
Fostering EFL Students' Critical Thinking Skills in Differentiating Between Factual and Fake News

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Abstrak

Studi ini bertujuan untuk mengevaluasi keterampilan berpikir kritis (CT) siswa setelah diajarkan tentang CT. Evaluasi difokuskan pada tiga kompetensi inti CT: identifikasi, mengidentifikasi bias, dan inferensi (Erstad dalam Fatiha et al., 2021). Data dikumpulkan melalui 36 jawaban siswa berdasarkan pertanyaan CT pada materi analisis berita di kelas membaca. Penelitian ini mengadopsi metode analisis deskriptif untuk menilai dan mengkategorikan kemampuan CT siswa berdasarkan level tinggi, sedang, dan rendah. Versi modifikasi dari rubrik CT NEIU digunakan untuk penilaian. Hasilnya menunjukkan bahwa 67% siswa mencapai level tinggi, 28% mencapai level sedang, dan 5% termasuk dalam kategori rendah. Siswa di level tinggi berhasil menerapkan ketiga keterampilan inti CT. Selain itu, siswa di level sedang berhasil menerapkan dua keterampilan inti CT, dan mereka yang berkemampuan rendah hanya dapat menunjukkan satu keterampilan inti CT. Oleh karena itu, Studi ini menyajikan kerangka kerja alternatif untuk menginstruksikan CT.

Kata kunci: Berpikir Kritis, Siswa EFL, Berita Faktual Dan Palsu, Instruksi Literasi Media, Membaca Subjek

Abstract

This study intends to evaluate students' critical thinking (CT) skills after being taught about CT. The evaluation focuses on three core CT competencies: identification, identifying biases, and inference (Erstad in Fatiha et al., 2021). Data were collected through 36 student answers based on CT questions on news analysis material in reading class. This research adopted a descriptive analysis method to assess and categorize students' CT abilities based on high, middle, and low levels. A modified version of NEIU's CT rubric was utilized for assessment. The results indicated that 67% of students achieved a high level, 28% achieved a middle level, and 5% fell into the low category. Students at the high level succeeded in applying all three core CT skills. In addition, students at the middle level succeeded in applying two CT core skills, and those with low ability could only demonstrate one CT core skill. Hence, The study presents an alternate framework for instructing CT.

Keywords: Critical Thinking, EFL Students, Factual And Fake News, Media Literacy Instruction, Reading Subject

1. INTRODUCTION

The progression of information and communication technology (ICT) has ushered in a new era in contemporary life (Myburgh & Tammara, 2013). Moreover, ICT has dual aspects: beneficial and detrimental (Untari et al., 2020). The beneficial aspects of the impact of ICT make it easier for people to communicate long distances, spread and receive information quickly, and others (Rahmatullah et al., 2022). Conversely, ICT is also regarded as having a detrimental effect, including the spread of

misinformation (Zhang & Ghorbani, 2020). Consequently, the spread of misleading information makes it easy for society to be provoked (Le, 2024).

Furthermore, most internet and social media users in Indonesia are held by Generation Z, with a total of 34.40%, followed by the millennial generation at 30.62% (APJII, 2024). Some of them are students from junior high school, senior high school, and university. Unfortunately, this group is stated as a generation with a very vulnerable population to exposure to fake news or hoaxes (Halfiani & Susilawati, 2023). In addition, each country has different ways of combating fake news. For example, Brazil includes media evaluation into the national curriculum to combat false information (Millenial, 2018). In addition, Finland integrates CT lessons in its education structure (Mackintosh, 2019). However, Indonesian students have not yet gained teaching concerning logic and thinking processes (Santosa in Andriani, 2017). Hence, this problem can be solved by educating students about CT (Nurfazri et al., 2024).

