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Dual-Instructional Model: Input to Developing and Evaluating Reading Modules in the Philippines

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ABSTRACT

Reading is a rudiment of academic and career success. It is a macro skill that holds higher proficiency and higher language skills such as speaking and writing. In recognition of the high significance of reading, this study made an intervention in response to identified reading challenges by constructing reading modules for Grade 9 students that were strengthened by two instructional models identified as ADDIE and CIPP further anchored on thinking skills, comprehension levels, and K to 12 reading competencies utilizing Quantitative Design via Quasi-Experimental Approach. For the development of the reading modules, the ADDIE Model was used to ensure the quality of the content through analysis, design, development, implementation, and evaluation phases. For the evaluation of the modules as regards viability in improving reading potential, the CIPP model was the final quality measure anchored on context evaluation, input evaluation, process evaluation, and product evaluation. The results showed that inconsistency of the reading achievement of participants urged the necessity of constructing reading modules. *Evaluation* and *comprehension* were the thinking skills weak points while *critical* and *interpretative* were the comprehension level

weak points. The effectiveness of ADDIE Development in the reading modules was justified by the outstanding ratings given by the reading experts and the viability of the reading modules in enhancing maximum reading potential was strengthened by the CIPP Model evaluation. The use of reading modules as supplementary tools in actual reading instruction and utilization of modules for other grade levels underscoring needs-based assessment and IM Models are highly recommended.

Keywords – Education, macro skill, ADDIE Model, CIPP Model, quasi-experimental, Philippines

INTRODUCTION

The reading status of United Nations affiliating countries disclosed that the proportion of 400 million illiterate adults in the South and South-west Asian subregion has remained unchanged since 1990 while 235 million women were deemed as lacking basic literacy which represents 64.9 % of the region's total adult illiterate population (United Nations ESCAP, 2014). In addition, the Asia-Pacific region was identified as a home for around 793 million adult illiterates noted with 51.8% or 411 million illiterate adults coming from South and West Asia (UNESCO & UNICEF, 2012). Such statistical figure appears to be alarming since literacy is currently at the peak of its demand along with the globalization trend especially when it was noted that the demand for competitive literacy skills is increasing at the peak of economic globalization, migration, changes in technology, and knowledge-based societal changes (EFA Global Monitoring Report, 2006). Corollary, literacy and education were identified as major sustainable development goals (Asian Development Bank, 2016). Hence, a threat to EFA Goal 4 or otherwise known as *Youth and Adult Literacy* is in danger by the pessimistic findings. It was declared further that ASEAN countries consider education as core to development and competitiveness (UNESCO Bangkok Office, 2013). Additionally, ASEAN countries will always regard education as a significant element in contributing to the political – security, economic, and socio-cultural ASEAN pillars (ASEAN Secretariat, 2013). Claiming this sense of regard on education and literacy, it was reported that the recommendations of ASEAN+6 towards the realization of the goal was identified as stronger commitment to education, more investment in education, and encouragement in curricular reforms (UNESCO Bangkok Office, 2015).

On the global perspective, reading has always been regarded by all the continents as a factor and indicator of academic, social, and occupational pursuits. Studies show that thousands of learners across the globe have reading disabilities and many fail in school because of difficulties in processing what they have read. An analysis of decades of studies in education about how learners can best learn to read indicate that, in most cases, academic failure can be prevented by strengthening reading potential. The statement above gives a hint that poor reading potential is a sure hole towards academic failure and to patch the gap for academic failure is to patch the shortcomings and deficiencies of reading potential which may further influence a challenged reader's personal, social, and occupational circles; hence, a number of interventions associated with this problem have been made.

In Africa, reading potential earned a similar regard for importance juxtaposed with the hope of making developing countries able to run towards competitiveness. South Africa was considered as a developing locus of education that currently faces a lot of educational issues including reading difficulties (Naidoo, Reddy & Dorosamy, 2014). Supporting this statement, it was confirmed that South African learners in the universities still need to undergo reading comprehension interventions since their reading skills are still inadequate at times and the necessity of the African Region to invest in education was also needed (Evans & Popova, 2015). The necessity of investing in education was verified (Trudell, Dowd, & Piper, 2012) when the most fundamental skill towards academic achievement and life-long sustainable development was stated as literacy among African learners which was emphasized as achievable through the application of reading strategies (Bharuthram, 2012).

In Australia, reading was also considered as a fundamental skill for learners since it serves as a key to acknowledge and open up opportunities (Abraham & Gram, 2009). A study also revealed that 46% of Australian adults have inadequate reading skills while 25% kindergarten students are readers at-risk; thus, experts enumerated a number of effective interventions for struggling Australian readers such as acceleread or accelerewrite, peer reading, toe by toe, SNIP, and ARROW that were delivered by Australian resource teachers in response to such (National Educational Psychological Service, 2012). The said interventions were made as a response to reading difficulties which were further believed that created a direct causal effect on the class achievement of Australian learners while it was also confirmed that reading is a powerful cultural impact in a learner's literacy development.

In Europe, reading literacy was defined as the comprehensive aptitude to understand, to use, and to reflect on written language forms and enumerated factors in reading achievements which were identified as approaches to teaching reading, teachers' knowledge in teaching reading, and promotion of reading outside the school (Network, 2011). However, the enumerated factors in reading achievement are not enough since motivation should also be derived from interest, confidence, and dedication (Cambria & Guthrie, 2010).

