



EFFECTIVENESS OF LOCALIZED WEBTOON SERIES IN ENHANCING THE READING AND WRITING SKILLS OF GRADE 11 LEARNERS

JOSIELYNE P. GERVACIO

SHS Teacher II

Camp Vicente Lim Integrated School

josielyne.gervacio@gmail.com

ABSTRACT

This quasi-experimental research determined the effectiveness of localized webtoon series in enhancing the reading and writing skills of Senior High School students. The developed webtoon series were validated by English teachers and ICT experts in the Division of Calamba City and webtoon specialists from South Korea. The evaluation of its effectiveness was administered through pre-test, formative, and post-test performance of the Grade 11 students of Camp Vicente Lim Integrated School. Mean was employed to describe the performance of the participants. T-test for dependent samples and paired samples were used to identify the significant difference in the performance of participants. The findings of the study revealed that both experimental and control groups have average performance in the pre-test and post-test. The experimental group attained high performance in formative tests, while the control group got average. The hypotheses were rejected because there was a significant difference between the formative test performance of the two groups. Similarly, there was a significant difference between the two groups' post-test performance. Furthermore, each group's pre-test and post-test performance was found to have a significant

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



difference. The findings implied that the developed material enhanced the participants' performance in Reading and Writing Skills and was more effective compared to SLMs. The study recommends that the material could be used in teaching Reading and Writing Skills and webtoon utilization can be adapted in other learning areas to further assess its effectiveness as an instructional tool.

Keywords: *instructional material, teaching strategy, reading skills, Webtoon, writing skills*

INTRODUCTION

From a global perspective, new web technologies and the expansion of interactive devices such as tablets and laptops can provide new opportunities for schools and their teaching methods. First and foremost, new technologies can enable schools to develop constructivist learning environments by moving away from passive learning and toward a more active learning style. Specifically, as stated by Bryant et al. (2020), the utilization of new technological innovations in the classroom has much promise: it allows for personalized, mastery-based learning, it saves teachers' time, and it gives kids the digital skills they need in 21st-century jobs. Individualized blended learning has been shown to dramatically increase student results in controlled pilot experiments. During this age of school closures and distant learning, educational technology has become a lifeline for continuing education. These opportunities were abruptly explored and given attention by schools worldwide during COVID

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



19 pandemic, including in the Philippines, to address and answer the problems in achieving education continuity.

Due to the worldwide pandemic's restrictions on Philippine education, public and private schools were forced to use online distance learning, alternative work arrangements, and other virtual practices to help prevent the virus's spread. Despite the short time of preparation of teachers, inadequacy, and inappropriateness of learning materials, scarcity of technological tools on the part of the students, technical difficulties, and a lot more hindrances, the government, especially the agencies directly concerned with education, urgently worked on resolutions, directives, and the like to hasten these inadequacies. As a result, the Department of Education (DepEd) issued DepEd Order 012 s.2020 or the Adoption of the Basic Education Learning Continuity Plan for the School Year 2020-2021 in Light of the COVID-19 Public Health Emergency to provide a set of educational interventions aimed to address fundamental education challenges and ensure learning continuity.

Investing in electronic tools for students, such as tablets, was one move taken by the Department of Education. Inquirer (2020) reported that 1,042,575 devices had been supplied to 43,948 public schools, accounting for 93 percent of all public schools in the country. According to Secretary Leonor Briones (2020) in a "Handang Isip, Handa Bukas" virtual press briefing, this move is part of DepEd's endeavor to identify ways to "gradually shift" from print to digital learning.

In SDO-Calamba City, 3500 tablets have already been delivered to various learners in the division's numerous schools. Five hundred twenty-nine of these were received by grade

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



11 students at Camp Vicente Lim Integrated School. Teachers can take advantage of these technologies to their full potential. Because the obstacles of distance learning are overwhelming, teachers must make significant changes and come up with concrete answers. To reduce and alleviate the issues and challenges brought by the new arrangement, they must employ new teaching approaches that appropriately use technology.

Given that 21st-century students are referred to as "digital natives," the teaching strategy should be based on the technology that students are most interested in and familiar with. Furthermore, because Filipino students cannot function without their smartphones and other electronic devices, technology and digital media must be investigated and employed, as students are interested in anything electronic, interactive, and distinctive. Hence, the researcher developed a localized webtoon series and utilized it to teach reading and writing skills to Grade 11 students.

