts of the play were divided according to the number of learning modules produced.

The Iterative Development Phase shows the results of Evaluation of the Designed Prototypes. The assessment was founded from two components: content, and layout design. In the content component, the comics-laden modules were assessed in terms of six factors: Factor I The Most Essential Learning Competencies (40%), Factor II Instructional Design and Organization (20%), Factor III Instructional Quality of Text and Visuals (20%), Factor IV Assessment (10%), Factor V Readability (5%), and Factor VI Referencing and Source Citation (5%). In the layout and design component, the comics-laden modules were assessed in terms of three factors: Factor I Physical Attributes (35%), Factor II Format (30%), and Factor III Visuals (35%).

Each Factor contains a corresponding number of indicators, to which were presented in a 5-point Likert scale. The scores provided by the evaluators in each indicator in every factor were averaged, and multiplied to its corresponding weight.

Table 5 presents the summary of evaluation conducted by the subject matter experts in terms of content.

**Table 5. Teachers' Evaluation of the Comics-laden Module in Terms of Content**

Indicators	First Evaluation	Second Evaluation
<b>Factor I. Most Essential Learning Competencies (40%)</b>		
1. The Comics-laden Modules covered the targeted Most Essential Learning Competencies (MELCs) intended for the quarter.	5.00	5.00
2. The Comics-laden Modules sufficiently developed the targeted Most Essential Learning Competencies (MELCs) intended for the quarter.	5.00	5.00
<i>Factor Total:</i>	10.00	10.00
<i>Weighted Rating:</i>	40%	40%
<b>Factor II. Instructional Design and Organization (20%)</b>		
1. Comics-laden Modules has learning objectives that are anchored on the MELCs.	4.77	5.00
2. Comics-laden Modules uses a variety (at least 3) of self-directed techniques, learning tasks, and formative assessments	5.00	5.00
3. Comics-laden Modules has content that is logically developed and organized, i.e., lessons/activities are arranged from simple to complex, from observable to abstract	5.00	5.00
4. Comics-laden Modules contains essential instructional design elements that contribute to the achievement of learning objectives.	5.00	5.00
5. Comics-laden Modules allows for review, comparison, and integration with previous lessons (if applicable).	5.00	5.00
6. Comics-laden Modules uses various motivational strategies (i.e., advance organizers, puzzles, games) to hook the target user's interest and engagement.	5.00	5.00
7. Comics-laden Modules uses process questions and activities which require different levels of cognitive domain to achieve desired learning outcomes	5.00	5.00
8. Comics-laden Modules has written and performance tasks that are differentiated based on target user's multiple intelligences, learning styles, and readiness levels.	5.00	5.00
9. Comics-laden Modules develops 21st century skills and higher order cognition (i.e., critical thinking, creativity, learning by doing, problem solving).	5.00	5.00
10. Comics-laden Modules integrates desirable values and traits.	5.00	5.00
<i>Factor Total:</i>	49.77	50.00
<i>Weighted Rating:</i>	19.91%	20%
<b>Factor III. Instructional Quality of Text and Visuals (20%)</b>		
1. All contents in the Comics-laden Modules are accurate.	5.00	5.00
2. The Comics-laden Modules is free from any social content violations.	5.00	5.00
3. The Comics-laden Modules has free from factual errors.	5.00	5.00
4. The Comics-laden Modules is free from computational errors (if applicable).	5.00	5.00
<i>Factor Total:</i>	20.00	20.00
<i>Weighted Rating:</i>	20%	20%
<b>Factor IV. Assessment (10%)</b>		
1. The Comics-laden Modules provides sufficient assessment activities that will help the learner track his/her progress and mastery of the target competencies	5.00	5.00
2. Comics-laden Modules has assessments that are aligned with the specific objectives and contents (i.e., lesson / topic)	5.00	5.00
3. The Comics-laden Modules provides variety of assessment types.	5.00	5.00
4. The Comics-laden Modules contains assessments that have clear demonstrations / examples, instructions, and/or rubrics to serve as guide on how these will be used.	5.00	5.00
5. The Comics-laden Modules has assessment activities that ensure active engagement of the learners.	5.00	5.00
6. The Comics-laden Modules has answer keys that provide exact answers for objective-type assessments and discussion points for non-objective types.	5.00	5.00
7. The Comics-laden Modules has pre- and post- assessment items that are constructed differently.	5.00	5.00
<i>Factor Total:</i>	35.00	35.00
<i>Weighted Rating:</i>	10%	10%
<b>Factor V. Readability (5%)</b>		
1. Vocabulary used in the Comics-laden Modules is appropriate to the target user's level of comprehension and experience	4.87	5.00
2. Length and structures of sentences in the Comics-laden Modules are suited to the comprehension level of the target users	5.00	5.00
3. Paragraph structures in the Comics-laden Modules facilitate smooth flow of ideas and concepts.	4.90	5.00
4. Topics and ideas presented from one lesson to the next are coherent and integrated with each other.	5.00	5.00
5. Instructions, discussion points, questions, and activities are clear to the target users	5.00	5.00
<i>Factor Total:</i>	24.77	25.00
<i>Weighted Rating:</i>	4.95%	5%
<b>Factor VI. Referencing and Source Citation (5%)</b>		
1. The copyrighted texts and visuals are accurately cited on the page where they are presented (i.e., primary and/or original sources are cited) containing the following: - Title of the work, Name of creator, Title of source, Title of source where the work is included, and/or publication details	5.00	5.00
2. The references are properly cited in the Reference List containing the following: Name of creator, Title of source, Publication details; publisher, location of publisher, date of publication, etc.	5.00	5.00
<i>Factor Total:</i>	10.00	10.00
<i>Weighted Rating:</i>	5%	5%
<b>OVERALL TOTAL</b>	<b>149.54</b>	<b>150</b>
<b>OVERALL WEIGHTED RATING</b>	<b>99.69%</b>	<b>100%</b>

