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The Debate Technique in EFL Classrooms: Impact on Critical Thinking and Speaking Skill: A Critical Review Study Conducted on Two Academic Articles Published in the Educational Field

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Abstract
The present study is a secondary research which aims at collecting, organizing and synthesizing preexisting data to shed light on the importance of classroom debate as a technique to develop and enhance critical thinking skills and speaking skill. It also provides a comparative and a critical analysis of two academic research papers published in the educational field that address the CT, debate and speaking skills issue. These two research papers have been critically evaluated in terms of validity and reliability of research methods and tools implemented, rigorousness of data analysis and pertinence of results. Results from the analysis of article X Indicate that the researcher presented a broad yet focused theoretical background around the present issue. He also used valid and reliable data collection instruments and executed a rigorous data analysis. The research findings were relevant and in adequacy to the overall aims and questions. As for article Y, the analysis revealed that the researchers used a mixed method approach to collect data which increased its reliability. Compared to article X, data analysis was not as rigorous yet, relevant to the research aims and questions. Based on the evidence, theories and arguments reviewed in the theoretical background and the critical evaluation of both articles, it is indicated that classroom debate does provide a significant improvement on EFL learners' critical thinking and speaking skills.

Keywords: EFL Learners, Critical Thinking, Speaking Skill, Classroom Debate.

1. Introduction

From the time of Socrates to the contemporary concerns about the need for educated university graduates and quality workforce, the ability to think critically and to speak competently has been recognized as an important and necessary outcome of education. Learners who have high-levels of critical thinking and strong communicative abilities display competencies that are needed and valued in both academic and professional fields.

A21st-century Partnership between business communities, education leaders, and policymakers in the United States has listed speaking abilities and critical thinking skills as two of the most important skills needed in the near future (Voogt & Roblin, 2012).

With the proliferation of knowledge in an expanding technological world and the popularity of fake news, there is now a greater need for learners to develop the skill to think critically. Learners need critical thinking skills to read beyond the literal, to write convincing essays, to evaluate the integrity and validity of information they are confronted with, to weigh the evidence presented to them and make judgments about what to believe and what not to

believe. (Renaud & Murray, 2008). Hence, what learners need is not more information but the ability to sieve through data and assess its credibility.

In a similar vein, as English established itself as a lingua Franca it became the shared language of communication among non-English speakers. In the classroom, mastering the speaking skill is the first indicator of language mastery. In fact, nowadays, there is a need for staff and personnel that are communicatively competent than ever before.

In light of the increased attention on critical thinking and speaking skills, educationalists and scholars have started to research for various strategies and methods that might promote their development in the classroom (Halpern, 2003). In fact, students face difficulties in developing their CT skills due to ambiguous CT instruction and poor background knowledge (Amin & Adiansyah, 2018). In the same way, they face challenges in enhancing their speaking skill due to affective factors such as anxiety (Burns & Joyce, 1997). Just as students face difficulties, teachers find it challenging to teach these skills and achieve progress. One challenge that confronts instructors in teaching CT is the term itself, as scholars defined CT differently it might be difficult to design a CT course or to adapt materials (El-Soufi, 2019). As for speaking skill, teachers also find it difficult to motivate students to speak in the classroom and to design oral activities that are inclusive to all students. Indeed, debate, as an argumentative and collaborative activity, is espoused as an ideal technique to develop CT and stimulate learners to speak confidently. Yet, to what extent does classroom debate contribute in developing CT and speaking skill? In this respect, I have chosen to evaluate two research papers that aim to investigate whether or not using debate significantly improved Malaysian and Indonesian (EFL) students' critical thinking and speaking skill and whether students had a positive perception towards debate participation.

That is to say, debate involves not only determining what to say but how to say it (Roy & Macchiette, 2005). In order to develop learners' critical thinking and speaking skills, instructors need to incorporate a variety of strategies into their classrooms because students benefit more when instructional strategies that promote active engagement are utilized.

The overall purpose of this research is to help find out valuable information about whether classroom debate has a significant improvement on EFL learners' critical thinking skills and speaking skills. It also allows insight on the significance of critical thinking skills and speaking skills in both academic and professional fields. Most importantly, the study at hand helps identify the validity and reliability of two research papers published in the educational field.