Consequently, the researcher seeks to determine the effectiveness of using webtoon to enhance reading and writing skills among Grade 11 students.

This study is anchored on Richard Mayer's Cognitive Theory of Multimedia Learning (2014). According to him, having two unique and independent channels allows students to work with more meaningful information since different content presentations are processed differently. The student can remember and work with significant pictures and keywords in working memory. Each of these bits of information is examined and organized into models and patterns that assist understanding and recalling the information. The knowledge is kept distinct in working memory, and the learner creates two models. Finally, the learner combines

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



the models to their existing knowledge and experiences to create a coherent whole. Once all the components have been linked together sensibly, the new information may be retained in long-term memory.

Moreover, the Theory of Second Language Acquisition (SLA) served as the backbone of this study. Krashen (1982) claimed that students retain more information and perform better when learning is associated with pleasant solid emotions. The Emotive Filter theory reflects Krashen's notion that a range of affective qualities aid but do not cause second language learning. The factors are drive, confidence, anxiety, and personality attributes. According to Krashen, individuals with intense desire, self-esteem, a positive self-image, lower stress, and extroversion are well-suited for second language acquisition. Low motivation, poor self-confidence, anxiousness, social awkwardness, and fear can all boost the emotional filter, preventing comprehensible input from being utilized for learning. In other words, language acquisition is impaired whenever the filter is present. On the other hand, positive affect is essential but inadequate for learning and acquisition.

Further, this study was underpinned by the ADDIE Model, which refers to analysis, design, development, implementation, and evaluation. The input for the instructional material is analysis; the process is design, development, and evaluation; and the result is implementation. In this study, the model served as a guide in developing, validating, and evaluating the localized webtoon series to ensure the quality and appropriateness of the developed instructional material. It assisted the researcher in developing more effective quality designs, clearly stated learning objectives, structured and coherent material, measured

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



and organized workload for educators and students, including visualizations and media, and practical student activities and evaluations related to the desired learning outcomes.

OBJECTIVES OF THE STUDY

This study determined the effectiveness of the localized webtoon series in enhancing the performance in Reading and Writing Skills of selected Grade-11 Senior High School students in the Division of Calamba.

Specifically, it sought to answer the following questions:

1. What is the mean score of the participants in the pre-test?
2. What is the mean score of the participants in the formative test?
3. What is the mean score of the participants in the post-test?
4. Is there a significant difference in the mean scores of each group in the formative test?
5. Is there a significant difference in the mean scores of each group in the post-test?
6. Is there a significant difference between the pre-test and post-test mean scores of each group?

MATERIALS AND METHODS

The researcher utilized the quantitative method for this study. According to Creswell (2014), quantitative method emphasizes obtaining numerical data and generalizing it across groups of individuals or explaining a particular event.

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



The type of design that was used is quasi-experimental. Creswell stated that a quasi-experiment is an experiment where the researcher allocates participants to groups, but not at random because the experimenter cannot establish groups intentionally. Moreover, the researcher applied the subjects' Pre- and Post-test nonequivalent group design. Creswell explained that a pre-test is a measurement of certain features or characteristics that will be examined for experiment participants before they receive an intervention. On the other hand, a post-test is a measure of some quality or characteristic that will be tested for participants in an experiment after they have received treatment. The study utilized two heterogeneous sections from the Grade 11 STEM strand with 30 students each to utilize the two teaching approaches in Reading and Writing Skills. One section was assigned as the control group, and another was assigned as an experimental group that would be exposed to the developed learning material. Participants were assigned to each group through match pairing on the basis of their strand and gender. The pre-test, formative test, and post-test were administered to the same participants.

To validate the localized webtoon series, the researcher used a standardized survey questionnaire to assess the developed instructional material. The questionnaire was a combination of indicators adapted and modified from validation tools of the DepEd regional office, SDO Calamba City, and Camp Vicente Lim Integrated School, which the researcher deemed appropriate for her study.

In evaluating the developed localized webtoon series, the researcher used a pre-test, formative test, and post-test for the respondents. The tests were composed of 50 items each

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



and were focused on first quarter topics of Reading and Writing Skills. The topics included were: 1. Patterns of Development in Writing 2. Claims in Written text and 3. Properties of Well-written Text. The performance results were interpreted using the levels of performance.

