A STUDY OF THE RELATIONSHIP BETWEEN DEBATE SKILLS AND ACADEMIC ACHIEVEMENT OF HIGH SCHOOL DEBATER AND NON-DEBATER STUDENTS IN SELECTED INTERNATIONAL SCHOOLS IN BANGKOK

Liu & Wei (Kevin Liu)

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Education in Curriculum and Instruction Graduate School of Education Assumption University of Thailand 2012
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ABSTRACT

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Key Words: DEBATE, RELATIONSHIP, ACADEMIC ACHIEVEMENT

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This study is about the relationship between debate skills and academic achievement. Debating skills is defined as analytical skills, communication skills and confidence levels, while academic achievement are measured in the form of GPA. These objectives of this study are to identify whether or not there’s a lack of debate skills in selected international high school in Bangkok, and whether or not there’s indeed a correlation between debate skills and GPA. 254 students out of 750 are selected as samples to conduct this research study.

Questionnaires, LSAT, IELTS, and GPAs were used as research instrument to collect data. Questionnaires were used to measure confidence levels, LSAT for analytical skills, IELTS for communicative skills and GPA for academic achievement. Descriptive method was used to identify whether or not there’s a lack of
debate skills in the selected international schools. A t-test was used to identify if there’s a significant difference in debaters and non-debaters. Finally, Pearson-r test was used to determine the correlation between debate skills and academic achievement.

According to the research findings, there’s a significant correlation between debate skills and academic achievement. The significance level of the test conducted was set to 0.05. Research findings also indicates that there is a slight lack of analytical skills and communication skills in the general student population in selected international schools in Bangkok. However, confidence skills were already in the satisfactory level in these international schools. The research finding also gives answers and confirms all 4 research hypothesis to be true.

Field of Study: Curriculum and Instruction  
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CHAPTER I
INTRODUCTION

This chapter presents the key idea of this research study by examining the background of the research, problem statement, and purpose of study. In addition, the research questions, research hypothesis, research objectives, and significance of study are also covered. Last but not least, this chapter also presents the theoretical and conceptual framework for this study, outlines the scope and limitation, and finally, definition of key terms.

Background of the Study

Since the last decade or so, Thailand debating society has experienced remarkable progress. It has been growing slowly but steadily and today, most of the major schools and universities have their own debate club. These clubs give the young speakers their very best support and help them reach the very top they can possibly reach. Debating today in Thailand is no longer a dream, that only the top minds and the best institutions can have, but rather a dream that everyone from all fields and all institutions have an equal shot in. The amount of interest debating receives from the students is so remarkable that today it is the centerpiece of all extracurricular activities in most of the school.

As an indication of how fast the debating society is growing—the huge number of debate tournaments and workshops that takes place in Bangkok speaks for themselves. Both Chulalongkorn University and Mahidol University, two of the leading universities in Thailand, arrange cross-training workshops where students from both high school and university level come to train themselves. Third parties arrange workshops as well and most of them are very successful.
Debate tournaments take place in Thailand all the time. Most of them, though small, by no mean are ineffective. These tournaments bring in the very best of a speaker and they push the envelope of competitive success to unprecedented levels. The biggest debate tournament in Thailand is the European Union Thailand National inter-varsity debate championship. Hundreds of high school and university students from all over Thailand comes and attend these tournaments. The competition started small in the English debate club of Thammasat University and the way it has grown in the last 8 years have been remarkable. After 5 years in Thammasat University and 2 years in Mahidol University, this year the tournament, for the first time, was taken outside Bangkok to Khon Kean University. The fact that the biggest English debate tournament is taking place outside Bangkok shows how far debating has spread in the root of Thailand and how far it has the potential to reach.

High schools and universities all over Thailand send their debate teams to these kinds of tournament on a regular basis. They send their teams not only because tournaments such as these, increases the skills of the debater at a rapid pace but also because of the fact that success of the debaters raises the status of the institution at a national stage. Institutions also happily arranges these debate tournaments because these tournaments makes the institution well known within the debating circuit and generate a image which is obviously superior compare to the other institutions.

Thailand is developing at a pace, which is very impressive. Globalization, today, is affecting Thailand more than ever. The importance of English language skill cannot be more stressed. Considering the number of users of the language and the amount of information that is decimated in that language, it is really important that Thailand catches up with the rest of the world in this aspect. With the emergence of the Internet, English is becoming the most influential language in terms of gathering
knowledge. English debating, in particular, is one of the easiest and the most effective way to develop in that language. A debater has to listen to what the other speaker is saying very intensely, analyze them and come up a response almost on the spot. There is no better way to better way for one to exercise his or her speaking and listening skills. Also, when a debater gives his he need a clear sense of structure, a sound grammar and organization. If a person can do all these things he or she shouldn’t have any problem writing as well.

