

Promoting Social Sciences Research Article Comprehension and Writing Skills Through Concept-Oriented Reading Instruction (CORI) for Graduate Diploma in Teaching Profession Students

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Abstract

The purposes of this research were to investigate the Concept-Oriented Reading Instruction on graduate diploma in teaching profession students' social sciences research articles comprehension, and to investigate the Concept-Oriented Reading Instruction on graduate diploma in teaching profession Students' writing skills. The sample consisted of 30 of graduate diploma in teaching profession students who were drawn from cluster random sampling for one classroom as a sampling unit. The experiment was carried out for 6 weeks, 6 hours each, 36 hours in total. The research instruments employed in this research were 1) 6 lesson plans using Concept-Oriented Reading Instruction (CORI), 2) Reading comprehension test, and 3) Writing skills test. The data was analyzed using mean, standard deviation and the paired samples t-test.

The results of the study were: 1) the students acquired better social sciences research articles comprehension after the implementation of the Concept-Oriented Reading Instruction, at a statistically significant 0.05. 2) the students gained writing skills after the implementation of the Concept-Oriented Reading Instruction, at a statistically significant 0.05. Moreover, the results of the writing skills in each aspect after the treatment of the Concept-Oriented Reading Instruction was converted that, mechanics and grammar received the highest score, topic sentences, and supporting detail sentences respectively. Conversely, students gained the lowest scores as elaborating detail sentences.

Keywords: Social Sciences, Research Articles, Cori, Teaching Profession Students

Introduction

English has become the most widely used language for international communication, education, business, science, and technology. It is recognized as a global lingua franca that enables people from different linguistic and cultural backgrounds to exchange knowledge and ideas effectively (Crystal, 2003). Higher education is becoming globalized alongside the economy, and English is proving to be a key ingredient – partly because universities in the English-speaking world dominate the global league tables, and partly because English is proving popular as a means of internationalizing both the student community and teaching staff. (Graddol, 2006, p.73). In the field of teacher education, English plays an essential role in academic and professional development. Most academic texts, research publications, and educational resources are written in English, making it a vital tool for graduate students to expand their knowledge and engage in scholarly communication (Harmer, 2015). The ability to comprehend and write research articles in English allows students to critically evaluate studies, conduct research effectively, and disseminate their findings to international audiences (Richards & Schmidt, 2010).

Roi Et Rajabhat University is a higher education institution dedicated to local development. Its missions are aligned with the National Strategic Plan and various educational policies of the country, particularly in organizing learning processes to develop human resources for both local communities and the nation. Guided by its philosophy of being a “Source of Lifelong Learning,” the university is committed to providing equal educational opportunities for all and promoting the acquisition of knowledge, skills, and moral integrity among learners. These efforts aim to produce graduates who can contribute effectively to sustainable local development. According to the Five-Year Strategic Plan (2023–2027) of Roi Et Rajabhat University, the university has set forth strategic directions that emphasize sustainable local development and the creation of innovation based on competency as a foundation for developing modern learning management that aligns with the essential skills of the 21st century. The plan focuses on promoting competency-based educational innovation in schools, along with assessment and evaluation systems that reflect the outcomes of learner development in accordance with competency-based curricula. These initiatives aim to support the educational reform of the nation, ensuring that teaching and learning processes are consistent with the local context and the needs of both local communities and the nation as a whole (Roi Et Rajabhat University, 2024).

The Faculty of Education and Human Development serves as the primary faculty responsible for producing and developing teachers in alignment with the university’s missions and according to Strategic Goal 2, the faculty emphasizes that its education programs should serve as innovative models of competency-based teaching and learning management. It supports key factors in creating exemplary competency-based instructional models and promotes research for educational innovation that connects academic knowledge with schools and local communities. The Faculty of Education and Human Development, Roi Et Rajabhat University, offers a Graduate Diploma in Teaching Profession Program, with the primary objective of producing graduates who possess the knowledge, skills, and ethics in accordance with the professional standards for teachers. The program also aims to develop personnel from other fields to become qualified professional teachers. It emphasizes fostering learners with characteristics that align with the current social and technological changes, enabling them to comprehend and write research articles in the field of social sciences is essential for graduate students in the teaching profession, as it enables them to critically analyze academic texts, engage in evidence-based practice, and contribute to educational innovation. However, many graduate students, particularly those in non-English speaking contexts, encounter difficulties in understanding and

producing academic research articles due to limited reading strategies, lack of conceptual understanding, and inadequate academic writing skills.

