

## ***Strengthening Higher Order Critical Thinking Skills of C1 Level Students in a Classroom Environment***

Ganzul Gantuya, University of Finance and Economics, Mongolia

The Asian Conference on Education & International Development 2023  
Official Conference Proceedings

### **Abstract**

Higher-order critical thinking skills are essential in university settings because they enable students to succeed in their studies. However, they cannot be learned solely by course materials and articles; nevertheless, they must develop a critical thinker's attitude or disposition. The two main objectives of this study were to examine whether students were enhancing their higher-order thinking abilities through vocabulary, grammar, discourse, reading, engaging with the text, and externalizing from the text. In addition, instructor-related questions were asked to identify how higher-order thinking skills were applied in the classroom. This study will target first-year students at the C1 level of the undergraduate academic English program. We will answer how essential higher-order critical thinking skills are for fostering learning strategies for academic skills such as vocabulary, grammar, discourse, reading, engaging with a text, and externalizing from a text. Furthermore, a standardized Cambridge self-assessment survey on critical thinking was conducted among 52 students to measure their critical thinking skills and evaluate the success/failures of students. Using the qualitative and quantitative methods, the results of the study showed that students could use vocabulary (54.5%), sentence-level grammar (51.3%), discourse (49%), reading & listening (48.7%), engage with a text (53.5%), and externalize from a text (51.4%) often. Although most students concluded that instructors always support them well in the learning environment, results showed their skills need to develop better. Furthermore, we will examine how this correlation can improve and how concepts can be put into practice.

Keywords: Higher-Order Critical Thinking Skills, Vocabulary, Grammar, Discourse, Reading, Engaging With a Text, Externalizing From a Text, Learner-Centered Pedagogy

**iafor**

The International Academic Forum  
[www.iafor.org](http://www.iafor.org)

## **Introduction**

Critical thinking is a crucial skill that should be acquired and enhanced in higher education among students by studying and reading and by being an active listener, speaker, and thinker. Improving teaching and learning can be beneficial to cultivate students' mental abilities through the practice and application of critical thinking in academic English in the classroom setting. Specific reading, listening, reading, and writing abilities are necessary at the C1 level of Academic English to comprehend complex sentence structures and information, develop a research paper and arguments, use sources, cite and reference them correctly, adhere to academic conventions, and consider cultural and psychological factors. The literature lacks research investigating whether students in the process of improving their academic reading and writing skills in English have the necessary background, understanding, or experience in critical reading and writing in English and how explicit instruction of these skills contributes to their understanding of critical reading and writing (Bilki & Irgin, 2022). Although researchers in Mongolia have researched critical thinking skills, there is insufficient information on how learners can develop themselves, and educators support their skills in Academic English. The University of Finance and Economics (UFE) started a new curriculum of Academic English with critical thinking in 2015 using 'Qskills' Oxford course books. In 2021, considering the necessity of global skills, the course changed textbooks to 'University Success' from Stanford University, which integrated challenging academic content and critical thinking. As this C1 course is in its second year at the university, students still face difficulties. Secondary schools in our country do not develop pupils' critical thinking skills, thus affecting their performance when they enter university.

This study examined how essential higher-order critical thinking skills of C1 level students foster skills in vocabulary, grammar, discourse, reading, engaging with a text, and externalising from a text. Also, we found out how instructors contribute to strengthening students' higher-order thinking skills. According to our findings, some of the significant abilities that Mongolian students lack are reading comprehension, listening, and discourse through higher-order critical thinking. Therefore, these skills need to be considered crucial for high-order critical thinking and learning rather than a means of information transfer.

English is a foreign language in Mongolia, where students must be tested to discover their proficiency level, and courses are provided accordingly. Therefore, this study will target first-year students at the C1 level of the undergraduate Academic English program at the UFE who only studied this course for one semester. The survey used quantitative and qualitative methods in Google Form. The significance of the study is to propose some strategies for the learners' improvement of higher-order critical thinking skills. This research includes relevant literature review, methods, discussions, results, recommendations, conclusions, and references.

## **Literature Review**

Many studies have been done on critical thinking skills integrating academic English as a second or foreign language. Adams et al. (2018) suggest critical thinking in EAP is realised in two ways: thinking about the language (analysing how English is used to express ideas) and thinking through the language (participating actively in using the language to explore and present ideas and arguments). Tricia, H. (2020) stated that good readers recognise, and decode quickly and accurately, words, grammatical structures, and other linguistic features and unaware of the process as they engage in this. In other words, a fluent reader knows

language structure well and can recognise a wide range of vocabulary automatically (Tricia, 2020). Therefore, educators should support, encourage, and guide their learners to foster critical thinking skills. Mongolian students must learn how to find and differentiate the truth and fallacy, reasons for something, the truth and validity of an argument, or draw a conclusion based on the interpretation of data, evidence, facts, and opinions. Also, instructors need to assist them in discovering to evaluate their own beliefs depending on their prior knowledge and distinguishing the facts and opinions using lingual devices.