Initially, the study at hand can be beneficial to EFL learners in terms of becoming aware of their critical thinking skills. It can also be beneficial to EFL instructors in terms of being mindful of the different strategies and activities that can motivate their students to speak in the classroom. Despite its limitations, this study can be beneficial to Algerian policymakers to include critical thinking into higher education curriculum. As for theoretical evaluation of research papers, it can be beneficial to beginner researchers in terms ensuring and maintaining the validity and reliability of their data collection instruments.

It is necessary to specify that, in this paper, the term "debate" is used as both countable and uncountable nouns to refer to a formal discussion of a particular problem and the act of expressing different opinions.

2. Research Background

Due to the proliferation of knowledge and that fast spread of fake news, the need to develop critical thinking in learners is a pressing issue. Critical thinking offers a complex whole of skills that enable EFL learners to rationalize data and confirm their credibility before submitting them to be true.

2.1. Definition of Critical Thinking

The concept of critical thinking has been polished and enriched since its appearance2500 years ago. A review of literature in the field of critical thinking revealed a general lack of consensus on how critical thinking is best defined (Reed, 1988). One of the major stumbling blocks to consensus are the conflicting interpretations, theories and models of two distinct disciplines namely, philosophy and psychology (Reed, 1988).

Reference to critical thinking can be found in the early 1900s when Dewey wrote about thinking. Dewey (1993) defined critical thinking as "Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds which support it, and therefore the further conclusions to which it tends" (p.6). He explains that critical thinking is an active process that requires reflecting on and evaluating reasons to reach reasonable conclusions. Dewey compared critical thinking to the application of logic to analyze information.

On the one hand, the philosophical approach views critical thinking as a range of dispositions, such as open-mindedness, that are more important than skills alone. Ennis (1989), one of the prominent philosophical theorists, defined critical thinking as "reasonable reflective thinking focused on deciding what to believe or do" (p.4). Ennis explains that it is insufficient to only have the requisite critical thinking skills to clarify, to evaluate well and to infer wisely, however, an efficient critical thinker must tend to apply these skills willingly.

On the other hand, from a psychological standpoint, Halpern (1996) defines critical thinking as "thinking that is purposeful, reasoned, and goal directed. It is the kind of thinking involved in solving problems, formulating inferences, calculating likelihoods, and making decisions" (p.5). Psychologists have researched and emphasized skills involved in thinking critically, such as analysis and evaluation, often ignoring dispositions, sensitivities, and values needed to be an effective critical thinker.

Based on the above statements, there seems to be uncertainty surrounding the definition of critical thinking. The core disagreement is based on the lack of relationship between philosophy and psychology. According to Bacon (2000), while philosophers believe that critical thinkers are inquisitive in nature and critical thinking is a set of qualities that are born with a person, psychologists tend to outline critical thinking by the types of actions or behaviors critical thinkers can do. Despite the contradicting theories, both schools of thoughts

come to the agreement that CT is active goal-directed thinking that requires the suspension of judgment before forming a conclusion.

Regardless of the major theoretical effort that has gone into analyzing and explicating the concept of critical thinking, it is still questionable whether these definitions have managed ultimately to make the concept comprehensible for future research (Capossela, 1998).

In the light of facts mentioned, I can deduce that critical thinking is both a process and a cognitive ability that allows the learner to evaluate information, formulate questions, and provide possible solutions effectively

Although efforts toward consensus between philosophy and psychology have been made, and widely accepted definitions of critical thinking exist, experts have not uniformly agreed on a single overarching definition. There is enough agreement, however, to pursue research on approaches to teaching critical thinking and on emphasizing its significance in both academic and professional fields (Reed, 1998).

2.2. Debate as a Technique to Develop Critical Thinking

In an EFL setting, where learners have inadequate opportunities to practice English in real-life situations, debating opens up opportunities for them to use the language in order to express their opinions with logic. Debate is a single activity in which students need to use their linguistic skills, critical thinking skills along with skills in delivery, presentation and vocabulary building (Alasmari & Ahmed, 2013).

Roy and Macchiette (2005) define debates as “the systematic presentation of opposing arguments about a specific issue” (p. 16). As participants listen, they must consider multiple viewpoints and evaluate the strengths and weaknesses of arguments to and arrive at a valid opinion.

Differently,Freeley et al. (2005) argue that “debate is the process of inquiry and advocacy, a way at arriving to a reasonable judgment on a preposition” (p. 6). Individuals may use debate to reflect on various perspectives in order to reach conclusions.It can also be used to persuade individuals to agree with a decision. Because debate requires listener to comparatively evaluate competing choices, it requires critical thinking.