CT is a skill that must be possessed by each individual today (Elder & Paul, 2020; Maslakhatin, 2016; Nurfazri & Septi Irwansyah, 2024; Saputra et al., 2019). Besides, in an English language environment, incorporating CT skills benefits learners by enhancing problem-solving skills, verbal interaction capability, writing ability, analytical thinking, and enthusiasm for learning (Liang & Fung, 2021a; Lu & Xie, 2024; Rittmann & Mpofu, 2024). In addition, CT-related discussions have become a hot topic in several circles (Dong et al., 2023). Not a few studies on CT have been conducted in various ways (I have written this section in the previous manuscript). Unfortunately, this ability is not considered an urgent need or is not included in the Indonesian curriculum as a separate learning (Kurniawati et al., 2020) (At least since this manuscript is written, CT has not been taught separately in the Indonesian curriculum).

On the other hand, the researcher carried out an initial assessment at one of the senior high schools in West Java, Indonesia. The results show that students encountered difficulties separating factual and fake news/information that they identified in the texts, including evaluating the text, identifying the bias in the text, creating inferences, and distinguishing between true and bogus news. This obstacle was found when the researcher asked students to answer the following questions about the news: "What is the difference problem between fact and fake news? What key point is the author or speaker trying to make? And who stands to derive advantage from this message?" Unfortunately, only 2 out of 36 learners could utilize CT skills. More than that, students admitted that they did not obtain any education regarding CT lessons. Hence, students should be taught about CT so they are not quickly persuaded by bogus news that can deceive them.

Therefore, this study aims to evaluate students' CT skills after being taught about CT. This research is based on two research questions: (1) How does the teacher implement CT teaching to nurture students' CT skills in differentiating factual and fake news? and (2) What aspects of CT skills are gained by students after being taught about CT in analyzing the news? Research question (1) has been accepted with the title "Applying Critical Thinking to Foster EFL Students' Ability in Differentiating Between Factual and Fake News: A Guide for Educators" by the International Journal on Philosophical Practice HASER. The previous study investigates the process of implementing CT learning for Indonesian students in reading class using news analysis material. Meanwhile, this study will answer the second research question by reporting students' CT skills after receiving critical thinking teaching. Therefore, this study provides an alternative CT teaching model, especially for Indonesian students, and prepares them to face the post-school world.

CT Requirements

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CT is an essential global skill that everyone today must develop to engage fully in 21st-century life. Costa et al. (2020) separate CT processes into four groups: solving issues, making choices, CT, and innovative thinking. In addition, Angelo (1995) classifies CT as a higher-order cognitive activity comprising duties to assess, synthesize, detect issues and solutions, and develop conclusions. Besides, Fisher (2011) serves the abilities of CT, including a) detecting issues and conclusions, b) grasping the notion of reasoning, c) understanding reasoning (assumptions, contexts, and mind maps), d) clarifying and explaining ideas, e) assessing the acceptability of an assertion, especially its trustworthiness, f) analyzing, assessing, and formulating explanations, g) making inferences, and h) developing arguments. In addition, Facione (1990) outlines that CT skills consist of interpretation, analysis, evaluation, and explanation.

Furthermore, Paul and Elder (2019) investigate the technique as a critical thinker by posing the following questions: a) What is the author's purpose? c) What is the writer's objective? c) What is the problem raised? d) Is there any evidence, background, or info? g) Is there any idea employed to argue for the information provided? f) How do authors view the global community? g) What is the breadth of his logic that the viewer may comprehend from our standpoint of view? h) How can he justify it from his viewpoint? and i) How can the recipient relate to his perspective to grasp what he has to say? Meanwhile, Erstad in Fatiha et al. (2021) describe three pillars of CT skills: identification, identifying biases, and inference.

Through CT teaching, students can be encouraged to think independently, see other perspectives, and produce an independent thinking (Lu & Xie, 2024; Yuan et al., 2021). In addition, students must be engaged in high-level cognitive, and not just teach them how to memorize or repeat the data (Abrami et al., 2015; Feronica et al., 2021; Ghanizadeh et al., 2020). Thus, the teacher is required to encourage students to assess information, evaluate alternative views, and develop new understanding (Li, 2023; Liang & Fung, 2021b).

On the other hand, teaching CT in reading class can be the most appropriate method to improve students' CT skills (Haryati, S., & Hidayati, 2017) because reading is one of the skills in English. In this class, students are asked to find facts from the text, analyze the findings, and interpret what they get from the text. In addition, CT and reading subjects are independent concepts that cannot be separated (Neilsen, 1989; Tabačková, 2015). As a critical reader, it allows someone to find specific information in a text, such as understanding the structure of the text, extracting main ideas, providing understanding, and others (Kiki, 2019). Thus, integrating CT in reading class can help students reflect on what they have read.