When interviewed (Faktorngpan 2012), what they think about debate, some current and former and current debaters said:

“It brings logic and reason above emotions” (Benjamin So 2012)

“It helps me think analytically and react dynamically and enlarge my mindset and attitudes; it also bridges the gap between studying and working in the real world.” (Tidarat Yingcharoen 2012)

Debating certainly helps to improve the basic skill set of a student. It helps them relate their academic learning to the real world. They are trained to think critically; come up with arguments on the spot. They know how to analyze them and present them systematically. These skills are particularly helpful to students when they are doing assignments, writing a report or even finishing an exam. Debating requires open discussion. Open discussion is a part of the academic process. It helps students, overcome their fears, realize their full potential and push their limits to the fullest extent. Debating helps curve a student to become the very best he/she can be. Probably that’s why top universities around the world have debating awards and scholarships.
Debaters are ambitious. They want to make the best out of their education to that they can benefit their career and debating help these students a way normal education cannot. All over the world, critical thinking, active learning and open discussions are emphasized in education. Debating brings the world, one step closer to that goal. It is particularly important for high school students who are young and need to be groomed. The fact that debating is getting so popular in Thailand, shows Thailand’s great potential and the will to reach the top.

**Statement of the Problem**

The purpose of this study is to examine the relationship between academic achievement and Debate. To gain a better understanding on this relationship it is important to take a deeper look into the problems that arises in high schools today. The first problem we think arises when it come to the analytical ability of the students. Analytical ability is the thought process required to evaluate information effectively. Examining a problem requires attention to details, identifying core issues and a lot of focus. Thai high school students have a huge problem with their analytical skills. They fail to see the arguments on both side and even if they do they fail to judge them on their merit and draw a proper correlation. They also lack the intuition or the gut feeling that one requires while judging an issue. This analytical ability, however, varies from person to person. Probably that’s why some people are very good and improves at a staggering pace, while other find it very difficult to move pass a certain level. But more often than not, students hit a stalemate when it comes to analytical ability. High school is the stage of a student’s life where analytical ability should be developed. We rarely see the facility in Thai high schools where these
skills should be encouraged. We think that, if students are to develop, this idea of developing analytical ability should be taken into serious consideration.

Thai students also have problems with open discussion. The idea is to allow the students to speak their mind- what they think about a particular issue or how does that issue affect them. What we see during this open discussion time is Thai students lack the confidence to go ahead and open their mouth. They, most of the time are timid, shy and scared, and these factors compels the Thai students to stay in their shells.

Lack of confidence in learning is another factor in Thai students that need attention. As I mentioned above, Thai students are shy and timid. They lack confidence. They inherit this idea that they are not good enough. We see this as extremely problematic. This idea further pushes the students in their shell. Their fear that if they try something new they will fail, does not encourage them to even try. It is understandable why they think so. Every person has this fear of failing. But this is where the role of the high school is extremely important. High schools are suppose to encourage students to try new things, challenge the status quo and come up with new and innovative idea. However what we see in the high school in Thailand is- care of the students are not taken that much and they are left to come out of their shell on their own. We do not see the problem taken care of anytime soon. Thai students lack English communication in class. English is still regarded as a foreign language and they lack the confidence to even try. We think it is a problem because Thailand will be a part of the AEC in 2015; a community in which English will act as the medium of instruction and communication. It is really important that students start practicing this skill from the high school level. English language takes time to get used to. Starting at the high school level will give them a good ten to twelve years to master the language
and by the time they will be done they will be able to and compete in the integrated AEC market. The reality in Thai high schools is very harsh. These issues are not being taken care of and if they are to prepare this young generation for the competitive AEC market, they should really start taking this issue in particular very seriously. Given that all these problems exist, the aim of the study is to find if debating can help the students rectify the problems that exist in high schools today.

**Research Questions**

As a means to respond to this problem, the following research questions guided this study:

1. Is there a lack of debate skills in selected international high school students in Bangkok?

2. Is there a significant difference in academic achievement between debaters and non-debater in selected international school in Bangkok?

3. Is there a correlation between students who debate and student who don’t debate in terms of analytical skills and their academic achievement?

4. Is there a correlation between students who debate and student who don’t debate in terms of communication skills and their academic achievement?

5. Is there a correlation between students who debate and student who don’t debate in terms of confidence and their academic achievement?
Research Objectives

This study sought to:

1. Determine the debate skills of selected international high school students in Bangkok.

2. Determine the difference of academic achievement between debaters and non-debaters in selected international school in Bangkok.

3. Determine the correlation of debaters and non-debaters in terms of analytical skills and their academic achievement.

4. Determine the correlation of debaters and non-debaters in terms of communicative skills and their academic achievement.

5. Determine the correlation of debaters and non-debaters in terms confidence and their academic achievement.

Research Hypothesis

The research objectives of this study formed the basis for the following hypotheses:

1. There is significant difference in academic achievement between debaters and non-debaters.

2. There is a correlation between debaters and non-debaters in terms of analytical skills and their academic achievement.

3. There is a correlation between debaters and non-debaters in terms of communicative skills and their academic achievement.

4. There is a correlation between debaters and non-debaters in terms of confidence level and their academic achievement.
Theoretical Framework

Debate, according to Meany and Shuster (2005, p. 44), is "an organized public argument on a specific topic. It is organized, in that there are rules (protocols) governing debating. It is public because it is conducted for the benefit of an audience. It involves arguments, which are well-explained opinions. A debate is also on a specific topic, with one side arguing in favor and the other team opposing the issue."

