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DEVELOPMENT OF CRITICAL THINKING VIA WRITING AND READING

The study is aimed to determine the ability of students to think critically while reading and writing. The teaching methodology included the preparation of texts of reports and their reading by students of the 8th grade to develop writing and reading skills in English, the development of critical thinking.

Methods of quantitative analysis, descriptive statistics, survey-test, Student's t-test were used. The study involved a teacher and a researcher (English teacher), 42 eighth graders. To collect data, assessment of educational achievements, analysis of documents and examination (preliminary and post-test) were carried out. The study was carried out in three stages: planning, execution, monitoring and reflection were the main stages of this study. The research base is the Nazarbayev Intellectual School of Physics and Mathematics in Shymkent.

In addition to the results of observation, according to the results of the assessment test, it was found that the average score of students increased from 43.71 on the results of the preliminary test to 74.45 on the results of the final test. The effectiveness of the methodology for the development of critical thinking according to the Student's t-criterion is shown. The use of the methodology also had a positive impact on the target audience (students and teachers), and also increased the pedagogical and professional competence of teachers in developing, planning and conducting lessons aimed at developing critical thinking.

Key words: productive skills, quantitative statistics, research, receptive skills, analyses, creativity, expressing ideas, mental growth.

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Жазылым және оқылым дағдылары арқылы сыни ойлауды дамыту

Зерттеу оқушылардың оқу мен жазу барысында сыни тұрғыдан ойлау қабілетін анықтауға бағытталған. Оқыту әдістемесі ағылшын тілінде жазу және оқу дағдыларын дамыту, сыни тұрғыдан ойлауды дамыту мақсатында 8-сынып оқушыларының есеп мәтіндерін дайындау және оларды оқуын қамтыды.

Сандық талдау, сипаттамалық статистика, сауалнама-тест, Студенттің t-тест әдістері қолданылды. Зерттеуге мұғалім мен зерттеуші (ағылшын тілі мұғалімі), 42 сегізінші сынып оқушысы қатысты. Мәліметтерді жинау үшін оқу жетістіктерін бағалау, құжаттарды талдау және емтихан (алдын ала және кейінгі тест) өткізілді. Зерттеу үш кезеңде жүргізілді: жоспарлау, орындау, бақылау және рефлексия осы зерттеудің негізгі кезеңдері болды. Зерттеу базасы – Шымкент қаласындағы физика-математика бағытындағы Назарбаев Зияткерлік мектебі.

Бақылау нәтижелерінен басқа, бағалау тестісінің нәтижелері бойынша студенттердің орташа балы алдын ала тестілеу нәтижесі бойынша 43,71-ден қорытынды тестілеу нәтижесі бойынша 74,45-ке дейін өскені анықталды. Студенттің t-критерийі бойынша сыни тұрғыдан ойлауды дамыту әдістемесінің тиімділігі көрсетілген. Әдістемені қолдану мақсатты аудиторияға (студенттер мен мұғалімдерге) де оң әсер етті, сонымен қатар сыни тұрғыдан ойлауды дамытуға бағытталған сабақтарды әзірлеу, жоспарлау және өткізудегі мұғалімдердің педагогикалық және кәсіби құзыреттілігін арттырды.

Түйін сөздер: тілдік дағдылар, сандық статистика, зерттеу, қабылдау дағдылары, талдаулар, шығармашылық, ойларын жеткізу, ой-өрісін дамыту.

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Развитие критического мышления через навыки чтения и письма

Исследование было направлено на определение способности учащихся критически мыслить во время чтения и письма. Методика обучения включала подготовку текстов докладов и их прочтение учащимися 8-х классов для развития навыков письма и чтения на английском языке, развития критического мышления.

Применялись методы количественного анализа, описательной статистики, опрос-тест, t-критерий Стьюдента. В исследовании приняли участие учитель и исследователь (учитель английского языка), 42 восьмиклассника. Для сбора данных проводились оценка учебных достижений, анализ документов и экспертиза (предварительная и послетестовая). Исследование проводилось в три этапа: планирование, исполнение, мониторинг и рефлексия были основными этапами этого исследования. База исследования – Назарбаев Интеллектуальная школа физико-математического направления г. Шымкента.

Помимо результатов наблюдения по результатам оценочного теста установлено, что средний балл учеников повысился с 43,71 по итогам предварительного теста до 74,45 по итогам окончательного теста. Показана эффективность методики развития критического мышления согласно t-критерию Стьюдента. Использование методики оказало также положительное влияние на целевую аудиторию (учеников и учителей), а также повысило педагогическую и профессиональную компетентность учителей в разработке, планировании и проведении уроков, направленных на развитие критического мышления.

Ключевые слова: языковые навыки, количественная статистика, исследование, навыки восприятия, анализ, творчество, выражение идей, умственный рост.

