2022

SciEd
SEAQIS Journal of Science Education

SEAQIS Journal of Science Education (SciEd)
P-ISSN: 2777-0397 | E-ISSN: 2798-7175
Vol: 2, No: 2, PP: 18-28
www.journal.qitepinscience.org

Research Paper Open Accsess

The Effectiveness of The Rose (Reconnection of Science and English) Module in The Achievement of Science and English Competencies

[1] Ronnel Joseph T. Competente, [2] Joyce T. De Guzman
[1,2,]Tinago National High School, Naga City, Philippines
[1] ronneljoseph.competente@deped.gov.ph

Abstract

DepEd's Basic Education – Learning Continuity Plan (BE-LCP) as described in DO. No. 12, s. 2020 called for measures that will bring education equitably to all its learners. The researchers saw the merging of Science and English into one learning material using a content-based instruction approach as an apt response to this call. Therefore, the ROSE (Reconnection of Science and English) Module was crafted. This experimental mixed-methods design action research sought to (1) determine the perceptions of the Grade 10 students on the ROSE (Reconnection of Science and English) Module in terms of (a) content, (b) activities, (c) the merged/integrated module as a whole; (2) determine if there was a significant difference between the students' pre and post-test results using the ROSE Module; and (3) identify how had the ROSE Module helped students achieved DepEd's Most Essential Learning Competencies (MELCs) in Science and English subjects. A survey questionnaire was used to find answers to objectives 1 and 3, while a diagnostic test was utilised as the instrument for objective 2. After two quarters of using the ROSE module, data on the pre and post-test results during the first and second quarters revealed a significant difference in the Grade 10 students' scores. Survey responses also showed that the respondents agreed to the Module's (a) content, (b) activities, and (c) merging/integration. Finally, despite the difficulties, confusion, and many other challenges, most of the respondents agreed that the ROSE module taught them academic skills such as writing and thinking as well as life skills such as responsibility, time consciousness, patience, perseverance, industry, and self-reliance.

Keywords: BE-LCP; CBI; modular print learning; ROSE Modules; Science and English competencies

Introduction

The current Covid-19 pandemic ushered in a new era worldwide, requiring almost all sectors from health, economy, transport, and even education to embrace the new normal. This era proved to be a challenging change to follow. Still, as the Department of Education braced for this life-changing turn in the academic field, it encouraged everyone to "ensure learning continuity through the K to 12 learning adjustments, alignment of learning materials, deployment of multiple delivery modalities, …" which was one of the principles highlighted in its Department Order No. 12, series of 2020 or the "Adoption of the Basic Education Learning Continuity Plan (BE-LCP) for School Year 2020-2021 in Light of the Covid-19 Public Health Emergency."

The same DepEd Order underscored two other equally important principles under which the BE-LCP stands, including "be sensitive to equity considerations and concerns, and endeavour to address them the best we can;", and "link and bridge the BE-LCP to DepEd's pivot to quality and into the future of education, under the framework of *Sulong Edukalidad* and Futures Thinking in Education."

DO No. 12, s. 2020 also laid down its Most Essential Learning Competencies (MELCs) in all curriculum areas, which is DepEd's "emergency measure to allow instruction amid challenging circumstances to focus on the essential learning and ease the requirements for adapting classroom-based learning resource for distance learning."

Due to the need to ensure that flexible learning opportunities are provided to the students and that academic requirements are eased without prejudice to the standards set in the MELCs in this time of the pandemic, the researchers conceptualised an integrative approach to the development of learning module in Science and English subjects. The concept arose from the approach called Content-based Instruction (CBI), where the focus is not primarily on the language itself but instead on what is being taught through the language (Bilash, 2009). In the CBI approach, a student learns the language by using it to learn some other new content. In like manner, the researchers will craft one module which focuses on Science 10 concepts using the skills in the English language.

Numerous research have proved that the CBI approach is an effective means of teaching not only the language but also the content. For one, Curtain (1995) and Met (1991) as cited by the Center for Advanced Research on Language Acquisition (CARLA, 2019), found that "CBI lends itself to the incorporation of a variety of thinking skills, and learning strategies which lead to rich language development, e.g., information gathering skills—absorbing, questioning; organising skills—categorising, comparing, representing; analysing skills—identifying main ideas, identifying attributes and components, identifying relationships, patterns; generating skills—inferring, predicting, estimating." In another study, Hull (2018) reported that CBI was a popular method in a language class since it targeted competencies not only in the language but also in the achievement of content knowledge in various subjects. Meanwhile, a study on the use of CBI in teaching and reading in Nepal (Adhikary, 2020) proved this method's effectiveness.