In the Asian perspective, it was found out that reading comprehension has remained to be a complex procedure that influences by a number of variables which encouraged the use of varied comprehension tests, assessment tools, and comprehension strategies. This reveals that there are still gray areas in reading that remains to be solved. As a result, studies are continuously conducted to decode these "gray areas in reading" (McKee, 2012). Among them are the findings on the effectiveness of conniving instructional materials and traditional memorization (UNESCO Bangkok Office, 2015), investment in reading instruction dependability on language exposure (UNESCO, 2008), application of effective reading strategies, monolingual superiority in reading tests than bilinguals (Bayat, 2017), effectiveness of pictures on texts, effectiveness of strategy instruction in Taiwanese classrooms (Fan, 2010), and the impact of reciprocal teaching – learning systems in Taiwanese remedial reading classes (Yang, 2010).

From the Philippine perspective, reading difficulties were found in various cases such as the overall students' performance in reading comprehension and science was indexed at low mastery level in Cotabato public secondary schools (Imam, Mastura & Jamil, 2013); major problems were lack of community-based instructional materials, delayed release of travel allowances and absence of permanent rooms during the conduct of the learning sessions in Samar public schools; there was a significant negative relationship between students' reading anxiety levels and reading comprehension performance in Mindanao; respondents' reading comprehension level showed a significant relationship toward metacognitive strategies which were applied in understanding text in English in Isabela schools (Batang, 2015); meta-cognitive reading was also applied across content and subject areas in Mindanao children's learning difficulties in relation to reading were composed of attention, expressive reading, focusing on tests, reading comprehension, and spelling (Ocampo,2015); the way that researchers and educators understood and described the process of reading has been revolutionized during the past decades; readers of narrative texts incorrectly assessed the knowledge of story characters, particularly as authors

sometimes provided readers privileged information that had been unknown to the story characters (Estacio & Bernardo, 2014); participants from learning extensions at Ozamiz City had an instructional level of fluency in reading grade-level English texts, and the identified positive association between oral fluency and age of readers (Estrada, 2016); and that reading fundamentals supported the scientifically-grounded research on reading focused on the development of phonology from theory to practice.

The K to 12 Program of the Department of Education in the Philippines highlights the role of the 3Rs known as reading, writing, and arithmetic in the development of the 21st century skills identified as life and career skills, learning and innovation skills, and information, media, and technology skills. With the goal of reading that pointed to the direction of genuine understanding through the derivation of meaning, reading has shown to be a big challenge to the K to 12 learners including those in the high school level. Because reading is a focused skill since the early years of education among students, it is alarming to realize that there are still high school students who show ineffective reading potential despite an amount of reading exposure in their earlier academic years. The crucial signs of functional illiteracy notable in K to 12 senior high school settings signal difficulty in deriving meaning from texts on a daily basis whether in the classroom settings or local and international workplace exposure. It is undeniable to correlate reading as a success indicator with both academic and their future occupational circles of high school students.

To note, the National Achievement Test (NAT) scores of secondary schools are at risk because of a notable decline compared to public elementary schools. To support this claim, Ordinario (2013) presented DepEd data showing that the average NAT scores of public secondary school students for School Year 2011 to 2012 were significantly lower at 48.90% compared to the National Achievement Test (NAT) scores of elementary student by 66.79%. Such has been an unbreakable trend for the last five years. In fact, the National Achievement Test (NAT) results of secondary school students and elementary school students in the public sector followed the ratio trend of 48.9% : 66.79% for school year 2011 – 2012, 47.92% : 68:15% for school year 2010 – 2011, 45.56% : 68:01% for school year 2009 – 2010, 46.71% : 65:55% for school year 2008 – 2009, and 49.26% : 64.81% for school year 2008 2007.

In relation to the five-year ratio trend of the National Achievement Test's (NAT) decline of results for the public secondary schools, general random interviews from students revealed that reading difficulty was one of their major

problems while answering the National Achievement Test (NAT).

Furthermore, warned the public that the aforementioned decline of the National Achievement Test (NAT) result trend may become more serious under the K to 12 program bought by several curricular transition dilemmas brought by the shifting of the Basic Education Curriculum (BEC) to Enhanced Basic Education Curriculum (EBEC) though the K to 12 Program.

In response to the reading difficulties deemed both from the international and local perspectives, reading programs and interventions have been made that led to different findings such as: Reading interventions implemented within the context of social studies have employed the use of graphic organizers, mnemonics, reading and answering questions, guided notes, and multi-component comprehension instruction; recommendation of further studies that give way to multi-level discoveries related with reading and behavioral outcomes (Solis, Miciak, Vaughn, & Fletcher, 2014); findings in five of the 12 interventions suggested significant moderate-to-large effects in reading or listening comprehension (Tutor, D. Baker, Gersten, S.K. Baker & Smith, 2016); instructional hierarchy through a useful framework for targeting academic interventions on accuracy or on fluency (Parker & Burns, 2013); moderate to large effect sizes on researcher-developed measures for cognitive strategy interventions through the utilization of graphic organizers as study guides to support social studies learning need to return to reading theory in an attempt to identify ways that current interventions may be reconceptualized to reading comprehension deficits (Compton, Miller, Elleman, & Steacy, 2013); an intergenerational Reading Club and Intergenerational Storytime deemed effective in increasing reading and literacy skills, close reading as an effective intervention that increases students' attendance, self-perception, and achievement; modeling the dominant explicit instructional move recommended for fluency and lessons in reading interventions provide instructional opportunities unrestricted by modeling and discussion (Reutzel, Child, Jones, & Clark, 2014); and participation in reading program with positive correlation between academic development, multi-level appreciation, and competence.

