PUBLISHED VERSION

Abu Nawas

Contextual Teaching and Learning (CTL) Approach through REACT strategies on improving the students' critical thinking in writing
International Journal of Management and Applied Science, 2018; 4(7):46-49

Originally published at:
http://ijmas.iraj.in/paper_detail.php?paper_id=12944&name=Contextual_Teaching_and_Learning_(CTL)_Approach_through_React_Strategies_on_Improving_the_Students%E2%80%99_Critical_Thinking_in_Writing

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21 May 2020

http://hdl.handle.net/2440/124867

CONTEXTUAL TEACHING AND LEARNING (CTL) APPROACH THROUGH REACT STRATEGIES ON IMPROVING THE STUDENTS' CRITICAL THINKING IN WRITING

ABU NAWAS

Master of Education, The University of Adelaide, North Terrace, Adelaide South Australia
Email: aboezona@yahoo.com

Abstract: Limited vocabulary and ideas become the students' barriers in composing a good writing. The students are struggle to express their thought on essay because they have limited words and ideas. Contextual Teaching and Learning (CTL) Approach through REACT (Relating, Experiencing, Applying, Cooperating and Transferring) strategies to overcome the issue. This approach helps students think critically and understand the material they are learning by connecting their subject with their lives' context.

This study aimed to investigate the effectiveness of CTL approach through REACT strategies on developing the students' writing skill which implemented to the third-grade students of Islamic Senior High School Madani, Indonesia. A quasi-experimental design was employed in this research. The sample of study consisted of 40 students that divided into two groups; 20 students in control group, and 20 students in experimental group. Both groups took pre-test and post-test as data collection, however only the experimental group was treated by using CTL approach through REACT strategies. Furthermore, descriptive statistical analysis (Mean, Standard Deviation, and t-test) used to measure the students' writing skill. The result showed that there was a statistically significant difference at (α=0.05) between the achievement of the experimental group and that of control group on post-test in favour of the experimental group. The difference implied that the implementation of CTL approach through REACH strategies was effective to improve the students' writing skill. The Mean score and Standard Deviation for the experimental group on the post-test was (M=4.9, SD=0.43) while that of the control group was (M=3.49, SD=0.25).

The researcher proposed some recommendations that Contextual Teaching and Learning (CTL) approach through REACT strategies is recommended to be applied in teaching and improving the students' writing skill to the secondary school.

Index Terms: Contextual Teaching and Learning (CTL) approach, REACT Strategies, Critical Thinking, Writing

I. INTRODUCTION

Critical thinking skill becomes one of the fundamental skills for 21st Century Skills which helps the learners prepare their education today and workforce in the future. According to Fisher (2011), critical thinking is a skill to interpret and evaluate the information and argumentation to create the solution [10]. Johnson (2002) also states that thinking critically is an ability to evaluate what they listen and read, and they assess their though process by proving decision or problem solving [15].

Students with critical thinking could promote them to make judgment or argument by considering the available information and thoughtful process [4]. Furthermore, Mulnix (2012) defines that critical thinking is beneficial for students in generating and processing the other skills, because it encourages to conceptualize, apply, analyse, synthesize and evaluate an information by observing, experiencing, reflecting and reasoning as the guide to act [17]. Critical thinking is also essential skill in workplace to make decision, solve the problem and generate the judgement [18]. Skill (2017) concludes that thinking critically is beneficial for students to develop their academic performance specifically in writing skill [11].

One of the fundamental skills that create the students' critical thinking is writing skill. Writing ability is the ability to represent the knowledge, argument and opinion on the paper [13]. Coulmas (2003) defines that writing skill is an ability which provides the reflection in past and generates a critical thinking skill for the writer [5]. Skill in writing supports the cognitive domain, and involves learning, understanding, implementation and synthesis of new knowledge [8].

However, most of students of secondary schools are still struggle to express their though on essay. According to Supatmi (2013) on her study, many students are difficult in writing because of generic structure and language features of writing essay [25]. Furthermore, lack of idea, vocabulary and writing structure become the students' problem in composing writing [20]. Alfaki (2015) also reveals that language problems, mechanical mistakes, writing development skill and cognitive problems are the students' barrier in developing their writing skill [1]. Therefore, Herman, Supardan, & Undang (2010) suggest that an appropriate teaching methodology plays an important role to develop the students' ability in writing. They emphasise that teaching methodology which relates to the students' real-life context, experience and interest to stimulate students in expressing their thought on generating essay [12].