Added to the research-driven rationale behind the fusion of Science and English learning, the researchers also recognise the need among its students for a module that will not seem to be academically demanding (although it teaches them all the skills highlighted in DepEd's MELCs) while learning both content and language. Furthermore, the process will also ease away much of the financial constraints on the school as it will reprint only one module for both the two subjects mentioned, a move which is also desired in this time of economic downturn.

This action research study investigated the effectiveness of an integrated module in Science and English 10 subjects called ROSE (Reconnection of Science and English) Module, which was utilised during the pandemic in Tinago National High School for the school year 2020-2021.

The study aimed to answer the following specific research questions:

a. What are the perceptions of the Grade 10 students on the ROSE (Reconnection of Science and English) Module in terms of (a) content, (b) activities, (c) the merged/integrated module as a whole?

b. Is there any significant difference between the students' pre and post-test results using the ROSE Module?

c. How has the ROSE Module helped students achieve DepEd's Most Essential Learning Competencies (MELCs) in Science and English subjects?

Methodology

The study used the experimental method, and all the Grade 10 classes using the ROSE Module were the respondents for twelve (12) weeks or two (2) grading periods. A mixed qualitative and quantitative approach was used in the treatment of data.

To address ethical concerns, parents' and students' consent were solicited. All personal

information from the respondents were treated with utmost confidentiality to conform to Republic Act 10173 or the Data Privacy Act of 2012. No names of the respondent were mentioned in the transcript of the survey and other discussions throughout the research to safeguard the identity of the respondents.

Participants and Other Sources of Data and Information

This study involved approximately 36 students from each of the eight (8) sections in Grade 10 or around 289 students in total, enrolled during the SY 2020-2021 in Tinago National High School, Junior High School Department. 90% of those students comprised the total population of the grade 10 level, and this was seen as a good representative of the population for the researchers to make conclusions.

For the survey, 75 respondents from the four classes who answered the survey questionnaire were randomly chosen by the researchers which aimed to triangulate the data derived from the pre and post-test results. The 75 respondents or an average of 19 students from each class also represented the population.

Innivation

The study used the ROSE (Reconnection of Science and English) Module as the innovation and intervention to assist the Grade 10 students in learning Science and English subjects.

First, the researchers taught Science and English 10 subjects respectively, downloaded DepEd Order No. 12, s. 2020 and located the Most Essential Learning Competencies (MELCs) in the subjects mentioned. From these competencies, they brainstormed the possible merging of topics (content) and skills. Then, learning activities with all Science texts were crafted with a diagnostic test to ensure that students' learning is gauged before and after the module utilisation. The module was then submitted for quality assurance at the school level and ready for reproduction and utilisation.

All students in the Grade 10 mentioned above utilised the module during the first and second quarters of 2020-2021. Although they used only one module, each subject area was still autonomous in assessing and grading the output produced from the module. For instance, in assessing an essay about what a student should do when earthquakes happen, the Science teacher just investigated the content presented in the essay. In contrast, the English teacher just focused on the essay's mechanics, organisation, and style. The researchers believed that this approach decreased the students' cognitive load and even led to better performance, as the CBI approach has proved in previous research.

Data Gathering

A researcher-made Diagnostic Test in Science and English was utilised to measure the students' skills in both subject areas before and after using the ROSE Module.

A survey questionnaire for selected students from each section was also used to determine the students' perceptions of the ROSE (Reconnecting of Science and English) Module in terms of (a) content, (b) activities, and (c) the merged/integrated module. Responses to these components derived from a five-point Likert Scale form with a distinct set of arbitrary descriptions which ranged from strongly agree to strongly disagree.

Data Analysis Techniques

Data from the Diagnostic Test and responses to the survey questionnaire were interpreted quantitatively. The researchers used the IBM SPSS Statistics to compute for the Mean, Standard Deviation, and t-test. For the students' responses to the survey questionnaire, a five-point Likert Scale was utilised and ordered from high to low frequency for their corresponding interpretation. Meanwhile, on the respondents' comments and suggestions,

emerging themes were identified and interpreted.