The researcher constructed and sent a letter to the School's Division Superintendent of SDO-Calamba City and the Principal of Camp Vicente Lim Integrated School to ask permission to conduct this study. After the approval, the researcher administered the validation survey to the selected SHS teachers.

Likewise, the researcher administered the tests to the participants and utilized the localized webtoon series. The researcher exerted all efforts to make sure that the objectives of the study and the content of the questionnaires were explained clearly. Afterward, all data were recorded and tabulated. Finally, the collected data were forwarded to the statistician for the application of statistical treatment.

Mean and Standard deviation were employed for SOP 1 to 3 to describe the results of the tests given to the experimental and control groups. Further, the t-test for independent samples was used for SOP 4 and 5 to measure the significant difference in the results of the formative and post-test of the control and experimental groups. Lastly, for SOP 6, the Paired Samples t-test was used to assess the significant difference between the pre-test and post-test performance of each group.

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



RESULTS AND DISCUSSION

Table 1. Pre-test mean scores of the students in the Control group and experimental group

| Group (n = 30) | Mean | Std. Dev. | Descriptive Interpretation |
|---------------------------------|-------------|------------------|---|
| Experimental Group | 29.37 | 7.156 | Average |
| Control Group | 27.57 | 8.49 | Average |

Legend: 45 – 50 = Very High; 38 – 44 = High; 25 – 37 = Average; 14 – 24 = Low; 1 – 13 = Very Low

As shown in Table 1, the level of performance of the experimental group in the pre-test has a general mean of 29.37. It is verbally described as Average. Meanwhile, the Control group also got an Average with a general mean of 27.57. In addition, the experimental group acquired a standard deviation of 7.156 which is lower than the control group who got 8.49. This means that the scores of the experimental group are closer to the mean while the scores of the control group are more spread out.

The findings only show that the students have average proficiency in their pre-test in RWS. The results imply that the respondents in both groups already have a fair amount of prior or background knowledge on the 1st quarter topics in the Reading and Writing Skills subject. Such may have been brought about by the spiral curriculum design that is followed

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



in the K to 12 curriculum, where some included topics were already discussed in their previous English classes during Junior High School but with varying levels of complexity. However, despite their existing schema of the subject content, there is still a need for rigid teaching for the low scorers to pass and the average scorers to further their performance.

Table 2. Formative test mean scores of the students in the Control group and experimental group

| Group (n = 30) | Mean | Std. Dev. | Descriptive Interpretation |
|--------------------|-------|-----------|-------------------------------|
| Experimental Group | 38.37 | 6.84 | High |
| Control Group | 33.10 | 5.87 | Average |

Legend: 45 – 50 = Very High; 38 – 44 = High; 25 – 37 = Average; 14 – 24 = Low; 1 – 13 = Very Low

As shown in Table 2, the level of performance of the Experimental group in the formative test has a general mean of 38.37 and is interpreted as High. In addition, the control group acquired a lower standard deviation of 5.87 compared to the experimental group who got 6.84 This means that the scores of the control group are closer to the mean while the scores of the experimental group are more spread out.

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



The results entail that with the application or utilization of the devised teaching material in the learning process, the group was able to get a good grasp of the taught concepts in the 1st quarter of RWS. Though some still have low scores, most got passing marks, and a few garnered outstanding scores. This is a strong indication that the teaching strategy applied, which is the use of localized webtoon series, has a good impact on the students' concept mastery.

On the other hand, the Control group got a general mean of 33.10 in the formative test and is described as Average. The obtained average mean score for the Control group may suggest that the students were still able to comprehend the included topics in the subject. However, the score difference only proves that the students exposed to the intervention, which is the webtoon series, performed better than those provided with instruction using the traditional DepEd SLMs.

Learning took place in both groups, as seen in the increased performance in the formative test, despite the difference in the strategy utilized. However, the experimental group proved to have more desirable performance than the Control group hence, it can be said that the use of localized webtoon series was more beneficial during the actual discussion or instruction compared to utilizing the traditional SLMs or printed materials.

