

Teaching Critical Thinking in Discussion

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ABSTRACT

Teaching critical thinking skills in the field of TESOL is a controversial issue. This paper introduces a more practical way of teaching critical thinking skills in discussions by using the six logic patterns commonly used in debate, and investigates whether these six logic patterns are teachable/learnable in written and spoken form and the effectiveness of this approach. Based on the students' writing samples, instructor's observation notes, and the questionnaire, the author found that these six patterns were teachable and learnable as well as effective. Another interesting finding was some of the logic patterns were easier for the students to understand and use than others.

INTRODUCTION

Teaching critical thinking skills in the field of TESOL is problematic. Atkinson (1997) claimed that teaching these skills in ESL/EFL contexts was not culturally appropriate and added that these skills were not teachable/learnable if they were taught. Davidson (1998) disagreed and stated that it was totally appropriate for language teachers to teach critical thinking skills since students would need to communicate with native speakers who had acquired these skills in their culture and showed some empirical data which supported the idea that these skills were learnable even in an EFL context. Although it is still controversial, the author, as a teacher, aligned himself with this idea and decided to teach critical thinking skills in an EFL context in order to prove that critical thinking skills are teachable and learnable.

Another problem of teaching critical thinking lies in its definition. As Atkinson (1997) illustrated, most language teachers were unable to define what critical thinking was and there were various definitions of critical thinking. Although Davidson (1998) insisted that people could easily find the common elements among these definitions, namely "rational judgment" (p. 120), this new definition does not seem clear enough for teachers to apply to their teaching. At a practical level, Smith (2003), writing in the field of management, described four categories about (critical) thinking-skills instruction: "inquiry," "reasoning," "inferential errors," and "argumentation" (pp. 36-39). Likewise, Snyder and Snyder (2008) discovered the three steps for successful business courses which focus on improving students' critical thinking skills: "modeling critical thinking skills, asking the right questions to stimulate students' critical thinking skills, and guiding students' practice" (pp. 94-96). Although these concepts can be useful guidelines, they are still unclear. Therefore, the author decided to use six logic patterns commonly used and taught in debate as another approach to teach critical thinking.

The six logic patterns the instructor introduced were (1) "in the long run," (2) "turn around," (3) "not unique," (4) "no threshold," (5) "no impact," and (6) "additional plan." The logic of "in the long run" is the idea of seeing things not from a short period of time but from a long period of time. The logic of "turn around" is the idea that a good point can be a bad point and that a bad point can be a good point. The logic of "not unique" means doubting its uniqueness. The students are pushed to think of "Is this the only one/reason? Can we find the same thing/element among others?" By using the logic of "no threshold," the students can criticize/weaken the person's idea by telling him/her to specify the exact number or amount. When he/she cannot show it, they should not accept his/her idea. The logic of "no impact" is the same as saying "So what?" The students should say that an advantage is not so good/important or that a disadvantage is not so serious. The impact can be weakened by the quality, quantity, and possibility. Even if the quality looks serious, if a bad thing is caused by that person's action

or behavior, the student can say “This is not serious because it’s his/her fault.” I named this logic “suffer the consequence” and included this in the same category of “no impact.” The logic of an “additional plan” is called a “spike plan” in Japanese debate. When a particular problem is caused by carrying out a plan or policy, the students are encouraged to think of “Is the problem solvable?” If the problem is solvable, they should suggest a solution by not changing the original idea/plan but by adding an extra plan.

Employing these six logic patterns, three research questions are addressed.

1. Are these six logic patterns teachable/learnable? Can the students apply acquired logic patterns to other situations in written form?
2. Can the students apply acquired logic patterns to other situations in spoken form?
3. How effective is this approach?

