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Abstract
Critical thinking (CT) is one of the most asked for academic skills and at the same time one of the academic skills reported to be declining in college students (Yanai 2004). This contrast often puts teachers in the predicament that they lower their academic expectations for their students. To put a stop to this compromise, teachers need to bring some changes to the way they teach class. This paper discusses a lesson plan using a TED Talk presentation to activate and raise ability in CT.

Keywords: Critical thinking, TED Talks

1. Introduction
TED Talks (Ted.com/talks) is too great of a teaching tool to pass up for any teacher. TED Talks is a website that offers videos of presentations given before live audiences. One person does a presentation on a certain topic with a screen behind him/her. The site provides presenter bios, subtitles, and transcripts in many languages. The TED presenters are from the fields of technology, education, and design (TED), as well as many others.

I decided to make a lesson plan using a TED Talk with Japanese subtitles, in order to focus on Critical Thinking (CT). Teachers often lament that CT is declining in their students. In fact, CT is ranked second by college teachers as one of the declining academic skills, after "taking initiative" (Yanai 2004).

Importantly, ability in CT will increase the probability of desirable outcomes such as making good career choices, and will prepare students for dealing with yet-unknown challenges in their future lives (Halpern 1998). Therefore, it is highly recommended that CT be incorporated as much as possible in class lessons.
The Cambridge Assessment defines Critical Thinking as the analytical thinking which underlies all rational discourse. As an academic discipline, it focuses on the processes involved in being rational. The five most significant processes are analysis, evaluation, inference, synthesis/construction, and self-reflection/self-correction. The skills and sub-skills of those processes are summarized in the Cambridge Assessment taxonomy (Black 2008) (See Figure 1). The students in my class exercise and develop some of those skills with the lesson plan I prepared using TED Talk presentations with Japanese subtitles. This paper discusses how one lesson plan was carried out.

2. Procedure.

Location and Subjects.
I taught a class, Academic Workshop, TED Talk で学ぶ世界, for one semester in the fall of 2018 at Kansai Gaidai College. The number of students enrolled was 32. The language used in class by the teacher was Japanese and the students used only Japanese when speaking and writing. All of the TED Talk presentation videos I used were in English with Japanese subtitles.

The purpose of this class is for students to exercise some Critical Thinking (CT) skills involving a lesson plan using a TED Talk presentation. The lesson plan has four class activities. The four class activities and the CT skills exercised in those activities as well as TED Talks videos used in class through the semester are as follows.

The four class activities.
Activity 1. “Food for Thought”
Activity 2. TED Talk presentation video as an input for CT
Activity 3. Evaluating the TED Talk through cooperative learning and team discussion
Activity 4. Construction of judgments showing evidence and rationality

The CT skills exercised.
(1) Analysis
A: Recognizing and using the basic terminology of reasoning
B. Recognizing arguments and explanations
C. Recognizing different types of reasoning
D. Dissecting an argument
E. Categorizing the component parts of an argument and identifying its structure
F. Identifying unstated assumptions
G. Clarifying meaning

(2) Evaluation
A: Judging relevance
B: Judging sufficiency
C: Judging significance
D: Assessing credibility
E: Assessing plausibility
F: Assessing analogies

(3) Inference
A: Considering the implications of claims, points of view, principles, hypotheses and suppositions.
B: Drawing appropriate conclusions

(4) Synthesis/Construction
A: Selecting material relevant to an argument
B: Constructing a coherent & relevant or counter-argument
C: Taking arguments further
D: Forming well-reasoned judgments
E: Responding to dilemmas
F: Making and justifying rational decisions

The following TED Talk presentation videos were used in class through the semester:
1. Lessons from fashion’s free culture by Johanna Blakley, Apr. 2010
2. A warrior’s cry against child marriage by Memory Banda, Jul. 2015
3. Why we all need to practice emotional first aid by Guy Winch, Nov. 2014
4. Poverty isn’t a lack of character; it’s a lack of cash by Rutger Bregman, Apr. 2017
5. Forget the pecking order at work by Margaret Heffernan, May 2015
6. The key to success? Grit by Angela Lee Duckworth, April 2013
Activity 1: Food for Thought

Critical Thinking Skills exercised in this activity: analysis and evaluation.

The lesson starts with a 15 minute “Food for Thought” activity before showing the TED Talk presentation. This activity helps to warm up the students and get them talking. The outcome of this activity along with the outcome of the following sections helps the students realize the TED Talk is an essential part of the success of their CT development.

