

APPENDICES

APPENDIX A

THE HOTS-BASED LESSON PLAN

Topic 1: Is a university degree necessary to get a good job?

By the end of the first four sessions, students can:

- Answer the questions related to the given materials on the topic – young people with tertiary education investment
- Analyze, evaluate, and create personal ideas for persuasively sharing and discussing within groups
- Consider the discussed information for appropriate selection and integration into their speeches
- Utilize appropriate structures and related topic vocabulary for expressing their individual critical viewpoints in their worksheet accomplishment, group discussion, and oral presentation
- Complete HOTS-based tasks individually and collaboratively

Meeting class	Time	Lecturer's instructions	HOTS integration	Students' activities Students are required to
Pre-task				
1 st	10 mins	1. Engage students with the topic's background knowledge		1. Answer the following questions based on their personal perspectives within 5 mins and share them with their classmates later: a. What are the hot jobs in the 21 st century? Why do you think they are hot? b. What are the changes of the job market in the real world nowadays? c. Do you agree or disagree with this trend? Why or why not?
While - task				
1 st	5 mins	2. Engages students with the related topic question "to your personal viewpoint, is a university degree necessary to get a good job?"		2. Listen to the question and answer
	7 mins	3. Shows the advanced selective video name "Growing Number of Americans Questioning the Value of College Degree"		3. Take advantage of the list of new words and watch a video name "Growing Number of Americans Questioning the Value of College Degree"
	10 mins	4. Asks students to complete worksheet 1.1		4. Write their answer in the worksheet 1.1

Meeting class	Time	Lecturer's instructions	HOTS integration	Students' activities Students are required to
	15 mins	5. Prepares and assigns the questions for students' discussion a. "According to your opinion, should young people invest money for college degree? b. Why or why not with explanation and evidence"		5. Answer the questions based on their personal thinking on the video by filling the worksheet 1.2
	10 mins	6. Asks students to share their viewpoints with their teammates		6. Discuss in groups for sharing their different viewpoints with the support of the provided critical structures
	20 mins	7. Invites students from groups for sharing the ideas in front of class		7. Perform the discussed viewpoints with lecturer and other friends with the support of the provided critical structures
	45 mins	8. Prepares the related reading materials for the topic 2: " Is a university degree necessary to get a good job? " 9. Divides students into groups of four 10. Assigns the reading materials randomly with the two opposing viewpoints toward the essential role of tertiary education for young people 11. Asks students to read the separated materials for comprehension and complete the worksheet 1.3	Analyzing	8. Receive the different prepared materials for reading at home 9. Read the materials individually for comprehension 10. Identify the essential information as the requirement mentioned in the worksheet 1.3
2 nd	45 mins	12. Gives comments on their products and supports weak students in identifying topic sentence, supporting sentences, and evidence		11. Revise the worksheet
	45 mins	13. Asks students to complete the worksheet 1.4 – "Individual reading worksheet"	Analyzing Evaluating Creating	12. Take advantages of the given reading materials and the given files for answering the questions presented in the worksheet 1.4 <i>Notes: Students are encouraged to</i> - Write out their personal viewpoints with persuasive explanation, reliable evidence, and valuable conferences - Search more reliable sources of materials for further reading

Meeting class	Time	Lecturer's instructions	HOTS integration	Students' activities Students are required to
				- Provide references for the evidence used in their explanation
	45 mins	14. Performs a short talk with students who received reading material number 1 for checking their comprehension, their completed worksheet 1.4 , and listening to their argument for the given topic within 15 mins 15. Conducts the same process for students who received reading material number 2, 3, and 4	Analyzing Evaluating Creating	13. Use their personal viewpoint which had scaffolded in the worksheet 1.4 for discussing with the other friends by sharing their general comprehension and their personal viewpoints with evidence 14. Listen to their friends, take notes, and argue for their different ideas 15. Revise the worksheet
3 rd	45 mins	16. Assigns worksheet 1.5 - "Group discussion task" with directed discussing questions for students to follow 17. Assigns students' roles for their discussion including 1 leader to direct the discussion, 2 secretaries to take notes the key points, and 1 time keeper to manage the time for group discussion 18. Asks students to record their whole discussion procedure and submit it 19. Observes the students' work and gives support (if any)	Analyzing Evaluating Creating Analyzing Evaluating Creating Analyzing Evaluating Creating Analyzing Evaluating Creating	16. Play their assigned roles in the discussion 17. Two students who received reading material number 1 and 2 take turn to answer questions 1,2. 18. The two remaining students are required to listen and take notes carefully and argue with their friends based on the suggested questions in the worksheet 1.5 19. Two other students who received reading material number 3 and 4 take turn to answer questions 3,4. 20. The two remaining students are required to listen and take notes carefully and argue with their friends based on the suggested questions in the worksheet 1.5 Note: Four students discuss the questions together by the following steps: a. Each student takes turn to present his/her personal viewpoint with evidence towards the given questions in Vietnamese context. b. The three remaining students listen to their friend's personal viewpoint and discuss whether they agree or disagree with their friend's opinion or not with explanation and evidence.
	30 mins	20. A assigns the worksheet 1.6 - "Detailed presentation outline" to students	Analyzing Evaluating Creating	21. Share their personal viewpoints towards the given topic

Meeting class	Time	Lecturer's instructions	HOTS integration	Students' activities Students are required to
		21. Asks students to discuss and submit their "accomplished detailed presentation outline" 22. Observes the students' work and give support (if any)		22. Listen to their friends' viewpoints and argue 23. Complete the worksheet 1.6 24. Submit the completed worksheet 1.6 - 25. Use the submitted worksheet to prepare their collaborative presentation 26. Revise the worksheet Note: Ask students to bring laptops to the next class for document revision
	45 mins	23. Assigns the worksheet 1.7 to students and asks them to finish it in at home		27. Consider the discussed ideas and their friends' different viewpoints by deleting the unrelated information, adding persuasive explanation with reliable evidence and references for editing their personal detailed presentation outline 28. Prepare the presentation content based on the detailed outlines and write the scripts for their divided parts individually to complete the worksheet 1.7
4 th	45 mins	24. Requires students read and gives peer feedback for their friends' scripts with the support of "thesaurus" and "wordtune" online tools	Analyzing Evaluating Creating	29. Share their scripts with friends in group for peer feedback in terms of language and content with the support of "thesaurus" and "wordtune" online tools
		25. Collects students' revised scripts - the worksheet 1.7 via MSTeams		30. Modify their scripts and submit the modified worksheet 1.7 to the lecturer 31. Revise the worksheet
	20 mins	26. Provides students the detailed rubric 27. Asks students to prepare the detailed content, Power Point slides, and rehearse for group presentation based on the completed outline		32. Prepare notecards and Power Point Slides for their group presentation 33. Practice their group presentation several times in advance 34. Record their group presentation 35. Submit transcripts into the Folder " GROUP PRESENTATION " before the deadline 36. Students' presentations are required to perform within 7 mins and 10 slides only. 37. Students' presentations are scored by two raters.