Based on the aforementioned definitions, Ican say that debateisan interactive argumentative activity in which students defend their point of views based on their position. Debate urges students to think about the multiple sides of an issue and drive them to communicate and interact with one another.

Debating in the classroom can take many forms. The following debate activities offer a range of opportunities to increase students’ understanding and involvement with the course material. The term format is simply used to indicate the sequence and length of individual exchanges. Kennedy (2007), presents the following types of debate activities:

- **The four-corner Debates**

Frequently, this activity starts with a question or a statement. Learnersare then given the time to individually consider the statement and form their views. Once the reflection is over,

the four corners of the classroom labeled “strongly agree,” “agree,” “disagree,” and “strongly disagree” are formed. Based on their knowledge, learnersmove to the corner that best represents their position. Moderated and timed by the teacher, each group presents his strongest arguments. After the debate is over, learners are permitted to switch sides if their personal views have been changed.

- **Role-play Debates**

Role-play can be useful in avoiding dualistic debate models by assigning students to argue on behalf of different characters. For instance, in the issue of national health care, students can be assigned roles such as a doctor, a patient, a wealthy and a poor individual. By debating the issue through the embodiment of different characters, learners can broaden their understanding of the issue and its complexity.

- **Fishbowl Debates**

Fishbowl debates involve grouping chairs in a circular pattern forming a fishbowl. To maximize collective understanding, several chairs are placed inside the circle representing the different positions. Chairs can also be added to students representing the audience. To reinforce attention among those outside the fishbowl, a neutral chair can be added to the middle allowing an extra member to enter the fishbowl and ask questions or make an argument.

- **Think-Pair Share Debates**

This type of debate requires students to think and make notes individually. After personal consideration, pairs work together to compare their notes and create arguments supporting both sides of the issue. Once complete, the teacher forms teams out of the compatible pairs. The newly formed groups of four discuss the issue, choose a position, and present their strongest arguments.

Despite the varied formats, all debates encompass the notion of argumentation. Ultimately, the core concept of any debate is the notion of advocacy. In most cases, at least one side in a debate needs to advocate forsome proposition while the other side rebuts. Consequently, all types of debate promote viewing issues critically from multiple perspectives. This implies students to analyze and evaluate the logical connections and build arguments for their position towards the subject under discussion.

All things considered, classroom debate can be shaped in different ways. Instructors are able to manipulate these formats to include the majority of their students in authentic interaction that permits them to present their views. Although the process of debate is based on argumentation, the different types and activities allow teachers to focus on a few elements of speech such as pronunciation, vocabulary and intonation.

As much as debate requires critical thinking skills, it also requires speaking skills. As an argumentative activity, classroom debate challenges the participants to make an oral defensible judgment in favor of their position. As an interactive activity, it allows them to

communicate with each other using the target language. Classroom debate is assumed to be an effective technique to develop learner's speaking skills.

2.3. Debate as a Technique to Develop the Speaking Skill

According to Ur (1996) "Of all the four skills (listening, speaking, reading and writing), speaking seems intuitively the most important: people who know a language are referred to as 'speakers' of that language" (p.120). Classroom activities that develop learners' ability to express themselves through speech would, therefore, seem an important component of a language course (Ur, 1996). In-class debates as an interactive technique deliver communication opportunities through which learners can practice and develop their speaking skills.

As much as debate requires critical thinking skills and cognitive capacities, it also requires competent speaking abilities. Roy et al. (2005) state that "Debate involves not only determining what to say but how to say it" (p. 265).

Not only, students have to interact with each other using the target language, they also have to communicate their arguments using the highest end of oral production in the favor of the case being proven. Hence, debaters have to perform two tasks simultaneously that is, interactive and extensive speaking. The delivery phase of the debate prompts students to interact and communicate as a group to form and answer then, individually produce speech by presenting their arguments. In order for their speech to be logical, convincing and comprehensible, students must provide evidence by being fluent and accurate and by using correct grammar, pronunciation and vocabulary.

Likewise, debate has the potential to reduce speaking anxiety and stage fright. Often, students attending speaking classes feel anxious due to pressure from the speaking tasks which require them to present individually and spontaneously within limited time. When working in small groups, learners are reported to be less anxious and experience little trouble speaking. In other words, the comfort of being in a team and the sufficient makes learners less inhibited and more willing to speak. Besides having enough time for preparation reduces their stress and increase their productivity. Debate as a collaborative and interactive technique enhances speaking skills and reduces speaking anxiety.