From the merits of the interventions stated above and the identified gap on reading modules as supplementary instructional materials responding to reading difficulties, the researcher saw hope on the necessity of reading modules as intervention to resolve reading challenges. Modular teaching is one of the most widespread and recognizes teaching-learning techniques in United States, Australia and many other Western countries including Asian region. Further,

it was proven highly effective because learning becomes more effective since it establishes a system of assessment other than marks or grade, users study the modules in their own working environment without disturbing the normal duties and responsibilities of regular learning sessions, can be administered to single use, small group or large group and are even more flexible so that implementation can be made by a variety of patterns, more appropriate to mature students and enables the learner to have a control over his learning by letting them accept greater responsibility for learning (Sejpal, 2013).

Given the above mentioned academic and scientific scaffolds from the review of literature and studies, the researcher felt the importance of constructing modules that aimed to enhance reading potential of Grade 9 students through reinforcing thinking skills, comprehension levels and study skills leading to the birth of this stud

FRAMEWORK

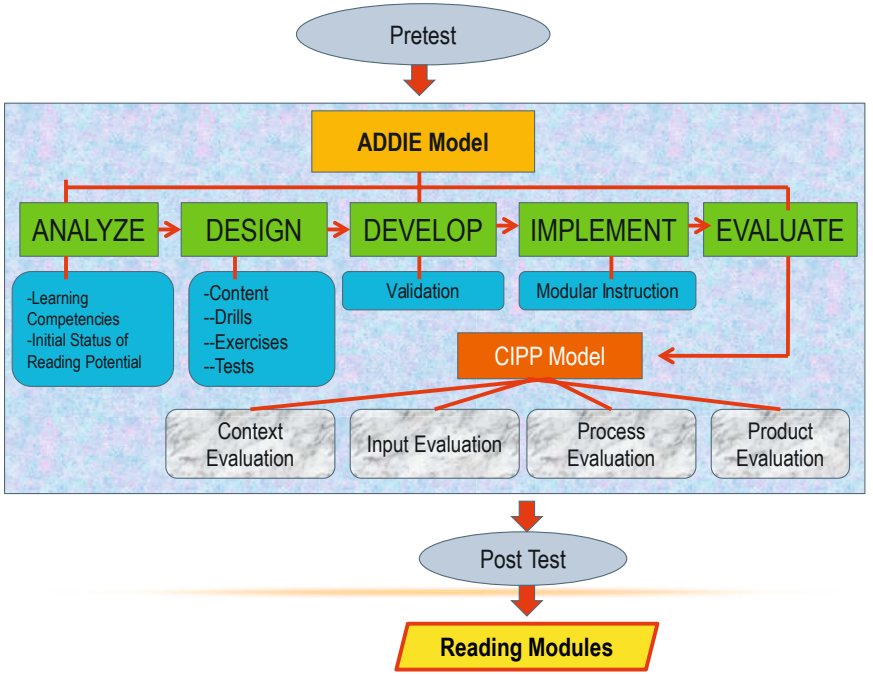

Figure 1. Research Framework

On Modular Instruction

A gap on instructional material development and production can be derived since much emphasis was given on segmented techniques and strategies in reading instruction which this study intended to address. Sejpal (2013) stated that modular instruction is a recent breakthrough in the field of education that addresses individual differences that help learners grow at their own pace based on their needs. It has been used widely in United States, Australia, and other educational landscapes. He further defines a module as a unit of educational engagements that is made up of discrete units that are wholesomely independent, self-contained, self-instructional, well-defined, encourages maximum learner involvement, and needs-based. Its advantages bear effective learning involvement, individually-paced learning atmosphere, flexible implementation, self-monitored and self-controlled learning, absence of learning prejudices, and sense of learning responsibility. In this study, the research byproduct were reading modules that were developed and evaluated by two models for instructional development and evaluation, ADDIE Model and CIPP Model, respectively. For the theoretical and content underpinnings, Bloom's Taxonomy of Thinking Skills and Brian Gray's Levels of Comprehension were carefully utilized.

Hence, it is very evident that one of the most effective interventions that must be given to remedy the reading challenge of learners was through reading modules since modules offer intact supplementary instructional aide that regular reading instructional procedures usually miss. Furthermore, the previously mentioned learning theories made the postulate stronger by reinforcing the concept of exercise, practice, and reflective learning with much importance in the recognition of reading as a significant skill every learner must possess. In addition, to make sure that the instructional material to be produced had excellent quality, two instructional models were used in developing and evaluating the constructed reading modules. ADDIE Model was used in the development of the reading modules while CIPP Model was utilized in the evaluation phase of the ADDIE Model.