2. METHOD, DATA SOURCES, COLLECTED, AND ANALYSIS

This research employed a descriptive analysis method. It aimed to analyze what aspects of CT skills students achieved and how they used their CT in analyzing two different news (See Table 1). This study was carried out at a Senior High School in Bandung City, West Java, Indonesia. Several aspects were considered in the selection of this site. First, the school implemented news analysis in reading class, but the English teacher still used traditional reading models. Second, students admitted that they were not taught about CT. The participants were 36 students in one class without randomization. Also, Pseudonyms were used to make the respondents feel more confident (Creswell, 2012).

Table 1

The news used in this research

Title	Publisher	Position
Papua Liberation Army Claims Execution of Intelligence Officer.	Tempo	First (Left)
Papua Police Rebut OPM's Claim on Killing Intelligence Office.	Tempo	Second (Right)

The data was taken from students' answer sheets. The data analyzed included responses from six students, representing a group of 36, to illustrate the students' use of critical thinking skills after receiving instruction on critical thinking. Besides, pseudonyms were used to ensure the confidentiality of the participants. Students' answers were rated by the NEIU's CT rubric (See Table 2) presented by the Center for Teaching and Learning (University, 2005). However, the CT rubric was modified because the researcher was eager to assess three cores of students' CT skills.

Table 2

The modified version of NEIU's CT Rubric

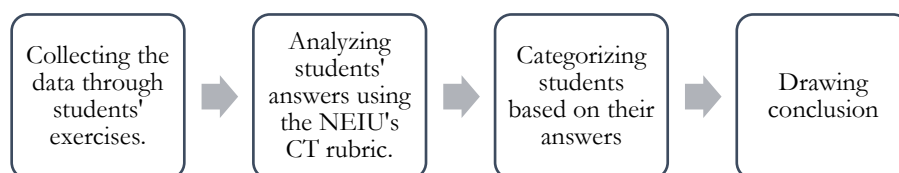
Quality	Low Proficiency (1 point)	Middle Proficiency (2 points)	High Proficiency (3 points)	Rating (1,2,3pt)
Criteria				
1. Identifies & explains ISSUES (Identification and identifying bias skills)	Identifies main issues but does not describe or explain them accurately or properly.	Successfully identifies and summarizes the main issues, but does not explain why/how they are problems or create questions.	Clearly identifies and summarizes main issues and successfully explains why/how they are problems or questions; and identifies embedded or implicit issues, addressing their relationships to each other.	
2. Inference & determines the factual and fake news	Make an inference but does not describe or explain them	Successfully infer and summarize the main issues, but does not explain why/how they	Clearly infer and summarizes main issue and successfully explain why/how they are problems or questions; and inference embedded or implicit issues,	

accurately	are problems	addressing their
or properly.	or create	relationships to each
	questions.	other.

Additionally, the researcher found this site suitable for study due to its focus on developing critical thinking skills. Students were encouraged to analyze news effectively, recognize biases, and draw inferences, including distinguishing between facts and misinformation, by applying their CT skills. Hence, the research procedure can be seen in this there below.

Figure 1

Procedure of this research



3. Result

The second research question dealt with determining what aspects of CT skills are gained by students after being taught about CT in analyzing the news? Hence, this study used students' exercises to acquire data to address the question. The document was derived from the last meeting of the news lesson analysis in reading class or after the intervention of teaching CT. Besides, the exercise used two news (See Table 1). Simultaneously, students were presented with 10 guideline questions relevant to the text and instructed to respond independently. However, five questions demonstrated students' CT abilities; the other five were support questions. The final exercise was assessed to discover the primary CT abilities that manifest in students' answers to the topic news that exploited the essential CT capabilities provided by Erstad in Fatiha et al. (2021). The competencies were identification, identifying biases, and inference (See Figure 2).