The debate, in which this research is based on, is the educational debate which is categorized as a "public debate" in Trapp's "public sphere" (Trapp, 2005). These debates take place in what is called "debate tournament" which is a competition in which students from various high school institutions compete to prove who is superior in debating.

"Debate" in this study follows a specific format, in which each contestant must follow 3 specific criteria in their speech; the Matter, Manner, and Method. The Matter is the content of the speech that includes substantive manner and rebuttal (D'Cruz, 2003 p. 8). Needless to say, this is the part in which the contestant's analytical skill is put into test.

The Manner is the presentation of speech: the delivery skill, style, and language, which is the way the debater persuades the audiences. Confidence and communication skill heavily matters in this aspect.

The Method is the structure and organization of the speech which includes the fulfillment of speaker roles, the management of speaking times, the allocation of arguments between speakers and the cohesion of the team (D'Cruz, 2003, p. 13-15).

Academic achievement generally refers to the level of actual accomplishment or proficiency one has achieved in an academic area. In this study, academic achievement is directly reflected by a students' Grade Point Average (GPA), in which
the 3 attributes fostered through debating has a significant influence on a student's GPA.

Analytical skill is an integral part of modern education, as Kilpatrick has asserted that "...they simply cannot memorize any longer. More important than knowing information is knowing how to look it up and apply it. This is the true skill of the lifelong learner" (Kilpatrick, 1925).

Confidence is one of the highly predictive factors of achievement and interventions based on social learning theory, according to a study by Siegel, Galassi & Ware (1985, in Martin, 2002). Increased skills and confidences were likely to result in positive performance changes.

Communication skill is another highly influencing factor towards students’ performance in general. One characteristics of the modern educational system is that it encourages students’ participation in class, in which the communication skill of individuals will help in enabling them to participate in the discussion.

**Conceptual Framework**

Based on various studies on debate skills and their importance in various academic area, the instruments for this study was deduced from three skills that are regarded as important for measuring high school students' skills. Furthermore, a status as "debater" was included (those identified under this status are students' who have participated in at least one debate tournament) for the purpose of examining the correlation between being a debater and academic achievement. Thus, the following conceptual framework was devised for this study:
The study was only conducted in selected international high schools in Bangkok. Hence, the result of this study may not be representative of all students in international high schools in Thailand, and also all high school debaters in Thailand. The study also did not take into account other various factors that could affect the academic achievement of high school students. In addition, IELTS and LSAT scores used as research instrument are taken within a 2 year interval period, which means the exams that the students took may not all be the same.
Definitions of Terms

**Debate** is a formal discussion on a particular topic called "motion" in a public meeting or legislative assembly, in which opposing arguments are put forward. In this research, debate specifically points to the debate tournaments, which is a formal competition of individuals' debate skills.

**Debate skills** are a set of skills that is both a requirement to be able to successfully debate, and also the skill that will be improved as a student participates in debating. The skills comprise of three main aspects; analytical skill, confidence, and communication skill.

- **Analytical skill** is the ability of an individual to logically understand and criticize complex issues. They are integral in argumentation and rebuttals in debate.

- **Communication skill** is the ability of an individual to effectively convey one's belief and logic to another through the use of English, and other body language.

- **Confidence** is to believe in having the ability to persuade the audiences with one's logical argumentation, language, and gestures.

**Academic achievement** is the level of actual accomplishment or proficiency one has achieved in an academic area. This is mostly measured by the result of a student's test, and through Grade Point Average (GPA) which factors in other aspects of academic activities. The measurement employed in this research is to examine the students' GPA.
**High School students** are students who are between twelve years to eighteen years of age at the time of study. They are referred to as Grade 7 to Grade 12 in the international schools' curriculum.

**International schools** means schools that use English as the main medium of education, and follows the American system of education. In this study, international school refers Ruamrudee International School, New International School of Thailand, and Ekamai International School.

**Significance of the Study**

In this study, we have identified the major problem in the Thai high school. We then further segmented that problem into small separate issues and then analyzed them individually.

Our main goal in this study was to discover that whether analytical ability; communication skill and confidence of a student have any significant effect on learning. We think they do have an effect on the student and students who have these qualities do comparatively better than the students who don't. We realize that these qualities vary from person to person. However when we look at the whole picture, we find out the fact that the high schools are not fulfilling their role very well and thus the problem arises. We understand that these factors are vital for learning and serious consideration should be given to them.

We think that there is a relationship between debate, analytical ability, communication skills and confidence. We see debate has a positive impact on academic learning and can act as a medium for developing these skills further. Debate can act as a bridge for the students to link their academic learning to the outside world. Debate is one of the few places where the students can use their academic
learning to analyze the outside world. This not only makes their learning more effective but also makes them realistic as well.

What we believe will be truly beneficial for the students is that they are encouraged to gather these skills from the high school level. In this study we are trying to prove that analytical ability, communication skills are vital to the learning process and it should be taken very seriously from the start.
CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter will explore the core ideas of this study: relationship between debate and academic achievement. It will explore the meaning, core importance of debate, and how debate fosters those skills that are necessary in academic achievement of students.