OBJECTIVES OF THE STUDY

The study attempted to develop reading modules for Grade 9 students as supplementary learning materials. Specifically, the study worked as anchored on the identification of the student-respondents based on the pretest result, identification of the particular areas of reading that needed to be focused on

the module development based on the pretest result, develop reading modules using the ADDIE Model to ensure quality content among lesson explanations, reading drills, and assessment, expert evaluation of the reading modules based on the elements of the CIPP Model known as context evaluation, input evaluation, process evaluation, and product evaluation, and determine the viability of the reading modules in developing reading skills based on the results of the evaluative CIPP subordination and the posttest result.

METHODOLOGY

Research Design and Approach

The study was categorized as a Quantitative Research which is a formal, objective, systematic process for obtaining information. It is used to describe, test relationships and examine cause and affect relationships. It eyes to test responses, describe, examine cause and effect relations. In addition, the study utilized a combination of two approaches, namely, *Quasi-Experimental* and *Descriptive Approaches*. A quasi-experimental approach is a study that includes a manipulated independent variable but lacks important controls, or a study that lacks a manipulated independent variable but includes important controls while Descriptive Approach is a purposive process of gathering, analyzing, classifying and tabulating data about prevailing conditions, practice, beliefs, processes, trends and cause-effect relationships and then making adequate and accurate interpretation about such data.

Methodological Framework

To clearly illustrate how the designs and approaches were utilized in the study, the intertwined consumption of the designs and approaches juxtaposed with the research direction is vividly shown in Figure 2.

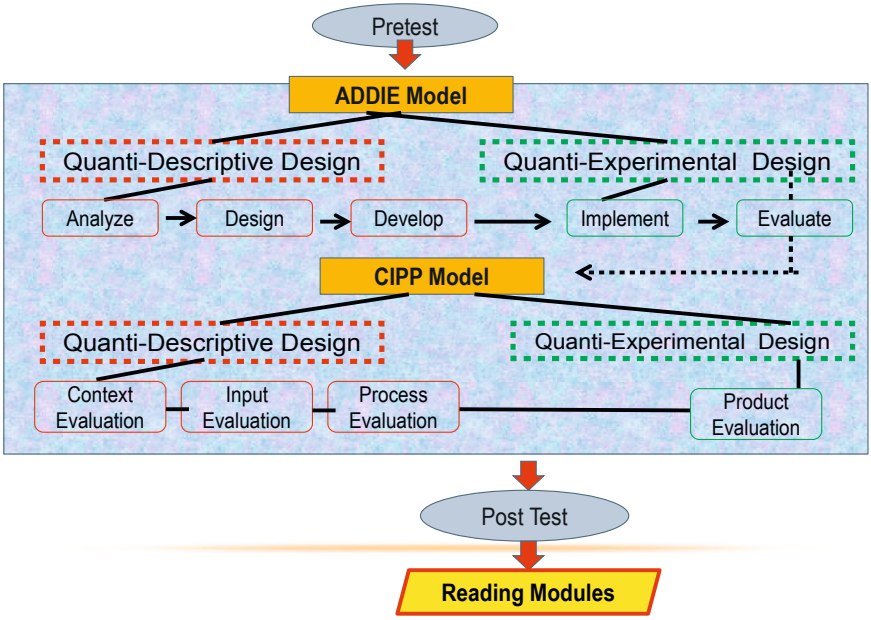

Figure 2. Methodological Framework

The methodological framework made use of particular graphics which had equivalent symbolisms and representations similar to the research framework. *Figure 2* shows the two parts of the joint use of the Quanti-Descriptive and Quanti-Experimental Designs as shown inside the dotted rectangular graphics juxtaposed with the research procedure which were represented by the oblongated rectangles. For clearer view, color coding was used in the said methodological framework. Color red was used to group the research procedure under Quanti-Descriptive while color green was used to cluster research steps under Quanti-Experimental. For the first part of the joint use of the designs which took place in the ADDIE Model, *Quanti-Descriptive Design* came from the *Analyze Phase* since Needs-Assessment was conducted while *Quanti-Experimental Design* was evident in the *Implementation Phase* where modular instruction was implemented. For the second part of the joint use of the designs in the CIPP Model, *Quanti-Descriptive* was utilized again in the *Content Evaluation* while the *Quanti-Experimental* was from the *Product Evaluation*.

On ADDIE and CIPP as Instructional Material Models

Aldoobie (2015) cites Dick and Carey as modifiers and refiners of the ADDIE Model which is utilized in constructing effective learning tools. ADDIE is an acronym for Analyze, Design, Develop, Implement, and Evaluate. This model guides authors in the process of creating effective instructional materials. The *Analyze Phase* is the most important step in the process for it helps authors to determine the basis for future decisions. ADDIE gives an edge in avoiding a mistake that many beginners make which is noted as the failure in conducting a proper analysis of the needs of the clients at the beginning. It is the *Analyze Phase* that helps authors identify the audience, limitations or opportunities, or other important points that will be useful in the design process. The *Design Phase* is the brainstorming step where the author uses the information obtained in the *Analyze Phase* to create a program or course that meets the needs of the clients. The *Development Phase* focuses in strengthening the design phase by-product. It includes draft writing, review production, revision construction, and actual testing. The *Implementation Phase* comprises material development processes with tests among concepts and resources. This phase can uncover topics that require further development or re-designing and is influences by organization sampling, material allocation, and underscoring pilot testing, training sessions, and instructional delivery. The *Evaluation Phase* plays an indispensable role throughout the procedure since evaluation objectives conceal significant discoveries in the *Analyze Phase*. These discoveries include the objectives and expectations of the learner.