Higher-order thinking skills involve the cognitive processes of analysing, evaluating, and creating. In this paper, we will try to find whether our C1 level learners developed higher-order thinking skills in a semester and what instructors can do to enhance their abilities in the classroom environment. Anderson, L. and Krathwohl, D. suggested that ‘analyse’ breaks the material into its constituent parts and determines how the parts relate to one another and/or to an overall structure or purpose (Anderson et al., 2001). According to Anderson, L. and Krathwohl, D., *evaluate* means making judgments based on criteria and standards. The last level of higher-order thinking is ‘create’, which means combining elements as a new coherent or functional whole; reorganising elements into a new pattern or structure (Anderson, et al., 2001).

Davies and Barnett (2015) identified three main threads, summarising critical thinking as reflective thinking skills, critical thinking as dispositions, and critical thinking as critical pedagogy. Regarding reflective thinking skills, Wilson (2019) stated, ‘critical thinking cannot exist in a vacuum, so accessing and understanding content – sound and reliable knowledge about a particular topic – is essential. It is the first challenge for non-native speakers when reading. Further, higher-order thinking enables students to apply, analyse and evaluate information, and on this basis to reason and to create new ideas and knowledge.’ It is true that learning academic English and developing students’ criticality related to higher thinking is challenging for both non-native educators and learners. It is arguably the responsibility of EAP teachers to push their students to think and question beyond their comfort zone and to engage with issues in the modern world (Wallace, 2003). A critical-thinking classroom depends on genuine, higher-order questions – questions which challenge but are answerable and which come from the students as well as the teacher. Group work and think-pair-share activities can provide non-threatening, supported opportunities for students to practise critical thinking (Wilson, 2019). When reading critically and actively, it is essential to know how to interpret and to reflect upon what is read through writing and discussing it with others. It means that students relate and engage with the text so that they will be able to think about how and why it is written and who the audience is. Most importantly, they can ask themselves how to create or produce a text, essay, or paper using various science-related topics and real-life cases. It concluded that teaching critical thinking was vital, and educators had to be good critical thinkers. The reason is that knowledge and abilities are inherited from one another. Bilki, Z. and Irgin, P. (2022) stated “to be able to externalise from the text as part of critical reading; readers need to make notes from the text and write about the text to present their position by synthesising from a range of texts and using their constructed meaning in what they produce as a writer. At this point, reading is linked to writing” (Bilki & Irgin, 2022). While academic reading requires identifying authors’ positions, views, audience, arguments, inferences and so on in specialised texts such as Sociology, Humanities, Biology, and Economics, academic writing needs research, analysis, comparison, evaluating and synthesising, integrating sources, summarising and creating a paper based on a specific topic which means they look for deeper information to understand life, cases, reasons, and logics. Listening and speaking could also be related to these sub-skills. The reason is that

when they listen, they have to make a conclusion on a given topic. When learners speak, they select words to say, arguments to make, and evidence to provide in the academic setting. In other words, they think critically using those sub-skills of higher-order thinking to produce the language, ask questions, and present their positions and views in English. According to Bilki, Z., and Irgin, P. (2022), expressing ideas and arguments clearly, logically, and reflectively on a paper is fundamental to critical thinking.

Fahim and Mirzaii (2014) concluded that “the ability to write argumentatively crucially depends on EFL/ESL learners’ being equipped with an intellectual capacity for thinking in a critical manner” (p.8), which shows the importance of training learners on language skills by embedding critical thinking skills into them. Pei, Zheng, Zhagn, and Liu (2017) explored the correlation between EFL learners’ argumentative writing and critical thinking. Although they found out an insignificant correlation between critical thinking skills and English writing proficiency, textual analysis of student essays showed that “strong critical thinking learners outperformed weak critical thinkers in relevance, clarity, logicity, profundity, and flexibility of argumentative writing” (p. 31). Amir, P. and Amina, O. (2018) noted, “as language acquisition processes engage learners’ higher-order thinking skills to negotiate meaning, at the same time, better language skills and active language use activate critical thinking skills.” Critical thinking is related to high-order cognition thinking like analysing, synthesising, and evaluating (Fuad et al., 2015). Teachers should consider the significance of critical thinking to plan and conduct learning that can improve students’ thinking skills and conceptual understanding (Mamu, 2015). Due to the additional time and effort required for the learning process, giving students challenging assignments may assist in boosting both teachers’ and students’ motivation. Because dealing with arduous, intense, debatable themes and subjects helps to increase their stimulus in the classroom. As a result, learners, who are motivated to learn, are more likely to desire to study harder and learn more.

## **Methods**

This quantitative and qualitative data aimed to determine the students’ higher-order thinking skills with the help of open and closed questions in the questionnaire at the Institute of Foreign Languages, UFE. In addition, it was administered to investigate how language teachers feel about critical thinking and how it is used in the classroom. The study was grounded on the interpretive approach that “allows the researcher to conduct a study in its natural setting” (Al Riyami, 2015, p.413). The survey was carried out over four weeks using Google Form.

The following research questions were used during the study:

1. How were students’ higher-order critical thinking skills? If their skills are poor, how can we push them to improve during one semester in the classroom?
2. How did teachers support their learners to foster their higher-order critical thinking skills from the students’ view during the lesson?
3. What could teachers do to develop these skills?