Figure 2

Students' CT Skills after being taught about CT

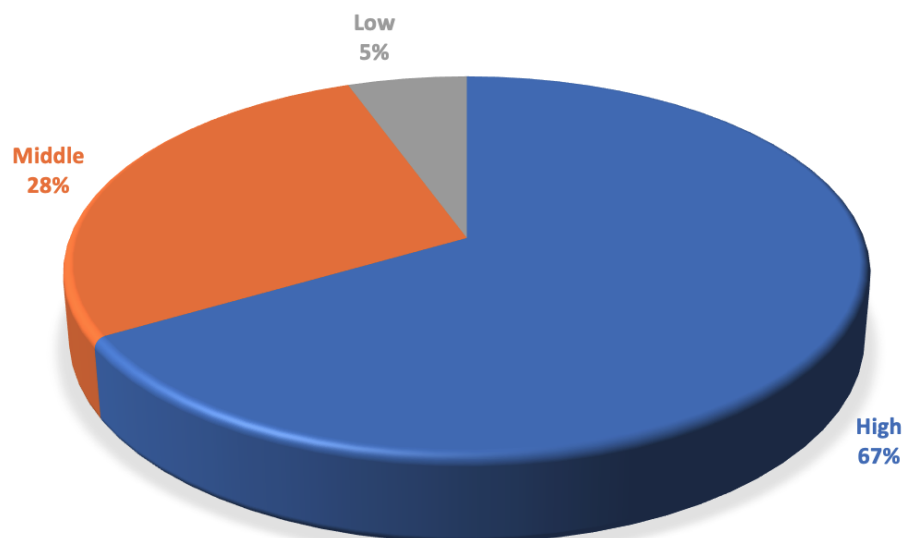


Figure 2 shows the results of students' CT skills after receiving CT instruction. Students were categorized based on their answers assessed using the NIEU's CT rubric. The data were taken from 36 student answers. From the assessment results, most students were in the high category (67%), followed by middle (28%), and students with low abilities were only 5%. Furthermore, the researcher used answers from six students to sample the results of applying students' CT skills in analyzing two news stories (See Table 3). This aims to describe the results of students' answers based on the assessment and see what factors cause students to be in each category.

Table 3

Cores of CT skills According to Erstad in Fatiha et al. (2021)

No	Students	Cores of CT Skills			
			Identification	Identifying bias	Inference
1.	High	Student 1 (S1)	✓	✓	✓
2.	Achieving students	Student 2 (S2)	✓	✓	✓
1.	Middle Achieving students	Student 3 (S3)	✓	(*) ✓	✓
2.	Achieving students	Student 4 (S4)	✓	✓	(*) ✓
1.	Low Achieving students	Student 5 (S5)	✓	(*) ✓	(*) ✓
2.	Achieving students	Student 6 (S6)	✓	(*) ✓	(*) ✓

Table 3

indicates that students achieved the three core components of CT skills, though not all provide contextually accurate responses; many still offer general answers. Conversely, students marked with

an asterisk struggle to explain their answers, placing them at a designated skill level. The data represents samples of student responses distinguishing factual from fake news. High-achieving students successfully demonstrated all three CT core skills, middle-achieving students generally fell short of one, and low-achieving students typically demonstrated only one core skill. Examples of three student responses to the questions are presented in the following section.

Identification Skills

Erstad in Fatiha et al. (2021) asserts that identification entails exploring all aspects that could impact an individual, community, or condition; subsequently, the audience delves deeper into the issue and its potential solutions. Meanwhile, the NEIU's CT Rubric emphasizes that identification comprises detecting and synthesizing key issues, correctly explaining why/how they are issues or queries, finding hidden or tacit difficulties, and resolving their linkages with others.