Meeting class	Time	Lecturer's instructions	HOTS integration	Students' activities Students are required to
	70 mins	28. Record their group presentation 7 mins/Group 29. Scores the students' group presentation 30. Gives group's feedback		38. Receive the scores and feedback for better oral presentation performances
Post-task				
4 th	20 mins	31. Understand students' perceptions of HOTS-based task application after completing Topic 2		39. Complete the reflective journal

Topic 2: Is nuclear energy the solution to global warming problems in Vietnam?

By the end of the next four sessions, students can:

- Answer the questions related to the given materials on the topic – nuclear energy, the solution for global warming in Vietnam
- Analyze, evaluate, and create personal ideas for persuasively sharing and discussing within groups
- Consider the discussed information for appropriate selection and integration into their speeches
- Utilize appropriate structures and related topic vocabulary for expressing their individual critical viewpoints in their worksheet accomplishment, group discussion, and oral presentation
- Complete HOTS-based tasks individually and collaboratively

a. Pre-task

Meeting class	Time	Lecturer's instructions	HOTS integration	Students' activities Students are required to
Pre-task				
5th	10 mins	1. Engage students with the topic's background knowledge		1. Answer the following questions based on their personal perspectives within 10 mins and share them with their classmates later: a. What kinds of energy do we have nowadays? b. Which ones do you prefer? Why? c. What do you know about nuclear energy?
While-task				
5th	5 mins	2. Shows the advanced selective video name "3 Reasons Why Nuclear Energy Is Terrible!"		2. Watch a selective video name "3 Reasons Why Nuclear Energy Is Terrible!" 3. Write their answer in the worksheet 2.1
	10 mins	3. Prepares and assigns the question " Should we use nuclear energy? Why with explanation and evidence " for students' discussion		4. Answer the questions based on their personal thinking on the video by filling the worksheet 2.2
	15 mins			5. Discuss in groups for sharing their different viewpoints
	20 mins	4. Invites students randomly from groups for sharing and discussing together		6. Perform the discussed viewpoints with lecturers and other friends
The remaining activities are similar to the Step 2. However, the final presentation of this Phase is INDIVIDUAL work, not the group work.				
8 th	20 mins	26. Provides students the detailed rubric 27. Asks students to prepare the detailed content, Power Point slides, and rehearse for their		32. Prepare notecards and Power Point Slides for their presentation 33. Practice their presentation several times in advance 34. Record their presentation

Meeting class	Time	Lecturer's instructions	HOTS integration	Students' activities Students are required to
		individual presentation based on the completed outline		35. Submit the transcripts into the Folder "INDIVIDUAL PRESENTATION" before the deadline 36. Students' presentations are required to perform within 5-7 mins and 10 slides only. 37. Students' presentations are scored by two raters.
	80 mins	28. Record their individual presentation 29. Scores the students' individual presentation 30. Gives individual feedback		38. Receive the scores and feedback for better oral presentation performances
Post – task				
8 th	30 mins	31. Understand students' perceptions after HOTS-based task application for Topic 2		39. Complete the reflective journal

APPENDIX B

RUBRIC

Critical thinking

Criteria	No.	1 Beginning	2 Developing	3 Competent	4 Proficient
Analyzing	1	Materials are poorly chosen.	Materials are presented but partially support the argument.	Materials are used to support the argument though they may lack depth or variety.	Materials are effectively integrated to support the argument.
Evaluating	2	Speaker presents personal viewpoints without addressing other perspectives or implications.	Speaker partly integrates 1-2 other perspectives/ implications.	Speaker integrates 3-4 other perspectives/ implications.	Speaker integrates 5-6 other perspectives/ implications.
Creating	3	Hypothesis is unclear with only one-sided.	Hypothesis is quite clear but lacks depth in other views.	Hypothesis is clear with limited inclusion of other views.	Hypothesis shows original thinking, compares and justifies with other viewpoints.

Content

Criteria	No.	1 Beginning	2 Developing	3 Competent	4 Proficient
Introduction	4	Introduction is incomplete and ineffective. Audience attention is not captured; topic is poorly presented.	Introduction includes only one part, with limited language. Audience attention is not captured; topic is poorly understood.	Introduction may miss one part, with two weak elements. Some appropriate language is used, but understanding of the topic is still limited.	Introduction (1) captures attention, (2) states the main idea, and (3) outlines the presentation. Language is engaging, and the topic is clearly understood and presented.
Body	5	The body is incomplete with transitions, supporting ideas, and facts/examples.	The body includes only one part of transition or supporting ideas or facts/examples.	The body may miss one part, with two weak elements.	The body includes 3 parts (1) transitions, (2) relevant supporting ideas, and (3) sufficient facts/examples.
Conclusion	6	The conclusion is incomplete. It fails to summarize main points or provide a final message.	The conclusion misses one part, or weak in summarizing and closing. It is brief and lacks impact.	The conclusion presents two parts but weak. It summarizes main points without a strong closing.	The conclusion performs (1) restatement of the thesis or summary, and (2) a closing statement that leaves the audience inspired.
Overall presentation	7	The presentation is little to no engagement with the audience,	The presentation occasionally engages the audience,	The presentation engages most of the time, and well-organized thoughts	The presentation constantly engages and keeps the audience interested throughout.

Criteria	No.	1 Beginning	2 Developing	3 Competent	4 Proficient
		thoughts are scattered and unorganized.	thoughts are somewhat disjointed.	with minor lapses in flow.	

Language use

	No.	1 Beginning	2 Developing	3 Competent	4 Proficient
Vocabulary	8	Vocabulary is very limited and inappropriate, making speech hard to understand. Major issues with word choice; key terms are not defined.	Vocabulary is often limited and inappropriate with jargon or clichés detracting from meaning. Key terms are often undefined.	Vocabulary is mixed with some well-chosen words but occasional serious errors. Some key terms may lack definitions.	Vocabulary is well-suited to the audience with no serious errors in word choice and phrases that enhance the speech. Key terms are well-defined.
Sentence structure and grammar	9	Sentence structure is poor, with 80% major errors of grammar making the speech nearly incomprehensible. Little to no variation in sentence types and excessive repetitions are performed.	Ideas are often unclear with limited sentence variation. 60% serious errors of grammar, and poor sentence structure affect comprehension.	Ideas are generally clear with varied sentences, though 40% errors of grammar occur. Some repetitions are presented but don't completely obstruct understanding.	Ideas are clearly expressed with varied and well-controlled sentence structures, including complex forms. 20% or no serious errors of grammar hinder comprehension.
Intelligibility	10	Speech is difficult to understand due to major issues with pronunciation and tone. Frequent mispronunciations significantly hinder comprehension.	Speech is quite difficult to understand due to frequent issues with pronunciation. Tone may be inconsistent, affecting overall intelligibility and audience comprehension.	Speech is easy to understand but some pronunciation issues may occasionally hinder understanding. Tone is adequate but may occasionally affect clarity.	Speech is easy to understand. Pronunciation and tone are flawless. Speaker can use tone to enhance clarity and engage the audience.