This study included 52 Mongolian participants who were non-native speakers and were studying Academic English at the C1 level for one semester at the university. The participants’ ages were between 17-21 years old. At the university, first-year students must study this course according to the curriculum at the higher education level. Learners’ proficiency tests were conducted before the course started in 2022. Twenty-three statements relating to students’ experiences and 13 statements regarding lecturers’ support from their

perspectives were asked to select one considering answer from the multiple choice. In addition, one open-ended question was requested to complete by their answers. In total, there were 37 questions. The texts were transferred to percentages. The students' survey was done in accordance with Student Self-Assessment Critical Thinking Questionnaire designed by Cambridge Life Competencies Framework in 2019. Furthermore, 16 statements with multiple choice and two open-ended questions on higher-order thinking skills improvement and acquisition were asked to complete the questionnaire from 4 instructors, who taught Academic English in the Fall semester of 2022, two of them were native speakers from Fiji and the USA, others were non-native Mongolian speakers. The instructor from the USA has one and a half years of experience while Mongolian and Fiji teachers have above 15 years of experience.

Yan, Z. (2021) stated in her research "teachers with the ability to think critically is good problem solvers and when facing a problem during the class, they can have greater reasoning skills so as to find a solution to the problem" which the belief of a good thinker can be inherited from time to time to the students. As stated by Vdovina and Gaibisso (2013), critical thinking is relevant to quality thinking that enables learners to communicate with others, gain knowledge, and deal with ideas, attitudes, and beliefs in a more skillful way. Shirkhani and Fahim (2011) proposed "critical thinking is an integral factor in many ways. The first reason that can be taken into consideration is that when language learners take responsibility for the way they think; they can evaluate the way they learn in a more successful way. Secondly, critical thinking causes learners to experience a meaningful process of learning in which learning a language is meaningful to them. Thirdly, critical thinking and learners' achievement are positively correlated." If the teachers show how to think critically, students learn a language proficiently. Crocker and Bowden (2010) proposed using a content-based approach as a way of merging the notional-functional approach with critical thinking in a language course, which means that "self-correction, clarifying ideas, making distinctions, giving reasons, formulating appropriate questions, making connections and comparing" could be the examples (p.3). Likewise, among scholars, it is believed that rote learning and ready-made materials cannot develop learners' higher-order thinking skills. Victoria, T. & Saleh, I. (2017) noted that learning strategy instruction is also considered an effective approach to teaching critical thinking skills in the language classroom. According to them, language teachers can promote their students' critical thinking by teaching them learning strategies. In doing so, students can develop their metacognitive awareness. Furthermore, teachers can encourage students to describe and share their own learning techniques and strategies (Victoria & Saleh, 2017). From the survey, we attempted to find out the answers to those three research questions and propose some strategies for improving the learners' higher-order critical thinking skills.

### **Instruments and Data Analysis**

The qualitative method investigated students' academic English awareness and teachers' assistance with critical thinking as higher-order skills in the classroom. The questionnaire refers to teachers and is quantitative because it comprises statistics gathered from the questionnaire to identify how teachers support learners' higher-order thinking skills.

The raw data were analysed using Statistical Package for the Social Sciences (SPSS) and Excel programs. The survey questionnaire was put into the Google Form to collect the data. We identified students' improved higher-order critical thinking skills and the following abilities: Vocabulary, Sentence-level grammar, Discourse, Reading & Listening, Engaging

with a text, Externalizing from a text, and Lecturer related questions. Each part of these skills was explained in the Google Form to ensure everything was clear for students. Finally, to determine the correlation between students' and teachers' perspectives, we conducted teachers' surveys on how they supported their learning to foster higher-order thinking skills.

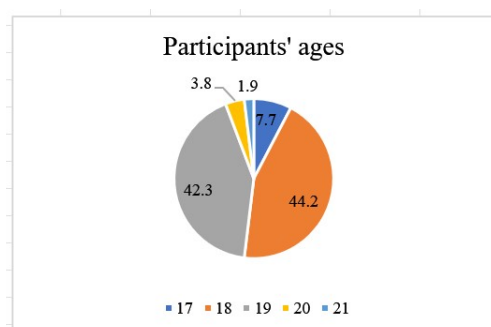
## Findings

The figures below demonstrate participants' age and gender rates. The participant's ages were between 17-21, as mentioned before. Therefore, 44.2% and 42.3% were the highest proportion of 18- and 19-year-old students. Furthermore, as we can see from **Figure 2**, 55.8% were females, whereas the male population was smaller than females, which means 44.2% were male students.

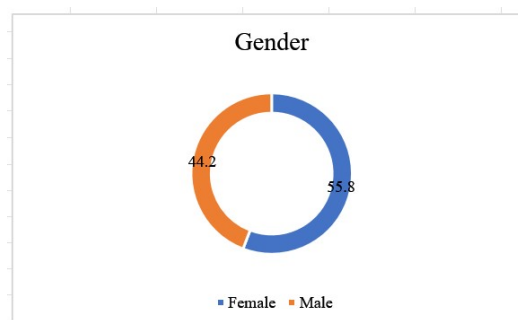
At the beginning of each skill, the descriptions of the skills are given to identify students' skills by themselves. **Table 1** below shows how they were described in the survey.