Table 4

Students's answer related to identification questions

Question	Students' Answer
What is the problem?	<p>S1: The first news (left) discusses a murder performed by the OPM on an Indonesian intel officer in order to send warnings to the state. The OPM wants the government to rescind the New Papua Autonomous Region (DOB) Law. However, the second report (right) indicates that the person slain by the OPM was not an intelligence official but an ordinary citizen. But, from the news, Sebby cannot share the information about the murder of the intelligence, so we cannot determine what truly happened.</p> <p>S2: The first news (left) addressed the topic of the assassination of an agent of intelligence by the OPM behind the excuse of a danger to the administration. The OPM wants the government to abolish the statute that created the New Papua Autonomous Region (DOB). The second Beria (right) presented a report from the police that the OPM slain was not an intelligence official but a citizen. Apart from that, there was something peculiar about the first report; Sebby was unsure when the incident happened.</p> <p>S3: The first news (left) reveals the narrative of the assassination of an intelligence agent by OPM. The assertion was designed to terrify the authorities. However, the second news (right) refutes the allegation</p>

of the first news. The police stated that the one slain by OPM was not a police officer but a citizen.

S4: The first news (left) reveals the narrative of the assassination of an intelligence agent by OPM. OPM tries to frighten government officials with this revelation. The second report (right) confirms that the target of the crime was not a person of intelligence. The police stated that the one slain by OPM was not a police officer but a citizen.

S5: The first article (left) discusses the OPM's assertion of the assassination of intelligence to push the government to abolish the New Papua Autonomy Law (DOB). The second report (right) refutes the claim because the individual slain was not an intelligence official but a civilian. The original news also did not specify when the incident happened.

S6: The initial news (left) announces the assassination of an intelligence officer by the OPM. The second report (right) states that the issue is not valid. The first report tries to alarm the government and ask it to abolish the New Papua Autonomy Law (DOB). However, the original news also did not specify a definite time.

According to Erstad in Fatiha et al. (2021), "What is the problem?" is incorporated into one of the specific identification skills. It is meant to explore a problem and possible treatments further after students have a clear perspective of the circumstances and the individuals, teams, or factors that may be changed. The inquiry wants S1, S2, S3, S4, S5, S6 to identify the problem of that news. In this question, all students could identify the problems or issues raised in the text using their respective language styles. For example, S1 could express her answer by saying, "The first article (left) describes an assassination carried out by the OPM against an Indonesian intelligence officer to make threats to the government. The OPM wants the government to revoke the New Papua Autonomous Region (DOB) Law. However, the second report (right) clarifies that the person killed by the OPM was not an intelligence officer but a civilian. But, from the news, Sebby can't give the detail when the killing of the intelligence, so we can't know what actually happens." S1 could differentiate the critical issue from the two news. In addition, S1 continued her explanation with, "But, from the news, Sebby can't give the detail when the killing of the intelligence, so we can't know the actual happens." In that response, S1 offered her thoughts about the news. Therefore, the question of the ability to identify had been successfully achieved by S1 based on the answer to the text.

Table 5

Students's answer related to identification questions

Question	Answer
What is the author's purpose?	<p>S1: The initial news (left) seeks to persuade the reader. The first news encourages readers to trust OPM's allegation. The second news (right) tries to tell the reader about a case in Papua. The second news notifies readers about the outcomes of the police investigation.</p> <p>S2: The initial news (left) is to make the reader believe that the OPM has assassinated an intelligence official. The second news (right) is to alert the reader to the killing of an intelligence officer. The second news piece informs readers of the conclusions of the police probe into the situation.</p> <p>S3: First news (left) is to persuade. The first news piece seeks to convince readers of OPM's allegation. The second (right) is to inform. The second item alerts readers about the outcomes of the police inquiry into the issue.</p> <p>S4: First news (left) is to convince. The first news pushes readers to trust OPM's assertion. The second news tells readers about the outcomes of the police investigation.</p> <p>S5: The first news (left) aims to persuade the audience of the OPM's assertion. The second news (right) aims to alert the readers of the Police's inquiry.</p> <p>S6: The first news (left) aims to persuade the audience of the OPM's assertion. The second news (right) aims to alert the readers of the Police's inquiry.</p>

The second query regarding identifying competency related to the author's purpose. Paul and Elder (2019) claimed that every thought has a purpose. The author's intention refers to the logic behind the production of a literary work. Additionally, the reader is expected to comprehend the author's intent and circumvent false content. As in the preceding question, all students could discern the author's goal from the students' replies. Hence, from students' replies to questions 1 and 2, they gained one of CT's abilities: identification.