Results and Discussion

On The Students' Perceptions of The ROSE Module in terms of (a) Content, (b) Activities, (c) The Merged/Integrated Module as a Whole

Tables 1 to 3 showed the survey results conducted among the four randomly chosen sections to answer the questionnaire regarding their perceptions of the ROSE Module. The survey had a five-point Likert scale option with the following arbitrary descriptions: 4.21 – 5.00 (Strongly Agree), 3.41 – 4.20 (Agree), 2.61 – 3.40 (Neutral), 1.81 – 2.60 (Disagree), and 1.00 – 1.80 (Strongly Disagree).

Table 1 below showed the results of the students' perceptions in terms of content. The questions focused on the relevance of literary texts with the English competencies, Science topics vis-à-vis content, and sufficiency of lesson discussion.

Table 1. *Students' Perceptions of the ROSE Module in terms of Content*

Section	Average	Interpretation
Magwayen	3.55	Agree
Lakambakod	3.06	Neutral
Bathala	3.69	Agree
Amihan	3.74	Agree
Average	3.51	Agree

The results generally favour the content of the ROSE Module which were evidenced by the overall average of 3.51 (agree).

Table 2 showed the respondents' perceptions of activities and included lesson relevance, reliability, and validity questions. The results posted an average of 3.77, which was also interpreted as "agree."

Table 2. *Students' Perceptions of the ROSE Module in terms of Activities*

Section	Average	Interpretation
Magwayen	3.76	Agree
Lakambakod	3.22	Neutral
Bathala	4.14	Agree
Amihan	3.97	Agree
Average	3.77	Agree

Meanwhile, Table 3 showed the students' perceptions of the merged/integrated module and contained questions about unity between lesson content and activities, clarity of instructions, the transition from easy to more complicated lessons, typeface readability, clarity of layout, and illustrations. Like the other two previous indicators, the results above showed that the students agreed with the overall merged or integrated module.

Table 3. *Students' Perceptions of the ROSE Module in terms of Merged/Integrated Module as a Whole*

Section	Average	Interpretation
Magwayen	3.80	Agree
Lakambakod	3.17	Neutral
Bathala	3.76	Agree
Amihan	3.90	Agree
Average	3.66	Agree

The preceding data revealed that CBI has indeed achieved its purpose to target both the content of the lesson in Science and the language competences in English. It was worth nothing that in merging content with language competences, several T's of the CBI approach (which according to Stoller and Grabe (1997) were the means to develop a coherent content-based curriculum) were evident: Themes, Texts, Topics, Tasks, and Transitions. Moreover, based on the data gathered, the students were generally in agreement with how the content, activities (or tasks), and transitions were merged.

On the significant difference between the students' pre and post-test results using the ROSE Module

Table 4 showed the pre and post-test results in Science and English during the first quarter. The results showed that the students had a higher post-test score (M=14.65), (SD=4.68) than pre-test score (Mean=11.10), (SD=5.44) during the first quarter administration of the test on the ROSE Module for Science and English.

Table 5 showed the t-test of Science and English tests during the first quarter. A paired samples t-test found this significant difference ***t (293) = -10.87, p<0.001***.

Table 4. *Pre and Post-test Results in Science and English during Quarter 1*

		Mean	N	Std. Deviation	Std. Error Mean
Science and English tests (Quarter 1)	Pre test	11.10	294	5.44	0.32
	Post test	14.65	294	4.68	0.27

Table 5. *Paired Samples t-test of Science and English during Quarter 1*

		Paired Differences					t	df	Significance	
		Mean	Std. Deviation	Std. Error Mean	Interval of the Difference				Significance	
					Lower	Upper			One-sided	Two-sided
Science and English tests (Quarter 1)	Pre-test-Post test	-3.55	5.61	0.33	-4.20	-2.91	-10.87	293	0.00	0.00

Meanwhile, Table 6 showed the results of the pre and post-test for Science and English during the second quarter.

Table 6. *Pre and Post-test Results in Science and English during Quarter 2*

		Mean	N	Std. Deviation	Std. Error Mean
Science	Pre test	10.88	307	5.70	0.33
	Post test	17.07	307	6.27	0.36
English	Pre test	5.23	268	3.46	0.21
	Post test	8.90	268	4.54	0.28

Results showed that the students had a higher post-test score (M=17.07), (SD=6.27) than the pre-test score (Mean=10.88), (SD=5.70) during the second quarter administration of the test on the ROSE Module for Science 10.

Similarly, in English 10, results showed that the students posted a higher post-test score (M=8.90), (SD=4.54) than the pre-test score (M=5.23), (SD=3.46) during the second quarter.