From **Table 2**, it is clear that learners often explain (63.5%), know (61.5%) what the implication of particular word choices is, and they have the ability to choose (40.4%) words for a different audience. At the C1 level, it is not a secret that vocabulary is not taught or learnt. Because at this level, students must be able to acquire and strengthen their awareness based on prior knowledge. Usually, the coursebooks for C1 level learners are not designed to learn new words. They are designed to analyse, evaluate, and predict the word meanings from the context. It shows that students can explain different vocabulary but must carefully select words for an academic audience. In terms of Sentence-level Grammar, according to **Table 3**, although 48.1% have some difficulties comparing and explaining the use of grammatical forms in different genres, 55.8% and 57.7% of the students said they have abilities to use grammar in complex sentences as well as identify author's purpose in the text.

**Figure 1** Participants' ages



**Figure 2** Participants' gender



**Table 1** Skills and descriptions related to higher-order critical thinking

No	Skills related to higher-order thinking	Descriptions
1	Vocabulary	Vocabulary refers to the words we must understand to communicate effectively. Educators often categorize vocabulary into the four skills: listening, speaking, reading, and writing. Having the appropriate vocabulary will enable you to effectively communicate in these skills.
2	Sentence-level grammar	The term refers only to the study of sentence and word structure (syntax and morphology), excluding vocabulary and pronunciation. Grammar, rules of a language governing the sounds, words, sentences, and other elements, as well as their combination and interpretation.
3	Discourse	Discourse means verbal interchange of ideas. Discourse refers to the use of words longer than a single sentence.
4	Reading & Listening	Good readers make predictions about thoughts, events, outcomes, and conclusions. As you read, your predictions are confirmed or denied. If they prove invalid, you make new predictions. This constant process helps you become involved with author's thinking and helps you learn.
5	Engaging with a text	It refers to the author's meanings: relating the author's text to what they already know, evaluating the author's arguments, and potentially making shifts in their own position.
6	Externalising from a text	This refers to the ability of being able to express the ideas from readings in the verbal and written forms.

**Table 2** Vocabulary

1. Vocabulary					
1.1 I can explain the meaning of particular words.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sometimes	13	25.0	25.0	25.0
	Often	33	63.5	63.5	88.5
	Always	6	11.5	11.5	100.0
	Total	52	100.0	100.0	
1.2 I know what the implication of particular word choices.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1.9	1.9	1.9
	Sometimes	12	23.1	23.1	25.0
	Often	32	61.5	61.5	86.5
	Always	7	13.5	13.5	100.0
	Total	52	100.0	100.0	
1.3 I am able to choose words for a different audience.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	3.8	3.8	3.8
	Sometimes	21	40.4	40.4	44.2
	Often	20	38.5	38.5	82.7
	Always	9	17.3	17.3	100.0
	Total	52	100.0	100.0	

**Table 3** Sentence-level grammar

2. Sentence-level grammar					
2.1 I can apply grammatical structures with complex sentences in writing.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sometimes	18	34.6	34.6	34.6
	Often	29	55.8	55.8	90.4
	Always	5	9.6	9.6	100.0
	Total	52	100.0	100.0	
	2.2 I can identify a purpose of an author in the text.				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sometimes	12	23.1	23.1	23.1
	Often	30	57.7	57.7	80.8
	Always	10	19.2	19.2	100.0
	Total	52	100.0	100.0	
2.3 I am able to compare the use of grammatical forms in different disciplines and different genres and explain their purposes.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sometimes	25	48.1	48.1	48.1
	Often	21	40.4	40.4	88.5
	Always	6	11.5	11.5	100.0
	Total	52	100.0	100.0	

**Table 4 Discourse**

<b>3. Discourse</b>					
<b>3.1 I can analyse how a text is structured and explain why.</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	3	5.8	5.8	5.8
	Sometimes	19	36.5	36.5	42.3
	Often	27	51.9	51.9	94.2
	Always	3	5.8	5.8	100.0
	Total	52	100.0	100.0	
<b>3.2 I can compare similar genres across and within disciplines.</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	3.8	3.8	3.8
	Sometimes	18	34.6	34.6	38.5
	Often	28	53.8	53.8	92.3
	Always	4	7.7	7.7	100.0
	Total	52	100.0	100.0	
<b>3.3 I can use citations to synthesise ideas</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	3.8	3.8	3.8
	Soemtimes	21	40.4	40.4	44.2
	Often	19	36.5	36.5	80.8
	Always	10	19.2	19.2	100.0
	Total	52	100.0	100.0	
<b>3.4 I evaluate the evidence used in a text and research paper.</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sometimes	14	26.9	26.9	26.9
	Often	28	53.8	53.8	80.8
	Always	10	19.2	19.2	100.0
	Total	52	100.0	100.0	

Regarding discourse, half of our learners (51.9%) have the capabilities to analyse academic text, (53.8%) compare genres, and (53.8%) evaluate evidence in a text or research paper. On the other hand, although they have these abilities, they have some challenges (36.5%) in using citations to synthesise ideas. Therefore, teachers must motivate them to master using in-text citations to integrate or synthesise ideas.

During one semester, teachers provided students with guidelines and consultations on how to write a research paper, include APA in-text citations, use them in the speech, feedback was given on each student's work to strengthen their critical thinking skills.