Importance of Debate

Debating has been defined and portrayed by numerous experts as an informal and organized public process, as a sport of mind, of arguing on a specific topic which contributes change and empower an individual development of performance and mind.

Philips & Hooke (1998) stress that debate can be an informal discussion over disagreeing opinions or a formal contest between two or more teams. They also point out that the very basis of debate is the ability to communicate orally and that, in debate, in order to be an effective speaker, one will have to be adept in varying his or her tone, speed, volume, fluency and body language, as well as possessing the data relevant to the construction of persuasive, successful arguments.

Trapp (2005) portrayed debate as “a decision-making tool used in a variety of argumentative settings” and grouped these settings to three spheres of communities: the personal, the technical, and the public. Trapp emphasized that debate in a public arena is “…essential and vital to democracy” and that “…it is not a form of expression; rather it is a form of persuasion”. When debating, debaters hope to
change others’ minds and hope that their listeners will “come to see things their way”. Trapp also avowed that “debate does not produce immediate unanimity, but over time, it can produce consensus and a changed understanding of what is right and what is prudent”. Debate is also defined by Trapp (2005, p. 5) as “the process of arguing about claims in situations where an adjudicator must make a decision”.

Debate has long been viewed as the apex of education and a tool for empowering an individual and those who are involved in debating realize that it is the most demanding type of persuasive speech. Snider (2008, p. 5) described it, as “a sport”. “It is a sport of the mind that encourages the acceptance of open discussion and a democratic mindset that might ultimately contribute to the creation of an open society”.

Meany and Shuster (2005, p. 44) provided a simple definition of debate as “an organized public argument on a specific topic. It is organized; in that there are rules (protocols) governing debating. It is public because it is conducted in the benefit of an audience. It involves arguments, which are well-explained opinions. A debate is also on a specific topic, with one side arguing in favor and the other team opposing the issue”. They add that debate is a broader form of argument that emphasizes the development of performance and speaking, as well as research to support the argumentation.

This research concentrates on educational debate, which is a “public debate” as categorized in Trapp’s “public sphere” (Trapp, 2005). “Debate” is operationally defined in this study as “a two-sided discussion of a controversial question, an attempt by two sides of participants to persuade the audience – an adjudicator or a panel of adjudicators as well as other audiences – to accept or reject the resolution under consideration called a ‘motion’ by presenting well organized arguments to support
his/her/their own case and to attack the opposition arguments with the art of persuasion”. This particular discussion takes place in a competition called a debate tournament, which, according to Snider (2008, p. 5), is an event in which teams compete to determine which is superior in solving a contemporary problem.

In presenting their argumentation, a debater must fulfill these three criteria: the Matter, Manner, and Method.

The Matter is frequently mentioned as the most important component of any debate. Matter is the component of the speech that includes substantive matter and rebuttal (D’Cruz, 2003, p. 8). WUDC World Parliamentary Debate Rules (Part 3, p. 3) states that matter consists of the arguments a debater uses to further his or her case and persuade the audience, including the rebuttals and points of information used to attack the opponent’s case. Such arguments should be based on reasoning, examples, case studies, facts and any other materials that the debate deems capable of using to further the case, as well as reinforcing rebuttals and points of information.

Elements of matter are “logic” and “relevance”. An argument is logical if its conclusion follows from the premise. The persuasiveness of the arguments presented by the speaker will be assessed in terms of the presence of matter and the quality of matter presented. An argument is relevant if it is likely to add weight to the overall proposition that the team is trying to prove. The proposition in turn must be relevant to the issues in contention in the debate (D’Cruz, 2003, p. 9).

The Manner is the least technical and the most subjective component as say Philips & Hooke (1998, p. 30-59). It concerns in with the way in which a speaker communicates ideas to the audience. Manner is the presentation of speech: the delivery skills, the style and language and the way in which a debate conveys his/her
message to persuade the audience. Manner has two major components: the visual presentation and the oral presentation.

The visual presentation, the body language, includes eye contacts (looking at the adjudicator(s) and the audience), gesture (a speaker’s physical movement during the speech that conveys meaning), stance (the way you stand), dress (the way in which a speaker dresses in one aspect of the person’s presentation of themselves), facial expression (the expression on the speaker’s face when expressing opinion), personality, confidence, and sincerity.

The oral presentation includes vocal style, volume (the amount of sound produced), pitch (high and low tone of voice), pace (the speed of delivery), pause (periods of silence between words or phrases), tone (a quality of voice expressing a particular emotion or attitude), and vocal variety. The oral presentation also covers enunciation, fluency, choice of language (should vary substantially depending on the context), sentence approach (short sentences are more punchy and make a speech more interesting), signposting (a tool by which you clearly signal the structure of your speech), repetition (when a speaker repeats an aspect of their speech twice or more. The purpose of repetition is to give emphasis to the repeated phrase), and humor.