Meanwhile, the following Table 7 showed the t-test on the pre and post-test of Science and English during the second quarter.

The paired samples t-test for Science found this difference to be significant ***t (306) = -22.43, p<0.001,*** while the same significant difference was found with the paired samples t-test for English ***t (267) = -11.36, p<0.001***.

Table 7. *Paired Samples t-test of Science and English during Quarter 2*

		Paired Differences					t	df	Significance	
		Mean	Std. Deviation	Std. Error Mean	Interval of the Difference				Significance	
					Lower	Upper			One-sided	Two-sided
Science	Pre-test-Post test	-6.19	4.84	0.28	-6.74	-5.65	-22.43	306	0.00	0.00
English	Pre-test-Post test	-3.67	5.29	0.32	-4.31	-3.04	-11.36	267	0.00	0.00

It could be noted that the grades of combined Science and English in Quarter 2 were 8.25 for the pre-test and 13.26 for the post-test. These results were lower than in Quarter 1. The discrepancy can be attributed to the fact that most of the topics during the first quarter are easier than those of the second quarter. For instance, in Science, Quarter 1 topics were mainly about Plate Tectonics; meanwhile in English, language skills mostly focused on using information from news texts in everyday life, appraising the narrative elements, and determining the effects of textual aids. On the other hand, more challenging content was presented in Science during the second quarter, including electromagnetic waves; while for English, competencies revolved around observing the language of research, identifying parts and features of argumentative essays, and formulating statements of opinion and assertion.

The above results reveal that generally, CBI can indeed improve the learners' general knowledge of the topic while at the same time give them opportunities to practice their communicative language skills, including reading and writing. This agrees with the study of Hull (2018) who reported that in the CBI approach, learners were first provided with an overview of the topic, then they were tasked to perform various activities that would make them practice their proficiency in the target language through the engagement with subject matter.

On How the ROSE Module Helped Students Achieve DepEd's Most Essential Learning Competencies (MELCs) in Science and English Subjects

Table 8 below showed the survey results among the respondents who were given the open-ended question "What can you say about the integrated module in Science and English?"

Table 8 reflected that the students generally had difficulty and confusion in using the ROSE module due to their limited vocabulary and the absence of one who could assist them in their studies. Some appreciated the module because it enabled them to get much knowledge from the learning material, while the others said that it was easier to have one module which covered two subjects.

Table 9 below showed the transcribed responses on what the respondents thought were the advantages of the ROSE Module.

The responses revealed that students found it easier to have the two subjects in one module because the lessons were clear and understandable, and it enabled them to go back and review past lessons. Furthermore, it also promoted their academic writing and thinking skills as well as positive values like responsibility, time consciousness, patience, perseverance, industry, and self-reliance.

Table 8. *Transcribed Responses on What the Respondents Can Say about the Integrated Module in Science and English*

Summary of transcribed responses	General Themes
Generally difficult	Complex and confusing due to the students' limited vocabulary and unavailability of someone who can assist them in their studies.
Difficult yet challenging	Much knowledge can be derived from the module.
Generally confusing	Easier to have two subjects in 1 module.
Confusing due to unfamiliar words/limited vocabulary of students	
Confusing because it's combined	
Much knowledge derived from the module	
Difficult and easy at the same time	
It enabled them to learn	
Easier to have two subjects in 1 module	

Table 9. *Transcribed responses on what the respondents think are the advantages of the ROSE Module*

Summary of transcribed responses	General Themes
Easier to have two subjects in one module	Easier to have two subjects in 1 module.
Able to get knowledge despite the pandemic	Still gained knowledge despite the health crisis.
Helped gain additional knowledge	Promoted development of writing skills, thinking skills.
Improved writing skills	Learned the values of responsibility, time consciousness, patience, perseverance, industry, and self-reliance.
Improved thinking skills	Lessons are clear and understandable.
Developed responsibility and time consciousness	Enabled students to go back and review previous lessons.
Clear and understandable lessons	
Students can still go back and re-read lessons	
Learned patience, perseverance, industry, self-reliance	
Learned to work on one's own	

Table 10 showed the disadvantages of the ROSE module as perceived by the respondents. Most disadvantages noted by the students in using the module including the difficulties in understanding the lessons because of having a limited vocabulary, unclear pictures, and no one to assist them in answering. Some also mentioned about having many household chores, which also led to their difficulty in answering the modules. By having just one module, the respondents commented that the lessons seemed compressed; meanwhile, the others said that by combining the two subjects, it looked like there was a lot to be done. On the other hand, some mentioned that by combining the two, they could not distinguish between Science and English.