Although half of the participants can make predictions about thoughts, events, outcomes, and conclusions as they read, 26.9% cannot hear the author's argument and points of view from recordings. We believe that if they read and write more out of classroom activities, their listening skills in the academic environment will enhance at the C1 level.



**Table 5 Reading and Listening**

<b>4. Reading and Listening</b>					
<b>4.1 I can read for understanding.</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sometimes	5	9.6	9.6	9.6
	Often	21	40.4	40.4	50.0
	Always	26	50.0	50.0	100.0
	Total	52	100.0	100.0	
<b>4.2 I work hard to hear the author's argument and points of view.</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	3.8	3.9	3.9
	Sometimes	6	11.5	11.8	15.7
	Often	29	55.8	56.9	72.5
	Always	14	26.9	27.5	100.0
	Total	51	98.1	100.0	
Missing	System	1	1.9		
Total		52	100.0		

**Table 6 Engaging with text**

<b>5. Engaging with text</b>					
<b>5.1 I relate meanings to other texts and my own prior knowledge.</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1.9	1.9	1.9
	Sometimes	14	26.9	26.9	28.8
	Often	28	53.8	53.8	82.7
	Always	9	17.3	17.3	100.0
	Total	52	100.0	100.0	
<b>5.2 I can listen for bias, assumptions, stance, inference.</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1.9	2.0	2.0
	Sometimes	20	38.5	39.2	41.2
	Often	25	48.1	49.0	90.2
	Always	5	9.6	9.8	100.0
	Total	51	98.1	100.0	
Missing	System	1	1.9		
Total		52	100.0		

<b>5.3 I can examine previously-held views.</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1.9	1.9	1.9
	Sometimes	20	38.5	38.5	40.4
	Often	27	51.9	51.9	92.3
	Always	4	7.7	7.7	100.0
	Total	52	100.0	100.0	

<b>5.4 I consider implications.</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1.9	1.9	1.9
	Sometimes	15	28.8	28.8	30.8
	Often	31	59.6	59.6	90.4
	Always	5	9.6	9.6	100.0
	Total	52	100.0	100.0	

The 'Engaging with text' skill focuses on whether students can relate to and evaluate their prior knowledge of the author's ideas, arguments, views, and implications and whether they can evaluate their position within the author's views. Although learners are able to relate meanings to other texts using their prior knowledge (53.8%), examine views (51.9%), and consider implications (59.6%), they have some needs to improve the skills such as listening for bias, assumptions, stance, as well as inference which are crucial at the C1 level.

**Table 7** Externalising from text

6. Externalizing from text					
6.1 I make notes - including both summaries and reflections.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1.9	1.9	1.9
	Sometimes	18	34.6	34.6	36.5
	Often	24	46.2	46.2	82.7
	Always	9	17.3	17.3	100.0
	Total	52	100.0	100.0	

6.2 I can talk/write about the texts.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	3.8	3.8	3.8
	Sometimes	11	21.2	21.2	25.0
	Often	25	48.1	48.1	73.1
	Always	14	26.9	26.9	100.0
	Total	52	100.0	100.0	

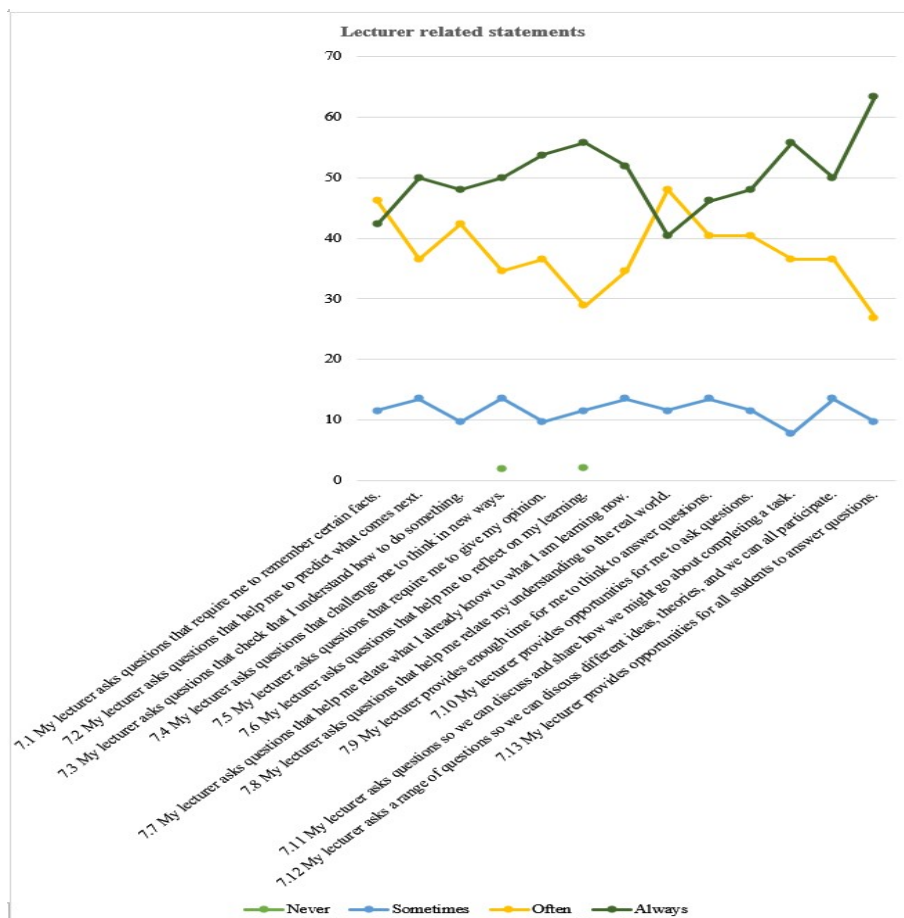
6.3 I use the text to present my own position.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	3.8	3.8	3.8
	Sometimes	9	17.3	17.3	21.2
	Often	30	57.7	57.7	78.8
	Always	11	21.2	21.2	100.0
	Total	52	100.0	100.0	