The expression “food for thought” means something that provides mental stimulation and nourishment (vocabulary.com n.d.). As a “food for thought” activity, I showed a short, 30 second English news video, “Court: Hula Dance Can Be Copyrighted” from NHK World News (2018). Each student was given a transcript in Japanese after watching the news video. Below is an English transcript of the 30 second news video.

COURT: HULA DANCES CAN BE COPYRIGHTED

A Japanese court has banned a Japanese dance school from using a Hawaiian Hula teacher’s choreography without permission. The judge also ruled that, in some cases, the moves can be copyrighted. A Hawaiian Hula teacher brought a lawsuit against a Japanese dance school for using her choreography without asking. The dance school argued that Hula cannot be copyrighted because its hand movements express song lyrics, like sign language. A judge in Osaka disagreed, saying even if the hand movements are common, they can show originality. The plaintiff welcomed the ruling. (Kapu Kinimaka-Alquiza / Plaintiff) “I’m so pleased and honored of the fact that the judges took time to educate themselves in our Hula to make such a great decision for us, kumu hula from Hawaii.” Her lawyer added that the ruling could affect other forms of dance. (NHK World News 2018)

After they watched the news video and read the Japanese transcript, I asked the students about whether this ruling was fair or unfair, that the Hawaiian Hula teacher won the case
against the Japanese Hula dance school. The students were given 10 minutes to think about this question and discuss it with their classmates. Here are some of their comments, translated into English.

Student #1: I think the ruling was fair because she created it.
Student #2: You can’t steal someone’s work. The ruling was right.
Student #3: You should not make money without permission. The ruling was fair.
Student #4: The ruling was unfair because hand movements are like a sign language.

I continued to ask more questions:
What about Hip Hop dance? Was Hip Hop dance invented all by one person and out of nowhere? Or was it influenced and helped by other previous styles of dances such as Jazz dance? Is Hip Hop dance copyrighted? Back to the Hawaiian Hula teacher, isn’t her choreography influenced by other people’s work? Is it totally original? Again, can you tell me if this ruling was fair or unfair?

The students were silent. No one responded. In their comments, the students accepted or disputed the claim of the Hawaiian Hula teacher and the court ruling. They did analyze and evaluate their reasoning to some degree. However, they were only able to repeat what was said in the news video about this particular case. When I asked them related questions about copyright in Hip Hop dance, they could not answer. The students seemed to be in a deadlock and needed help to find answers to the extended problem. To do so, they would need more knowledge on the specific topic.

Activity 2: TED Talk presentation video as an input for CT
Critical Thinking Skills exercised in this activity: analysis, evaluation and inference.

When the students realized they need help to answer my questions about Hip Hop dance and to make a wider judgment on whether the Hula dance court ruling for copyright was fair or not, I introduced the TED Talk “Lessons from fashion’s culture” by Blakley (2010).

Rationale for Using TED Talk: Expanding Specific Knowledge.
This is the perfect moment to show a TED Talk presentation because the students are
desperate for help. They want more input to help in their judgment about copyright issues. At this point the students’ curiosity reaches the highest level.

Knowledge on specific topics is one component of Critical Thinking (Kusumi 2006). This helps students to construct well-reasoned and rational opinions and judgments. In this course, instead of reading and researching the usual books and journals, the students watch TED Talk videos as an input to develop knowledge on specific topics and raise their CT.

Watching a TED Talk is not as difficult as a traditional research activity like reading for those students that are not particularly studious or patient book researchers. The TED Talk presenters are experts in their fields and cover basic information to cutting edge knowledge in about 14 to 20 minutes. Moreover, the presenters do so in a way that even just average students can easily understand.

Introduction of Team Quiz.
To double down on the students paying their fullest attention to the TED Talk, I tell them they will have a team quiz about the contents of the TED Talk afterward. Now the students have two reasons to take the TED Talk seriously: first, to look for information to expand their judgment about copyright issues, and second, to take a team quiz. While watching the TED Talk attentively, they not only take notes (in Japanese) but also analyze and evaluate the TED Talk and infer its wider implications.