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



Table 3. Posttest mean scores of the students in the Control group and experimental group

| Group (n = 30) | Mean | Std. Dev. | Descriptive Interpretation |
|--------------------|-------|-----------|-------------------------------|
| Experimental Group | 35.57 | 4.41 | Average |
| Control Group | 31.50 | 8.32 | Average |

Legend: 45 – 50 = Very High; 38 – 44 = High; 25 – 37 = Average; 14 – 24 = Low; 1 – 13 = Very Low

As shown in Table 3, the level of performance of the experimental group in the post-test has a general mean of 35.57. It is interpreted as Average. Conversely, the Control group got a total mean of 31.50 and is described as Average. Moreover, the experimental group acquired a standard deviation of 4.41 which is lower than the control group who got 8.32. This means that the scores of the experimental group are closer to the mean while the scores of the control group are more spread out.

The results indicate that both Experimental and Control groups, utilizing different teaching strategies, have improved their performance in the given assessment. After receiving varying instruction from the teacher, they learned and acquired the covered competencies. Though the students remained on Average and were not able to advance in terms of scores range which is believed to be caused by several possible learning barriers brought about by

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



the current distance learning setup that limited the teacher's execution of the teaching process, it can still be interpreted that substantial positive change in students' knowledge occurred.

This has resulted from applying an innovative teaching strategy in the form of localized webtoon series specifically designed to teach concepts from the Reading and Writing skills subject.

Table 4. Test of significant difference between the formative test mean scores of the students in the two groups

| Test | Group | Mean | Mean Difference | t-value | Cohen's d |
|-----------|--------------|-------|-----------------|---------|-----------|
| Formative | Experimental | 38.37 | 5.27 | 3.199** | 0.83 |
| | Control | 33.10 | | | (Large) |

df = 58; **Significant at .01 level; Cohen's d: 0.20 (Small); 0.50 (Medium); 0.80 (Large)

Table 4 shows the test of significant difference between the level of performance of the Experimental and Control group in the formative test. The computed means of each group obtained a mean difference of 5.27 with a t-value of 3.199. Thus, there is a significant difference between the formative test performance of the two groups.

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



This implies that there is better retention of competencies taught if the actual learning process is enjoyable and the instructional material used is appropriate to the interests and needs of learners. Based on the teacher's observation of the class during the instruction, they become more enthusiastic and participative when they were exposed to the learning material to which they can relate with and about topics or stories familiar to them. Further, the conduct of the formative test had been essential in ensuring that learning transpires while utilizing the created instructional tool.

Further, it has an effect size of 0.83 and is described as Large. This indicates that there is a high practical significance, and the experimental intervention was more successful than the control intervention based on the formative test results. Specifically, this means that 79.7% of the experimental group is above the Control group's mean, 67.8% of the two groups overlap, and there is a 72.1% chance that random participants from the experimental group have a higher score than the participants from the Control group.

Table 5. Test of significant difference between the post-test mean scores of the two groups

| Test | Group | Mean | Mean Difference | t-value | Cohen's d |
|----------|--------------|-------|--------------------|---------|-----------|
| Posttest | Experimental | 35.57 | 4.07 | 2.366* | 0.61 |

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



Control

31.50

(Medium)

df = 58; **Significant at .05 level; Cohen's d: 0.20 (Small); 0.50 (Medium); 0.80 (Large)

Table 5 presents the test of significant difference between the level of performance of the Experimental and Control group in the post-test. The computed means of each group obtained a mean difference of 4.07 with a t-value of 2.366. Thus, it can be said that there is a significant difference between the post-test performance of the two groups.

It implies that there is a clear and noticeable advantage in using the localized webtoon series over the conventional SLMs or printed materials, as shown in the comparison of the post-test results. This may have stemmed from the 21st-century students' proliferating interest in unique and creative digital media and their need for a diverse and distinct learning experience. In fact, as observed by the teacher, the students, after being subjected to the utilization of 3 episodes of localized webtoon series, had a better grasp of the concepts of patterns of development in writing, properties of well-written text, and types of claims. Also, because the stories used were contextualized to a school setting, they were able to strongly connect and profoundly explain how these topics can be relevant and useful in real life. Moreover, the same obtained significant results in comparing the formative test's mean support and confirmed the validity of these findings.

Further, it has an effect size of 0.61 and is described as Medium. This indicates an average practical significance, and the experimental intervention was more effective than the

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



control intervention based on the post-test results. Notably, this translates that 72.9% of the experimental group is above the Control group's mean, 76% of the two groups overlap, and there is a 66.7% chance that random participants from the experimental group have a higher score than the participants from the Control group.