6.4 I can synthesise from a range of texts.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	1.9	1.9	1.9
	Sometimes	17	32.7	32.7	34.6
	Often	28	53.8	53.8	88.5
	Always	6	11.5	11.5	100.0
	Total	52	100.0	100.0	

**Table 7** shows that our learners can present their ideas using the text (57.7%) and synthesise information from various types of texts (53.8%). However, we need to focus on developing their skills to take notes, summarise (46.2%) given texts as well as talk and write (48.1%). Any university student must acquire these skills to lead academically and think critically.

**Figure 3** Lecturer related statements



The last section of the survey was lecturer-related statements on how they were encouraged to foster higher-order critical thinking skills. We also asked our colleagues how they supported and motivated their learners to enhance their skills and tried to identify whether

teachers' and students' perspectives overlapped. As a result of the findings, both instructors and students considered themselves motivated, enhanced, and most importantly, cultivated higher-order thinking skills. Instructors improved students' abilities to think critically, including problem-solving, analysing and evaluating information as well as one's ideas, integrating data, and distinguishing facts and opinions at the academic level. In addition, they assisted students in learning using the APA style, selecting appropriate research papers, recognising the author's purposes and arguments and so on. According to the table below, one teacher was hesitant about whether the students acquired the skill of drawing reasonable inferences from observations and understanding perspectives and values of this subject. On the other hand, we strongly believe they raised their ethical awareness regarding plagiarism by reading, analysing, and writing a research paper.

**Table 8** Questions and population were chosen by teachers

N <sup>o</sup>	Questions & Percent have been chosen by teachers	20%	50%	80%	100%
1	Students developed ability to apply principles and generalizations already learned to new problems and situations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	They developed their skills to analyze information and ideas (comparing and contrasting, listing, discussing, etc).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	They developed their skills to evaluate information and ideas (revising, interpreting, measuring, criticizing, explaining etc).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Students developed ability to draw reasonable inferences from observations.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	Students developed ability to synthesise and integrate information and ideas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	Students developed ability to distinguish between fact and opinion.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Students enhanced ability to create something (generating ideas, making outline, planning, preparing, performing a presentation, writing a paper, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	They improved their reading skills such as reading actively, recognizing main ideas and supporting details, understanding cohesion, reading fluency, identifying author's purpose and arguments in a text, audience, inference, looking for and reading appropriate research papers related to a given topic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9	They improved their writing skills such as developing a research question, creating an outline with thesis statement, creating coherence and cohesion, paraphrasing, using APA style, referencing, citing the sources, critically evaluating and organizing research, producing a research paper.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10	They improved their listening skills such as listening actively, understanding main ideas and supporting details, speaker's inference, attitude and tone, voice in real life situations or from the recordings.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	They improved their speaking skills such as delivering a persuasive group presentation, creating cohesion in presentations and discussions, synthesizing a text into a visual, and participating in extended discourse.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	They learned to understand perspectives and values of this subject.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13	With the assistance of this lesson, some students became open to express their opinions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14	They cultivated a sense of responsibility for one's own behavior such as copying/ plagiarizing other's work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	Students cultivated an active commitment to honesty and respect for others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16	How can student centered learning method influence students' learning to improve higher-order critical thinking skills? Please, be specific.				
17	In general, how do you see your primary role as a teacher?				
18	How did you support/ What did you do to develop your students higher-order thinking skills?				

Questions 16, 17, and 18 were open-ended for teachers to specify whether the student-centred learning method affected the cultivation of their higher-order critical thinking skills. As they mentioned, **Instructor 1:** student-centred learning method makes students feel more comfortable expressing their opinions openly without criticism. It will encourage students to explore ideas more critically and discuss opposing views.

**Instructor 2:** The course developed my students' autonomy to some extent - when I mainly focused on thinking creatively and critically related questions and tasks at the beginning and end of each unit.

**Instructor 3:** I believe it is more beneficial to students’ learning if they participate in several sessions. There could be a sign-up sheet during the first week of class, where students commit to attending consultations over the semester.

**Instructor 4:** Group or pair work enabled students to discuss topics openly. It led students to learn from each other.

All four teachers were asked to select a role as a teacher. Interestingly, three of them consider their roles as ‘Helping students develop higher-order thinking skills’, and another teacher finds herself/himself as fostering student development and personal growth.