Generally, students' perceptions seem to indicate that taking part in debate does improve their speaking skills. Williams et al. (2001) surveyed 286 debate participants at 70 different universities. These students rated improved communication skills as the most considerable benefit of debate participation. Similarly, students surveyed by Combs et al. (1994) reported a statistically significant improvement in their oral communication skills as a result of in-class debate participation.

In contrast, results from Ferris' (1998) study disclosed that learners were so much worried about classroom discussions and taking part in classroom debates. This implies that debate as a speaking activity can increase learners' anxiety rather than reduce it. Hence, classroom debate cannot be disclosed as impeccably effective in reducing learners speaking anxiety.

Given these points, it can be inferred that debates support learners to skillfully and surely use evidence and arguments in their classroom interactions. To make those reasons understandable and convincing, debating motivates students to organize their thoughts and articulate them accurately and fluently in their oral productions.

To sum up, in-class debates can be considered as an effective strategy to enhance learners speaking skills. Eventually, debates are speaking situations in which conflicting points of view are presented and argued. Therefore, it is apparent that debate has a positive influence on the development of speaking skills since this activity requires a spoken discourse and verbal communication among the participants.

3. Overview of the Two Articles

In this section of the study, a brief overview of the two articles critically evaluated is provided. The focus is going to be on the research objectives, theoretical background, approaches, data collection and analysis and overall results. The two articles are as follows:

Article X: Iman, J. N. (2017). Debate Instruction in EFL Classroom: Impacts on the Critical Thinking and Speaking Skill. *International Journal of Instruction*, *10*(4), 87-108.

Article Y: Zare, P., & Othman, M. (2015). Students' perceptions toward using classroom debate to develop critical thinking and oral communication ability. *Asian Social Science*, *11*(9), 158.

3.1. Article X

In general, this article is about the impact of the World School Debate Championship formation on Indonesian learners' critical thinking and speaking skills. The study is conducted at the Islamic Senior high schools MAN 3 Palembang with tenth-grade students in the academic year of 2013-2014. The population of the study consists of 48studentsdivided equally into an experimental and a control group. Students are purposively selected.

In this research, the quasi-experimental design is used. The experimental group received a pre-test treatment using WSDC and then a post-test after 21 sessions. Meanwhile, in the control group, the researcher only administered a pre-test and post-test without any treatment. Consequently, the quantitative approach is adopted to collect data. In addition to the test, the researcher used the Student Oral Language Observation Matrix scale (SOLOM) to measure speaking sub-skills improvements while a critical thinking rubric, is used to measure CT sub-skills improvements.

The results are compared and analyzed using the SPSS program. The findings showed that there is a significant difference between the experimental and control group and a high contribution of debate towards particular and general aspects of CT and speaking skills. Overall, the layout of articleX is adequately structured and organized.

3.2. Article Y

The purpose of this article is to make inquiries about students' perceptions on employing British parliamentary debate to improve critical thinking and oral communication ability. The population of the study includes 16 undergraduate students majoring in Teaching

English as a Second Language at the Faculty of Educational Studies, University Putra Malaysia. The participants were randomly assigned to a group and took part in debates for nine sessions throughout one semester. The date of the research is not mentioned.

Data collection is completed through both quantitative and qualitative approaches. At the end of the nine sessions, students were given a survey questionnaire which consists of twenty-one statements using a five-point Likert scale and were administered semi-structured interviews whereas, reflective papers containing eight open-ended questions were distributed at the beginning and at the end of the study. The quantitative data were analyzed through statistical analysis (mean score) while the qualitative data were analyzed in a non-numerical method.

The results of the study indicate that students found classroom debate an innovative, interesting, constructive, and helpful technique to teaching and learning. The respondents also believed that participating in classroom debate helped them improve their speaking ability and enhance their critical thinking skills. It is worth mentioning that the layout of the article is effective and easy to follow. Nevertheless, the paragraphs tend to be too lengthy and pack the information together.

It is necessary to highlight that, in this paper, both articles are highly complementary. The research in the first article by Iman (2017) is carried out from a researcher's perspective using quantitative instruments while the study in the second article, by Zare and Othman (2015) is carried out from students' perspectives using both qualitative and quantitative approaches. Hence, conducting research from different perspectives allow for deep insight on the investigated issue.