APPENDIX C

Student's name:

ID number:

REFLECTIVE JOURNAL

Analyzing

Tick your answer (chọn đáp án)	Can you identify the coherence (Em có thể xác định sự liên kết giữa)	Explain
☐ Yes ☐ No	1. Between supporting sentences and the topic sentence in one paragraph? (giữa các luận cứ với luận điểm trong 1 đoạn văn?)	If yes, what is your identification based on? (Nếu có, em đã xác định sự liên kết đó dựa trên điều gì?) If no, why can't you do that? (Nếu không, tại sao em không xác định được?)
☐ Yes ☐ No	2. Between the evidence and the topic sentence in one paragraph (giữa các minh chứng với luận điểm trong 1 đoạn?)	If yes, what is your identification based on? (Nếu có, em đã xác định sự liên kết đó dựa trên điều gì?) If no, why can't you do that? (Nếu không, tại sao em không xác định được?)
☐ Yes ☐ No	3. Between the paragraphs and the others within the whole reading material? (giữa các đoạn với nhau trong tài liệu đọc?)	If yes, what is your identification based on? (Nếu có, em đã xác định sự liên kết đó dựa trên điều gì?) If no, why can't you do that? (Nếu không, tại sao em không xác định được?)

Criteria	Subskills			Scores										
Analyzing	1	Dishtinguishing the ideas	Before	1	2	3	4	5	6	7	8	9	10	
			After	1	2	3	4	5	6	7	8	9	10	
	2	Finding the coherence	Before	1	2	3	4	5	6	7	8	9	10	
			After	1	2	3	4	5	6	7	8	9	10	

Evaluating

2. Can you evaluate a reading source if it is reliable? (Em có thể đánh giá được một tài liệu nào đó là đáng tin cậy không?)

- If yes, what is your evaluation based on? (Nếu có, em đánh giá độ đáng tin cậy đó dựa trên tiêu chí nào?)

- If no, why can't you do that? (Nếu không, tại sao em không đánh giá được?)

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3. Can you evaluate authors' viewpoints in the materials are persuasive or not?

(Em có nghĩ rằng những quan điểm mà tác giả đề cập trong tài liệu thuyết phục không?)

- If yes, what is your evaluation based on? (Nếu có, Sự đánh giá đó của em dựa trên tiêu chí nào?)

- If no, why can't you do that? (Nếu không, tại sao em không đánh giá được?)

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4. Can you evaluate the solutions suggested by writers in the materials are appropriate or not?

(Em có nghĩ rằng mọi giải pháp được đưa ra bởi tác giả là hoàn toàn phù hợp hay không?)

- If yes, what is your evaluation based on? (Em đánh giá mức độ phù hợp của giải pháp dựa trên những tiêu chí nào?)

- If not, how could you know? (Nếu không, tại sao em không đánh giá được?)

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Criteria	Subskills			Scores									
Evaluating	3	Evaluating the reliability of the materials	Before	1	2	3	4	5	6	7	8	9	10
			After	1	2	3	4	5	6	7	8	9	10
	4	Evaluating the persuasion of the materials	Before	1	2	3	4	5	6	7	8	9	10
			After	1	2	3	4	5	6	7	8	9	10
	5	Evaluating the authors' solutions	Before	1	2	3	4	5	6	7	8	9	10
			After	1	2	3	4	5	6	7	8	9	10

Creating

1. Can you generate your own viewpoint for a particular topic after reading materials? (Em có thể đưa ra quan điểm cá nhân cho 1 chủ đề cụ thể nào đó sau khi đọc các nguồn tài liệu liên quan không?)

- **If yes, how do you generate your own viewpoint?** (Nếu có, em đã làm như thế nào để đưa ra được quan điểm cá nhân đó?)
- **If no, why can't you do that?** (Nếu không, tại sao em không thể đưa ra quan điểm cá nhân cho 1 chủ đề cụ thể nào đó sau khi đọc các nguồn tài liệu liên quan?)

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2. Can you adjust other solutions to make your own one after reading the materials? (Em có thể điều chỉnh giải pháp của người khác để biến nó thành giải pháp phù hợp hơn theo ý mình sau khi đọc các nguồn tài liệu không?)

- **If yes, how do you adjust to make your own solution? What is your adjustment based on?** (Nếu có, em đã điều chỉnh những giải pháp đó như thế nào? Sự điều chỉnh của em được thực hiện dựa trên những tiêu chí gì?)
- **If no, why can't you do that?** (Nếu không, tại sao em không thể điều chỉnh giải pháp của người khác để biến nó thành giải pháp phù hợp hơn theo ý mình sau khi đọc các nguồn tài liệu?)

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Criteria	Subskills			Scores											
Creating	6	Creating the personal viewpoint	Before	1	2	3	4	5	6	7	8	9	10		
			After	1	2	3	4	5	6	7	8	9	10		
	7	Creating the personal's solutions	Before	1	2	3	4	5	6	7	8	9	10		
			After	1	2	3	4	5	6	7	8	9	10		

Content and language

1. Can reading materials improve your presentation's content including introduction, body, and conclusion? (việc đọc tài liệu có giúp em cải thiện nội dung cho mở bài, thân bài, kết bài không?)

- If yes, how reading materials improve your content? Explain with descriptive example. (Nếu có, việc đọc tài liệu đã giúp em cải thiện nội dung bài thuyết trình như thế nào? Em hãy giải thích kèm ví dụ cụ thể từ chính mình).
- If no, why reading materials cannot improve your content? Explain with descriptive example. (Nếu không, tại sao việc đọc tài liệu lại không thể giúp em cải thiện nội dung bài thuyết trình? Em hãy giải thích kèm ví dụ cụ thể từ chính mình).

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Criteria	Subskills			Scores									
Quality content	8	Generating the speech's content for introduction	Before	1	2	3	4	5	6	7	8	9	10
			After	1	2	3	4	5	6	7	8	9	10
	9	Generating the speech's content for bodies	Before	1	2	3	4	5	6	7	8	9	10
			After	1	2	3	4	5	6	7	8	9	10
	10	Generating the speech's content for conclusion	Before	1	2	3	4	5	6	7	8	9	10
			After	1	2	3	4	5	6	7	8	9	10
	11	Generating the speech's content for your overall presentation	Before	1	2	3	4	5	6	7	8	9	10
			After	1	2	3	4	5	6	7	8	9	10

2. Can reading materials improve your presentation's language in terms of vocabulary, sentence structures, grammar? (việc đọc tài liệu có giúp em cải thiện ngôn ngữ cho bài thuyết trình của mình không khi xét về khía cạnh từ vựng, cấu trúc câu, và ngữ pháp?)

- If yes, how reading materials improve your language? Explain with descriptive example. (Nếu có, việc đọc tài liệu đã giúp em cải thiện ngôn ngữ bài thuyết trình như thế nào? Em hãy giải thích kèm ví dụ cụ thể từ chính mình).
- If no, why reading materials cannot improve your language? Explain with descriptive example. (Nếu không, tại sao việc đọc tài liệu lại không thể giúp em cải thiện ngôn ngữ bài thuyết trình? Em hãy giải thích kèm ví dụ cụ thể từ chính mình).

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Criteria	Subskills			Scores									
Language use	12	Vocabulary	Before	1	2	3	4	5	6	7	8	9	10
			After	1	2	3	4	5	6	7	8	9	10
	13	Sentence structures and grammar	Before	1	2	3	4	5	6	7	8	9	10
			After	1	2	3	4	5	6	7	8	9	10
	14	Intelligibility	Before	1	2	3	4	5	6	7	8	9	10
			After	1	2	3	4	5	6	7	8	9	10

APPENDIX D

SEMI-STRUCTURED INTERVIEW

English-Vietnamese version for students after the training

Section 1: HOTS-based tasks completion

1. Are there any difficulties for your HOTS-based individual worksheet completion? If yes, what makes them difficult? How did overcome them? Explain with evidence.