The responses to the final questions were:

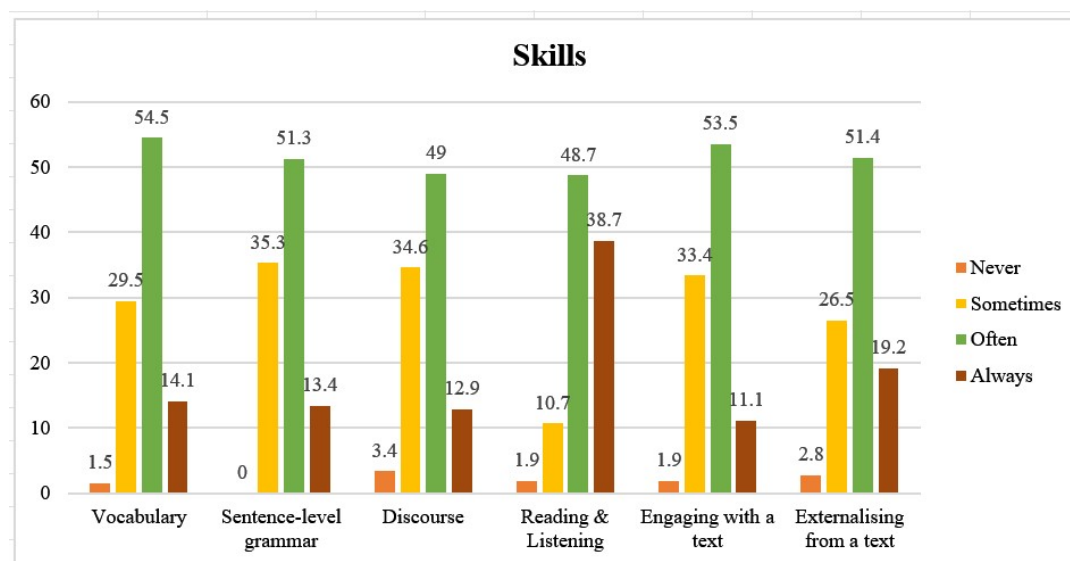
**Instructor 1:** Gave students different opinions/ideas/situations to openly discuss and explore.

**Instructor 2:** Asked Critical thinking/ Analytical questions every time to support my students’ higher-order thinking skills.

**Instructor 3:** I think I supported my students’ higher-order thinking skills through “warm-ups”. I wrote a series of questions on the board related to course content and these were discussed in pairs.

**Instructor 4:** Different types of open-ended questions were asked to get their answers. Also, I tried to guide them to think in depth and evaluate responses.

**Figure 4 Skills**



The results of the study showed that students were able to use vocabulary (54.5%), sentence-level grammar (51.3%), discourse (49%), reading & listening (48.7%), engage with a text (53.5%), and externalise from a text (51.4%) often. In addition, teachers motivated their learners to strengthen their higher-order thinking skills. Students considered that they were satisfied and encouraged by their teachers. However, some results, including discourse (49%), reading and listening (48.7%), should be developed much more than other skills.

## Discussion

Critical thinking skills are strongly associated with students’ academic ability (Kanbay, Isik, Aslan, Tektas, & Kilic, 2017). Students’ academic ability may vary across grades. Thus, the

student's academic ability must be considered when designing a lesson because the anticipated result is reducing the gap between different groups of students and the improvement in academic ability (Mahanal et al., 2019). We strongly believe that student-centred learning helps students make proper decisions, analyse, evaluate, and synthesise information to create relevant work. According to Bali, M. (2015), there are three differences among students that may make teaching critical thinking challenging: their cultural capital and exposure to critical thinking before college; their exposure to pedagogies that promote critical thinking before college; and their linguistic ability, which impacts their ability to read/write critically. Herein, it considers that students with different cultural backgrounds and world views affect their learning. In other words, their higher-order critical thinking skills were promoted differently in one semester in C1-level environments. Also, Mongolia is an Asian nation that highly respects the elderly, which means youngsters do not or avoid saying anything in opposition to elders or teachers. According to Bali, a third issue relates to linguistic competence and how it can hinder student capacity to read and write critically, as well as their confidence in expressing themselves orally. These three areas represent diversity among student and to be considered when teaching critical thinking (Bali, 2015). These phenomena impact and challenge the learners to strengthen their ability to think critically in the university setting.

Moreover, foreign language educational systems of high schools are based on rote learning in the land of nomads; however, the systems developed to modify the curriculum, including enhancement of student-centred learning and critical thinking. On the other hand, although higher educational institutions such as the UFE have been continuously changing their Academic English curriculum to improve academic and critical thinking skills, it is not enough to support learners' thinking.

Based on the results above, continual communication is one of the most important aspects of keeping the students challenged while supporting them. In other words, they must frequently quiz one another throughout conversations, dialogues, or discussions.

## **Conclusion**

Throughout the term, students must be educated in critical thinking, especially in higher-order thinking skills. Regular assignments that challenge higher-order critical thinking must be assigned and given to them such as writing a research paper. It allows learners to upgrade their abilities to think critically. Lecturers, instructors, and professors must observe how they are doing to foster their higher-order thinking skills. To do so, learners can be observed by peers and classmates by reviewing each other's work.