Carrying out research from a researcher's perspective has a significant impact on formulating the research questions. It allows for more focused aims and therefore, accurate results while conducting research from students' perspectives, provide direct feedback on areas of focus for future inquiries. Accordingly, the two articles are highly complementary as they provide in-depth data from different perceptions on the same issue. The next section will provide a critical analysis of both articles.

4. Critical Evaluation of the Two Articles

This section of this chapter will provide a comparative and critical analysis of the aforementioned articles. Both articles will be criticized with regard to appropriateness of research methods and tools implemented, rigorousness of data analysis and pertinence of results. This section will also evaluate the researchers' qualifications, ethical considerations and references.

4.1. Evaluation of the Research Design and Procedure

The research design allows the reader to understand how the research results were reached. It is important that the chosen instruments measure the concept being studied in an unwavering and consistent manner. Besides, the population and sampling procedure should fit the research purpose.

In article X, the researcher adopted the quantitative approach. Iman (2017) used a quasi-experimental design of nonequivalent pretest-posttest control group design. In addition to the test, a SOLOM Scale and a rubric were also employed to collect data. Although a rationale behind the test and the scale is not mentioned, a rationale behind the rubric is stated by the author in the review of literature section. Besides, the researcher neither presented a sample of the test nor discussed its limitations. Nonetheless, in articles, authors are not required to provide samples of their instruments. They are however required to do so when submitting a dissertation or a thesis.

The aim of this research is to investigate whether or not using debate significantly improved students' CT and speaking skill and how much debate contributed to each of their aspects. The pretest-posttest design not only allows the researcher to determine if there is a difference between experimental and the control group but it also can determine how much of a change or how much growth there is between the pretest and the posttest. The scale and rubric employed provide exact and numerical measurements regarding the impact of debate on specific speaking and CT sub-skills. For this reason, the methods and process of collecting data are appropriate to the research questions.

It is difficult to evaluate the ratability and validity of data collection instruments as the researcher did not provide a sample of them. However, I can evaluate the measures the researcher took to ensure both principles. Reliability concerns the extent to which a measurement of a phenomenon provides stable and consist result (Carmines and Zeller, 1979). Reliability is also concerned with repeatability. For example, a scale or test is said to be reliable if it yields similar measurements when administered under the same conditions to the same person on two separate occasions.

In this article, in order to figure out the reliability of the test, the researcher used inter-rater reliability. Simply, after administering the test, students' scores were produced by two raters independently and a correlation coefficient was calculated between them for both speaking skills and CT. The results showed that there are significant correlations between the two raters' judgments for both variables. Hence consistency and repeatability are ensured. Moreover, the researcher fairly explained all instruction procedures related to debate to the participants. This increases the reliability of the research. Yet, in contrast to article Y, there is no triangulation of data as only one instrument has been used. This influences reliability significantly.

As for test validity, Cohen et al. (2007) explain that "Validity, on the other hand, concerns the extent to which the test tests what it is supposed to test. This devolves on content, construct, face, criterion-related and concurrent validity" (p. 432). The test as a selected instrument is valid and is in adequacy with the objectives and the research questions of the study. But we do not know if the test itself is valid because the researcher did not present any sample of it.

As far as the reliability of the SOLOM scale and rubric is concerned, the researcher did not disclose any information about maintaining their reliability. However, it seems like the instruments have been chosen carefully as they are relevant to the research questions and aims. The researcher presented a convincing rationale behind his choice. SOLOM is a rating scale that teachers can use to assess their students' command of oral language. It measures

speaking features such as vocabulary, pronunciation and fluency whereas critical thinking rubric measures aspects of CT such as identifying and explaining issues, evaluating evidence and evaluating conclusions. For these reasons, scale and rubric validity is achieved.

Regarding the research population, the researcher introduced the participants with insufficient details. The participants were 48 Indonesian tenth grade students enrolled in Islamic Senior high schools MAN 3 Palembang. The sampling type used was purposive sampling or, also known as non-probability sampling. The researcher could have added more information about the participants such as age and gender. Besides, there is no indication that the teacher is the researcher.