METHOD

The instructor carefully examined the discussion questions in the fall semester of 2012 and matched the logic with them by assuming some students would use the target logic of that lesson. If none of the students used the target logic pattern during the class, the target logic was explained at the end of the discussion or the activity. After each lesson, the same explanation about the target logic and some sample statements that the students should disagree with by using that logic were posted online. To check the students’ understanding about the logic, in the beginning of the following lesson, the students were asked to work on the writing practice for a few minutes (see Appendix A); 6 minutes were given in total to finish the quiz about homework reading and this writing practice. After the students finished the writing practice, the instructor explained some possible answers in class. Then, the writing was collected, checked, and returned to the students in the following lesson. Whenever these logic patterns were heard in discussions, the instructor picked it up, took notes, and gave a positive feedback in class and sometimes online. In this way, the logic patterns were recycled and reinforced throughout the semester. In the final lesson, the students completed the questionnaire about learning these logic patterns, which consisted of 1 five-point Likert-type item (“I found the logic patterns useful”) and 1 open ended question (“How did you feel about the logic you learned in this course?”) They filled out their name and answered the questionnaire in Japanese (see Appendix B).

Although this approach was taken in all 13 classes (3 A-level, 8 B-level, 2 C-level classes), the data from one B-level class will be mainly discussed here. This class was chosen because of its high attendance rate. The participants of this study were eight university students (2 men and 6 women) who majored in education or history. Their English proficiency level was high-intermediate. One student (Aiko¹) studied abroad in London for 3 years when she was in high school but the others had never lived abroad. Haru and Nozo were absent only once in week 2 and 4 but the rest of the students were never absent.

The first logic (“in the long run”) was introduced in lesson 3 under the topic of Language 2, the second logic (“turn around”) was taught in lesson 4 under the topic of Fashion 1, the third logic (“not unique”) was covered in lesson 6 under the topic of Media 1, the fourth logic (“no threshold”) was covered in lesson 7 under the topic of Media 2, the fifth logic (“no impact”) was covered in lesson 10 under the topic of Human rights 1, and the sixth logic (“additional plan”) was covered in lesson 11 under the topic of Human rights 2.

¹ All of the names in this paper are pseudonyms to protect the participants’ privacy.

RESULTS

For this case study, 3 types of data were collected and analyzed: students' writing samples about the logic, field notes of all the lessons as a participant researcher, and the questionnaire.

Writing Samples

According to the students' sample writing, Yasu understood 5 logic patterns and could apply it to the new situation/topic (see Table 1). Nozo and Haru understood 4 types of logic and wrote their answers appropriately. Aiko, Meiko, and Yuki understood half of the logic. Makiko understood 2 logic patterns and Taka understood only 1 logic pattern.

Table 1. *Performance of students' writing practice about previously taught logic*

Ss	"in the long run"	"turn around"	"not unique"	"no threshold"	"no impact"	"additional plan"
Aiko		C	C			C
Nozo		C	C	C	C	
Haru		C	C		C	C
Meiko		C	C	C		
Makiko	C				C	
Yuki		C	C			C
Taka		C				
Yasu		C	C	C	C	C

Note. C = correct

Among 6 logic patterns, some logic patterns ("turn around" and "not unique") seem to be easier to understand and apply. For example, against the second statement of "turn around" (see Appendix A), Taka wrote *"But this could be a bad point. Having a lot of cultures may be dangerous of confusing many cultures."* Against the first statement of "not unique," Yasu wrote *"I see your point, but I disagree to this idea. It's mainly because even if you don't study abroad, you could learn English in Japanese English school. For example, there are GABA, Nova and Coco juku."* The logic patterns of "no impact" and "additional plan" were moderately easy. For instance, against the third statement of "no impact," Yuki wrote *"That's not so serious because there are many people who work hard in Japan. But all of them don't die due to work hard. So this won't happen."* Against the third statement of "additional plan," Haru wrote *"It's possible to solve this problem. For example, if the government makes places that we can put on the bicycle safely, bicycle is not stolen."*

On the contrary, some logic patterns ("in the long run" and "no threshold") seem to be more difficult. Makiko was the only student who could use the logic of "in the long run." For example, against the third statement of "in the long run" (see Appendix A), Makiko wrote *"But if suitable menus are made, more people, even foreigners, can order cook easily. In the long run, the restaurants can make more money than before."* On the other hand, many students misunderstood the direction and disagreed with the statement without using the logic. For example, against the second statement of "in the long run," Aiko wrote *"But Japanese government doesn't have much money because they need to pay much money for Tohoku."* Only Nozo, Meiko, and Yasu could use the logic of "no threshold" appropriately. For instance, against the third statement of "no threshold," Meiko wrote *"How many follow up questions are good? Unless you say the exact number, I won't accept your idea."*