Table 5 shows the descriptive statistics of the teachers' evaluation of the comic-laden modules. It is shown that the comic-laden modules possessed very good features, and met all the standards specified in Factors I, III, IV, and VI.

The evaluators saw that the modules contained the most essential learning competencies intended for the quarter and could develop the 21<sup>st</sup> century skills of the students. In verbatim, Teacher 2 stated that:

*"Na hit tanan competencies na naa sa MELC about sa topic tas gwapa kayo pagka present kay naka comics, dili gyud ma bore ang mga bata ani. Kung ako ang bata ganahan gyud ko ug module ani."*

They evaluators also observed pressing social issues were presented in the modules in a way that does not offend anyone or any organization.

Verbatim: *"Nice kay nay mga social issues ba nga sensitive raba gyud ang uban pero need gyud sad masabtan sa mga bata pero mura bitaw ug dili siya negative na gyud kaayo if the students will read it nga murag maka build ug hate. I mean free siya from biases ug maka-widen na nuon ni sa ilang perspective."* (Teacher 6)

They also mentioned how engaging the modules were because of the different activities that are doable even at home.

Verbatim: *"I love the activities kay even if distance learning ba kay na-improvise ang activities in a way nga ga promote nuon sya ug family bond kay need man ug participation sa family members ug dili sya discriminating kay pwede man bisan kinsa as long as kauban sa balay."* (Teacher 8)

The incorporation of comics to the modules was highly appreciated by the teachers. They highlighted how it could make learning fun even if students' main source of learning is through their modules alone.

Verbatim: *"Dili man gyud tanan bata natu maka-internet, maka-search ba. Busa ganahan kaayo ko kay ang comics ba murag gi-spoonfeed na gyud tanan nimo sa bata nga mura bitaw ug gi simplify gyud ug ayo para masabtan sa mga bata. Kay ang literary piece baya nga gipili kay taas pa gyud kaayo ni. Sayonan ka play baya ni pero na shorten siya through comics nga wala nawala ang thought and concept sa story ba. Colorful pa gyud kaayo ug makita pa gyud ang emotions sa mga characters busa ganahan gyud ang mga bata ani kay dili na gyud sila maglisod."* (Teacher 3)

However, despite the very good features of the developed prototype, the researchers failed to include the specific learning objectives.

Paragraph / Line / Page number (in chronological order)	Brief description of Errors/ Findings/ Observations	Specific recommendations for improving the identified criterion
Page 2	It is anchored to MELCS but the module did not specify learning objectives.	Include specific lesson objectives. Start with, <i>'In this modules, the students will be able to...'</i>

It is important to understand what value judgement is. **Value judgement** is a judgement of the rightness or wrongness of something, or someone based on a comparison or other relativity or of the usefulness of something or someone. It does not simply describe the world; they prescribe **certain attitudes or behaviors** toward the world. It is based more on **perceptual understanding on a certain issue**; a claim that a particular human action or object has some degree of importance, worth or desirability.

Let's take a look on these examples:

DISCRIMINATION	VALUE JUDGMENTS
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tives.

With the given two observations above, the researchers revised the developed prototyped to address the issues found by the evaluators. The researchers made sure to consistently use American English and inserted another page for the learning objectives.

**WHAT I NEED TO KNOW**

LEARNING OBJECTIVES:

- determine the ways on how to take a stand on a critical issue presented in the play;
- enhance knowledge in proving your claim with all evidences collected through a panel discussion;
- take a firm stand on statements in order to master the ways of making your own stand.

**HOW TO LEARN FROM THIS MODULE**

To achieve the objectives cited above, you are to do the following:

- Take your time reading the lessons carefully.
- Follow the directions and/or instructions in the activities and exercises diligently.
- Answer all the given tests and exercises.