When evaluating the number of cases in a research, there is no clear-cut answer for the correct sample size because it depends on the purpose of the study and the nature of the population under scrutiny (Cohen et al. 2007). However, the larger the sample is, the more accurate the results are and the more reliable the research becomes. Though very small, a sample size of thirty is held by many scholars to be the minimum number of cases in research if the researcher wishes to use statistical analysis (Cohen et al. 2007). Kendal (2015) further argues that "to assess the sample size we really need to look at the researcher's conclusion" (p.168). Namely, if a small sample size is selected, the research conclusion should be bound to the sample size only and not generalized to include a larger population. Notably, in article X, the conclusion is targeted toward the 48 students only which makes the sample size highly accurate.

The sampling procedure, however, lacks accuracy as it may be open for bias. The selectivity which is built into a non-probability sample derives from the researcher targeting a particular group, in the full knowledge that it does not represent the wider population, it simply represents itself. (Cohen et al. 2007). In purposive sampling, the researcher handpicks the cases to be included in the sample on the basis of his judgment of the participants' possession of the particular characteristics being sought (Cohen et al. 2007). In this way, the researcher builds a sample that is satisfactory to his specific needs only. Particularly, the researcher did not discuss any sampling limitations or research needs to sample a specific unrepresentative group. This could increase the subjectivity of the sampling procedure.

Another major flaw that can be observed in article X is that the researcher neither made clear how ethical standards were maintained nor stated that he obtained consent from participants. Cohen et al. (2007) argue that informed consent serves as a foundation on which subsequent ethical considerations can be structured. Accordingly, conducting a research without participants' accord is one of the factors causing dilemmas in research.

Given the above evaluation, I can say that the research design of article X is adequately structured and easy to follow. The researcher used clear terminology and incorporated sufficient information in describing the instructional procedures leading to the conclusion. The data collection methods were overall valid and reliable. Also, the chosen research population, size and sampling procedure were representative of the established aims. Overall, the researcher carried out his research properly.

As for article Y, the researcher adopted a mixed-method approach. The quantitative data were collected through a survey questionnaire which consisted of 21 items with a 5-point

Likert scale while the qualitative data were gathered through reflective papers, including 8 open-ended questions, and a semi-structured interview. The researchers presented a thorough rational behind each chosen instrument and a detailed description of instructional procedures. Yet, similarly to article X, no limitation of application is discussed.

Making inquiries about students' perceptions requires triangulation of data as statements may be subjective. The exclusive reliance on one method of data collection may bias or distort the researcher's picture of the particular slice of reality being investigated. May (2001) argues that questionnaires could be socially biased as respondents may not be honest in reporting themselves. Fortunately, the researchers have not depended only on the results of the questionnaire in reporting their findings, but have double checked them using semi-structured interviews and reflective papers to make it clear that their results are reliable and authentic. This implies that the methods and data collected are in adequacy with the research questions and aims.

According to Cohen et al. (2007), interviews enable the participants to discuss their interpretations of the world in which they live and to express how they regard situations from their point of view. Thus, interviews allow for a more detailed description and close monitoring of students' perceptions. Overall, the triangulation of methods provides in-depth information on the said topic and ensures reliability.

In any research, validity and reliability imply that the items used measure correctly the purpose they are used for based on credible data. Regarding the first two instruments, questionnaires can be deemed valid if the respondents who complete the questionnaires do so accurately, honestly and correctly (Belson l986, cited in Cohen et al. 2007). Since reflective papers are based on questions too, it is logically that they follow the same narrative.

On this basis, judging from the participants' statements, I can say that the respondents who completed the questionnaire have done so accurately and correctly. Besides, the participants are bound to a five-point Likert scale (Strongly Disagree=1 to Strongly Agree=5) which leave little room for error. Correspondingly, the featured reflective papers' answers indicate that the open ended questions were also answered accordingly. However, it is difficult to know if the students' statements are honest as questionnaires in general yield subjectivity. Furthermore, out of the 21 questions that form the questionnaire, only the 2 last items addressed the speaking issue while the 19 first items dealt with CT. This leads to a problem of validity.

In research, reliability is concerned with repeatability. Cohen et al. (2007) purport that, in a quantitative study, the research could show same results if it were to be conducted on the same participants in the same situation. This being said, it is difficult to decide whether the questionnaire is reliable or not as there has not been a previous study conducted on the same group of the participants in the same context.

As for the third instrument, in interviews, inferences about validity are made too often on the basis of face validity. That is whether the questions asked look as if they are measuring what they claim to measure (Cannell and Kahn, 1968 cited in Cohen et al. 2007). In this sense, the interview has high validity as it contains questions that measure students' perceptions, feelings and preferences towards participating in a debate.