Table 6. Test of significant difference between the pre-test and post-test mean scores of the students in each group

| Group | Test | Mean | Mean | t-value | Cohen's d |
|--------------|----------|-------|------------|---------|-----------|
| | | | Difference | | |
| Control | Pre-test | 27.57 | 3.93 | 3.103** | 0.47 |
| | Posttest | 31.50 | | | (Small) |
| Experimental | Pre-test | 27.57 | 8.00 | 5.072** | 1.18 |
| | Posttest | 35.57 | | | (Large) |

df = 29; **Significant at .01 level; Cohen's d: 0.20 (Small); 0.50 (Medium); 0.80 (Large)

Table 6 shows the test of significant difference between the level of performance of the Experimental and Control group in the pre-test and post-test. The computed means of the control group obtained a mean difference of 3.93 with a t-value of 3.103. Thus, it can be concluded that there is a significant difference between the pre-test and post-test performance of the group.

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



It implies that learning still exists through the employment of DepEd SLMs for teaching, but the positive change is minimal due to varied possible circumstances such as low motivation for self-learning, the ineffectiveness of the material, and others. Since it was suggested in several researches cited in this study that 21st-century students prefer unique and interesting learning materials that are relatable and enjoyable for them, they may have found consuming the SLMs uninteresting and inappropriate for their learning style hence resulting to lower performance.

Further, it has an effect size of 0.47 and is described as Small. This indicates that there is little practical significance based on the pre-test and post-test results of the control group. Specifically, this means that 68.1% of the experimental group is above the Control group's mean, 81.4% of the two groups overlap, and there is a 63.0% chance that random participants from the experimental group have a higher score than the participants from the Control group.

Conversely, the experimental group acquired a mean difference of 8.00 with a t-value of 5.072. From this, it can be said that there is a significant difference between the pre-test and post-test performance of the Experimental group.

It shows that the applied strategy to the experimental group was more instrumental and contributory in increasing the participants' reading and writing skills than the strategy applied to the control group. After 3 teaching sessions of employing 3 different episodes of localized webtoon stories where the school is the setting, students were the characters, and the storyline is about their daily lives in school, it has been apparent in the assessment results that they liked and preferred the teaching strategy and instructional material used compared

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



to the normal ones. Specifically, when the students from the experimental group were asked for feedback, they commented that they were hooked by the illustrations and the dialogues of the character helped them easier understand the concepts taught.

Moreover, it has an effect size of 1.18 and is described as Large. This indicates that there is a high practical significance, and the experimental intervention has become an effective performance enhancer based on the pre-test and post-test results. Mainly, this indicates that 88.1% of the experimental group is above the mean of the Control group, 55.5% of the two groups overlap, and there is a 79.8% chance that random participants from the experimental group have a higher score than the participants from the Control group.

CONCLUSIONS

Based on the data gathered, the null hypotheses stating there is no significant difference between the formative tests, posttest and pretest mean scores of the two groups was rejected. Likewise, the results establish the conclusion that utilizing the localized webtoon series has been advantageous and effective at a higher level than the traditional use of SLMs.

RECOMMENDATIONS

Based on the outcomes and conclusions of the research study, the following recommendations are proposed:

1. The effectiveness of using the developed material was proven evident hence teachers need to consider adapting the localized webtoon series in teaching the Reading and Writing Skills subject.

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



2. Schools are encouraged to provide students with adequate and appropriate instructional materials. Furthermore, it needs to be ensured that students can use and manipulate technology-based materials suitable for 21st-century education. They could also be provided with the necessary resources such as tablets and internet connections to allow them to maximize harnessing the power of technological innovations in learning.

3. School administrators (Principals, Head Teachers, and Master Teachers) are encouraged for the use and monitoring of technology-based teaching materials such as the localized webtoon series by their teachers, not just in the RWS subject but in other knowledge fields.

4. Teachers developing their localized webtoon series in their specific subject areas need to work closely and collaborate with other teachers or experts who can create digital illustrations to produce reliable teaching materials. These developed materials can foster a proper and faster understanding of the concepts in the syllabus and textbooks and can be adapted easily by other educators.

5. Future researchers can conduct further studies to prove better the effectiveness of developing and utilizing Localized Webtoon Series in enhancing SHS students' Reading and Writing skills. It is also recommended that they try to apply the strategy in a face-to-face class to strengthen the veracity of the results and optimize the use of the teaching material.