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II. CONTEXTUAL TEACHING AND LEARNING (CTL) APPROACH

Contextual Teaching and Learning (CTL) approach becomes a new and modern method of teaching to address the necessities in education today. According to Johnson (2012), Contextual Teaching and Learning (CTL) Approach is an approach which helps students understand what they are learning by connecting their subject with their lives' context[15]. CTL approach emphasises students' interest and experiences, so the students are easy to understand the material [23]. Moreover, Sears (2003) also defines that Contextual Teaching and Learning (CTL) approach encourages the students to take a part of their learning and provides a concrete framework for combining pattern theories and practice. Sears also stresses that CTL approach is the learning process which has purposes of supporting the students for understanding the educational material that they are learning by relating academic subjects to the situation of their lives such as their personal, social and cultural situation [24]. Additionally, Nurhadi, B, and A.G., (2004) concludes on their study that Contextual Teaching and Learning (CTL) approach helps the students relate the topic substance to the real circumstances and encourage them to make a relation between the material and its application to their lives [19].

Furthermore, Bern and Erickson (2001) outlines the teaching techniques associated with CTL as follows: cooperative learning, problem-based learning, work-based learning, project-based learning, service learning and react strategies. These approaches helps the teachers connect the material content with real circumstance, and motivates the learners to relate to the knowledge and application in their lives [2]. CTL strategies are likewise fundamental in emphasising critical thinking, recognising the requirement of teaching and learning in the different context, motivating the students to study each other and employing authentic evaluation Blanchard [3]. Additionally, some scholars found that Contextual Teaching and Learning (CTL) approach help students develop their achievement at school, also promote their critical and higher order thinking [9][21][16].

III. REACT STRATEGIES

REACT strategies stands for Relating, Experiencing, Applying, Cooperating and Transferring strategies. The REACT strategies are the teaching and learning strategies which deal with the concept of contextualization proposed by Crawford. Ültay, Durukan, & Ültay, (2014) conclude that REACT strategies fasilitate the students to learn by the hands-on activities and daily life example [26]. REACT (Relating, Experience, Applying, Cooperating, Transferring) strategies become the appropriate methodology based on students' daily live experiences and create a lively classroom atmosphere [22]. Crawford (2001) argues that REACT strategies are useful for students to encourage their critical thinking in their learning process. The strategies also allow the teachers not to emphasize the concept of memorizing the materials such as facts, definition and procedures, but they develop the students' critical thinking about the fundamental concept of materials [6].

Crawford (2011) classifies five REACT strategies as the contextual teaching strategies: (1) Relating strategy is the first stage of contextual teaching and learning methodology. The students are stimulated by connecting the material with their experience or their prior knowledge, and the teacher relates the concept of material which completely familiar to the students in this stage. (2) Experiencing strategy is the second step of REACT strategies which carries out the materials into the class in afford to give hand-on experience. This strategy helps the students with no relevant experience explore and understand the subject materials that are going to be taught. (3) Applying strategy is defined as the stage which allows the teachers to create the relevant exercise, and let the students learn by putting the concept to use in the real activity such as solving the problem. (4) Cooperating strategy is learning way which promotes the students in learning together by sharing opinion, responding and keeping communication with other students, and they can learn from others. (5) Transferring strategy is last stage of REACT strategieswhich uses the existing knowledge or the students have learnt.Therefore, this can be concluded that REACT strategies helps students in promoting their critical thinking specifically in composing the writing.

IV. THE STUDY

This study aimed to investigate the effectiveness of CTL approach through REACT strategies on developing the students' critical thinking in writing which implemented to the third-grade students of Islamic Senior High School Madani, Indonesia. This research was designed as a quasi-experimental study. The number of participant were 40 students that divided into two groups; 20 students in control group, and 20 students in experimental group. Both groups took pre-test and post-test as data collection, however only the experimental group was treated by using CTL approach through REACT strategies as the intervention for the period of the experiment [7]. Furthermore, the instruments of theresearchwere writing tests (pre and post-tests),lesson plan as the guidance of treatment process, and writing assessment criteria (grammar, vocabulary, mechanics, fluency and form) adopted from Hughes (2005) as the rubric[14]. However, before conducting

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the research, the researcher consulted to the EFL professors, supervisors and English teachers about the tests to ensure the validity of the test. Additionally, descriptive statistical analysis (Mean, Standard Deviation, and t-test) used to measure the students' writing skill and compare the mean of data sets to decide if there was a significant difference.

V. RESULT

1. Descriptive Analysis

Table 1 and 2 below describe the distribution of data from pre-test and post-test for control and experimental groups.