There is no ideal manner necessary to be effective. Philips & Hooke (1998, p. 33-58) also confirm the importance of the “light and shade” approach. That is to say, while being serious and earnest at some points, one should be more relaxed and perhaps even jovial at others. The tone should be suited for the point being made; clear enunciation of each word is fundamental; the speech should be clearly heard and the volume and the pitch should vary and be appropriate to the physical context of the debate.
The Method is the organization of matter, prioritization of arguments and example and structure of debating speech is referred to as method (Philips and Hooke, 1998, p. 60). Failure to fulfill these duties may detract from the effectiveness of team performance.

Relevance to Academic Achievement

These components that form the core value of debate often affect those who participate in debate to form higher proficiency in the three integral skills in academic achievement: analytical skill, confidence, and communication skill.

Academic achievement generally refers to the level of actual accomplishment or proficiency one has achieved in an academic area. In this study, academic achievement is directly reflected by a students’ Grade Point Average (GPA), in which the 3 attributes fostered through debating has a significant influence on a student’s GPA.

Analytical skill is the ability of a student to logically understand and criticize complex issues. Analytical skill is an integral part of modern education, as Kilpatrick has asserted that “...they simply cannot memorize any longer. More important than knowing information is knowing how to look it up and apply it. This is the true skill of the lifelong learner” (Kilpatrick, 1925).

Confidence refers to an individual’s belief in his own ability and higher self-esteem. Confidence is one of the highly predictive factors of achievement and interventions based on social learning theory, according to a study by Siegel, Galassi & Ware (1985, in Martin, 2002). Increased skills and confidences were likely to result in positive performance changes. People with a strong belief in themselves often set challenging goals, blame insufficient effort for failure, can quickly recover
their sense of worth after setbacks, and displays low vulnerability to stress (Bandura, 1977). Conversely those with weak beliefs were likely to shy away from difficulties, has low aspiration, are prone to depression, and so on, according to Bandura.

Communication skill is another highly influencing factor towards students’ performance in general. One characteristics of the modern educational system is that it encourages students’ participation in class, in which the communication skill of individuals will help in enabling them to participate in the discussion.

A number of works strongly suggest that participating in debate activities positively affects the academic achievement of students. They have been a strong basis for this study.

Mezuk’s work (2009) examines data from Chicago Public School and Chicago Debate League from 1997 to 2006. Overall, it shows that more than three quarters of African American debaters graduate, compared to barely half on non-debaters. The effect for African American males is even bigger: African American males who participate in debate are 70 percent more likely to graduate and three times less likely to drop out.

Another study in Minnesota in 2005 concluded that:

- Debaters scored 36% higher on the reading post-test than on the pre-test. This improvement is 61% greater than improvements among the comparison group.
- 80% of the debaters reported no attendance problems compared to 49.02% with no reported attendance problems among the comparison group.
- Debaters averaged 15% higher self-esteem than the comparison group, and this boost in self-esteem was positively correlated with the duration of debate participation: the longer he/she debate, the wider the differential.
- By the end of their first year of debate, 100% reported an increased interest in their class.

- Compared to the comparison group, 87% of debaters were better able to analyze information.

- On a 4.0 scale, the gross average of debaters’ 2006 GPAs was 2.97, compared to 2.5875 among the comparison group. Returning debaters averaged a 0.13 increase in their GPAs, while returning comparison group members lost an average of 0.10 points.

A variety of other studies also back this theory that debate positively affects the academic achievement of students. Studies in students in Chicago, Kansas City, St. Louis, Seattle, and New York (2004) concluded that “academic debate improves performance at statistically significant levels on reading test scores, diminish high-risk behaviors, and improves academic success and student attitudes towards higher education”, according to the National Association for Urban Debate Leagues (2010) compendium of research.

**Constructivism**

Constructivism is the learning theory that states that individual learns by adapting and developing through information they previously have and new information given to them. “Constructivist stance maintains that learning is a process of constructing meaning; it is how people make sense of their experience” (Merriam and Caffarella 1990 p.260) Supported by Lev Vygotsky and Jean Piaget, constructivism is the act of learning where instructors switch roles to facilitators and helps learners adapt and learn through certain guided process.
In cases of debate, the facilitators are no longer the teacher, but opponents in another team and the adjudicator. In a debate, team is given a certain topic, and the team, through teamwork must indicate the reasons as to why that topic must stand. These reasons, or arguments, come from self-generated ideas and previous experiences. In the real debate, the opponent team will pin point your arguments, and give reasons as to why these arguments might not stand. During the debate round, students must generate new ideas and leads based on what their opponents have rebutted, and must try to develop new rebuttals and level of analysis to sustain their team to win. Finally, when the debate is over, the adjudicators give the verdict, and give a general direction of where the debate should be. Both teams then use these guidelines to prepare the next round. The learning process occurs when individuals are constantly provided with “hints and guidelines” from both the adjudicator and the opponent team.

Scaffolding, or “the support given during the learning process which is tailored to the needs of the student with the intention of helping the student achieve his or her learning goals” (Sawyer, 2006) is then slowly developed through out each debating round.