Students learn about mental growth and how to solve difficulties in their lives through applying critical thinking in instructional texts on the curriculum (Tyler, 2013: 119) [1]. The more sorts of texts students grasp through reading and writing, the more critical thinking structure may be applied to knowledge construction (Allen, 2004: 5) [2]. Students must master the report text in order to report one of their observations of the surrounding environment. To reach this purpose, teachers must create a strong lesson plan, such as a research model in learning.

Taking into consideration the focus of the current research, the present article aims at investigating the strategies for improving critical thinking via reading and writing. The object of study is critical thinking skill in the content of language learning.

With the purpose of reaching the aim that was mentioned above, the following objectives of study were formulated:

- Identifying students' learning strategies employed for writing and reading with the purpose of improving critical thinking.
- Encouraging educational stakeholders to have a global view of current educational policies by analyzing educational data on the steps of developing critical thinking skills and abilities as well as the reading and writing skills.

- Enabling researchers or teachers to research into the most appropriate ways and strategies that might form and develop critical thinking skills of students by providing them with proper reading and writing materials.

Overall, development of the learners' abilities to think critically and analytically largely depends on teachers' activities on organizing reading and writing. Hence, much attention should be paid on how the reading and writing comprehension should be formulated to reach the research objective.

Literature review

Teachers collaborate and share the outcomes of observational learning by composing observation report text through the use of the model action research (Estes, 2004: 241) [3]. Curriculum development shifts the learning paradigm from teacher to student, and text-based learning necessitates various innovations to meet the demands of that learning (Pedersen & Liu, 2003: 167) [4].

Students are expected to develop their own knowledge while teachers serve as facilitators in a student-centered learning environment (Keiler, 2018: 6) [5]. Similarly, the English language functions as a science draft as well as a tool for absorb-

ing, developing, and communicating science to others. In other words, students' ability to communicate thoughts, concepts, and ideas in numerous domains of study can be shaped by their ability to communicate in English.

Language is viewed as text, and it is not simply a collection of words or laws of language, but also a functioning that does not exist in isolation. This context represents the language users' ideas, attitudes, beliefs, and ideology. Language develops into a mature form of human thought. As a result, the more forms of text pupils grasp, the more critical thinking structure that may be applied to knowledge construction.

Teachers should respond rapidly to changes in negotiating learning that will enable students to use oral or written text as a vehicle for mediating a wide range of knowledge in this regard (Richards, 2005: 168) [6]. As a result, the ability to develop text-based English language instruction becomes critical as a prerequisite for successful curriculum implementation.

As a result, the ability of the teacher to create and implement learning activities has a significant impact on the quality of English language learning. The research is one of the methods used by teachers to improve their capacity to plan learning activities.

The research model implemented for examining critical thinking development via reading and writing is a collaborative and continuous evaluation strategy for instructors that are founded on the values of collegiality and mutual learning, real-world classroom experience, and reflection to create a learning community (Cerbin & Kopp, 2006: 252) [7].

Teachers can improve their professionalism and facilitate the learning process with the help of the research model, thereby improving the quality of education. By paying attention to criticism and ideas from observers, the research can improve the professionalism of teachers for the development of learning.

Productive and receptive skills have grown increasingly important in the age of globalization and information. Listening, speaking, reading, and writing are all methods of gaining access to knowledge. A person with good literacy skills would be able to master all four language skills in various situations.

However, this research focuses on two particular skills: reading and writing. Writing skill is one of the literacy abilities which is required for language fluency, particularly for expressing ideas, emotions, and feelings. Literacy is defined as the capacity to read and write, which is linked to academic commu-

nity success (Sedgwick, 2016: 583) [8]. Literacy, in this sense, is a tool that may be used to attain success in a social setting.

Furthermore, students must absorb, search, and master information in relation to the topics by reading. Students will be able to articulate their ideas logically and appropriately if they master reading abilities. Reading activities necessitate a higher level of capability (Ulum, 2016: 1676) [9]. It requires not just a variety of data or knowledge, but also the ability to consistently employ written language while adhering to proper regulations.

Methodology

The independent variable (X) in this study was the critical thinking ability, while the dependent variable (Y) was the capacity to generate the report text by writing and analyzing the reports by reading (Y). This research was conducted as an experiment with a posttest control group (Fraenkel, Wallen, & Hyun, 1993: 83) [10]. Purposive sampling technique was used to select 42 grade 8 pupils from Nazarbayev Intellectual school of Physics and Mathematics in Shymkent.

The instruments employed were observational in nature and tested both reading and writing skills in eighth-grade secondary school students by requiring them to write a report text of observation. The observation report text is a detailed, systematic, and accurate description of the observation. When creating the report text, the author must pay close attention to the content he or she is writing. To attain this goal, a number of elements are required.