Patil and Kalekor (2015) cited Daniel Stufflebeam as the developer of a useful approach to educational evaluation known as the CIPP or Context-Input-Process-Product Model. The said model is also used in evaluating instructional materials to ensure quality and effectiveness. In this study, the faculties in the CIPP Model incorporated other evaluation procedure for strong quality control measure. First, *external evaluation* was incorporated in the *Context Evaluation* which centered on the goals, intended learners and their reading potential status, competencies underpinned and materials consulted. Next, *internal evaluation* was incorporated both in *Input Evaluation* and *Process Evaluation* which focused on the presented content, embedded skills, undertaken actions and designed assessments. Lastly, *overall evaluation* took part in the *Product Evaluation* wherein the reading modules were judged according to their totality, usefulness and viability.

On Learning Theories as Underpinnings

Aside from the utilized instructional material models, the study was further strengthened through the use of the underpinned learning theories that made all the contents of the research rationality-based and goal-oriented. With that, none of the elements of the study were insignificant and unrelated. Benjamin Bloom is a proponent of a theoretical ranking of the levels of thinking called, *Taxonomy of Thinking Skills*. The *Implementation Phase* comprises material development processes with tests administered among concepts and resources. Additionally, *Synthesis Phase* concerns about blending ideas in order to draw new plans, to generate solutions, and to create new concepts. On the other hand, *Evaluation Phase* makes it possible for readers to identify, select, and judge options. Moreover, Law of Exercise Proponent Edward Thorndike argued that a response will be strengthened depending on its number of reoccurrence. Simply put, if a response is continuously exercised, it is likely to belong to a routine until it becomes established. The key to strengthened connection is practice while the key to fossilized connection is the absence of its usage brought by forgetting. To sum it up, if mastery is desired to be achieved, consistent exercise must be undergone or else skills will be diminished.

Moreover, Jerome Bruner is an advocate of his own view of *Constructivist Learning*. First, instruction must be concerned with the experiences and contexts that make the student willing and able to learn. Readiness of learners is very significant. Second, instruction must be structured so that it can be easily grasped by the student that gives way to spiral organization. Third, instruction should be designed to facilitate extrapolation and fill in the gaps. The principles mentioned will contribute to the production of an effective instructional material that puts the welfare of learners at the center. Corollary, Moon (2004) coined John Dewey in his *Reflective Learning Theory* (1933) *that* focused the key to learning in the daily basis. For John Dewey, the day to day basis is tantamount to the significant reality that completes human existence. In consideration of the physical science-related procedures such as environmental explanations, predictions, and control, he associated the mode of inquiry with the scientific systematization of human experience. Derived from the aforementioned, the idea of experiential reconstruction and transformation was formulated which argued that man learns best through his experiences in the authentic life settings.

Research site and participants

The purposive sampling procedure was used in the study. Following the

procedure and principles of purposive sampling, the researcher in search for respondents, settled for 50 Grade 9 - section 3 students of Camp General Emilio Aguinaldo High School for they belong to the equilibrium point of the academic standing and performance scale for the Grade 9 Level students and 8 reading experts. The aforesaid research locale is a K to 12 Model School supervised by the DepEd Schools Division Office Quezon City in the Philippines.

Statistical techniques

Firstly, weighted mean was used to show the academic achievement of the respondents. Secondly, standard deviation showed the distribution of the score ranges in the Pretest and Posttest. Thirdly, averaging was used in the interpretation of the data in the research questionnaire. For the interpretation of the item-achievement in the pretest and posttest, the scale below was the guide in interpreting the responses of the student-respondents through *error-rate percentage*.

Indicator		**Skill Interpretation**
Correct Response based on total respondent-population	**Erroneous Response based on total respondent-population**	
51% and above	50% and below	Strength
50% and below	51% and above	Weakness

The thinking skills, comprehension levels and reading areas that appeared as *weak points* were the highlights of the constructed reading modules.

For the utilized guide in interpreting the feedback gained from the reading instructor-respondents when they evaluated the reading modules, the scale is reflected below:

Numerical Rating	**Description**
5	Outstanding
4	Very Satisfactory
3	Satisfactory
2	Needs Minimal Improvement
1	Needs Maximum Improvement

To interpret the wholeness of the gathered data from the reading instructor-respondents, the scale below served as the guide after averaging was performed. Uniform interval of the numerical ratings was observed for unbiased description. The legend at the last column corresponds to an equivalent complete description level used in the interpretation of the averaged responses from the questionnaire.

Numerical Rating	Description	Legend
4.1 – 5.0	Outstanding	O
3.1 – 4.0	Very Satisfactory	VS
2.1 – 3.0	Satisfactory	S
1.1 - 2.0	Needs Minimal Improvement	NMinI
0 – 1.0	Needs Maximum Improvement	NMaxI

It is notable that this study observed descriptive measures anchored in the utilization of the descriptive approach. The statistical treatment made the disclosed findings clear, unbiased and accurate; thus, leading to an effective means of discovering the truth and exploring everything from the data garnered.