Table 10. *Transcribed Responses on What The Respondents Think are The Disadvantages of The ROSE Module*

Summary of transcribed responses	General Themes
Lessons were compressed	Lessons were compressed.
Difficulty understanding some parts of the module	Lessons seemed like it's a lot/a handful.
No emphasis on each separate subject	No more emphasis on each separate subject; can't distinguish which is Science or English.
The module seems to cover a lot of topics	Difficulties are due to limited vocabulary, unclear pictures.
Difficulty due to limited vocabulary	Difficulties are due to the absence of someone who can assist them in answering.
Some pictures are unclear	Difficulties are due to household chores.
Difficulty due to unavailability of someone who can assist in answering the module	
Lack of focus due to various household chores	
Unsure about what subject to focus on	

Table 11 below showed how the ROSE module helped the respondents in learning the Science and English subjects. First, the students noted that ROSE Module made them learned two subjects in one module, making answering the activities more manageable.

It also facilitated their understanding on unfamiliar words, grammar, and thinking skills which led to the realisation that Science and English are not that difficult. Furthermore, they learned new knowledge through the module during the pandemic.

Table 11. *Transcribed Responses on How The ROSE Module Helped Them in Learning Science and English*

Summary of transcribed responses	General Themes
It made answering the activities easier	It made answering the activities more manageable.
I learned to understand and read properly	It facilitated understanding of unfamiliar words, grammar, thinking skills.
I learned patience in understanding unfamiliar words	It led to discovering new knowledge despite the pandemic.
I gained additional knowledge	It led to the realization that Science and English are not that difficult.
I learned despite the pandemic	It made them learn two subjects in just one module.
The realization that Science and English are not that difficult	
It improved my English, and I gained additional knowledge	
I learned especially grammar	
I learned the two subjects in one module	
I get to hone my skills in thinking/understanding	

The succeeding table below focused on the respondents' comments on the ROSE Module. It was noted that the respondents freely wrote down their comments about the module they used for the first and second quarters. Their comments derived from the difficulties they experienced in answering the module due to vocabulary. Some of them reflected that they had a tough time balancing between answering the module and doing house chores.

Moreover, there were many essays to be written. Despite some difficulties, they expressed that they were able to manage the answers, and it was easy to have two subjects in one module. Their responsibility and self-reliance were also developed by answering the module on their own.

Table 12. *Transcribed Responses of The Respondents' Comments on the ROSE Module*

Summary of transcribed responses	General Themes
Easy to answer but too many essays	It was easy to answer, but it has too many essays to write.
No problem encountered	Some parts were difficult to understand due to reasons like limited vocabulary.
Difficulty answering some parts of the module	Lessons were tough but managed through them all.
Tough lessons but manageable	Answering the module taught them responsibility, self-reliance.
I learned how to be a responsible student	The module is sound, and they're contented with it.
Difficult to understand; did not learn anything	It was easy to have two subjects in one module.
Learned how to study on one's own	The modular approach gave them a tough time balancing between studies and working for the family.
Asked the help of others for complex topics	
Module is good	
Contented with the module	
Difficulty in using the English language	
I had difficulties but was able to manage	
I had a tough time balancing between studies and working	
Easier to understand with one module for two subjects	
Appreciates the two subjects in one module approach	

Table 13 below showed the general suggestions culled from the respondents' answers. The suggestions ranged on opposite extremes: some recommended the approach while the others preferred the separate subjects of Science and English. Other recommendations focused on visual aspects of the module such as having clear pictures, using simple vocabulary, and more explanations and examples that geared to facilitate their understanding. There was also one who suggested having more space for their answers.

Table 13. *Transcribed Responses to the Respondents' Suggestions on the ROSE Module*

Summary of transcribed responses	General Themes
Recommends this approach	The approach is recommended.
Suggests clear pictures, so it's easy to understand	Make images clear to facilitate better understanding.
Some lessons need explanations and a lot of examples	Give more explanations and examples, especially for complex topics.
Better if Science and English are separate	Use simple vocabulary.
Suggests more straightforward vocabulary facilitate understanding	Have more space for students' answers.
Suggests explanations/discussions	The approach is NOT recommended.
Suggests more space for answers	

The statistics on the pre and post-test of the learners showed that the ROSE Module was indeed effective in achieving the competencies in Science and English, evidenced by the significant difference in both subjects during the first and second quarters when the module was implemented among the Grade 10 learners.