Inquiry based learning is a learning approach that are based in the idea that when people are presented with a problem or questions, they will identify the questions and intend to solve the problem through the guidance of certain facilitator. In cases of debate, “point of information” is often offered during speeches by the opponent side. These are questions that students must answer during their speech. In process of attempting to solve a certain problem, students are then able to develop and learn.
For instance, if the topic states “That Abortion should be Banned”, students initially start off with reasons as to why they believe that’s the case. These reasons can come from previous debates or personal knowledge. After presenting their reasons, the opposition gives reasons as to why “Mother’s choice is important.” This forces students to deal with the fact why the right to life outweighs the choice of the mother. In process of rebutting and counter-acting with those arguments, their original arguments of why abortion should be banned are then further justified and developed. The constructivist learning process and scaffolding comes in when students are guided by a particular “facilitator” (opponents and judges) and gradually develops their mental self.
CHAPTER III

RESEARCH METHODOLOGY

Research Design

In this research, sample surveying using structured questionnaire are used in order to gather primary data from the respondents. Pearson’s correlation method are also be used to identify the correlation between debating attributes and academic achievement.

Population

The population of this study was high school students in three selected international schools in Bangkok. These international schools were chosen because they offer high school program, have more than 50 percent of Thai students in student population, and offers debating programs. The selected international schools are Ruamrudee International School, New International School of Thailand, and Ekamai International School.

Sample

The sample of this study is 254 students. This number is obtained from Daryle W. Morgan’s (Education and Psychological Measurements, 1970) sample chart with N=750 students. Students that did not participate in the debating program were randomly selected and students that are in the debating program were all included in the sample. This includes Ruamrudee International School, RIS, (50 randomly selected students, 35 additional students in the debating program), New International
School of Thailand, NIST, (50 randomly selected students, 38 additional students in the debate program), and Ekamai International School, EIS (50 randomly selected students, 31 additional students in the debate program). Students in the debate program have at least participated in the program for a year. In total, there are 72 freshmen, 59 sophomores, 70 juniors, and 53 seniors. All sample taken from the 3 schools are taken from the academic year 2012 – 2013, fall semester. In addition, all students in the sample took IELTS. The high school students in the selected schools participated by responding to a questionnaire on their confidence in school subjects, and analytical reasoning test, their IELTS oral school as well as their GPA. Table 3.1 gives a summary of the population and sample.

Table 3.1 Population and Sample

<table>
<thead>
<tr>
<th>International Schools</th>
<th>Population</th>
<th>Sample Debater</th>
<th>Sample Non-Debater</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIS</td>
<td>268</td>
<td>35</td>
<td>50</td>
<td>85</td>
</tr>
<tr>
<td>NIST</td>
<td>246</td>
<td>38</td>
<td>50</td>
<td>88</td>
</tr>
<tr>
<td>EIS</td>
<td>208</td>
<td>31</td>
<td>50</td>
<td>81</td>
</tr>
<tr>
<td>Total</td>
<td>722</td>
<td>104</td>
<td>150</td>
<td>254</td>
</tr>
</tbody>
</table>
Research Instrument

There are a total of 4 research instruments: LSAT, IELTS, Questionnaire is to assess the debate skills of students. The GPA is used to assess the academic achievement of students.

Instruments Assessing Debate Skills

LSAT Analytical Exam

The LSAT, or Law School Admission Test, is used as an instrument to test the analytical skills of the participants. The Law School Admission test is a standardized test that’s used in the majority of Law Schools in America. In this action research, parts of the “logical reasoning” are excerpted for the purpose of this research. These exams come in a form of multiple choices. A value of one is given to each correct answer, and a 0 to each wrong answer. The LSAT is used to measure the analytical skills of students.

IELTS

The IELTS, or International English Language Testing System’s oral score is also used in this research. In the oral test, an interviewer, which is authorized by the British Council and Cambridge Examination, performs a series of questions purely to test the communicative skills of the participants. The questions are often related to social life questions which ask you to express your opinion about certain subject. The IELTS exam questions are different every time. A recorder records the conversation between the interviewee and interviewer and are then further accessed by the headquarter in IELTS Australia. A score of 2 – 9 are given by both the interviewer and the headquarter, and the final score is averaged in between the two evaluators.
The IELTS score is used in this research to measure the communication skills of students.

Questionnaire

The questionnaire is used in this research as a tool to measure the confidence level of the students. The questionnaire is a 10 item instrument based on Fennema-Sherman Mathematic Attitude Scales that was developed by the researcher using a Likert scale for responses. The Fennema-Sherman Mathematic Attitude Scales were adapted and modified to fit the nature of this study. The scale was originally developed in 1976 and has been used repetitively in various studies to measure people’s confidence towards certain subjects.

The construction of the instrument was based on three variables – confidence, usefulness, and motivation. These three variables proved to be significant because they have been proposed by the National Council for Teachers. For the purpose of this study, only the confidence variables were extracted from the instrument design. In the questionnaire, the 10 questions are given 3 responses: “Agree”, “Disagree”, and “Unsure”. Each response is given a value. A value of three was given to an agree response, two was given to an answer of unsure, and one was given to disagree.
**Instrument assessing GPA**

**GPA**

The GPA, or Grade Point Average is obtained by averaging the raw value of the grades obtained by the participants in his or her school subjects. A value of 4 is given to a score of 97-100 points, and a value of 0 is given to a score below 60 in any subjects. In this research, the GPA is used to assess the level of academic achievement for students.