The first is the student's completeness in his or her use of the English language. The second is the accuracy with which the facts are revealed. The next point to consider is the precision with which ideas are discussed. The message to be given by the author in the report text can be easily absorbed and comprehended by the reader if those standards are met.

The learning activities for producing report text and reading the produced reports with further analyses become enjoyable if they are planned, designed, and developed jointly and continually by the teaching team through research.

Finally, pupils will be motivated, trained, and habituated to writing and reading in order to communicate thoughts, information, or knowledge that will be valuable to them and others. As a result, students are not just objects of development, but also agents in development that has become the heir to a

nation's values. Using the ANOVA application, the data were analyzed using descriptive and inferential statistics.

Experimental

Tests cores of demonstrating critical thinking while writing report text and reading reports in control class will be provided in this section.

The implementation of quantitative research for identifying the relationship between critical think-

ing and language skills was conducted with several stages.

The first stage of the observation revealed that 75.42 percent of the students were actively experiencing knowledge, with 72.25 percent of them being able to gain comprehension, 81.25 percent being able to convey concepts, and 44.52 being able to think reflectively which are considered as the components of critical thinking.

Stage I: Observing students' learning activity (table 1)

Table 1

№	Description of Learning Activity	Quantity of Students
1	Experiencing knowledge: learning, discovering: pupils actively observe and investigate, as well as reading and writing.	75.42 %
2	Developing comprehension requires practice, as well as the ability to think critically and creatively.	72.25 %
3	Communicating ideas: expressing one's own thoughts, explaining, debating, presenting, and showcasing one's work.	81.25 %
4	Critically thinking entails observing and summarizing the teaching and learning process, correcting errors in the teaching and learning process, and summarizing the learning subject in one's own words.	44.52 %

In addition to lesson observation, students were given a pre-test on descriptive writing using a report text

and reading analyses. The results of the pre-test and the post-test are presented in the table below (table 2).

Table 2 - Students Pre-test Score

№	Pre-test score	Post-test score
	33	65
	37	70
	43	67
	40	70
	50	70
	37	70
	37	77
	37	67
	50	73
	63	88
	37	70
	37	70
	40	67
	63	88
	47	75
	43	63
	40	70
	37	67
	37	63
	60	88
	67	90

	37	63
	40	73
	40	67
	50	88
	37	85
	37	70
	40	87
	60	90
	37	85
	60	85
	60	93
	40	63
	30	63
	37	77
	40	77
	40	77
	37	70
	42	70
	37	80
	60	63
	40	73
Total score:	1836	3127
Mean score:	43.71	74.45

The students' post-test scores also improved significantly. While the entire pre-test score was 1836, with an average of 43.71, the total post-test score was 3127, with an average of 74.45, which is considered significant. The final stage of the observation revealed that 80.13 percent of the students were actively

experiencing knowledge, with 79.42 percent of them being able to gain comprehension, 84.65 percent being able to convey concepts, and 80.28 being able to think critically. Next, student's t-test was used to compare the two means, which showed a significant difference in the means ($\alpha=0,05$).

Stage III: Observing students' learning activity (table 3)

Table 3

No	Description of Learning Activity	Quantity of Students
1	Experiencing knowledge: learning, discovering: pupils actively observe and investigate, as well as reading and writing.	80.13 %
2	Developing comprehension requires practice, as well as the ability to think critically and creatively.	79.42 %
3	Communicating ideas: expressing one's own thoughts, explaining, debating, presenting, and showcasing one's work.	84.65 %
4	Critically thinking entails observing and summarizing the teaching and learning process, correcting errors in the teaching and learning process, and summarizing the learning subject in one's own words.	80.28 %

In terms of teaching and learning assessment, 86 percent of students gave high marks for lesson plan clarity, and 82 percent gave high marks for the grading and evaluation process. While 75 % of students thought the projects they were given were worthwhile, just 78 % felt they had enough up-to-

date materials. In terms of subject comprehension, 68 % of students understand more than 90 % of the material covered. Students' interest for studying is increased when they use report text to write descriptive text and read reports for further analyses because 83 percent of students provided adequate

input, 36 percent of them said their interest had reached a good level.

Test instruments and process evaluation were used to measure the success of this research activity's execution. The study's findings, based on the examination of this method, are as follows:

The purpose of strengthening the competence of EFL teaching lecturers, particularly the competence in developing and implementing learning (pedagogical skills) and subject matter competencies, is aided by the research stages (professional competencies).

The research steps and activities for EFL learning are suggestions for sharing understanding among fellow lecturers, making student evaluations as recommendations for improving teaching quality, complementing and sustaining one another, and can be used as collaboration between lecturers and teachers in schools in an effort to improve lecturers' and teachers' professionalism for developing critical thinking through reading and writing.