Em có gặp khó khăn gì trong quá trình hoàn thành HOTS-based individual worksheet không? Nếu có, điều gì làm nó khó đến vậy? Em đã làm gì để vượt qua những khó khăn đó? Em hãy giải thích kèm những trải nghiệm cá nhân về điều đó.

How would you like HOTS-based individual worksheet? (*mức độ yêu thích của em dành cho HOTS-based individual worksheet là?*)

- 1- Very dissatisfied
- 2- Dissatisfied
- 3- Neutral
- 4- Satisfied
- 5- Very satisfied

2. Are there any difficulties for your HOTS-based group worksheet completion? If yes, what makes them difficult? How did overcome them? Explain with evidence.

Em có gặp khó khăn gì trong quá trình hoàn thành HOTS-based collaborative worksheet không? Nếu có, điều gì làm nó khó đến vậy? Em đã làm gì để vượt qua những khó khăn đó? Em hãy giải thích kèm những trải nghiệm cá nhân về điều đó.

How would you like HOTS-based group worksheet? (*mức độ yêu thích của em dành cho HOTS-based group worksheet là?*)

- 1- Very dissatisfied
- 2- Dissatisfied
- 3- Neutral
- 4- Satisfied
- 5- Very satisfied

Section 2: Students' perceptions of HOTS-based tasks

Analyzing	1. Are there any changes in the way you identify the coherence among the topic sentence, the supporting sentences, the evidence, and the paragraphs in the materials before and after you experience the HOTS-based tasks? <i>Please explain it with your own experience.</i> <i>Có sự thay đổi nào trong cách em xác định sự liên kết giữa các luận điểm, luận cứ, minh chứng số liệu, và các đoạn trong tài liệu trước và sau khi trải nghiệm hoạt động phát triển tư duy hay không? Em hãy nói rõ sự khác biệt đó.</i>
Evaluating	2. Are there any changes in the way you evaluate the reliability of the material/ evaluate the persuasion of the authors' viewpoints in the materials/ evaluate the appropriateness of the suggested solutions in the materials before and after HOTS-based tasks? Please explain it with your own evidence. <i>Có sự thay đổi nào trong cách em đánh giá độ đáng tin cậy của tài liệu/ đánh giá độ thuyết phục của các quan điểm mà tác giả đề cập trong tài liệu/ đánh giá mức độ phù hợp của giải pháp được nêu trong tài liệu trước và sau khi trải nghiệm hoạt động phát triển tư duy hay không? Em hãy nói rõ sự khác biệt đó.</i>
Creating (and content)	3. Are there any changes in the way you generate your own viewpoint/ the quality of your adjusted solutions before and after HOTS-based tasks? Please explain it with your own evidence. <i>Có sự thay đổi nào trong cách em tổng hợp nên quan điểm cá nhân/ về chất lượng của các giải pháp mà em điều chỉnh trước và sau khi trải nghiệm hoạt động phát triển tư duy hay không? Em hãy nói rõ sự khác biệt đó.</i>
Content quality	4. Do you think your speech content has improved after HOTS-based tasks? If yes, how does it change? Please explain it with your own evidence. <i>Nội dung bài nói trước công chúng của em có được cải thiện sau trải nghiệm hoạt động phát triển tư duy không? Em hãy nói rõ sự khác biệt đó.</i>
Language use	5. Do you think your topic-oriented vocabulary has been improved after of HOTS-based tasks? If yes, how have it improved? <i>Lượng từ vựng liên quan chủ đề cụ thể của em có được cải thiện sau trải nghiệm hoạt động phát triển tư duy không? Em hãy nói rõ sự khác biệt đó.</i> 6. Do you think your sentence structures and grammar have been improved after HOTS-based tasks? How have them improved? <i>Việc sử dụng các cấu trúc câu của em có được cải thiện sau trải nghiệm hoạt động phát triển tư duy không? Em hãy nói rõ sự khác biệt đó.</i>
Application	7. Can you apply the three thinking skills including analyzing, evaluating, and creating to improve your speech content after HOTS-based tasks? How do take advantages of those three thinking skills to improve your speech content? <i>Em có thể vận dụng kỹ năng phân tích, kỹ năng đánh giá, và kỹ năng sáng tạo để cải thiện nội dung bài nói trước công chúng của em sau trải nghiệm hoạt động phát triển tư duy không? Em hãy nói rõ sự khác biệt đó.</i>

	động phát triển tư duy không? Em hãy cho biết cụ thể em đã làm gì với 3 kỹ năng tư duy đó để cải thiện nội dung bài nói của em.
Perception	8. Among the analyzing, evaluating, and creating tasks, which one is the most difficult for you? What makes it difficult? How did you overcome these difficulties? Explain with evidence. <i>Trong 3 hoạt động/ bậc phân tích, đánh giá, và sáng tạo, hoạt động nào khó nhất đối với em? Tại sao nó lại khó với em đến vậy? Em đã làm gì để vượt qua những khó khăn đó? Em hãy giải thích kèm những trải nghiệm cá nhân về điều đó.</i>
	9. Why do you think that the two remaining tasks are easier for you? Are there any difficulties for those tasks you encountered? If yes, what make them difficult? How did you do to overcome them? Explain with evidence. <i>Tại sao em cho rằng 2 hoạt động còn lại dễ hơn? Dễ hơn ở chỗ nào? Em có gặp khó khăn gì trong quá trình hoàn thành 2 hoạt động còn lại không? Nếu có, điều gì làm chúng khó đến vậy? Em đã làm gì để vượt qua chúng? Em hãy giải thích kèm những trải nghiệm cá nhân về điều đó.</i>

Section 3: students' affection

After your training, which one do you prefer HOTS-based individual worksheet or HOTS-based group worksheet? Why?

Sau khóa học, loại task nào em yêu thích HOTS-based individual worksheet hay HOTS-based group worksheet? Tại sao?

APPENDIX E
COMPLETED WORKSHEET FROM STUDENT S1
HOTS-BASED INDIVIDUAL READING WORKSHEET

TOPIC 1: Is a university degree necessary to get a good job?