**Validity & Reliability**

**Validity of Questionnaire**

Validating the instruments used in this research proves to be an important part in making sure this research’s legitimacy. To make sure that the items created are measuring the content they were defined to measure, various actions were taken. **Questionnaire**

Each item in the 10-item questionnaire was evaluated by an independent expert panel. Since this questionnaire was originally designed to test the participant’s interest in Mathematics, experienced Mathematics teacher and university professors were the ones assessing the appropriateness of items for measuring the objectives. Though the questionnaire is adapted in this research to suit its purpose, the outcome won’t hurt the intrinsic value of the questionnaire. For instance, “I am happy when I’m learning Math” are adapted to “I am happy when I’m learning Debate”. The intrinsic value of the question still lives, the only thing that has been modified is the subject matter.

The contents experts’ evaluations of items were measured using the index of item-objective congruence (IOC). Content experts are asked to rate each item on the
degree to which they did or did not measure specific objective listed. A rating of 1 was given for "clearly measures the objective", -1 for "clearly not measuring", and 0 "unclear" for each item. These ratings are then translated to the item-objective congruence formula, provided by Crocker and Algina (1986, in Turner and Carlson, 2003):

\[ \text{lik} = \frac{N}{(2N-2)}(X_k - X) \]

Where lik is the index of item-objective congruence for item \(i\) on objective \(k\), \(N\) = the number of objectives, \(X_k\) = the expert's mean rating of item \(i\) on objective \(k\), and \(X\) = the experts’ mean rating of item \(i\) on all objectives.

An index value of 1.00 indicates that all experts agreed that the item clearly measures the objective, while 0.5 – 0.69 indicates that the items should be reexamined. All 10 items in this questionnaire received a rating of 1.00 in the IOC index. This shows that all 10 items in this questionnaire has high validity.

GPA, IELTS, and LSAT

All three instruments are universally accepted by international organizations, schools, and universities around the world. The IELTS and LSAT are validated by education experts in the British Council and the College Board Institution. The GPAs are validated by professional licensed teachers in various schools. In this research, the teachers of the schools of Ruamrudee International School, New International School of Thailand, and Ekamai International School are the ones issuing and contributing to GPAs.
Reliability

As the instrument has been used widely in a wide range of settings, its validity and reliability has been tested.

The original Cronbach’s Alpha is 0.8.007. This showed the excellent quality of this questionnaire (Cronbach et al., 1965).

An acceptable range of Cronbach’s Alpha value is 0.7 – 0.9. (McMillian & Schumacher, 1997) This Cronbach’s Alpha value have been previously proven and is excerpted from a previous study (Relationship Between Attitude and Achievement in Mathematics of Students in Selected International Schools in Bangkok, 2004), which used the same type of questionnaire in this research.

**Collection of Data**

For the purpose of this research, permission were granted to the researcher for one period of class time for sample participants to take the LSAT reasoning test and to fill out the questionnaire. The teacher then collects the research instruments and hand it to the administrative office. GPAs and IELTS score are collected in the administration office along with the questionnaires and LSAT test scores. GPAs and IELTS is a must-have for all 3 international schools, and thus are accessible. Data was collected in the fall semester of the academic year 2012 – 2013, fall semester.

**Data Analysis**

The LSAT exam is given a value of “1” for each correct answer and “0” for each incorrect answer. The raw score, ranging from 0 – 25, are then converted in to a scale of 120 - 180 points. (appendix) A score of 120 is unsatisfactory. A score of 150 is satisfactory, and a score of 180 means excellent analytical skills.
The IELTS exam are valued from 2-9 by the British Council. A score of 2 represents inadequate oral skills. 5.5 means average, and 9 mean excellent communicative skills. (appendix)

The GPA, ranging from 0 – 4.0, are given by school teachers. A GPA of 0, according to official interpretation of all 4 schools, is interpreted as failure. 2.5 interpreted as satisfactory, and 4.0 interpreted as excellent. (appendix)

The Questionnaires was given a value of 1 for “disagree”, 2 for “unsure”, and 3 for “agree”. The mean is used as the final score for this research. A mean below 1.5 indicates little confidence. A mean between 1.5 and 2.5 indicates uncertainty. A mean above 2.5 indicates that the participant is confident. A satisfactory level of confidence is 2.0. All scored data are keyed in a statistical software for further analysis.

1. Hypothesis two was tested by performing a t-test to determine if there’s a difference between debaters and non-debaters in terms of academic achievement.

2. Hypothesis three was tested by computing Pearson coefficient r to determine the degree of correlation between the mean scores of GPA (academic achievement) and the mean scores received in LSAT logical reasoning test. The confidence level was .05 level of significance.
3. Hypothesis four was tested by computing Pearson coefficient $r$ to determine the degree of correlation between the mean scores of GPA (academic achievement) and the mean scores received in IELTS oral exam score. The confidence level was .05 level of significance.