Therefore, the researcher has become interested in conducting a study on Promoting Social Sciences Research Articles Comprehension and Writing Skills through Concept-Oriented Reading Instruction (CORI) for Graduate Diploma in Teaching Profession Students, which is an instructional approach that integrates reading comprehension strategies with conceptual learning. It encourages students to engage actively with texts, construct meaning through inquiry and discussion, and connect new information with prior knowledge. Specifically, this research focuses on improving students' ability to understand and write social sciences research articles in English. It is expected that the integration of CORI will foster students' conceptual understanding, promote active reading, and strengthen their academic literacy, which are essential skills for future professional teachers and researchers.

Literature Review

The Concept-Oriented Reading Instruction (CORI) was developed by John T. Guthrie and colleagues in 1993. It was based on the integration of the principles of inquiry-based science instruction with reading instruction. CORI combines reading skills and strategies, knowledge, motivation, and social collaboration to foster the construction of new knowledge (Guthrie & Anderson, 1999; Guthrie, Alao, & Rinehart, 1999). The Concept-Oriented Reading Instruction (CORI) emphasizes the development of students as engaged readers. It highlights four key components essential to the reading process: (1) motivations for reading, (2) strategy use, (3) conceptual knowledge, and (4) social interactions. These components are interrelated in fostering reading comprehension. Specifically, enhancing students' motivations for reading encourages their desire to read, while the effective use of reading strategies facilitates the construction of conceptual knowledge, which is the ultimate goal of reading. Moreover, social interactions serve as the foundation for learning, providing opportunities for collaboration and knowledge sharing among learners. (Guthrie, J. T., 2004).

Research Methodology

This research was pre-experimental research, which employed one-group pretest-posttest. This research was conducted through three steps of process: pretest, treatment and post-test to investigate the enhancement of the student's social sciences research articles comprehension and writing skills

Population and Sample

The research population were 120 of graduate diploma in teaching profession students who were enrolled the Language for communication for teacher course, second semester, academic year 2025 at Faculty of education and human development, Roi Et Rajabhat university. The sample consisted of 30 of graduate diploma in teaching profession students who were drawn from cluster random sampling for one classroom as a sampling unit.

Variables

In this study, the independent variable was the Concept-Oriented Reading Instruction and the dependent variables used in the study were; students' social sciences research articles comprehension and students' writing skills.

Research Instruments

The research instruments used in this study were: 1) six units of the Concept-Oriented Reading Instruction lesson plans, 2) Reading comprehension test, and 3) Writing skills test. The researcher developed the research instruments and the process of the research instruments were developed as follows:

1. The Concept-Oriented Reading Instruction lesson plans

The conceptual theme for the learning content consists of six social sciences research articles focusing on experimental research processes. Each selected article must include all six essential components of a research paper: Abstract, Introduction, Method, Research Instruments, Results, and Discussion. The length of each article ranges from approximately 5 to 15 pages. The Concept-Oriented Reading Instruction (CORI) learning process consists of 6 lesson plans with the following 4 steps:

Step 1: Observe and Personalize involves stimulating students' interest to create motivation for reading. This step connects the content of the research process with real-life situations during classroom instruction. Learning materials such as video clips, news articles, and other media are used to engage students, linking these materials to the topic of the research article. These activities aim to arouse curiosity and encourage students to reflect on their prior knowledge and experiences before beginning the reading process.

Step 2: Searching and Retrieving is the phase in which the instructor guides students on how to read English research articles based on the topics introduced in Step 1. During this stage, the instructor teaches the necessary reading strategies, modeling the reading/writing process and monitoring students' comprehension. This enables students to apply these strategies to explore other research articles and to retrieve knowledge and reading strategies and writing independently.

Step 3: Comprehend and Integrate involves reading the content of research articles using the reading strategies learned in Step 2. The instructor organizes activities that encourage social interactions among students, which help them integrate information and enhance their understanding of the content. During this phase, students learn to identify key details, compare information, and writing summaries of the findings obtained from their reading.

Step 4: Communicating to Others is the phase in which students demonstrate their new knowledge and findings obtained from reading research articles. The instructor organizes activities that allow students to communicate their understanding, such as writing summaries of the findings from the articles, in order to develop effective communication skills. Providing opportunities for students to present their work also encourages them to explain what they have learned from the reading process.