FOR STUDENTS WITH NECESSARY TERTIARY EDUCATION FOR YOUNG PEOPLE

HOTS	HOTS-integrated questions
1. Analyzing	1.1. What are the differences between the two terms “tertiary education” and “nontertiary education”? <i>According to Oxford dictionary, tertiary education is education for people above school age, including college, university and training courses for particular jobs. According to World Bank Group, Tertiary education refers to all formal post-secondary education, including public and private universities, colleges, technical training institutes, and vocational schools. Nontertiary education is education and training that is not under tertiary education</i>
	1.2. What are the advantages and disadvantages of tertiary education for young people? - Advantages: + <i>Higher income. A College degree often boost a person’s earning potential, according to a study in 2021 by the Bureau of Labour Statistics, bachelor degree holders had median weekly earning of \$1,344, compared to \$899 for people who dropped out of college and \$809 for people who only have a high school diploma</i> + <i>More job opportunities: Having a higher education brings more job opportunities, nowadays degrees are much more desirable by employers, not only that but having said education would increase someone’s qualifications.</i> + <i>Possible networking opportunities: University provide their students with networking opportunities through seminars, career pairs, and conferences where they can build connection with industry professionals and their peers.</i> + <i>Broad-based learning: higher education provide a large variety of subjects for their students to study, helping them develop many skills and knowledge.</i> - Disadvantages: + <i>Higher cost: Tertiary education often cost more than non tertiary education, with tuition fee and living expenses adding up significant amount of debt for the student</i> + <i>Less connected with family ties: Students who go to college often have to move out for the University that they want, bringing them away from their original home, or making them have less time for their family.</i> + <i>Possibility of economic benefit: Students often choose to study what they are passionate or interested in, instead of other majors that are more lucrative. There is a percentage of students who have degrees that they can’t do much with, and can’t follow up with their economic expectations.</i> + <i>Time commitment: Higher education is beneficial in the long run, but you have to be able to put years of your life into it.</i> + <i>Lack of practical experience: Higher education may not provide students with as much practical experience as apprenticeships, which can be a disadvantage in certain fields.</i> https://degrees.snu.edu/blog/the-pros-and-cons-of-higher-education

HOTS	HOTS-integrated questions
	1.3. Whether the supporting sentences relate to the topic sentence within one paragraph? Why or why not with evidence? <i>Yes it does. Supporting sentences follows the topic sentence and the main ideas within the paragraphs written, for example these paragraphs:</i> <i>The Value of Work Experience</i> <i>If you're a recent graduate, your new degree may serve as evidence that you've acquired the skills necessary for an entry-level job in your chosen field. Prospective employers are likely to see you as someone who can get up to speed quickly, requiring little on-the-job training, which costs employers both time and money.</i> <i>Any work experience that you've acquired along the way can help, too, whether it came in the form of an internship in your field or simply a job to pay the bills. As George D. Kuh noted in The Chronicle of Higher Education, "research suggests that working during college is related to acquiring such employer-preferred skills as teamwork and time management." Such work, Kuh added, also "helps students see firsthand the practical value of their classroom learning by applying it in real-life settings-which, additionally, often helps to clarify their career aspirations."</i> <i>Have sentences that directly or indirectly support the above topic sentence. Like: "As George D. Kuh noted in The Chronicle of Higher Education, "research suggests that working during college is related to acquiring such employer-preferred skills as teamwork and time management." Such work, Kuh added, also "helps students see firsthand the practical value of their classroom learning by applying it in real-life settings-which, additionally, often helps to clarify their career aspirations." "</i> <i>This part about skills you can learn from work experience directly support the value of work experience mentioned in the topic sentence</i>
	1.4. Whether the evidence relate to the topic sentence within one paragraph? Why or why not with evidence? <i>Yes the evidence does relate to the topic sentence. It does relate because the information and statistics given as evidence is a direct correlation to the topic sentence, giving proof to the topic sentence. For example:</i> <i>The Value of Education</i> <i>More education often leads to better job stability and pay. A common theme from U.S. Bureau of Labor Statistics (BLS) research on employment opportunities is that those with higher levels of education typically earn more and experience lower rates of unemployment.¹</i> <i>The latest BLS data, modified in September 2021, revealed that, in 2020, workers with professional or doctoral degrees had the highest median weekly earnings (\$1,893 and \$1,885, respectively), followed by those with master's degrees (\$1,545), bachelor's degrees (\$1,305), and associate's degrees (\$938). At the bottom of the list were workers without a high school diploma (\$619).¹</i> <i>Workers with a bachelor's degree had median weekly earnings of \$1,305 in 2020, compared with \$781 for workers with a high school diploma.¹</i>

HOTS	HOTS-integrated questions
	More education also closely aligns with lower unemployment rates. The June 2021 BLS data shows, for example, that people with doctoral or professional degrees had unemployment rates of 3.1% or lower during 2020, a year characterized by vast COVID-19-related layoffs, vs. 11.7% for those without a high school diploma.¹ <i>First, they mentioned that more education lead too higher salary, and give a statistic showing that higher levels of education typically earn more and experience lower rate of employment. This is an evidence that education has value.</i> <i>Second, they gave more statistics from the latest BLS data, detailing wages for jobs with higher education, and support that people with higher education are less likely to be unemployed. This shows that higher education has its value.</i> 1.5. Whether the paragraphs relate to the others in the whole reading material? Why or why not with evidence? <i>While some are less related to the others, most of the paragraphs relate to the other paragraphs in the whole reading material. They relate to each other since the material is trying to convey one subject all throughout leading to most paragraphs having some, likely small correspondent to one another, this is also supported by the well done transitions and order making one idea flow into the other better. Evidence: In the reading material every section talk about a sub part of the main topic which is Education vs Experience, and because most paragraph is an aspect of the topic, they tend to have relating information with each other.</i>
2. Evaluating	2.1. Whether the information mentioned in the materials are reliable? Why? Evidence? <i>It is reliable because the information was taken from reputable sources that was made by qualified people through studies, surveys, or research. The materials were made within the decade so they still have quite a bit of relevancy.</i> <i>For example: https://www.bls.gov/careeroutlook/2021/data-on-display/education-pays.htm</i> <i>This is one of the sources the materials provide, it is an official website of the United State Government, it shows labour statistics, and since it was made by a well established group, there a high chance that the information or statistics given is mostly true.</i> 2.2. Is the author's viewpoint presented in the materials bias? Why? Evidence? <i>Yes, every author is bias when writing in one way or another, as people it is almost impossible to be completely objective, so our ideas of something can come through in our writing. In these materials, the author often want to prove a point "their point" and it often coincide with the reality of something that has truth value to it.</i> <i>Evidence: author bias is often shown through details(what they tell and don't tell the reader) and word choice. Though in academic writing, bias is much harder to spot or recognize.</i> <i>Evidence: for example the author cited this: Many of the skills they cited as most important didn't involve a specific curriculum but had more to do with the sorts of soft skills that college is often said to confer. As an example, 90% of hiring managers cited the ability to "effectively communicate orally" as very important, and 87% said the same thing about the ability to "work effectively in teams."⁴</i>