Watching the TED Talk.
At this point the TED Talk with Japanese subtitles is shown to the class. In this example, it is Lessons from fashion’s culture by Johanna Blakley (2010). Here is a short summary of what Blakley says:

There’s very little intellectual property protection in the fashion industry. They have trade protection but no copyright protection and no patent protection. This means that anybody could copy any garment and sell it as their own design. The only thing that they can’t copy is the actual trademark label on the piece of apparel. That’s one reason why you see logos splattered all over these products. The fashion industry doesn’t have any copyright protection because the courts decided long ago that apparel is too utilitarian to qualify for
copyright protection. They didn’t want a handful of designers owning the seminal building blocks of our clothing. The logic behind copyright protection is that without ownership there is no incentive to innovate. Those of you who are familiar with this might be really surprised by both the critical success and the economic success of the fashion industry. Because there’s no copyright protection in the fashion industry, fashion designers have actually been able to elevate utilitarian design, things to cover our naked bodies, into something that we consider art. Because there is no copyright protection, the fashion industry is very open and creative.

Activity 3: Evaluating the TED Talk through Cooperative Learning and Team Discussion

Critical Thinking Skills exercised in this activity: analysis, evaluation and inference.

To make useful the input from the TED Talk the students saw, they need to fully understand its contents by analyzing and evaluating arguments and reasons and infer its wider implications. The students do so through cooperative learning in a team discussion.

Cooperative Learning

Jacobs, Power and Loh (2002) define cooperative learning (CL) as a teaching methodology that offers “principles and techniques for helping students work together more effectively.” They list areas that students can benefit by participating in cooperative learning. Examples are, increased motivation to learn, increased student responsibility for their own learning and increased ability to appreciate and consider a variety of perspectives. Moreover, Cooper (1995) mentions that putting students in team learning situations is the best way to foster critical thinking because they receive continuous support and feedback from other students and the teacher.

Team Discussion and Team Quiz

After watching the TED Talk, I divided my class of 32 students into eight teams of four students to participate in a cooperative learning (CL) team discussion. Students have to share the information from the TED Talk to prepare for the team quiz. This quiz makes the four members work together and aim to get a higher score. Each student’s contribution determines the score for their team and each member gets the same final team score. Students will not usually willingly participate in a team discussion without reasons to do so. However, if they see the same goal and reward in sight, they will do so. That’s the reason
the activity is intended for teams and not for individual students.

The TED Talk presenter speaks pretty fast because she covers the basics and the advanced information in 21 minutes. The subtitles move pretty fast as well. During team work, students have to help each other to get missing pieces of information to make sense of the contents of the TED Talk they just saw. I do not give them transcripts of the TED Talk. Here are some verbal exchanges that students had in their teams, translated into English.

_I did not get that part. Did you catch the reason?_

_So, what does utilitarian mean?_

_She showed four industries with no copyright protection. I got only two. Did you get the others?_

_I did not know you can copy someone’s design and are not sued, wow, it’s incredible._

The students exchanged information and gave each other support. They talked continuously about the contents with no time wasted in unrelated talk. Some expressed admiration to other team members for their quick understanding on some complicated concept from the TED Talk. They all worked hard to grasp the main idea and detailed information. They felt pressure not to be the one on the team who lowers the team score. At the same time, they enjoyed the interaction among themselves.

**Team Quiz**

I prepared seven questions, in Japanese, for this particular TED Talk. The students do not know what these seven questions are until the quiz begins. In other words, all students have to prepare themselves to be able to answer any question over the contents of the entire TED Talk they watched. If they knew what the questions are beforehand, they would only work at finding the answers to those questions and ignore the rest of the information. Entirely, not selectively, reviewing and understanding the TED Talk serves as a vital source of extensive information necessary for their judgment on this particular topic, copyright issues.

The four team members decide who will answer the first, second, third and so on up to the final seventh question before the quiz starts. Once the quiz starts, the team members cannot help one another with the answers; in other words, they are on their own. This makes every
member share the responsibility to bring a high score for their team. Therefore, during the pre-quiz team discussion, they prepare earnestly for the quiz. No one dares to slack off.

When the team quiz starts, one student from each team stands up and goes to their team quiz desk. The first question sentence is projected and the student writes their name and their answer on the team answer sheet (See Figure 2). The student has one minute alone without the other team members to help. After one minute the next team member has a turn to write their name and answer on the same team answer sheet. After the seven questions have been shown, the last student stays at the team quiz desk. This student exchanges their team answer sheet with another team's member who will be the grader for that answer sheet. The teacher projects the seven questions and sample answers. The student grader marks the answers as correct or not correct. Each correct answer is one point. When the grader is not sure about the answer they raise their hand and ask the teacher for help. The teams have their answer sheet graded and returned. The points the team gets will be part of each team member's final grade.