Identifying Biases

Erstad in Fatiha et al. (2021) claimed that identifying biases is the capacity to recognise departures or discrepancies from what ought to be. As an excellent critical intellectual, an individual does his or her best to scrutinize material objectively. The NEIU's CT Rubric also emphasizes that identification comprises detecting and synthesizing key issues, correctly explaining why/how they are issues or queries, finding hidden or tacit difficulties, and resolving their linkages with others.

Table 6

Students's answer related to identifying biases questions

Question	Answer
Who stands to get benefit from this information?	<p>S1: From the first report (left), the OPM is profiting because they assume that killing an Indonesian intelligence official would push the government to rescind the New Autonomous Region Law (DOB) for Papua. The second news (right) will assist the government and police since it is regarded as successful in revealing allegations from OPM.</p> <p>S2: The initial report (left) backed the OPM so that the public understood that the OPM had assassinated an intelligence officer and threatened the government to rescind the law. The second (right) story helped the police and the administration since they succeeded in burying the subject of the assassination of an intelligence officer by the OPM.</p> <p>S3: OPM and government.</p> <p>S4: The first news (left) helps the OPM because they feel that the government would fear them; thus, the government is prepared to rescind the New Autonomous Region Law (DOB) for Papua. The second news (right) benefits the Police and the Government since they succeeded in suppressing the topic of the murder.</p> <p>S5: OPM and the reader.</p> <p>S6: The reader and media.</p>

Table 6 illustrates that all students were expected to explain who stands to derive benefit from this information due to their understanding of the text. Erstad in Fatiha et al. (2021) said that this skill could be incredibly difficult, as even the sharpest among us might fail to perceive biases. Critical solid thinkers tried their utmost to assess material objectively. Hence, asking who benefits from an event is one of the questions used to hone one's ability to identify bias. From the data in Table 6, students could generally find who benefits from the text. However, there were very significant differences in each student's answers. S1, S2, and S4 could provide answers based on clear reasons and link one piece of information to another. Meanwhile, S3 could only identify his findings without explaining why they were related to who benefits. In addition, students at the low level only provide answers to the person who benefits without summarizing or explaining them.

Table 7

Students's answer related to identifying biases questions

Question	Answer
Does the source appear to have an agenda?	<p>S1: Yeah, the initial report (left) has a definite scheme for the killing of an intelligence officer by the OPM. OPM has an agenda to compel the government to rescind the statute. In addition, Serby will also kill foreigners who arrive in his region if OPM's desires are not realized.</p> <p>S2: The initial report (left) mentions a plot for the OPM to purposefully assassinate someone suspected of being state intelligence. The government is scared and seeks to abolish Papua's New Autonomous Region Law (DOB). However, OPM did not disclose when the event happened. Thus, it raises something confusing. The second report (right) contains a proposal that the cops succeeded in silencing the murder victim. He was a layperson, not an intelligence official.</p> <p>S3: The assassination of an intelligence officer.</p> <p>S4: The initial news (left), OPM has prepared an agenda to terrify the government into abolishing the New Autonomous Region Law (DOB) for Papua by murdering an intelligence officer as a victim. In the second (right) story, the Papuan Police sought to silence the topic of the murder. As a consequence, the OPM did not kill an intelligence official but a civilian.</p> <p>S5: The assassination of an intelligence officer.</p> <p>S6: The assassination of an intelligence officer.</p>

On the other hand, the ability to identify bias must examine what agenda has been or is being prepared by the author or creator of an event. This is used to evaluate information or arguments. Table 7 shows the results of students' answers regarding what agenda was prepared by the author or creator of the scenario. S1, S2, and S4 provided detailed answers by analyzing the agenda presented by the two texts. In addition, S1 was able to link motives with political goals, and S2 supported S1's statement and added insight by questioning the time of the incident that was not mentioned by one of the news claims; thus, it provided unclear information. Meanwhile, students in the middle category provided structured responses but lacked details. S3 could only mention events without in-depth

analysis. Moreover, students in the low critical thinker category only focused on one event without providing more detailed responses.