RESULTS AND DISCUSSION

Strengths and Weaknesses of the Respondents based on the Pretest Result

Evaluation appeared to be the most frequent *underachieved thinking skill* with a total of 11 tallied erroneous responses. The other erroneous responses for the remaining items were *Comprehension* with 9, *Knowledge with 4, and 2* tallied counts for *Application, Analysis and Synthesis.*

Aside from the *thinking skills* that appeared as *weaknesses* of the respondents, there were also deemed *weaknesses* in the *comprehension levels* based on the Pretest result. The distribution of the tallied *under achieved comprehension levels* was led by the *Critical Level* with 12 occurrences in the tally. The other *underachieved comprehension levels* followed the sequence: *Interpretative* with 10, *Literal* with 5 and *Creative* with 3.

In some items, the respondents achieved the higher order thinking skills and comprehension levels but in other items, the respondents failed to maintain correct responses. Hence, mastery of the skills was questionable and the correct responses seemed to be unreliable and impossible to be declared as strengthened reading potential. In the interview, the student-respondents admitted that their confusion with the reading concepts that they encountered in the pretest caused

them to commit inconsistency in answering correctly that justifies the logic behind the five-year ratio trend of the National Achievement Test's (NAT) decline of results for the public secondary schools where general random interviews from students also revealed that reading difficulty was one of their major problems while answering the National Achievement Test (Ordinario, 2013) as mentioned in the review.

This finding can be supported by *Bloom's Thinking Skills* and *Gray's Comprehension Levels* which were always not mastered by learners. Accordingly, positive student academic achievement was difficult to be achieved.

Focused Reading Areas in Module Development

The focused reading competencies in the constructed reading modules were those that appeared as *weakness* in the pretest result. It used the error percentage-rate achievement basis of the item score analysis similar to the previous data presented. The items that were attained by the respondents with erroneous 49 percent or below of the total population response were considered as a *strength*. On the other hand, the items deemed as *weaknesses* were those that obtained an erroneous response by 50 percentor above of the total respondent.

Using the percentage above in analyzing the achievement of the respondents, the following were the underachieved *reading areas* that were focused on the development of the reading modules: sensing character traits, drawing inferences, drawing conclusion, methods of paragraph development, graphic organizers, reading for information, giving titles, affixation, fact vs. opinion, outlining, context clues, library skills, scanning, and short story elements. These reading difficulties were also mentioned in the reading struggles among South African learners (Naidoo, Reddy & Dorosamy, 2014).

Development and Improvement of the Reading Modules based on the ADDIE Model

The data gathered and visual presentations revealed the necessity of improving reading potential of respondents through modules. The weak points as regards *thinking skills, comprehension levels and reading areas* were the key subjects for the development of the reading modules guided by the ADDIE Model.

A. Development of the Modules

Modular content was carefully chosen with reference to the identified weak points in thinking skills, comprehension levels and reading competencies

mandated by DepEd for the K to 12 curriculum. Aside from the stringent anchorage with the standards mentioned above, the ADDIE Model served as the guiding post in the instructional material construction process to ensure the quality content of the reading modules. It ranged through five phases: Analyze, Design, Develop, Implement and Evaluate.

The following were the highlighted characteristics of the modules anchored on the principles and procedure of the ADDIE Model: needs assessment-based, learner-friendly, constructively interactive and feedback-oriented. With respect to the characteristics of the reading modules based on the ADDIE principles, the following were the parts of the reading modules: *lesson introduction*, l*earning goals, prior knowledge check-up point, learning achievement check-up point, key learning*, multi-level exercises dubbed as *jump start, beat the drill* and *take the challenge*, *in a nutshell* and *feedback boxes*. All modules were validated by four reading experts and this is also an attempt to invest in education (Trudell, Dowd, & Piper, 2012).

B. Improvement of the Reading Modules

The responses of the eight reading instructors asked to evaluate the reading modules using the CIPP questionnaire were divided into five options represented by numerical ratings with equivalent descriptions: 5 for *outstanding*, 4 for *very satisfactory*, 3 for *satisfactory*, 2 standing for *needs minimal improvement* and 1 standing for *needs maximum improvement*.

After the ratings from the eight reading instructors were gathered and tabulated, the average was computed and interpreted using the following scale:4.1 – 5.0 for outstanding (O), 3.1 – 4.0 for very satisfactory (VS), 2.1 – 3.0 for satisfactory (S), 1.1 – 2.0 for Needs Minimal Improvement (NMinI) and 0 – 1.0 for Needs Maximum Improvement (NMaxI).

Suggestions for improvement solicited from the reading-instructors were also considered in the improvement of the modules. To further mention, analysis and approval from the reading experts functioning as validators were also sought before making any changes in the floated reading modules.

To highlight, the deemed *weak points in reading areas* were library skills, graphics, affixation, context clues, graphic organizers, outlining, fact vs. opinion, skimming and scanning, giving titles, drawing inferences and making predictions, drawing conclusions, paragraph development, sensing character traits, short story elements and figures of speech.

The *weak points in reading areas* as presented in the constructed reading modules were further divided into two categories: *Reading as a Skill* and *Reading*

for Appreciation. For *Reading as a Skill*, library and study skills were the points of reinforcement. For *Reading for Appreciation*, short story elements and figures of speech were the points to be developed. All thinking skills and comprehension levels were embedded in the content of the reading modules.