6. Future researchers can also develop and test the effectiveness of localized webtoon series in teaching subjects other than RWS, which can be undertaken in the near future.

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



REFERENCES

- [1] Bryant, J., Child, F., Dorn, E., & Hall, S. (2020, June 12) New global data reveal education technology's impact on learning. Mckinsey & Company. [https://www.mckinsey.com/industries/public-and-social-sector/our-insights/new-global-data-reveal-education-technologys-impact-on learning](https://www.mckinsey.com/industries/public-and-social-sector/our-insights/new-global-data-reveal-education-technologys-impact-on-learning)
- [2] Child Hope Philippines. (2021, March 15). The Importance of Technology in Philippine Education. <https://childhope.org.ph/importance-of-technology-in-philippine-education/>
- [3] Clery, R. (2018). Webtoons, a tool for communicating science in Antarctica. UC Repository. <https://ir.canterbury.ac.nz/handle/10092/15833>
- [4] Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches. Sage Publications, Inc. <https://adams.marmot.org/Record/.b40623245>
- [5] Department of Education. (2020, June 19). Basic Education Learning Continuity Plan. <https://www.deped.gov.ph>
- [6] Elicay, K. (2019, December 4). The Philippines Scored The Lowest In Reading Comprehension Among 79 Countries. Smart Parenting Philippines. <https://www.smartparenting.com.ph>

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



[7] Erya, W. I. & Pustika, R. (2021). Students' Perception Towards the Use of Webtoon to Improve Reading Comprehension Skill. Journal of English Language Teaching and Learning, 2(1), 51-56. <https://doi.org/10.33365/jeltl.v2i1.762>

[8] Falcon, L. A., & Wilson, A. M. (2018). Seeking Equilibrium: In What Ways are the Teachers Implementing a Balanced Literacy Approach Amidst the Push for Accountability. Texas Journal of Literacy Education, 6(2), 73-93. <https://files.eric.ed.gov/fulltext/EJ1198870.pdf>

[9] Gonzales, G. (2020, August 24). 93 percent of public schools receive devices from DepEd — official. Inquirer.Net. <https://newsinfo.inquirer.net>

[10] Hikmah, U. (2021). The Effectiveness of Webtoon For EFL Students In Reading Comprehension. Proceeding Paper: The Effectiveness Of Webtoon For EFL Students In Reading Comprehension. Academia.edu. https://www.academia.edu/45149748/The_Effectiveness_Of_Webtoon_For_EFL_Students_In_Reading_Comprehension

[11] Hizon, I.R. (2018, October 13). The Importance of Instructional Materials. Sun Star Pampanga. <https://www.pressreader.com/philippines/sunstarpampanga/20181013/281681140839189>

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez, Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas, Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



[12] Jaca, C. A., Jaluague, J. & Lonoy, C., Mendoza, E., Mercado, R., & Sandimas, P. (2019). Teachers' Perspectives on The Reading And Writing Subject Of The Senior High School Curriculum. International Journal of Education and Research, 7(6). <https://www.ijern.com/journal/2019/June-2019/27.pdf>

[13] Jang, W., & Song, J. (2017). Webtoon as a New Korean Wave in the Process of Glocalization. Kritika Kultura, 0(29), 168-187. <http://dx.doi.org/10.13185/KK2017.02908>

[14] Kiflaini, K. (2021). Students' Perception about Webtoon in Improving Students' Reading Comprehension Skills. https://www.academia.edu/45154066/Students_Perception_about_Webtoon_in_Improving_Students'_Reading_Compehension.

[15] Lasaten R. C. & Pablo, J. C. (2018). Writing Difficulties and Quality of Academic Essays of Senior High School Students. Asia Pacific Journal of Multidisciplinary Research, 6(4), 46-57.