Reliability, however, is to have a highly structured interview with the same format and sequence of words and questions for each respondent (Silverman, 1993 cited in Cohen et al. 2007). According to the researchers, the interviewees were volunteers which means that the rest of the participants did not take the interview at all. In this regard, reliability is affected but not absent.

In parallel to article X, in article Y the population of the research was not adequately described. The participants of the study are 16 undergraduate Malaysian students randomly selected from the university of UPM.The researchers should have added few other characteristics such as gender, age and grade.

A sampling size of 16 participants is considered not as extensive. As mentioned above, Cohen et al. (2007) explain that a sample size of thirty is said to be the minimum number for any research if the researcher wishes to use statistical analysis. But, they still urge researchers to use a larger sample to make their data more reliable. Notably, both statistical and verbal data were used in this study as the researcher used a mixed-method approach. The 16 cases of this article are, therefore, considered less than a merit size yet, valuable as the conclusion was targeted towards the sample size only.

In random or probability sampling, each member of the population under study has an equal chance of being selected. Thus, a probability sample will have less risk of bias. The sampling method fits the research purpose. But, we must keep in mind that few interviewees were volunteers. Cohen et al. (2007) argue that "In cases where access is difficult, the researcher may have to rely on volunteers" (p.116). In particular, the researchers did not discuss any limitations or difficulties that might have affected the sampling process. In this respect, the description of the sampling method lacks accuracy.

Ethical considerations can be considered as the most important part of a research. In presenting the results of the questionnaire, the researchers did ensure anonymity of statements. Hence the identity of participants is protected. Prior to every interview, the interviewees were briefly explained the objectives of the interview, the expected time it may last and were also asked to grant the researcher the permission to use the recorder. The interviewees were informed that their responses will be kept confidential. Besides, the fact that the subjects volunteered implies that they consented to participate in the research. Thus, I can say that the researchers maintained the minimum ethical considerations.

In a nutshell, based on the above evaluation, I can say that the research design of article Y is academically presented and organized. The instruments used are valid and appropriate to the research questions. Perceptions can only be investigated using questionnaires and interviews although they can be biased and yield subjective data. Despite the small sample of cases, the research population was overall representative of the research.

4.2. Evaluation of Data Analysis and Findings

Data analysis helps the reader understand how the drawn conclusions have been reached. This section should contain enough details about the analysis of the data collected and the main findings of the research.

In article X, the data obtained from the test, the SOLOM scale and the rubric were analyzed using the Statistical Package for Social Sciences program (SPSS) through descriptive statistics. This section discussed the descriptive statistics, the progress analysis (Paired sample t-test), the mean difference analysis (Independent sample t-test), and the percentage analysis of each aspect contribution (Stepwise regression analysis) (Zare & Othman, 2015).

The findings showed that debate particularly WSDC had a significant improvement on general and particular aspects of students' critical thinking and speaking skills. The contribution to CT as a whole was (0.821 or 82.1%). Partially, the contribution of each aspect of CT varied from context 32.3%, issue 26.2%, implication 20.1% and assumption 6.6%.On the other hand, there was a (0.961 or 96.1%) contribution of the debate toward the whole aspects of speaking skill. Partially, the contribution of each aspect of Speaking Skill was as follows: fluency was 67.4%, grammar was 13.7%, pronunciation was 8.3%, comprehension was 5.4% and vocabulary was 1.4%. Overall debate has a considerable improvement on both skills.

The results also indicated that the students in the experimental group got higher CT and speaking skill achievement than those in control group. In the experimental group, CT results showed that 100 % of students were in a good category with the mean score of 16.16.For the speaking skill, the result showed that 100 % students were also in a good category with the mean score of 17.93.Based on the category of score range, it could be concluded that the experimental group's CT and speaking skills achievements were in a good category.

In contrast, in the control group, the CT results showed that 29.2 % of students were in average category with the mean score 11.57 whereas speaking skills results, showed that 66.7 % students were in average category with the mean score 13.34. Hence, it could be concluded that the CT and speaking skill achievements of the control group were in an average category.

In this section, it is apparent that the researcher efficiently explained all the steps involved in the data analysis procedure. However, he did not clarify why the current analysis strategy is particularly chosen. According to Cohen et al. (2007), the data analysis strategy undertaken should be determined by the researcher in relation to the nature of the study and the methodology chosen. The analysis strategy must be fitting to the research purpose and questions.