Field Notes of All the Lessons

From week 2 to week 14, based on field notes, Nozo used the learned logic patterns in the actual discussions most actively (see Table 2). She used the logic of “in the long run,” “turn around,” and “not unique.” Makiko, who could not use the logic in written form, showed an interesting result. She used 4 types of logic patterns: “in the long run,” “not unique,” “turn around,” and “no impact.” More importantly, she used the logic of “in the long run” (in week 3) and “not unique” (in week 4) before the instructor explicitly taught these logic patterns. For example, in week 4, she used the logic of “not unique” and said, “*Even if I were rich, I wouldn’t buy fashion magazines because reading fashion magazines is not the only way to learn about the trend. If you just go outside and watch people’s clothes, you can learn what the latest trend is.*” On the other hand, Yasu, who was the most active logic user in writing, used the logic in the discussion only twice. Haru and Taka’s use of logic was not observed at all.

Table 2. *Students’ use of logic patterns in the discussion*

Lesson/Ss	L2	3	4	5	6	7	8	9	10	11	12	13	14
Aiko							NU		TA				
Nozo				LR	TA		NU				NU	NU	
Haru													
Meiko											NU		
Makiko		LR	NU	TA									NIP
Yuki				LR									NIP
Taka													
Yasu					NU							NU	

Note. LR = In the long run, TA = Turn around, NU = Not unique, NTH= No threshold, NIP = No impact, AP = Additional plan

With respect to the most frequent logic, the same as the written form, the logic of “not unique” was the most common; it was counted 8 times. For example, in week 6, Yasu said “*You said the information from TV is controlled by the TV stations, but the information from the internet is also controlled and biased.*” In week 8, Ai said, “*I don’t think pachinko can be popular in the world because casinos exist in other countries. Pachinko isn’t new for them.*” The logic pattern of “turn around” was used 3 times. For instance, in week 6, Nozo said, “*You said books are the best way to get information because their information is the most trustful. But this can be a bad point. If people use only books, they can’t improve their ability to check the correct and incorrect information.*” This result was also the same as the writing practice. However, the most difficult logic in writing, “in the long run,” was used 3 times as well. For example, in week 5, Yuki said, “*But wearing fashionable clothes is important only when you meet people for the first time. In the long run, people will pay more attention to your personality.*” In lesson 14, when the students discussed whether the problems of the homeless or the elderly were serious or not, 2 students used the logic of “no impact.” For instance, Yuki said, “*I don’t think the problem of the homeless is serious. They may be hungry and cold. But this is their fault.*” None of them in this class had a chance to use the logic of “no threshold” and “an additional plan.”

The questionnaire

Makiko, Aiko, and Taka strongly agreed that they found the logic patterns useful. The rest of the students agreed. Yasu mentioned the effectiveness of learning these logic patterns by saying “*By learning these logic patterns, the quality of my report in Japanese improved. I would like to*

continue using these logic patterns.” Haru and Yuki recognized that they couldn’t use the logic patterns although these logic patterns were very useful to persuade others in the discussion. Nozo, who used the logic in the discussion most actively, wrote “By using the logic patterns, I could notice that it was possible to disagree with a statement which looked like correct.”

DISCUSSION AND CONCLUSION

The findings indicated that students were able to apply acquired logic patterns to other situations in written and spoken form. For this particular class, this approach seems to have worked well. By introducing these logic patterns, the students recycled and applied them under the new topic. However, some logic patterns were easier to use than others. In writing and speaking, the easiest logic pattern for the students was “not unique.” In writing, the students could use the logic of “turn around” appropriately, but in speech, this logic was not counted as frequently as the logic of “not unique.” Moreover, although the most difficult logic was “in the long run” in writing, this logic was sometimes used in the discussion. This was because the students did not get used to the task itself and did not follow the direction in writing. This logic must be as easy as other logic patterns to understand for the students; however, because it was introduced as the very first writing practice, the students could not use this logic to disagree with the statement. Also, it is possible that because this logic was introduced in the very beginning, the students had ample chances to use it in the following lessons. This could be another possible reason why the students could use this logic in the discussions.