Inference

Inference is the ability to build conclusions based on data presented to someone. This ability is important to improve because it allows people to make logical decisions. In addition, this ability is one of the important aspects of CT. A critical thinker must study the material given and produce conclusions based on primary evidence (Erstad in Fatiha et al., 2021). In addition, the NEIU's CT rubric emphasizes that one must extract the full meaning of information based on one's findings clearly and include relevant evidence.

Table 8

Students's answer related to inference question

Question	Answer
What conclusion can you draw based on the text above? Give your evidence	<p>S1: Based on the earlier identification, there are inconsistencies. Sebby's assertion is not founded on the circumstances of the occurrence. He only acquired information about the murder. After that, the spokesman for the Papua Regional Police, Kamal, said that those slain by OPM were civilians. Finally, material relating to intelligence killings is fake news. And, the actuality is the second news (right).</p> <p>S2: In conclusion, based on the facts that have been obtained, the OPM planned the death of an intelligence officer so that the Government would rescind the New Autonomous Region Law (DOB) for Papua. In addition, the OPM did not disclose when the event took place. So, it will lead to things that are not evident. On the other side, the Papuan Police have succeeded in suppressing the topic of the murder. According to the police statement, the OPM did not murder an intelligence official but a civilian. So, the first news (left) is phony, whereas the second news (right) is a fact.</p> <p>S3: The initial news (left) announces a threat from the OPM to the government by murdering an accused intelligence officer. However, the Papuan Police in the second story (right) refuted this assertion. The OPM has killed civilians and not an intelligence official. As a result, the initial news is</p>

bogus. And, the genuine news is the second news (right).

S4: The murder problem is fake. The police stated that the OPM killed people.

S5: The OPM claims to have assassinated an intelligence officer, and the police have refuted these accusations.

S6: The OPM claims to have assassinated an intelligence officer, and the police have refuted these accusations.

The capacity to infer enables an individual to extrapolate and identify potential outcomes while evaluating a situation. It is essential to acknowledge that not all conclusions will be accurate. In other words, an inference is a reasoned assumption, and an individual's capacity to infer accurately can be refined by deliberately accumulating extensive information before reaching conclusions. When confronted with a novel setting to assess, initially skim for indicators—such as headlines, visuals, and salient statistics—then inquire about the underlying reality.

Table 8 shows that students were able to summarize the two news items. However, there are significant differences in the inference results for each student. S1 and S2 could provide clear and logical conclusions by presenting specific evidence from the text. S1 identified inconsistencies in Sebby's statement because he claimed the information from what he got without including evidence of when the incident occurred. In addition, S2 provided a conclusion by analyzing the evidence and identifying the motive. Also, S2 provided a logical justification by stating that the OPM leader did not include sufficient evidence in his statement. As a result, it invited something unclear. On the other hand, the police have succeeded in silencing the information provided by Sebby. Likewise, with S3, although he could not provide further explanation in the previous answer, S3 has concluded from the results of his identification. As a result, S1, S2, and S3 can distinguish between factual and fake news by providing logical reasons. In addition, S4 only gave a short answer without further explanation. Meanwhile, S5 and S6 only repeat the introductory statement of the text without providing further evidence and explanation. Therefore, they are at a low level.

4. DISCUSSION

In the growth of ICT today, CT is a crucial skill that everyone must master, especially when they face many different types of news or information. This skill permits people to examine the information critically. This study aims to measure students' CT skills in distinguishing between true and bogus news and assess how well students use CT to analyze both news texts in a reading class critically. The analysis of this study is based on students' answers to questions about the news. After that, students are categorized based on their ability to answer the questions into three levels: high, middle, and low—comprehend and employ CT skills. The results provide important insights into students' abilities and identify areas where adjustments are needed.