With review verification from the previously discussed postulates from the literature that were earlier cited in this study, all the parts catered multi-level drills to achieve reading mastery through practice exercises. In every reading exercise, the goal of deriving meaning was brought out since the primary goal of reading is comprehension. Moreover, the researcher believes that reading potential may be developed through a start in needs-assessment, justifiable choice of embedded reading competencies, proper sequence of reading lessons, ample segment for discussions and examples, integration of visuals and strengthened multi-level drills.

To sum up, the evaluation of the modules based on the utilized ADDIE Development was successfully positive and effective. It was very much evident with the parts, designs and features of the actual reading modules that underscored modular characteristics such as made up of discrete units that are wholesomely independent, self-contained, self-instructional, well-defined, encourages maximum learner involvement, and needs-based. Its advantages bear effective learning involvement, individually-paced learning atmosphere, flexible implementation, self-monitored and self-controlled learning, absence of learning prejudices, and sense of learning responsibility (Sejpal, 2013).

Evaluation of the Reading Modules based on the CIPP Model

To be very cautious and particular with the quality of the reading modules, the *Evaluation Phase* of the ADDIE Model used in the construction process of the reading modules incorporated the CIPP Model.

The evaluation questionnaire of the reading modules based on the CIPP Model had four parts wherein each part stood for every phase in the CIPP Procedure. *External, internal and overall evaluations* were also converged in the CIPP faculties. Similar rating scale and description scale were used in this part.

A. Context Evaluation

The first part of the CIPP questionnaire focused on Context Evaluation incorporated with *external evaluation u*nderscoring the proficiency level, intended learners, embedded competencies, validated items, completed parts, enhanced skills and benchmarks, consulted resources and utilized instructional designs.

The reading experts gave positive feedback about the appropriateness of embedded competencies, distribution of drills, variation of reading skills, consultation of reliable resources and covered topics. Items 1 and 3 that highlighted the embedded competencies and reading techniques introduced earned an average of 4.88 which corresponded to *outstanding*. Item 2 that explored on the variety of drills from contextual to authentic got a 4.63 average while item 5 that underscored the comprehensive coverage of the module attained a 4.75 average which were both described as *outstanding*.

Lastly, item 4 that highlights evident consultation of the reading modules to other instructional materials g*ained a 5.00 average which corresponded to an outstanding* rating also. To generalize, the reading modules successfully passed the context evaluation of the reading instructors guided by the standard context assessment of the CIPP Model.

B. Input Evaluation

The second part of the CIPP questionnaire settled at *Input Evaluation* converged with *internal evaluation* that underscored method of topic development, utilized reading texts, selected reading skills and embedded values.

The 8 reading instructors rendered positive feedback as regards method of topic development, utilization of reading texts, selection of reading techniques and parallelism of contents. Items 1, 2 and 5 that focused with the simple to complex topic development, appropriate and valued-oriented reading texts garnered an average of 4.63 which was equivalent to *outstanding*. Item 4 that underscored the parallelism of the modular content attained a 4.88 average while item 3 that pointed the ideal connection of the reading texts with the skills achieved a 5.00 average which were both described as *outstanding*. The reading modules successfully passed the *input evaluation* of the reading instructors guided by the standard input assessment of the CIPP Model.

C. Process Evaluation

The third part of the CIPP questionnaire zeroed in *Process Evaluation* confluence with *internal evaluation* paying much attention with the realistic execution, effectiveness of the modules, solicitation of feedbacks and opportunity towards self-paced learning.

To the experts, the reading modules had shown outstanding workability and usefulness as supported by the average of 4.50 in Items 1 and 4. Further, they expressed that the modules could offer room for development and potential

as supported by an average of 4.63. Items 3 and 5 that pointed the solicited feedbacks and "silent study time" earned an average of 4.75 which were equivalent an *outstanding* rating. As a whole, the reading modules were rated outstanding as regards to the process evaluation of the CIPP Model.

D. Product Evaluation

The last part of the CIPP questionnaire emphasized *Product Evaluation* integrated with *overall evaluation* that considered suitability of the structure, development of modular design, observance of learning competencies, anchorage of contents to learning objectives, and observance of the reading modules as reading supplementary tools.

The reading instructors rated the reading modules with agreeable points. Item 1 that pointed the suitability of the modules' total construction had an average of 4.63 which was described as *outstanding*. Similarly, Items 2,3 and 5 earned an *outstanding* rating with an average of 4.75 when they zeroed in the suitability of the modular design, learning competencies as guiding posts and effectiveness of the modules as supplementary tool in reading instruction. Lastly, item 4 had an average of 5.00 when it underscored the parallelism of the modular content with the objectives which was further interpreted as *outstanding*.

To generalize, the reading modules attained an outstanding rating in all the criteria set for the *product evaluation* of the CIPP Model. The positive responses of the 8 reading instructors strongly suggest the effectiveness, workability and appropriateness of the reading modules as a tool in developing reading potential at the maximum extent.

This intervention also proved the effectiveness of using of graphic organizers, mnemonics, reading and answering questions, guided notes, and multi-component comprehension instruction which were mentioned earlier in the review (Swanson, et al., 2014).