HOTS	HOTS-integrated questions
	<i>They chose this information to talk about rather than other options, meaning they had similar idea to the statistics and wanted this statistics specifically to support their claims.</i> 2.3. Are the solutions mentioned in the material effective? Why? Evidence? <i>I would say that it was. The material gave reliable evidence for the answer, helping the reader know more about the subject and possibly help them make a choice.</i> <i>Evidence: effective means that the solution achieves the result that the writer wants, if the writer's goal was to give information on the subject, they definitely did that effectively. If it's supposed to be a persuasive solution it also does it job quite effectively. Since, as a reader I find it both persuasive and informational.</i>
3. Creating	3.1. According to your personal viewpoint, is a university degree necessary to get a good job? Why or why not with evidence? <i>I believe that you can still get a good job without a university degree, though it can be much much harder and more tedious than having one. People who don't get a university degree often have to do a lot of self study(which you should also do if you're getting one regardless), and get other qualifications, whether it's a language degree, specialized degrees, or experience. Even then, with so many recruiter wanting a bachelor degree, there are less good jobs compare to having a university degree. In conclusion I think that a degree is not totally necessary but having one gives you many more chances.</i> <i>Source: https://hbr.org/2021/08/you-dont-need-a-college-degree-to-land-a-great-job</i> 3.2. What are your suggested solutions for Vietnamese young students to achieve good jobs with bachelor degrees? Explain with evidence. <i>Other than education, nowadays employers wants experience. While having a bachelor degree is good, students should also try to get more qualifications, find courses, get internships, expand your resume. There are many things a graduate can do to look more appealing to recruiters, one of those is to expand your soft skills, communication skills are also a big plus in today's society. Another one is to start networking early, many students can find themselves better job opportunities and meaningful connections if they're able to network efficiently, a network you can rely on goes a long way in getting yourself out there in the workforce.</i> <i>According to a statistic from FPT education, by 2025, the workforce will be missing up to 400,000 workers in the field of information technology, graphic design, and marketing. However, many graduates don't qualify for these jobs because of the industry's high employment requirements.¹</i> <i>Students who want good jobs should do research into what their needs and wants are, whether they want a job in a certain field or a type of job where they work at home, make a long term plan of what they'll need to do to achieve it. Students should remember to challenge themselves especially if they want to make it further in the work force.</i> <i>Mind set is also very important when looking for a good job, if a student can stay confident and focus on the task for long periods of time, they will have a much higher chance to succeed. It is also important in the way a student carry themself, recruiters are more likely to pick people who are more confident, energetic, and shows capability</i>

HOTS	HOTS-integrated questions
	Sources: 1. https://phothongcaodang.fpt.edu.vn/hoc-sinh-sinh-vien-can-lam-gi-de-co-cong-viec-tot-ngay-khi-ra-truong/ 2. https://vnexpress.net/7-dieu-can-lam-de-co-cong-viec-phu-hop-sau-tot-nghiep-4381783.html 3. https://career.gpo.vn/goc-hoi-dap-sinh-vien-moi-ra-truong-can-lam-gi-de-co-cong-viec-tot-a4381.html

COMPLETED WORKSHEET FROM STUDENT S1

HOTS-BASED INDIVIDUAL WORKSHEET

TOPIC 2: Is nuclear energy the solution to global warming problems in Vietnam?

FOR STUDENTS WITH “POSITIVE INFLUENCES OF NUCLEAR POWER”

HOTS	HOTS-integrated questions
1. Analyzing	1.6. What are the differences between the two terms “nuclear power” and “other kinds of power”? - Nuclear power is power made from nuclear fission or nuclear fusion - other kinds of power are power made from sources other than nuclear, like solar, wind, wave, fossil fuel,...
	1.7. What are the advantages and disadvantages of nuclear power in handling the problems of global warming? - Nuclear power is a very clean source of power, it barely produces any greenhouse gasses unlike the main green house gas emitter which is fossil fuel. This means that nuclear power is much better for the environment than what we are relying on currently, as well as assisting global warming. - The main possibility for nuclear power to cause more harm to global warming would be any possible factory mishap or nuclear energy being used as weapons in war. Any of those possibilities can cause negative effects on global warming and the environment by causing direct damage on the area where it happened.
	1.8. Whether the supporting sentences relate to the topic sentence within one paragraph? Why or why not with evidence? Yes it did, they used a quote by a person to say that nuclear power should be used. Evidence: <i>Why Nuclear Power Must Be Part of the Energy Solution</i> BY RICHARD RHODES • JULY 19, 2018 Many environmentalists have opposed nuclear power, citing its dangers and the difficulty of disposing of its radioactive waste. But a Pulitzer Prize-winning author argues that nuclear is safer than most energy sources and is needed if the world hopes to radically decrease its carbon emissions. They start by giving an argument but also lead into why despite that argument it should be a possible solution.
	1.9. Whether the evidence relate to the topic sentence within one paragraph? Why or why not with evidence? Yes, the evidences given in the reading related to the topic sentence since it directly correlated with the main ideas and those main ideas support the topic sentence, so the evidence can also directly support the topic sentence. Evidence: Topic sentence: Why Nuclear Power Must Be Part of the Energy Solution In the United States in 2016, nuclear power plants, which generated almost 20 percent of U.S. electricity, had an average capacity factor of 92.3 percent, meaning they operated at full power on 336 out of 365 days per year. (The other 29 days they were taken off the grid for maintenance.) In contrast, U.S. hydroelectric systems delivered p....

HOTS	HOTS-integrated questions
	1.10. Whether the paragraphs relate to the others in the whole reading material? Why or why not with evidence? <i>Yes it does, the whole paragraphed was all written about nuclear power, its benefits, and its disadvantages. Therefore, the paragraphs relate to others indirectly since it is about the same topic. Though, since each paragraphs talk about different main idea, they don't directly relate to each other much. Evidence:</i> <i>For example - these paragraphs</i> <i>Like all energy sources, nuclear power has advantages and disadvantages. What are nuclear power's benefits? First and foremost, since it produces energy via nuclear fission rather than chemical burning...</i> <i>Second, nuclear power plants operate at much higher capacity factors than renewable energy sources or fossil fuels. Capacity factor is a measure of what percentage of the time a power plant actually produces energy. It's a problem for all intermittent energ....</i> <i>Third, nuclear power releases less radiation into the environment than any other major energy source. This statement will seem paradoxical to many readers....</i> <i>There have been three large-scale accidents involving nuclear power reactors since the onset of commercial nuclear power in the mid-1950....</i> <i>These paragraphs have different main ideas so they don't directly relate to each other, but they all do talk about the same topic of nuclear energy.</i>
2. Evaluating	2.1. Whether the information mentioned in the materials are reliable? Why? Evidence? <i>Yes, the evidence in the materials are reliable. This is because it was taken from multiple trust-worthy sources and were things that actually happened. Evidence:</i> <i>- There have been three large-scale accidents involving nuclear power reactors since the onset of commercial nuclear power in the mid-1950s: Three-Mile Island in Pennsylvania, Chernobyl in Ukraine, and Fukushima in Japan.</i> <i>+ In the above all these events happened, and were documented. The material use this evidence to support its main idea.</i> 2.2. Is the author's viewpoint presented in the materials bias? Why? Evidence? <i>I think that the author's viewpoint presented in the materials are somewhat bias, but despite that the material is able to convey ideas through presented facts and sound logic. The reason it is only somewhat bias I because the author choose to believe in one thing more than the other, the author also showed both sides of the argument, but focused more on the good aspects than doing both completely equally by only talking about one negative while giving 3 positive. Though they did do quite a good job at showing both sides since the one negative was in-dept.</i> <i>Evidence: Many environmentalists have opposed nuclear power, citing its dangers and the difficulty of disposing of its radioactive waste. But a Pulitzer Prize-winning author argues that nuclear is safer than most energy sources and is needed if the world hopes</i>