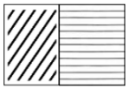






Instructional Dimensions	Time					
	60 mins	60 mins	60 mins	60 mins	60 mins	60 mins
Observe and Personalize <i>-Activate students' schemata</i> <i>- Stimulating students' interest</i>						
Searching and Retrieving <i>-Strategy Instruction (R/W)</i>						
Comprehend and Integrate <i>-Reading the content of research articles using the reading strategies learned</i> <i>-Writing summaries</i>	<div> <div>Reading</div>  </div> <div> <div>Writing</div>  </div>					
Communicating to Others <i>-Demonstrate their new knowledge and findings</i> <i>-Share and show</i>						
Note:	 Designates teacher leadership  Designates joint teacher-student responsibility  Designates student responsibility for learning					

Figure 1: Social Sciences Research Articles Comprehension and Writing Skills through CORI

2. Reading comprehension test

The test consists of 40 items created by the researcher, in the form of multiple-choice questions with four options. The learning objectives for the test are defined as follows: 1) Knowledge Dimension: 20 items designed to assess students' ability to identify the main ideas of each research article topic and to accurately describe the key characteristics of social sciences research article topics and 2) Application Dimension: 20 items designed to evaluate students' ability to read and comprehend the main points of the research articles. The content validity of the test was examined by having experts review the items. The Index of Item-Objective Congruence (IOC) was calculated to assess the alignment between each question and the learning objectives. The IOC values ranged from 0.60 to 1.00, indicating satisfactory content validity. Regarding the difficulty level, the test items ranged from 0.46 to 0.73, suggesting that each item had a moderate level of difficulty. The discrimination indices ranged from 0.38 to 0.78, demonstrating that the items were effective in differentiating between higher- and lower-performing students. The Cronbach's alpha coefficient for the test was 0.76, indicating an acceptable level of internal consistency and reliability.

3. Writing skills test

The writing skills test has a total score of 20 points and is designed to assess the test-takers' ability to communicate in paragraph form. It focuses on the skill of writing summaries based on articles they have read, with a limit of 150 words per response. The test evaluates relevant language knowledge and subskills, including the ability to: 1) Identify supporting details that relate to the main topic and compare differing aspects, 2) Distinguish supporting-detail sentences that are relevant to the main topic, 3) Write a complete summary according to the assigned task and, 4) Use grammatical structures, vocabulary, and specialized terms correctly. Scoring is based on a 1-4 scale across five criteria, following the framework of Matthew, B., James, H. & Gary, K. (2017): Topic Sentence, Supporting Detail Sentences, Elaborating Detail Sentences, Legibility and, Mechanics and Grammar.

To evaluate the subjective writing skills test, the researcher conducted the following procedure: The written responses were sorted and copied into three sets. These copies, along with the writing assessment rubric, were then sent to three writing test raters. Each rater scored the writing according to the established rubric and recorded the scores on the designated forms. The researcher then examined the consistency of the scores among the three raters by calculating the inter-rater reliability. The statistical method used was the Spearman-Brown Prophecy Formula (Henning, 1987, p. 83). The inter-rater reliability coefficient for the writing test was found to be 0.98, indicating a very high level of agreement among the raters. Once consistency was confirmed, the raters proceeded to evaluate the remaining writing responses.

Data collection

Prior to the Concept-Oriented Reading Instruction, the pre-test of social sciences research articles comprehension and Writing skills were administered to the students in order to comprehend social sciences research articles and levels of writing skills. Before participating in the instruction, the students received an overview of the course. The content of each unit and classroom practice was also briefly explained. A total of six thematic units lasted over 6 weeks (6 hours a week) with an emphasis on explicit. After the treatment, the posttest of social sciences research articles comprehension and Writing skills were administered to the students in order to comprehend social sciences research articles and levels of writing skills.

Research Finding

Research objectives 1. to investigate the Concept-Oriented Reading Instruction on graduate diploma in teaching profession Students' social sciences research articles comprehension, and the mean scores of reading comprehension pre- and post-test were used. The research findings were described as follow.

Table 1 Social sciences research articles comprehension (n=30)

Group	\bar{X}	<i>SD</i>	\bar{D}	<i>S.D._D</i>	<i>t</i>	<i>Sig.</i>
Pre-test (40)	21.97	2.71	7.324	1.561	15.341*	.000
Post-test (40)	25.31	2.98				

* $p < .05$

Table 1 illustrates the mean scores of pretests and posttest were compared by using a pair sample t-test. The mean score of pre-test scores was 21.97, $SD = 2.71$. The mean of posttest scores was 25.31, $SD = 2.98$. The results revealed that the students acquired better social sciences research articles comprehension after the implementation of the Concept-Oriented Reading Instruction, at a statistically significant 0.05.

Research objectives 2 to investigate the Concept-Oriented Reading Instruction on graduate diploma in teaching profession students' writing skills, and the mean scores of writing skills pre- and post-test were used. The research findings were described as follow.

Table 2 Writing skills (n=30)

Group	\bar{X}	<i>SD</i>	\bar{D}	<i>S.D._D</i>	<i>t</i>	<i>Sig.</i>
Pre-test (40)	8.73	5.47	6.314	1.657	24.982*	.000
Post-test (40)	16.43	5.43				

* $p < .05$

Table 2 illustrates the mean scores of pretests and posttest were compared by using a pair sample t-test. The mean score of pre-test scores was 8.73, $SD = 5.47$. The mean of posttest scores was 16.43, $SD = 5.43$. The results revealed that the students gained writing skills after the implementation of the Concept-Oriented Reading Instruction, at a statistically significant 0.05.