[16] Lefever-Davis, S., & Pearman, C. (2015). Reading, Writing and Relevancy: Integrating 3R's into STEM. The Open Communication Journal, 9, 61-64. <https://doi.org/10.2174/1874916x01509010061>

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez, Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas, Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



[17] Li, Z. (2015). Connecting Reading and Writing: A Case Study. English Language Teaching, 8(6). <https://doi.org/10.5539/elt.v8n6p150>

[18] Madikiza, N., Cekiso, M., Tshotsho, B., & Landa, N. (2018). Analysing English First Additional Language teachers' understanding and implementation of reading strategies. Reading and Writing, 9(1). <https://doi.org/10.4102/rw.v9i1.170>

[19] Madrunio, M. R., Martin, I. P., & Plata, S. M. (2016). English Language Education in the Philippines: Policies, Problems, and Prospects. English Language Education Policy in Asia, 1, 245–264. https://doi.org/10.1007/978-3-319-22464-0_11

[20] McGraw Hill Canada. (2019, April 16). Richard Mayer's Cognitive Theory of Multimedia Learning. <https://www.mheducation.ca>

[21] Mharzar, B. (2018). Reading and Writing Experiences of Middle School Students in the Digital Age: Wattpad Sample. International Journal of Education & Literacy Studies, 6(2), 89–100. <https://doi.org/10.7575/aiac.ijels.v.6n.2p.89>.

[22] Middlebury Graduate School. (2016). What are some challenges to writing an essay. <http://www.middlebury.edu/#story645114>

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



[23] Parvin, R. H., & Salam, S. F. (2015). The Effectiveness of Using Technology in English Language Classrooms in Government Primary Schools in Bangladesh. FIRE: Forum for International Research in Education, 2(1), 47-59. <https://doi.org/10.18275/fire201502011049>

[24] Raja, R., & Nagasubramani, P. (2018). Impact of modern technology in education. Journal of Applied and Advanced Research, 3, 33-35. <https://doi.org/10.21839/jaar.2018.v3iS1.165>.

[25] Raulan, R & Fatimah, S. (2018). Teaching Writing Narrative Text by Using Webtoon Digital Comic to Senior High School Students. Journal of English Language Teaching, 7(4). <https://doi.org/10.24036/jelt.v7i4.101305>

[26] Rokhayani, A., & Utari, A.R. (2014). The Use of Comic Strips as an English Teaching Media. Language Circle Journal of Language and Literature, 8(2), 143-149. <https://doi.org/10.15294/lc.v8i2.3018>

[27] Schütz, R. (2019, October). Stephen Krashen's Theory of Second Language Acquisition English Made in Brazil. <https://www.sk.com.br/sk-krash-english.html>

[28] Swanson, E., Stevens, E. A., Scammacca, N. K., Capin, P., Stewart, A. A., & Austin, C. R. (2017). The impact of tier 1 reading instruction on reading outcomes for students in Grades

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza



4–12: A meta-analysis. Reading and Writing: An Interdisciplinary Journal, 30(8), 1639–1665.

<https://doi.org/10.1007/s11145-017-9743-3>

[29] Suhartatik, Y. P., Amanah A., & Loesita, S. (2021). "Webtoon" For Teaching Extensive Reading in Digital Era. Int Aca J Edu Lte, 2(1), 51-58.
<https://doi.org/10.47310/IAJEL.2021.V02I01.005>

[30] Sulistyo, G., & Imamyartha, D. (2017). An Evaluation Paradox: The Issues of Test Validity in the Realm of Writing Test as the Final School Examination in the Indonesian Senior High School Milieu. Dinamika Ilmu, 17(1). <https://doi.org/10.21093/di.v17i1.585>.

[31] Tsai, C. (2015). Exploring senior high school students' difficulties and strategies for reading L1 and L2 texts in Taiwan. International Journal of Language and Linguistics, 41, 39-51. <https://doi.org/10.15804/tner.2015.41.3.03>.

[32] U.S. Department of Education. (2017, January). Reimagining the Role of Technology in Education: 2017 National Education Technology Plan Update.
<https://tech.ed.gov/files/2017/01/NETP17.pdf>

Editorial Team

Editor-in-Chief: Alvin B. Punongbayan

Associate Editor: Andro M. Bautista

Managing Editor: Raymart O. Basco

Web Editor: Nikko C. Panotes

Manuscript Editors / Reviewers:

Chin Wen Cong, Christopher DC. Francisco, Camille P. Alicaway, Pinky Jane A. Perez,
Mary Jane B. Custodio, Irene H. Andino, Mark-Jhon R. Prestoza, Ma. Rhoda E. Panganiban, Rjay C. Calaguas,
Mario A. Cudiamat, Jesson L. Hero, Albert Bulawat, Cris T. Zita, Allan M. Manaloto, Jerico N. Mendoza