Table 1
Students' Score of Control Class

No	Statistics	Pre-Test	Post-Test
1	Mean	3.39	3.49
2	Standard Deviation	0.17	0.25
3	Variance	0.03	0.06
4	Minimum	3.0	3.2
5	Maximum	3.6	4.2

Table 1 shows that the mean score was 3.39 for pre-test and 3.49 for post-test. Standard Deviation for pre-test was 0.17 and 0.25 for post-test, and the variance for pre and post-test were 0.03 and 0.06. Furthermore, the minimum score of pre-test was 3.0, and 3.2 for post-test. While the maximum score pre and post-scores were 3.6 and 4.2.

Table 2
Students' Score of Experimental Class

No	Statistics	Pre-Test	Post-Test
1	Mean	3.7	4.9
2	Standard Deviation	0.39	0.43
3	Variance	0.15	0.19
4	Minimum	2.8	4.2
5	Maximum	4.2	5.6

Table 2 presents that the students' mean score for pre-test was 3.7 and 4.9 for post-test. Standard Deviation for pre-test was 0.39 and post-test was 0.43. Moreover, the variance for pre-test was 0.15 and 0.19 for post-test. The minimum score of pre- and post-tests were 2.8 and 4.2. Thought 4.2 and 5.6 were the maximum scores for pre-and post-test for experimental class.

Table 3
Students' Post-test Scores for Each Criterion

No	Indicators (Criteria)	Mean Scores	
		Control Class	Experimental
1	Grammar	3.45	4.0
2	Vocabulary	3.55	4.15
3	Mechanics	3.5	4.10
4	Fluency	3.75	4.40
5	Form	3.2	4.60

Overall, table 3 shows that the students' post-test score in experimental class was higher than control class in all criteria. The students' mean score in grammar was 3.45 in control class and 4.0 in experimental class. The students' score in vocabulary was 3.55 in control class, and 4.15 for experimental class. Furthermore, the students' average scores in mechanics were 3.5 and 4.10 for control and experimental class. 3.75 and 4.5 were the students' score in fluency criteria for control and experimental class. Additionally, 3.2 was the students score in form criteria for control class, and the students achieved the higher score (4.60) in experimental class for the same criteria.

2. Comparison Statistical Methods

Table 4
t-test Result of Students' Post-test

Groups	N	Mean	SD	t	df	Sig.
Control	20	3.49	0.25	38	30.6	.000
Experimental	20	4.97	0.43			

Table 4 indicates that the difference between experimental and control groups. There was a significance difference in students' post-test score for control class (M=3.49, SD=0.25) and experimental class (M=4.97, SD=0.43); t (38) =13.0, p=.000p<0.05. The result suggests that Independent variable (CTL through REACT strategies) influences on improving the students' critical thinking in writing.

VI. DISCUSSION

Based on the pre-test result, the students' writing skill for control and experimental groups were slightly the same level, andboth groups achieved 3.39 and 3.7. The different treatment was conducted for both groups. Conventional (common) methodology was treated in the control class and CTL approach through REACT strategies was regarded in experimental class. After the treatment, the students from control and experimental groups were delivery post-test, and the result sowed that the groups' post-test score improved. The students' post-test score for control class was 3.49 and 4.9 for experimental class.Post-test score in control class only improved 0.10 point, and the students' post-test score in experimental class improved significantly (1.2 point).

Furthermore, there was significant different for students' post-test scores based on the indicators. Overall, the students' scores in experimental class in each criterion (grammar, vocabulary, mechanics, fluency and form) were higher than in control class (table 3). The result was also supported in t-test analysis, and the comparison analysis for both groups showed significant difference in students' post-test

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score. Therefore, Contextual Teaching and Learning (CTL) approach has positive impact on students' achievement [15][23][2], and the contextualisation through REACT strategies supports the students' critical thinking in writing [26][22][6]. So, this approach can be useful to improve the students' critical thinking to write, and this also can be implemented in the teaching and learning process.

CONCLUSION AND RECOMMENDATION

The main contribution of this study is a new knowledge about the effectiveness of Contextual Teaching and Learning (CTL) approach through Relating, Experiencing, Applying, Cooperating and Transferring (REACT) strategies on improving the students' critical thinking in writing. The result showed that there was significant difference mean scores between pre-test and post-test of experimental study. Therefore, CTL approach through REACT strategies can be implemented in teaching English, specifically in teaching writing. the other researchers can also explore the influence of CTL approach trough REACT strategies on other students' learning skill. However, this study likewise has the limitation due to some uncontrolled variables during conducting the research.

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