Figure 3. Comment and suggestion of Teacher 6

It is important to understand what value judgment is. **Value judgment** is a judgement of the rightness or wrongness of something, or someone based on a comparison or other relativity or of the usefulness of something or someone. It does not simply describe the world; they prescribe **certain attitudes or behaviors**

some degree of importance, worth or desirability.

Let's take a look on these examples:

DISCRIMINATION	VALUE JUDGMENTS
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Figure 4. Correction of the Teacher 1 in bold text and red font color

After revisions were made, the modules were given back to the evaluators for the correction. Teacher 1 said after seeing the revised module:

Verbatim: *"Okay na siya kay mas clear na gyud sa mga bata kung unsay expected sa ilaha tapos dili na sila ma confuse sa paggamit sa British and American English kay here in the Philippines, American man atong gamit so let's try to be consistent with the correct usage of this language by spelling the words correctly. Dili natu i-confuse ang student."*

Table 6 lays out the results of evaluation conducted by the subject matter experts in terms of layout and design.

**Table 6. Teachers' Evaluation of the Comics-laden Module in terms of Lay-out and Design**

Indicators	First Evaluation	Second Evaluation
<b>Factor I: Physical Attributes (35%)</b>		
1. Cover elements are correct and complete. It has grade level identifier, quarter number and module number, learning area, module title, cover art.	5.00	5.00
2. All the following necessary elements in the modules are complete. It has preliminary pages, title page, the introduction of the module, body presentation, back matter, references, others, answer key.	4.93	5.00
<i>Factor Total:</i>	9.93	10.00
<i>Weighted Rating:</i>	34.76%	35%
<b>Factor II: Format (30%)</b>		
1. Headings have consistent heading styles (i.e., main heads, subheads, sections, and subsections).	5.00	5.00
2. The size of letters on each page is appropriate for the target user (11-12 pt for Grades 5 to 10)	5.00	5.00
3. Font styles used on each page are appropriate for the target user	5.00	5.00
4. Each page observes proper spacing between letters, words, and paragraphs	4.83	5.00
5. The pages observe an appropriate balance of illustrations and texts	5.00	5.00
<i>Factor Total:</i>	24.83	25.00
<i>Weighted Rating:</i>	29.80%	30%
<b>Factor III: Visuals (35%)</b>		
1. The visuals used are simple, relevant, and easily recognizable.	5.00	5.00
2. The visuals are proportionately drawn in size, appropriately placed on the page, and use appropriate color when needed	5.00	5.00
3. The visuals are properly labeled/captioned (if needed).	5.00	5.00
4. Visuals are consistently clear in content and detail.	5.00	5.00
5. The visuals of a process involving separate steps or actions are consistent and have individual pictures or frames.	5.00	5.00
<i>Factor Total:</i>	25.00	25.00
<i>Weighted Rating:</i>	35%	35%
<b>OVERALL TOTAL</b>	<b>59.76</b>	<b>60</b>
<b>OVERALL WEIGHTED RATING</b>	<b>99.6%</b>	<b>100%</b>

The table further shows the descriptive statistics of the teachers' evaluation of the comic-laden modules in terms of lay-out and design. It is shown that the comic-laden modules met the standards specified in Factors III, but not in Factors I and II.

Paragraph / Line / Page number (in chronological order)	Brief description of Errors/ Findings/ Observations	Specific recommendations for improving the identified criterion
Page 2	Delete the space between "the and the effectiveness"	Careful with the use of the space.

As previously stated, another page was created to present the lesson objectives thus meeting the specific standard in the evaluation form in terms of content. For the evaluation in terms of lay-out and design, the page creation met the standard number two of the Factor 1, "All the following necessary elements in the modules are complete. It has preliminary pages, title page, the introduction of the module, body presentation, back matter, references, others, answer key."

There were also paragraphs in the modules that did not observe proper spacing and this was addressed in the module revision. Moreover, Factor III for lay-out and design observed the standard. Figure 8 shows the sample visuals of the comic strip.

*Effects of Comics-laden SLM's to the Students' Engagement Level*

**Table 7. Mean and Standard Deviation of Students' Engagement Scores**

	Experimental Group (n=30)		Control Group (n=29)	
	Pretest	Posttest	Pretest	Posttest
Mean	2.14	3.26	2.30	2.35
SD	.62	.51	.77	.69

Table 7 shows the mean and the standard deviation (SD) of the students' Engagement Scores in both the pretest and the posttest. In the pretest, the mean of the control group is 2.30 while the mean of the experimental group is 2.14. These meant, as previously discussed in Table 2, that both the control and experimental groups are slightly engaged. Further, it can be observed that the control group has a higher average score than the experimental group. In the posttest, the mean of the experimental group went up to 3.26 while the control group earned a mean of 2.35. This implies that the control group stayed as slightly engaged, while the students in the experimental group became moderately engaged after they were given the comic-laden modules.