HOTS	HOTS-integrated questions
	<i>to radically decrease its carbon emissions. This shows the author's opinion and bias in choice of what they want to head into</i>
	2.3. Are the solutions mentioned in the material effective? Why? Evidence? <i>The material was more of a informative material than a persuasive one but I believe that the solution of using nuclear power to decrease carbon emissions is an effective solution. This is because I think nuclear energy could be very effective in all the reasons that was mentioned in the material, being efficient, less carbon emissions, less radiation.</i> <i>Evidence:</i> <i>First and foremost, since it produces energy via nuclear fission rather than chemical burning, it generates baseload electricity with no output of carbon, the villainous element of global warming</i> <i>Second, nuclear power plants operate at much higher capacity factors than renewable energy sources or fossil fuels</i> <i>Third, nuclear power releases less radiation into the environment than any other major energy source.</i> <i>but there is no question that a full accounting of the external costs of different energy systems would find nuclear cheaper than coal or natural gas.</i>
3. Creating	3.1. According to your personal viewpoint, is nuclear energy the solution to global warming problems in Vietnam? Why or why not with evidence? <i>When it comes to nuclear energy in general I definitely support it thanks to its vast benefits, but for Vietnam, it might not be the best idea. Countries that have a better economy and more qualified personnel is much better at building, maintaining, and affording nuclear plants in general and is more capable at dealing with things such as further research, development, and hazard control. Vietnam on the other hand is still developing in it's many fields, and has not been able to develop a team of professionals to handle nuclear power in an efficient way. Another reason is due to the high cost of nuclear energy, not only is building and maintaining costly, but another big cost factor is building large nuclear waste disposal factories. Furthermore in the case of a nuclear mishap, Vietnam would take a lot of damage economically and environmentally due to not having sufficient resources to deal with it. Other than that, Vietnam has great potential for other renewable energy sources that would cost less to build, maintain, and much less chance for big environmental and economic damage. For those reasons I believe that nuclear power isn't the answer for Vietnam in general or for global warming.</i> <i>Sources:</i> <i>https://asia.fes.de/news/interview-vietnam-says-no-to-nuclear-energy.html</i> <i>https://cvtvn.net/2022/10/11/7-reasons-why-nuclear-energy-is-not-the-answer-to-solve-climate-change/</i>

HOTS	HOTS-integrated questions
	3.2. What are your suggested solutions for Vietnam to overcome the problems of global warming? Explain with evidence. <i>My suggested solutions for Vietnam to overcome the problems of global warming would be to learn from other countries' mistakes and start early on it's environmentally friendly endeavors. This include focusing on green energy, environmental conservation, and developing better waste management. Vietnam has potential especially in it's wave energy production with it's many rivers and being more than half surrounded by the ocean, this gives Vietnam a headway to develop clean wave energy that could reduce carbon emissions greatly. Furthermore, other green energies are not out of the question for Vietnam, though it might not be as effective as it's wave energy potential, other energy sources like solar and wind should not be ruled out. Vietnam also has a rich ecosystem with many species and beautiful nature, programs that protect the environment and plants trees are integral in making a healthy environment for the whole country. Moreover, since Vietnam has had a history with many floods, forests can make a different in lessen it's natural disaster problems. One of the main problem of Vietnam is that it's waste disposal system isn't very well developed yet, there is still a lot of waste and trash in Vietnam. We have a big waste problem, especially when it comes to plastic, so if Vietnam can conquer this problem one day, It will definitely help with global warming.</i> Sources: https://www.imf.org/en/News/Articles/2018/01/09/NA010918-For-Vietnam-greener-growth-can-reduce-climate-change-risks https://vietnamlawmagazine.vn/undp-expert-gives-recommendations-for-vietnam-to-overcome-challenges-69976.html

COMPLETED WORKSHEET FROM STUDENT S4
HOTS-BASED INDIVIDUAL READING WORKSHEET

TOPIC 1: Is a university degree necessary to get a good job?

FOR STUDENTS WITH UNNECESSARY TERTIARY EDUCATION FOR YOUNG PEOPLE

HOTS	HOTS-integrated questions
1. Analyzing	1.1. What are the differences between the two terms “tertiary education” and “nontertiary education”? - The term “Tertiary education” means that you are educated at a college, or a university and you will get your bachelor’s degree when you go into the workforce. - The term “Nontertiary education” means that you don’t study at a college or a university after high school, and you must attend courses to earn certifications.
	1.2. What are the advantages and disadvantages of nontertiary education for young people? <i>The advantages:</i> - You can get your experience from your job earlier than other students who spend 2-4 years in classrooms. <i>The disadvantages:</i> - Many recruiters require a bachelor’s degree, and those who have it can deal with a higher salary.
	1.3. Whether the supporting sentences relate to the topic sentence within one paragraph? Why or why not with evidence? <i>The supporting sentences relate to the topic sentence within one paragraph because each supporting sentence provides evidence or details that expand upon the main idea presented in the corresponding topic sentences.</i>
	1.4. Whether the evidence relate to the topic sentence within one paragraph? Why or why not with evidence? <i>The evidence relates to the topic sentence within one paragraph. Each supporting sentence provides specific details that directly illustrate and support the topic sentence. For instance, in the paragraph discussing the challenges faced by those without college degrees, the supporting sentences cite statistics from the U.S. Bureau of Labor Statistics to demonstrate the disparity in salaries and unemployment rates.</i>

HOTS	HOTS-integrated questions
	1.11. Whether the paragraphs relate to the others in the whole reading material? Why or why not with evidence? <i>Yes, the paragraphs relate to the others in the whole reading material. All the paragraphs discuss the idea that although those who graduated from a university may take some advantages, those without university degrees can also get a good job.</i> <i>Specifically, the article starts with a general overview of the topic, then delves into specific examples and challenges: "I do think that there are certain industries where there are really strong biases against people without degrees, and I think it exists even in places where there isn't necessarily a degree requirement," said Bonnie Dilber, who is a recruiting manager at Zapier, and finally offers advice on how to overcome these challenges: Dilber said. "Just focus on what experiences you've had and what you've accomplished... But if you took a few classes at a school, you can put that on your resume regardless of degree status."</i>
2. Evaluating	2.1. Whether the information mentioned in the materials are reliable? Why? Evidence? <i>The information in the article appears to be reliable. The author cites credible sources, such as the U.S. Bureau of Labor Statistics, and quotes experts in the field of human resources and career development such as Bonnie Dilber (a recruiting manager), Dennis Szentmariay (an investigations manager and federal task force officer for the city of Highpoint)</i> 2.2. Is the author's viewpoint presented in the materials bias? Why? Evidence? <i>The author's viewpoint seems to be relatively unbiased because the author presents information from various perspectives:</i> - The advantages of tertiary education: <i>People without college experience face more challenges in their job search. Many job listings require four-year degrees even if the degree is not relevant to the position. College graduates often use their degrees to negotiate a higher salary.</i> - For those who do not study at a university: <i>It is possible to find a high-paying job without a degree. You just need to know where to look and how to sell yourself in the job application process.</i> 2.3. Are the solutions mentioned in the material effective? Why? Evidence? <i>The solutions mentioned in the article are likely to be effective for many individuals. The advice provided, such as emphasizing skills, networking, and pursuing alternative forms of education.</i> <i>Evidence: "About 27% of people actually work in a field that's relevant to the area that they majored in. So the majority of people are successful in their work because they learned the skills they needed on the job or through self-guided learning, not based on their college degree."</i>
3. Creating	3.1. According to your personal viewpoint, is a university degree unnecessary to get a good job? Why or why not with evidence? <i>From my perspective, a university degree is not necessary to get a good job. In fact, there are many jobs in which you do not need a university degree to be hired. Today, majors</i>

HOTS	HOTS-integrated questions
	<i>like Marketing, and law... are required experience rather than a degree. For example, Dennis Szentmariay, who is an investigations manager and federal task force officer for the city of Highpoint, dropped out of community college and got his first law enforcement job without having a degree in law enforcement.</i> <i>However, you must make lots of effort to get work experience. That is why if you do not have enough skills and courage to go into the workforce after finishing high school, the safest choice is still to go to university.</i>
	3.2. What are your suggested solutions for Vietnamese young students to achieve good jobs with bachelor degrees? Explain with evidence. <i>I think besides their degree, they should attend courses to earn more certifications to make their resume better, and they need to set a mindset that they are ready to gain work experience, not a high salary just because they have bachelor's degrees. As someone said, "Experience speaks louder than a degree."</i>

COMPLETED WORKSHEET FROM STUDENT S4

HOTS-BASED INDIVIDUAL WORKSHEET

TOPIC 2: Is nuclear energy the solution to global warming problems in Vietnam?