In addition to the discrepancies about the students’ use of particular logic patterns between the spoken and written form, there were individual differences. For example, whilst Yasu could use 6 logic patterns in writing, he could use the logic of “not unique” only twice in the discussion. Contrary to this, Makiko, who could use just two logic patterns in her writing, used 4 different logic patterns in the discussion. Besides, she used the logic of “in the long run” and “not unique” before it was introduced. These discrepancies might be due to lack of opportunities for the students to use the logic (in discussions, if one student has used that logic, the other students cannot use it) and the time constraints (some students did not have time to finish the writing).

Nevertheless, the questionnaire’s results showed that all of the students considered learning these logic patterns useful. Even Taka, who could not use any logic patterns in the discussion and could use only one logic pattern in writing, strongly agreed with the usefulness of leaning about the logic. Moreover, Yasu mentioned that he could transfer what he learned in this course into other classes, even in other languages.

Since this is only a case study, it has several limitations. First, the six logic patterns introduced here are not supported by the literature. They are just common logic patterns in debate. Second, it was not clear whether these logic patterns were teachable/learnable in a pure sense because some students could use the logic pattern which the instructor had not introduced. To make this point clearer, either using an experimental group or doing a further qualitative research which includes the interview or questionnaire immediately after the discussion will be necessary. Finally, the data were taken only from the observation logs. The whole transcripts should be used to know which logic patterns the students actually used. Regardless of these shortcomings, it is hoped that this paper can help other instructors who want to incorporate critical thinking into their curriculum especially in an EFL/ESL context.

REFERENCES

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APPENDIX A: Writing practice

<p>Critical thinking tips #1 "In the long run"</p> <p>[Choose one of the statements <input checked="" type="checkbox"/> and disagree with the statement]</p> <p>e.g. "Making English our second official language would not lower our Japanese skills." ← "But in the future (in the long run), English might become stronger than Japanese because people would think English is more useful. As a result, Japanese language and culture would die."</p> <p><input type="checkbox"/> Older people would find it difficult to master English and communicate with others in English if English became the second official language in Japan.</p> <p><input type="checkbox"/> The Japanese government would have to pay a lot for changing all the signs and official documents into the bilingual ones if English became the second official language.</p> <p><input type="checkbox"/> The restaurants would find it difficult to find a suitable translation for their menus. They would also need to spend time and money to make bilingual menus.</p>	<p>Name ()</p>
<p>Critical thinking tips #2 "Turn Around"</p> <p>[Choose one of the statements <input checked="" type="checkbox"/> and disagree with it by using the logic of "Turn around"]</p> <p>e.g. "More Japanese people should use a credit card when shopping <u>because it is very convenient</u>. Even if you don't have money, you can get what you want to get." ← "This could be a bad point because if you continue buying things even though you don't have enough money, you will spend too much money for shopping. You will have a lot of debt."</p> <p><input type="checkbox"/> My friend tells me I should think more positively. <u>I always think negatively and worry about what I say</u>. But because of this, I sometimes can't communicate with people well.</p> <p><input type="checkbox"/> <u>The more cultures there are</u>, the more interesting the world will become.</p> <p><input type="checkbox"/> Don't <u>give too much money</u> to my son. He's just 5 years old! I want him to be just kind and open. I don't want him to judge people by their wealth.</p>	<p>Name ()</p>
<p>Critical thinking tips #3 "Not unique"</p> <p>[Choose one of the statements <input checked="" type="checkbox"/> and disagree with it by using the logic of "Not unique"]</p> <p>Think of "Is this the only one/reason?" or "Can we find the same thing/element in other things? /Can we find other causes?" and doubt its uniqueness.</p> <p>E..g. "We can't trust the information on the internet because it contains false information." ← "I see your point, but other media such as TV also have false information. For instance, I sometimes notice that the announcers apologize for spreading wrong information."</p> <p><input type="checkbox"/> "To master English, you need to study abroad."</p> <p><input type="checkbox"/> "College students should dress fashionably because it's the only time for people to enjoy wearing their favorite clothes."</p> <p><input type="checkbox"/> "People should stop smoking if they don't want to have a cancer."</p>	<p>Name()</p>
<p>Critical thinking tips #4 "No threshold"</p> <p>[Disagree with the statements below by using the logic of "No threshold"]</p> <p>Tell the speaker to specify the exact number or amount. If they can't show it, don't trust what they've said. This logic may be a bit difficult for you to use in the discussion (because most likely you don't have any data), but it's a popular logic in the (Japanese) Diet.</p> <p>e.g. "The celebrities should not use the drugs because their action influences ordinary people?"</p> <p>→ "Why can you say the celebrities' action influences ordinary people? How many people will be influenced by their action? How much influence will ordinary people get? Unless you prove this point, I won't accept your idea."</p> <p><input type="checkbox"/> The former Prime Minister Naoto Kan said "I will do my best!"</p> <p><input type="checkbox"/> The Japanese government should stop issuing the Japanese bonds (debt investments).</p>	<p>Name()</p>