Moreover, the results of the writing skills in each aspect after the treatment of the Concept-Oriented Reading Instruction was converted to the rank.

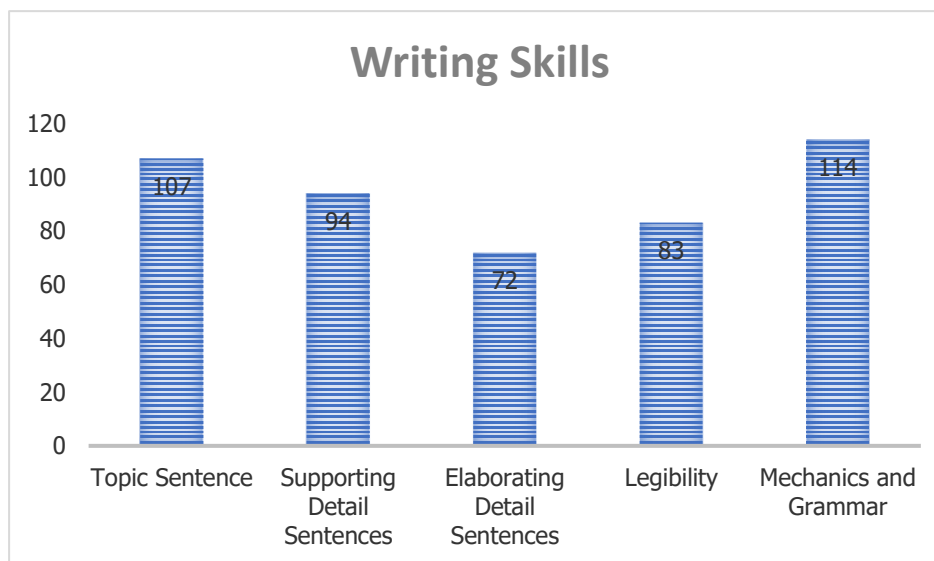


Figure 2: The results of the writing skills in each aspect

As figure above shows that, mechanics and grammar received the highest score, topic sentences, and supporting detail sentences respectively. Conversely, students gained the lowest scores as elaborating detail sentences.

Discussion/Conclusion

1. The results revealed that the students acquired better social sciences research articles comprehension after the implementation of the Concept-Oriented Reading Instruction, at a statistically significant 0.05. This may be attributed to the fact that Concept-Oriented Reading Instruction (CORI) integrates the principles of inquiry-based instruction from science education with reading, combining reading skills and strategies, knowledge, motivation, and social collaboration to construct new knowledge (Sugiarto, D., Indrawati, I., & Meygita, R., 2021). Moreover, it can involve students in reading, understand the text better, and motivate students to read. This strategy also intends to improve reading comprehension by: activating background knowledge, questioning, searching for information, summarizing, organizing graphically, and identifying story structure (Oktavia et al., 2022). Moreover, these findings are consistent with the research conducted by Bactong Besagas, (2022) CORI is one strategy that has the potential to significantly improve students' reading comprehension abilities and achievement scores.

2. The results revealed that the students gained writing skills after the implementation of the Concept-Oriented Reading Instruction, at a statistically significant 0.05. Moreover, the results of the writing skills in each aspect after the treatment of the Concept-Oriented Reading Instruction was converted that, mechanics and grammar received the highest score, topic sentences, and supporting detail sentences respectively. Conversely, students gained the lowest scores as elaborating detail sentences. These results may be attributed to the fact that the challenging reading techniques, like summarizing, at this stage, students integrate their reading skills into the skill of writing summaries and are easier to learn when students are attempting to acquire conceptual understanding (Zulkifli, D. & Triana, L. 2023). CORI has two main aspects: (a) support for the cognitive strategies for knowledge construction during reading, and (b) support for the

motivational development of learners. Teaching about the concepts or contents of a discipline serves these two objectives (Guthrie, 2004).

Suggestion

1. Future research should investigate the implementation of Concept-Oriented Reading Instruction (CORI) in conjunction with different types of reading texts, such as narrative and expository texts. It is also recommended to examine CORI alongside other related variables, such as motivation and engagement, in order to gain deeper insights into its effectiveness across diverse learning contexts.

2. The teacher should integrate Concept-Oriented Reading Instruction (CORI) with critical reading instruction and explore its application among students from other academic disciplines. Such studies could provide broader perspectives on the effectiveness of CORI in enhancing analytical and evaluative reading skills across various learner groups.

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