In general, CT involves the process of learning, evaluating, and synthesizing information to develop a judgment that can be proven and accounted for. After learning about CT from the teacher, students

seemed to understand the CT skills developed by Erstad in Fatiha et al. (2021), such as identification, identifying biases, and inference. This can be seen in students' answers to questions requiring them to analyze two news items. Meanwhile, not all pupils can provide replies that are suited to the context of the question; many nevertheless gave broad answers. On the other hand, the capacity of students with an asterisk cannot explain their replies. Therefore, students identified with an asterisk are at a predetermined level. This category is based on the criteria determined in the assessment (the NEIU's CT Rubric). At high ability, pupils could supply answers with specific explanations. On the other hand, in the middle ability, pupils merely supplied generic replies without being supported by an explanation. Meanwhile, students with low ability cannot supply replies with their attitude. Some of their replies were based on news or headlines. As a result, pupils with high ability can discern factual and fraudulent news. However, not all middle-level students can discern real and fraudulent news. Moreover, the low-level students could not present their analysis of the factual and fake news in their answers; thus, they could not identify factual and fake news.

High Ability: At this level, students cannot only distinguish between real and fake news, but they can also provide accurate reasons and evidence. For example, students are able to see contradictions or inconsistencies in one of the news stories, such as the time of the incident against the claim from the OPM, which could not be found because the OPM leader only received the information from its members. In addition, their responses demonstrate a deep mastery of CT principles, indicating that they can analyze, interpret, and explain their conclusions based on evidence.

Middle Ability: Children with intermediate abilities demonstrate a general understanding of CT but lack the depth of understanding observed in high-ability students. Although they can sometimes identify whether a news story is real or fake, they fail to express their reasoning in depth. Their responses are broader, indicating awareness of CT theory but an inability to apply it correctly. These students superficially recognize the difference between real and fake news but lack the analytical skills to support their responses.

Low Ability: Students in the low ability category have considerable difficulty integrating CT skills. Their responses sometimes focus heavily on the headline or surface elements of the news story, with limited critical engagement. Without the ability to investigate content, these students find it impossible to distinguish whether news is legitimate or fake. They cannot provide thorough analyses or explanations, highlighting the need for more significant improvements in CT training.

Despite the general increases in students' CT skills, the research demonstrated that not all students could consistently deliver context-appropriate responses. High-ability students were able to interact substantially with the topic. Hence, more specifically, students can benefit from extra education on applying these skills. Middle- and low-ability students encountered considerable difficulty, with many unable to consistently offer replies suited to the unique context of the questions. This issue could be attributed to several causes, including a lack of trust in their CT abilities or insufficient practice with real-world occurrences. For low-ability pupils, the attempt to study information seriously was evident in their dependence on superficial qualities like headlines. This proclivity demonstrates a gap in cognition that stops folks from thoroughly appreciating the complexity of CT.

This study underlines the importance of personalized CT instruction in developing students' thinking power when facing the rapid development of this era. The findings show that most students actively use CT skills to distinguish between factual and fake news after receiving CT instruction (See Figure 2). High-ability students can focus on refining their skills, helping pupils apply CT principles appropriately and confidently. In addition, they can find sufficient evidence to compare one piece of

information with another. The students' findings show inconsistencies between one piece of information and another. Therefore, they can easily conclude and distinguish the two news items. On the other hand, although students with middle ability can elaborate on their answers, they still cannot provide further explanations and collect sufficient evidence. For further instruction, students can focus on strengthening their analytical skills to broaden their understanding of CT principles. Exercises encouraging detailed and evidence-based thinking can enable these students to move from broad to specific answers, increasing their capacity to interact critically with knowledge. Furthermore, students with low skills can be directed to find the difference between real and fake news, emphasizing evidence and source reliability, which can build their confidence and critical thinking skills. Providing systematic education, such as step-by-step analytical guides or group discussions, can enable these students to gain a more robust understanding of CT principles.

5. CONCLUSION

This study is a further effort to investigate "what" cores of CT skills students receive in distinguishing between factual and fake news after receiving CT instruction. The skills measured are: identification, identifying biases, and inference. Furthermore, students' abilities are categorized into three levels based on their answers: high, middle, and low. Students' assessments are based on the modified NIEU's CT rubric. The results show that the majority of students have actively developed CT skills and applied them to analyze two different news stories. However, there are still some notes for further research as outlined in the discussion of this study. Therefore, further research is recommended to use other aspects of CT to foster students in analyzing information. Therefore, the results of this study propose recommendations for stakeholders in the literacy movement, which offers an innovative approach to CT instruction, especially in reading education, and can be an alternative model in teaching CT to students.

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