These are the questions and sample answers I gave to the class.

Lesson from the Fashion Industry

Q 1. Why is it not illegal to copy someone’s design in the fashion industry?
Answer: Because there is very little intellectual property protection and apparel is too utilitarian to qualify for copyright protection.

Q 2. Why do the designers splatter their logos all over their products?
Answer: Because there's trademark protection; you cannot copy the actual trademark label.

Q 3. The fast fashion giants are notorious for knocking off high-end designs and selling them at very low prices. How do these luxury high-end brands remain in business?
Answer: It is a very different demographic. The counterfeit customer was not the customer for high-end brands.

Q 4. List some of the industries that do not have copyright protection.
Answer: The food industry, automobiles, furniture, open source software, hairdos, jokes, the smell of perfume.
Q.5. How is the gross sales for industries with very little copyright protection?
Answer: Very high.

Q.6. What is one of the lessons from the fashion industry free from the copyright protection?
Answer: It creates a very open ecology of creativity.

Q.7. What do you have to prove to win the copyright protection for apparel in Japan?
Answer: You have to prove that your garment has never existed before and it's totally unique. The novelty standard is very high.

The students now can use input from the TED Talk as knowledge on the specific topic that enhances critical thinking. They are ready to construct their judgment on the topic of copyright issues.

Activity 4: Construction of judgments showing evidence and rationality
*Critical Thinking Skills exercised in this activity: inference and synthesis/construction.*

After the quiz, I go back to the original question and ask the class “What do you think now? Is the court ruling fair or unfair that a Hawaiian Hula teacher won the case over the Japanese Hula dance school?”

The students are given 15 to 20 minutes to write their judgments. The students can write as much or as little as they like. Each student writes alone and gets a grade for individual work, not team work. Grading this work is done by the teacher after class.

Here is what three students wrote, translated into English.
Student #1 (See Figure 3).
*I thought copying was bad considering plagiarism and copyright protection. I see a lot of knock off clothes and designs in many countries and couldn't think they are as good as the original ones. When I heard the story from the TED talk that Prada stole Valencia designs, I realized there is an advantage where there is no copyright protection. We have more freedom and possibility to create something better than the original ones. I think it is a plus for us. At first I thought the Hawaiian Hula teacher was right, but hand and body movements are limited*
in variation to begin with so you cannot help having similar body movements in dancing. Even when the same choreography is performed, it looks different when different people dance. Everybody has a right to dance the way they want to express themselves. You cannot get body movements limited to some people and copyrighted.

Student #2.
I realized we humans have made progress copying and stealing the original. Having this fact in mind, no copyright protection like in the fashion industry is a good thing. The important thing is that the new will come into being in the process of copying. Instead of fighting against being copied like in the Hula case, you should be proud of the fact that people recognize and like your original so that they copy and spread it out to the world. That's the attitude that genuine creators should have and move on to the next.

Student #3.
I think the Hawaiian Hula teacher has a strong case against the Japanese Hula dance school. She must have spent a lot of time and energy creating the choreography. It is not right to steal someone's hard work and make money out of it without permission. Putting myself in her shoes, I couldn't stand the fact that somebody steals my hard work. Although it is said in the TED that no copyright protection in the fashion industry elevates utilitarian design into art, I still think it is so unfair and demotivating to the creator. Without copyright protection, there will be less innovation in the world, which will backfire on us.

Although only three students' judgments are shown here, all the students improved in terms of volume. Volume symbolizes how much they have to say and how much input they have available to make use of. When first asked the question of Hula dance copyrights in the food for thought activity, they couldn't say much. By analyzing and evaluating the TED Talk and inferring its implication with their team members, they now had a lot more words pouring out.

Regarding the contents, rationality, which equates with critical thinking, lies in their judgment along with the evidence and reasoning. They assessed analogies of two different cases of the Hawaiian Hula dance ruling and no copyright protection in the fashion industry. Then they applied the evidence from one case to another in order to construct their own
judgment on whether the Hawaiian Hula dance ruling was fair.