Viability of the Reading Modules to Develop Reading Skills based on the Results of the Evaluative CIPP Subordination and Posttest Result

This segment centers in the feasibility of the reading modules in the actual reading instruction. This part sought the feedback of eight reading instructors as regards to the suitability of the reading modules to the target group of respondents, comprehensiveness of the total coverage, correctness of the embedded competencies, adequacy of provided reading exercises, utility of study skills, correct variation of item difficulty and appropriateness of modular design.

Moreover, it was in this part that the reading instructors collaboratively decided that the reading modules can be used as an effective reading supplementary tool.

With initial reference to the previous data gathered, the correctness of the claim regarding the effectiveness of the reading modules was halfway achieved. The eight reading experts commented positively in the suitability of the reading modules to Grade 9 learners as supported by Item 1 which attained an average of 4. Items 7 and 9 gathered an average of 4.63 when they described the easy presentation of the modular content and adequate skill-distribution. Items 2, 8 and 10 had an average of 4.75 when they underscored the comprehensive scope, wide array of texts, and effectiveness of the modules as reading aid. Items 3,5 and 6 garnered an average of 4.88 upon focusing on reading competency-anchorage, skill-improvement attempts and wide scope of exercises. Lastly, item 5 that reflected the adequate chance in developing lower and higher order thinking skills achieved a 5.00 average. The ratings above were all equivalent to an *outstanding* remark.

Aside from the positive feedback from the 8 reading instructors, the student-respondents also expressed their positive comments about the reading module. They noted that the reading modules were learner-friendly since there was complete assistance given to them through the feedback boxes. The reading instruction followed a gradual learning phase starting from simple to complex. The adequate examples and multi-level practice exercises also gave them much opportunity to apply and test they have learned. Lastly, the summary and posttest after every lesson made them realize about the learning improvement that they had underwent.

In a nutshell, the reading modules were deemed viable in developing the reading potential of Grade 9 learners based on the data above. The undeniable positive and agreeable comments and feedbacks of the reading instructors and the student-respondents served as proof in strengthening the claim regarding the effectiveness of the reading modules. Supported by the garnered ratings, the reading modules were deemed both learner and teacher friendly. It offered better reading instruction by being an effective supplementary tool for better learning outcomes.

Furthermore, a comparative analysis of the pretest and posttest results to determine if there was an improvement that took place in the reading potential of the participants. The mean achieved by the respondents in the posttest was higher compared to the mean achieved in the pretest; thus, reading potential improvement via the constructed reading modules was evident for higher scores

appeared. In addition, the standard deviation in the posttest proved that the score distribution was closer compared to the pretest standard deviation which signified that the respondents did not only attain higher scores but also observed close achievement of the high scores mentioned above.

To elucidate, the reading modules were found effective in developing the reading potential of Grade 9 students based on the relative improvement of the mean and standard deviation of the posttest compared to the pretest. The previously *weak points in* thinking skills, comprehension levels and reading competencies transformed to be strong points at the last learning achievement assessment after using the reading modules. The reading modules did not only function as remedial instructional materials but also as enhancement tools. The comprehension capacity of the learners also improved for they were able to perform better regardless the varying embedded thinking skills and reading rudiments.

Inclined to the reviews of the study, since the scores achieved by the student-respondents both in formative and summative assessment were good, there are now clearer possibilities of academic success for the students. The said learning improvement was the product of the application of the learning theories and instructional models that served as founding roots of this Quasi-Experimental plus underscored the review as justification on the claim that learning becomes more effective since it establishes a system of assessment other than marks or grade, users study the modules in their own working environment without disturbing the normal duties and responsibilities of regular learning sessions, can be administered to single use, small group or large group and are even more flexible so that implementation can be made by a variety of patterns, more appropriate to mature students and enables the learner to have a control over his learning by letting them accept greater responsibility for learning (Sejpal, 2013).

CONCLUSION

Based on the results, a needs-based analysis is an indispensable starting point in developing instructional materials. Likewise, underachieved competencies are the major considerations in choosing modular content. Moreover, modules described as needs assessment-based, learner-friendly, constructively interactive and feedback-oriented are viable in developing learning potential of students. Furthermore, modules which successfully met the standards of the CIPP Model are providing big possibilities towards improvement in learning achievement.

Finally, effectiveness of modules in improving learning potential is best measured through the use of an instructional material model and pretest-posttest analysis. Since ASEAN countries consider education as core to development and competitiveness (UNESCO Bangkok Office, 2013) as mentioned earlier in the review, education will e contributory to the political – security, economic, and socio-cultural ASEAN pillars (ASEAN Secretariat, 2013).

TRANSLATIONAL RESEARCH

The researcher presents the traceable future directions from the standpoint of this study. Due to the proven viability of the crafted modules in improving reading potential, it is highly recommended that they should be used as an aid in actual reading instruction. Considering the fact that the produced reading modules in this study were deemed effective, the construction and utilization of learning modules for other grade levels and other content areas is necessary to meet the potential learning challenges. Since that the proper sequence of skills contributed to the effective execution of modular instruction in this study, future reading modules must observe hierarchical organization of content and skills. Modules in grammar and literature may also be crafted to enhance other English skills of students. While learner-friendly instructional materials were deemed very effective in improving the potential of students, maximum effort must be made to construct instructional materials that will also possess such characteristic. Further, learning modules must be needs assessment-based to make sure that the topics and skills honed were the ones that need immediate attention and development. And finally, all future instructional materials must gain anchorage in such for strong instructional foundation.

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