New Directions in Teaching and Learning English Discussion

Otherwise, Japan will go bankrupt like Greek. <input type="checkbox"/> You should ask a lot of follow up questions in the discussion test in order to get 5 points for "Questions." <input type="checkbox"/> The Prime Minister Yoshihiko Noda said he will dissolve the house of representatives soon.	
Critical thinking tips #5 "No impact"	Name()
<p style="text-align: center;">[Disagree with the statements below by using the logic of "No impact"]</p> Think of " So what? " and say something (an advantage) is not so good/important OR something (a disadvantage) is not so serious. Impact can be calculated by (1) Quality (2) Quantity and (3) Possibility. Even if "(1) Quality" looks serious, if some bad things are caused by that person's action, you can say it's not serious—"Suffer the consequence." <input type="checkbox"/> If Japan joins TPP, farmers will lose their jobs. (Attack the Quality) <input type="checkbox"/> Because of the automatic revolving door in Roppongi, one child was killed in 2004. (Attack the Quantity) <input type="checkbox"/> If I go to university, my dad may have to work harder to make more money. If he works harder, he may be sick and die. (Attack the Possibility) <input type="checkbox"/> Some students couldn't take a discussion test because they had a drinking party and kept drinking till morning. (Attack the Quality—"suffer the consequence")	
Critical thinking tips #6 "Additional plan"	Name()
<p style="text-align: center;">[Disagree with the statements below by suggesting an "additional plan"]</p> Think of "Is the problem solvable?" and if solvable, suggest a solution. For example, in the previous lesson, one said, "The Japanese government should start introducing the system of life without parole. But I know it costs more." Here, you can say, "As of the cost, it's possible to solve. For example, the government should have the prisoners make money by assigning some easy tasks such as making cardboard boxes etc. If we also introduce this system, the cost will not become an issue." <input type="checkbox"/> If Japan joins TPP, Japanese farmers will suffer financially. It's a problem. <input type="checkbox"/> Some unemployed people take advantage of the system of unemployed benefits and pretend to search the jobs. This is a serious problem. <input type="checkbox"/> Tokyo should introduce the system of "Free" bicycles like France. But the problem is some bicycles may be stolen and people may start using the public bicycles like their own bicycles. <input type="checkbox"/> To become more eco-friendly, Tokyo should start using the system that Kamikatsu (Tokushima prefecture) is using. Separating the garbage into 34 different categories. This solves the waste problem in Tokyo. But the problem is people may not know how to separate the garbage.	

APPENDIX B: The questionnaire

Name()	
1. I found the logic patterns useful. ロジックを学んで役に立った。 	
(1) Strongly agree (2) agree (3) neither agree or disagree (4) disagree (5) Strongly disagree	
2. How did you feel about the logic you learned in this course? この授業で学習したロジックについて、どう思ったか、自由に記述してください。(日本語で。)	