3. Conclusion

I was one of the many teachers who lamented students’ declining Critical Thinking (CT) skills. However, I was shocked in a good way with the outcome of this lesson plan. The students transformed in a limited time and were able to construct their own judgment with rationality. Students seem to need step by step lesson plans in which all students, despite their motivation and pre-knowledge levels, can exercise CT and come up with a rational judgment within class time. As the saying “practice makes perfect” goes, repetition is a key for CT. I recommend that teachers incorporate CT into their class lesson as much as possible in order not to find themselves lowering their academic expectation for their students.
1 Analysis

A Recognizing and using the basic terminology of reasoning

B Recognizing arguments and explanations

C Recognizing different types of reasoning

D Dissecting an argument

E Categorizing the component parts of an argument and identifying its Structure.

F Identifying unstated assumptions

G Clarifying meaning

Expansion

E.g. argument, reasons, conclusions, analogy, inference, assumptions, flaws. This skill underpins most critical thinking skills.

Recognizing argument is a fundamental sub skill in Critical Thinking. (An argument is defined as one or more reasons offered in support of a conclusion). Being able to distinguish between argument and non-argument as well as between argument and explanation.

Recognizing that arguments use different types of reasons, e.g. common knowledge, statistics, conditional statements, scientific data, ethical principles etc. More advanced recognition will include recognizing different forms of argument, e.g. deductive proof, hypothetical reasoning, reduction ad absurdum.

Extracting and separating the relevant material from the less relevant (e.g. rhetoric, background). Identifying the key claims which might form parts of the argument.

Recognizing the parts of an argument and the function they play. E.g. evidence, examples, reasons While “dissecting an argument” and “categorizing component parts” often co-occur and work together iteratively, they are separate sub skills.

Looking for things (e.g. facts, beliefs, principles) which are essential to the argument but have not been explicitly presented.

Detecting, avoiding and removing ambiguity for the purposes of reasoning soundly or judging the soundness of reasoning. Removing confusion over the meanings of words, phrases or expression of ideas that might alter the thrust or efficacy of the argument.

2 Evaluation

A Judging relevance

B Judging sufficiency

C Judging significance

D Assessing credibility

E Assessing plausibility

F Assessing analogies

This process is more than simply judging relevant versus irrelevant. It entails judging the degree of relevance of a claim or piece of evidence to a particular interpretation or conclusion.

Determining whether there is enough evidence to support a conclusion. Recognizing the difference between necessary and sufficient conditions.

Assessing the degree of importance of evidence in relation to conclusions and arguments.

In relation to claims, assessing the likelihood that a claim could be true, i.e. “Is this the sort of thing which is likely to happen?”

In relation to explanations, assessing the likelihood that the explanation given is the correct one (e.g. by considering alternative explanations). This can often play an important role in assessing arguments.

Judging whether two things being compared are sufficiently alike for the comparison to be useful (i.e. in clarifying and strengthening an argument).
| 3 | Inference | A | Considering the implications of claims, points of view, principles, hypotheses and suppositions. | This requires looking at the wider implications of the components of the argument, including its overall conclusion. This will include checking for consistency and corroboration between the claims within an argument. Principles may be ethical principles. |
| 4 | Synthesis/construction | A | Selecting material relevant to an argument | Gathering and collating appropriate and sufficient evidence. |
|    | B | Constructing a coherent & relevant argument or counter-argument. | Using one's knowledge of argument structure to construct one's own argument. |
|    | C | Taking arguments further | Extending an existing argument. Constructing new lines of reasoning which advance the argument. |
|    | D | Forming well-reasoned judgements | Arriving at carefully considered and more accurate judgments in situations where there is insufficient evidence to allow certainty. (This involves applying all the relevant critical thinking skills) |
|    | E | Responding to dilemmas | This skill is applied in a situation where some action has to be taken in response to a problem, but any action taken will have undesirable consequences. It involves recognition of the consequences of competing courses of action, and an attempt to judge between them. |
|    | F | Making and justifying rational decisions | Deciding upon the best course of action once a conclusion has been drawn having applied the relevant critical thinking skills. |
| 5 | Self-reflection and self-correction | A | Questioning one's own pre-conceptions | Gaining awareness of, examining and evaluating one's own pre-conceptions and being prepared to set them aside. |
|    | B | Careful and persistent evaluation of one's own reasoning. | Applying all of the above to oneself, with the aim of greater accuracy in one's own reasoning. |
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Figure 2. One Team’s Answer Sheet

Figure 3. Student #1’s Judgment
Notes

1 Cambridge Assessment is an international group designing and delivering examinations and tests around world such as University of Cambridge ESOL for English for Speakers of Other Languages (ESOL).

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