Correspondingly, all data obtained were taken into account and followed a rigorous analysis process. The researcher did a proper job separating and presenting the analysis of each variable. He also included few tables to make the analysis much clearer. The results of data analysis established a strong proof of the research claims and were relevant to the research questions.

As for article Y, the quantitative data were analyzed through a mean score while the qualitative data were analyzed in a non-numerical method. The results of the study indicate that students found classroom debate an innovative, interesting, and helpful approach to teaching and learning. They also believed that participating in classroom debate helped them overcome the fear of speaking before a crowd, boost their confidence to speak and express

their opinions, improve their speaking abilities and enhance their critical thinking skills (Zare & Othman, 2015).

According to the total mean score (m=4.16) of the whole survey questionnaire(quantitative findings), students demonstrated a positive perception and outlook toward the classroom debate. Participants enjoyed the debate and found the experience interesting (m=4.38). Regarding critical thinking, students claimed that classroom debate enhanced and promoted their CT skills. They believed that debate reduces biases and promotes considering and understanding different perspectives (m=4.06) and helps students learn to use evidence and data to support their arguments and viewpoints (m=4.13). As for oral communication, participants believed that debate improved their oral communication abilities, argumentation skills and actually helped them improve their speaking skill (m=4.38).

With reference to qualitative findings, students' responses to the open-ended questions in reflective papers and to those of the semi-structured interview are generally consistent with their responses to the survey questionnaire. Reflective papers' statements show that students found debate an enjoyable and effective in reducing anxiety and stage fright. For instance, one the students commented "It reduces the level of my anxiety in speaking in front of the crowd" (Zare & Othman, 2015, p. 164). Correspondingly, interviewees described debate as an interesting, helpful, interactive, useful and challenging activity. "At first I was intimidated, but then as time go on, I sensed I like it and find it interesting. I really enjoyed debating" (Zare & Othman, 2015, p. 165). From all the above description, it can be concluded that students had a positive perception towards debate participation.

In research, although it is frequent that quantitative data is analyzed statistically while quantitative data is analyzed in a non-statistical method, the researchers should have clarified why the particular analysis strategy is chosen. As opposed to article X, this article included less explanations regarding the steps involved in analyzing both qualitative and quantitative data.

Generally, in educational research, quantitative data goes through a more rigorous analysis process than qualitative data. Particularly, in this research, despite accounting for all data gathered, the quantitative analysis procedure was not rigorous enough but, appropriate to the research questions. This section also lacks organization and proper presentation of results. For instance, in analyzing and displaying the results of the questionnaire the researchers should have separated the statements related to overall debate from those related to critical thinking and communication ability. Besides, only one table displaying the survey questionnaire's mean scores was used, it made the analysis procedure somehow clearer. As a whole, the quantitative data analysis lacks strength and organization.

Likewise, the qualitative data analysis was not rigorous. Usually, in analyzing quantitative research, coding is used. Coding is the procedure of labeling and organizing the qualitative data to identify different themes, in this case positive and negative perception. The researchers of article Y did not use the coding procedure to extract categories or themes, they simply presented the participants' statements with no analysis. No reference is made to the number of students who gave a positive or a negative answer. Therefore, the analysis presents weaknesses

On the basis of the above evaluation of the data analysis and the research results, I can say that the analysis procedure of article X was more rigorous and well-presented than article Y. The findings of both articles, on the other hand, were relevant to the established research aims and questions.

5. Conclusion

This article has provided a comparative and a critical analysis of two distinct but related academic papers published in the educational field. Article X is about the impact of WSDC on general and particular aspects of students' critical thinking and speaking skill. The researcher clearly indicated the aim of the study and presented a board yet focused theoretical background around the issue. He also used valid and reliable data collection instruments that are in adequacy to the research aims and questions. Data is analyzed rigorously leading the reader to understand how the conclusions are drawn while the purpose of article Y, is to make inquiries about students' perceptions on employing British parliamentary debate to improve CT and oral communication ability. The aim is clearly stated and focused on the main idea. The researchers gave an appropriate overview of the available literature surrounding the research problem. They also used a mixed method approach to collect data which increased its reliability. Although data analysis could have been more rigorous, the presented results are relevant to the research aims and questions. The above evaluation indicated that Iman (2017) and Zare and Othman (2015) are qualified and professionals in carrying out research.

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