To improve higher-order critical thinking skills, they must be practised consistently throughout the course by working together as groups or pairs to learn from each other. Discussions during the course will help them strengthen their abilities to analyse, evaluate, interpret, and integrate sources to create their research papers and complete their given assignments and tasks. Instructors must provide an example for their learners of how to conduct higher-order critical thinking, and they must help them become critical thinkers by offering them practice opportunities and providing feedback. Instructors should stop asking students to memorise new words and the contents they have learnt. If instructors are aware of higher-order thinking skills and are good thinkers, then students become excellent thinkers. Therefore, showing and modelling them could be the best way to enhance their thinking skills in higher order. In addition, it will be possible to strengthen learners' higher-order thinking

abilities if we let them create their presentations, ideas, theories, papers, activities, and actions rather than trying to impart our knowledge to them. Also, when designing the curriculum, there must be ideas for cultivating these skills at tertiary level studies.



## References

- Adams, K., Baker, L., Brinks Lockwood, R., Dimond-Bayir, S., Jordan, N., Kennedy, A., Lansford, L., Lewis, M., O'Neill, R., Ostowska, S., Peterson, S., Russell, K., Sowton, C., Wastebrook, C., White, N., & Williams, J. (2018). *Prism*. Cambridge: Cambridge University Press.
- Al Riyami, T. (2015). Main approaches to educational research. *International Journal of Innovation and Research in Educational Sciences*, 2(5), 412–416.
- Amir, P., & Amina, O. (2018) Critical thinking and academic success of English language students' life and school : journal for the theory and practice of education, Vol. LXIV No. 2.
- Bali, M. (2015). Critical thinking through a multicultural lens. In M. Davies & R. Barnett (Ed.), *The Palgrave handbook of critical thinking in higher education*, 31-47. New York: Palgrave Macmillan.
- Bali, M. (2015). Critical thinking through a multicultural lens. In M. Davies & R. Barnett (Ed.), *The Palgrave handbook of critical thinking in higher education*, 317–334. New York: Palgrave Macmillan.
- Bilki, Z., & Irgin, P. (2022). Towards becoming critical readers and writers: ELT students' perceptions on the effectiveness of critical reading and writing instruction. *International Online Journal of Education and Teaching (IOJET)*, 9(2). 987-1003.
- Brown, G. (1994). Modes of understanding. In G. Brown, K. Malmkjær, A. Pollitt, & J. Williams (Eds.), *Language and understanding* (pp. 10-20). New York: Oxford University Press.
- Crocker, J. L., & Bowden, M. R. (2011). Thinking in English: A content-based approach. In A. Stewart (Ed.), *JALT2010 Conference Proceedings*. Tokyo: JALT.
- Fahim, M., & Mizraii, M. (2014). Improving EFL argumentative writing: A dialogic critical thinking approach. *International Journal of Research Studies in Language Learning*, 3(1), 3-20.
- Fuad, M. N., Zubaidah, S., Mahanal, S., & Suarsini, E. (2015). The Profile of Students' Learning Outcomes, Critical, and Creative Thinking skills and Learning Strategy on Junior High School Teachers in District of Kediri. *Biology National Conference Proceeding, Mathematics and Science Faculty, Department of Biology, Universitas Negeri Malang*.
- Kanbay, Y., Elif, I., Özgür, A., Pınar, T. & Nurhayat, K. (2017). Critical Thinking Skill and Academic Achievement Development in Nursing Students: Four-year Longitudinal Study. *American Journal of Educational Research and Reviews*, 2:12.  
DOI:10.28933/ajerr-2017-12-0501

- Mahanal, S., Zubaidah, S., Sumiati, I. D., Sari, T. M., & Ismirawati, N. (2019). RICOSRE: A Learning Model to Develop Critical Thinking Skills for Students with Different Academic Abilities. *International Journal of Instruction*, 12(2), 417-434.
- Mamu, H.D. (2015). Profile of Critical Thinking skills and Metacognition of Students in Biology Science Lesson in Junior High School. *Journal of UNTAD*.
- Pei, Z., Zheng, C., Zhang, M., & Liu, F. (2017). Critical thinking and argumentative writing: Inspecting the association among EFL learners in China. *English Language Teaching*, 10(10), 31-42.
- Rubin, J. (1979). What the 'good language learner' can teach us. In J. B. Price (Ed.), *Sociolinguistic aspects of language learning and teaching* (pp. 17-26). London: Oxford University Press.
- Shirkhani, S., and Fahim, M. (2011). Enhancing critical thinking in foreign language learners. *Proc. Soc. Behav. Sci.* 29, 111–115.
- Tricia, H. (2020) *Teaching and Learning in the Language Classroom*, London: Oxford University Press, p.192.
- Vdovina, E., and Gaibisso, L. (2013). Developing critical thinking in the English Language classroom: a lesson plan. *ELTA J.* 1, 54–68.
- Wallace, C. (2003). *Critical reading in language education*. Basingstoke: Palgrave.
- Wilson, K. (2019). *Critical thinking in EAP: a brief guide for teachers*. Part of the Cambridge Papers in ELT series. Cambridge: Cambridge University Press.
- Yan, Z. (2021). English as a Foreign Language Teachers' Critical Thinking Ability and L2 Students' Classroom Engagement. *Front. Psychol.* 12:773138.

**Contact email:** zulaana@gmail.com