Results and discussion

In this paper, the author examined the conclusions from the research data about the teaching and learning of report text writing skill and report reading skills for further development of critical thinking skills. The findings revealed that students in the early stages face numerous challenges, including misunderstanding, a lack of enthusiasm, and a lack of conversation in the writing/reading report text learning activities.

The students participating in the control class during the experiment have a high level of enthusiasm. Their focus, though, is still inadequate. Even so, some students engage in activities that are unrelated to the subject. As a result, just a few of them are active during the conversations and presentations demonstrating their critical thinking.

The factors that influence the pupils' capacity to create report text and analyze the reports using reading skills by employing critical thinking abilities were discovered through observations and document analyses. The content, text structure, diction, sentence, and mechanics (spelling and punctuation) scores derived from the five elements examined on aspects of writing skills of the report text and reading skills through a report are still less.

The phenomenon that the pupils in the control class are experiencing some challenges and barriers has an impact on the assessment of learning results.

It can be seen that only seven students received 2.66 above or the average is only 2.77 (B+) based on the frequency and proportion of students' ability to produce report text of observation. As a result, the ability to produce the report text is still considered low. This is in contrast to the phenomenon that occurred when composing the report text utilizing the critical thinking abilities.

It demonstrates that none of the students had any difficulties drafting the report text of the observation results. In terms of creating a lesson plan and carrying out learning activities in the classroom, the observed teachers and the observer can work together. Teachers can also help students ask questions, explore issues, and solve problems. Furthermore, students can express their perspectives in order to work together to solve learning challenges, and they are positioning their teacher as a resource if they are unable to address the problems.

Students can learn in a suitable and enjoyable environment by learning to create report text of observation results using their critical thinking ability. It improves students' learning outcomes. The final trial yielded an average result of 3.33 (B+).

Thus, implementing research for improving critical thinking has a number of advantages. The first is for teachers and students to develop social and emotional bonds. The second goal is to improve teachers' and students' understanding of learning materials by encouraging them to think reflectively and analytically. The third goal is to boost teachers' confidence in their ability to improve their professionalism as English language teachers. The fourth goal is to foster effective collaboration, meaningful conversation, and fair competition among teachers and students. The fifth goal is to increase teachers' abilities to organize, implement, and evaluate learning activities, including mastering material, planning, implementing, and utilizing learning aids such as media, materials, and learning resources, as well as evaluating learning activities.

Furthermore, the research can help to improve the quality of a lesson plan's components, such as teaching materials, objectives, and learning methodologies (Bowe & Gore, 2016: 64) [11]. Another advantage is that it assists teachers in observing and criticizing learning process by reflecting on their teaching critically as well as focusing on students' activities (Cerbin & Kopp, 2006: 256) [7]. Teachers can also collaborate on lesson planning and practice their work in order to achieve their common goal (Gutierrez, 2021: 39) [12].

Conclusion

To conclude, this article aimed to identify students' ability to demonstrate critical thinking while doing writing and reading tasks in "English as a foreign language" context. In order to research the particular issue "report writing" and reading "report texts" were selected as a foundation and, overall, the effect of improving critical thinking abilities in English classrooms was investigated. The current research took place in Grade 8, in Nazarbayev Intellectual school of Physics and Mathematics in Shymkent. By employing a descriptive analytic approach within a quantitative approach, the study looked at the methodology of one teacher lecturer, a researcher at the same time used for reading and writing comprehension to develop critical thinking. The research sample included 42 Grade 8 students.

By the triangulation of research instruments (observation, document analysis, and assessment exam) the teacher researcher could reach rich data in the selected sphere. The research was carried out in three stages, with the help of the guidelines of action research; this included planning, doing, observing, and reflecting.

Overall, the assessment test results revealed that students' pre-test scores increased from 43.71 to 74.45 in the post-test with the gain score indicating 29.23. Consequently, the effectiveness of critical thinking in improving students' capacity to write descriptive content for report text and reading the reports has been proved. It positively affected the target audience of the research, namely, students and teachers, and also might help for improving teachers' pedagogic and professional competence in developing, planning, and performing lessons directed to the development of critical thinking. The research can also contribute to the professional development of teachers in critical thinking area (Calderhead, 2012: 13) [13].

Based on the foregoing, it can be stated that the capacity to write a report text and read reports for improving critical thinking is deemed successful. The outcomes of the tests calculations back up this assertion. Subsequently, it demonstrates that the alternative hypothesis that was set at the beginning of research is correct. It means that encouraging students to write report texts and read reports for further analyses can be used to Grade 8 students in School for selected learners in South Kazakhstan for developing their critical thinking.

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