FOR STUDENTS WITH “NEGATIVE INFLUENCES OF NUCLEAR POWER”

HOTS	HOTS-integrated questions
1. Analyzing	1.1. What are the differences between the two terms “nuclear power” and “other kinds of power”? <i>Other kinds of power: Wind, Water, and Solar (WWS)</i> <i>Time for planning and operation:</i> <u>Nuclear power</u>: One nuclear power plant takes on average about 14-1/2 years to build, from the planning phase all the way to operation. <u>WWS</u>: Utility-scale wind and solar farms, take on average only 2 to 5 years, from the planning phase to operation. Rooftop solar PV projects are down to only a 6-month timeline. <i>Cost:</i> Nuclear power: many existing nuclear plants are so costly that their owners are demanding subsidies to stay open. New nuclear power costs about 5 times more than onshore wind power per kWh. <i>Risks:</i> <u>Nuclear power</u>: creates risk and cost associated with weapons proliferation, meltdown, mining lung cancer, and waste risks. <u>WWS</u>: avoid all such risks.
	1.2. What are the advantages and disadvantages of nuclear power in handling the problems of global warming? <i>Advantages:</i> Replace the world’s fossil fuel power plants with nuclear reactors as a way to solve climate change. Nuclear is a “clean” carbon-free source of power. (To limit the impacts of climate change, the world must rapidly reduce its dependency on fossil fuels to reduce greenhouse gas emissions. Nuclear energy is low-carbon and can be deployed on a large scale at the timescale required, supplying the world with clean, reliable, and affordable electricity. (click here)) <i>Disadvantages:</i> - Create many other risks that affect people’s health. - Waste Risk
	1.3. Whether the supporting sentences relate to the topic sentence within one paragraph? Why or why not with evidence? <i>The supporting sentences relate to the topic sentence within one paragraph because it provides more detail information that are related to the topic sentence:</i> <i>TS: The growth of nuclear energy has historically increased the ability of nations to obtain or harvest plutonium or enrich uranium to manufacture nuclear weapons.</i> <i>SS: The building of a nuclear reactor for energy in a country that does not currently have a reactor allows the country to import uranium for use in the nuclear energy facility. If the country so chooses, it can secretly enrich the uranium to create weapons grade uranium and harvest plutonium from uranium fuel rods for use in nuclear weapons.</i>

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	1.4. Whether the evidence relate to the topic sentence within one paragraph? Why or why not with evidence? <i>The evidence provides specific details that directly illustrate and support the topic sentence.</i> Evidence: <i>TS: Uranium mining causes lung cancer in large numbers of miners because uranium mines contain natural radon gas, some of whose decay products are carcinogenic.</i> <i>E: A study of 4,000 uranium miners between 1950 and 2000 found that 405 (10 percent) died of lung cancer, a rate six times that expected based on smoking rates alone. 61 others died of mining related lung diseases.</i>
	1.5. Whether the paragraphs relate to the others in the whole reading material? Why or why not with evidence? <i>The paragraphs relate to the others in the whole reading material because each paragraph supports one main idea that nuclear energy is not the answer to solve climate change.</i> Evidence: - ...but they don't look at the human impacts of these scenarios. Let's do the math... - ... switching out our energy system to nuclear would result in about 93 million people dying... - ...transitioning to 100% renewables as soon as possible would result in tens of millions fewer deaths. - The time lag between planning and operation of a nuclear reactor includes the times to identify a site... - ... the LCOE does not include the cost of the major nuclear meltdowns in history... - ... nuclear weapons proliferation concerns... - ...will not cause the reactor to fail, resulting in a major disaster. - ... causes lung cancer in large numbers of miners... - ... air pollution emissions may have caused 69,000 additional air pollution deaths in China in 2016 alone, with additional deaths in years prior and since. - ... which can damage water supply, crops, animals, and humans.
2. Evaluating	2.1. Whether the information mentioned in the materials are reliable? Why? Evidence? <i>The information mentioned in the materials is reliable because there are a lot of specific figures and examples.</i> - Emissions from new nuclear are 78 to 178 g-CO₂/kWh, not close to 0. Of this, 64 to 102 g-CO₂/kWh over 100 years are emissions from the background grid while consumers wait 10 to 19 years for nuclear to come online or be refurbished, relative to 2 to 5 years for wind or solar. - Chernobyl, Russia in 1986; three reactors at Fukushima Dai-ichi, Japan in 2011) or damaging (Three-Mile Island, Pennsylvania in 1979; Saint-Laurent France in 1980).
	2.2. Is the author's viewpoint presented in the materials bias? Why? Evidence? <i>The author's viewpoint presented in the material is biased a little bit because the author points out many disadvantages of nuclear power, but there is only one paragraph that refers to the advantages.</i>

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	- There is a small group of scientists that have proposed <u>replacing 100% of the world's fossil fuel power plants with nuclear reactors as a way to solve climate change</u>. Many others propose nuclear grow to satisfy up to 20 percent of all our energy (not just electricity) needs. They advocate that nuclear is a “clean” carbon-free source of power, but they don't look at the human impacts of these scenarios. Let's do the math...
	2.3. Are the solutions mentioned in the material effective? Why? Evidence? <i>The solutions are effective.</i> <i>WWS is the solution to climate change: a comprehensive study across 138 nations from 1995 to 2021 showed that increasing renewable energy consumption significantly reduces carbon dioxide emissions.</i>
3. Creating	3.1. According to your personal viewpoint, is nuclear energy the solution to global warming problems in Vietnam? Why or why not with evidence? <i>I think nuclear energy isn't the solution to global warming problems in Vietnam.</i> <i>Vietnam does not have enough economic potential to be able to resolve the risks caused by nuclear energy.</i> <i>Evidence: the estimated cost to clean up the damage from three Fukushima Dai-ichi nuclear reactor core meltdowns was \$460 to \$640 billion.</i>
	3.2. What are your suggested solutions for Vietnam to overcome the problems of global warming? Explain with evidence. <i>I suggest that we should use renewable energy because increasing investment in solar and wind energy projects reduces CO2 emissions, leading to less dependence on fossil energy sources. An NREL study found that generating 35% of electricity using wind and solar in the western U.S. would reduce CO2 emissions by 25-45%.</i>