This was affirmed by the results of the survey questionnaire in which the respondents also agreed with the ROSE module in terms of content, activities, and integration of the two subjects.

In the survey responses, the respondents' answers to the questions reflected both positive and negative feedback. A closer look at some of the responses revealed that they seemed to be generally talking about the "modules" as a whole during the time of pandemic and not just the ROSE Module. In fact, they had much difficulty in accomplishing the module because they were doing house chores or had no one who could assist them in answering the questions.

Some answers were specific only to the ROSE Module, for example, the difficulty in distinguishing which lesson was for Science and English. Since the lessons were merged, the learners could not determine the activities for the separate subjects.

Conclusion

The concept of the ROSE Module is anchored on Content-based Instruction (CBI), an approach which focuses on the topic or the subject matter. In CBI, students learn about the topic using "a language they are trying to learn rather than their native language, as a tool for developing knowledge and linguistic ability in the target language" (teachingenglish.org.uk). CBI is considered to be a more natural way of developing language ability, as it bears a resemblance to the way we learn our first language. With CBI, students fulfil a real language purpose: to know about Science concepts and translate that learning to activities such as writing essays, creating infographics, or writing outlines.

Based on the students' perceptions of the ROSE Modules, the data shows that the respondents perceive the ROSE Module's content, activities, and subject merging or integration as something agreeable to them.

From the significant difference between the students' pre and post-test results using the ROSE Module, the data gathered show that in both Science and English subjects, there is a significant difference between their pre and post-test scores during the first and second quarter periods. Moreover, the difference is higher during the first quarter than the second quarter.

According to how the ROSE Module helps students achieve DepEd's Most Essential Learning Competencies (MELCs) in Science and English subjects, the results show that the learners believe the ROSE Modules have both advantages and disadvantages, and it have been instrumental

in helping them learn the two subject areas. They also give their comments and suggestions on how the module can still be improved for Grade 10 students in the succeeding years.

Recommendations

It is understandable that students experienced confusion or felt that there was no focus on their language learning. CBI is not explicitly focused on language learning; instead, it uses language to learn about content, which is entirely new to them. To address this difficulty, it is recommended that measures be done by the researchers to address this confusion among the students, and this include the following: (1) orientation of students on the ROSE module and the underlying principle behind the merging of Science and English subjects; (2) making language more straightforward to promote better understanding among the learners; and (3) inclusion of lesson enhancers such as short video lessons explaining the complex topics.

Further research on the utilisation of CBI is also recommended especially in the Philippine setting to better shed light on the relevance of this approach to the country's educational setup. This is especially true in the secondary level of both Junior and Senior High School (Grades 7 through 10 and 11 through 12), as English instruction is used for most of the subject areas including Mathematics, Science, English, Music-Arts-Physical Education-Health (MAPEH), and Technology and Livelihood Education (TLE).

Finally, regarding the innovations on modules that will be crafted using the CBI approach, it is also suggested that besides the students, teachers can contribute in evaluating the content, activities, and the merged module as a whole.

References

Adhikary, R. P. (2020). Effectiveness of content-based instruction in teaching reading. *Theory and Practice in Language Studies*, Vol. 10, No. 5, pp. 510-519, May 2020. http://dx.doi.org/10.17507/tpls.1005.04

Bilash, O. (2009). *Content-based Instruction*. Available: https://sites.educ.ualberta.ca/staff/olenka.bilash/Best%20of%20Bilash/content

British Council. (2021). Content-based instruction. Available: https://www.teachingenglish.org.uk/article/content-based-instruction

Center for Advanced Research on Language Acquisition (CARLA). (2019). *Content-based Second Language Instruction*. Available: http://carla.umn.edu/cobaltt/CBI.html

DepEd Order No. 12, series 2020. *Adoption of the Basic Education Learning Continuity Plan (BE-LCP) for School Year 2020-2021 in Light of the COVID19 Public Health Emergency*. Department of Education.

Hull, T. (2018). Content-based instruction: A communicative approach for the EFL classroom. *PUPIL: International Journal of Teaching, Education and Learning.* 2(3),63-77. Available: https://dx.doi.org/10.20319/pijtel.2018.23.6377

Stoller, F. L.& Grabe, W. (1997). A 6T's Approach to Content-Based Instruction. Available: https://carla.umn.edu/cobaltt/modules/curriculum/stoller_grabe1997/6ts.pdf