4. Hypothesis five was tested by computing Pearson coefficient $r$ to determine the degree of correlation, between the mean scores of GPA (academic achievement) and the mean scores received in the questionnaire. The confidence level was .05 level of significance.
<table>
<thead>
<tr>
<th>Research Objective</th>
<th>Source of Data or Sample</th>
<th>Data Collection Method or Research Instrument</th>
<th>Data Analysis</th>
<th>Research Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Determine the analytical skill, communication skill, and confidence of selected international high school students in Bangkok</td>
<td>Administration of Selected International Schools.</td>
<td>IELTS LSAT Questionnaire</td>
<td>Means and Standard Deviation</td>
<td>There’s a slight lack of analytical and communication skills among students, and a satisfactory confidence level.</td>
</tr>
<tr>
<td>2. Determine the difference of academic achievement between debaters and non-debaters in selected international school in Bangkok.</td>
<td>Administration of Selected International Schools.</td>
<td>GPA t-test</td>
<td>t-test</td>
<td>There is a significant difference academic achievement between debaters and non-debaters.</td>
</tr>
<tr>
<td>Research Objective</td>
<td>Source of Data or Sample</td>
<td>Data Collection Method or Research Instrument</td>
<td>Data Analysis</td>
<td>Research Outcome</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>-----------------------------------------------</td>
<td>---------------</td>
<td>------------------</td>
</tr>
<tr>
<td>3. Determine the correlation, if any, of debaters and non-debaters in terms of analytical skills and their academic achievement.</td>
<td>Administration of Selected International Schools.</td>
<td>LSAT</td>
<td>Pearson Coefficient r</td>
<td>There is a positive correlation between students who debate and student’s GPA.</td>
</tr>
<tr>
<td>4. Determine the correlation, if any, of debaters and non-debaters in terms of communicative skills and their academic achievement.</td>
<td>Administration of Selected International Schools.</td>
<td>IELTS</td>
<td>Pearson Coefficient r</td>
<td>There is a positive correlation between students who debate and student’s GPA.</td>
</tr>
<tr>
<td>Research Objective</td>
<td>Source of Data or Sample</td>
<td>Data Collection Method or Research Instrument</td>
<td>Data Analysis</td>
<td>Research Outcome</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------------------</td>
<td>-----------------------------------------------</td>
<td>---------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>5. Determine the correlation, if any, of debaters and non-debaters in terms of confidence and their academic achievement.</td>
<td>Administration of Selected International Schools.</td>
<td>Questionnaire</td>
<td>Pearson Coefficient r</td>
<td>There is a positive correlation between students who debate and student’s GPA.</td>
</tr>
</tbody>
</table>
CHAPTER IV

RESEARCH FINDINGS

The major purpose of this research is to determine the relationship between debate skills and academic achievement. The debate skills are further categorized into analytical skills, communication skills and confidence level. In effort to answer the research questions and validates the research hypothesis, all the data collected are analyzed through a statistical software and the results are presented in this chapter. This chapter will be structured according to the research questions stated in chapter 1. Each research question will be responded with a research finding, which corresponds to the research objective.

Research Question One – Is there a lack of debate skills in selected international high school students in Bangkok?

The data was analyzed through descriptive statistics of mean and standard deviation. Through the statistical software, data of the LSAT, IELTS, questionnaire, and of 254 were keyed in to determine the mean of each test. In addition, the minimum and maximum scores of each type of test are also inputted into the software. The result is presented in the Table 4.1.
Table 4.1 Mean Scores and Standard Deviations of Analytical, Communication and Confidence Levels

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Debater Mean</th>
<th>Non-Debater Mean</th>
<th>Debater and Non-Debater Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical</td>
<td>254</td>
<td>152.42</td>
<td>147.33</td>
<td>149.4173</td>
<td>7.05757</td>
</tr>
<tr>
<td>Communicative</td>
<td>254</td>
<td>6.35</td>
<td>5.40</td>
<td>5.7953</td>
<td>1.59589</td>
</tr>
<tr>
<td>Confidence</td>
<td>254</td>
<td>2.42</td>
<td>2.08</td>
<td>2.2232</td>
<td>.43135</td>
</tr>
<tr>
<td>Valid N</td>
<td>254</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.1 demonstrates the mean analytical, communicative, and confidence levels of 254 sample students selected in the 3 international schools in Bangkok. Each skill is marked with a maximum score and minimum score obtained by the students. The 254 students is composed of both debaters (104 students) and non-debaters (150), and their mean were computed as one group to measure the mean of high school students in general for each debate attribute. The mean of the analytical skills of students is 149.417, mean of communicative skills is 5.7953, and the mean of
confidence level is 2.223. Recall from chapter 3 that the average satisfactory score of LSAT is 150, IETLS is 6, and Confidence is 2. The research finding suggests that the average score of general population for analytical skills and communicative skills is in the average to below average range, while the confidence skills is slightly above average.

The table answer research question 1. The answer is that there is a slight lack of analytical skills and communication skills, while the confidence level is in the satisfactory level.

**Research Question Two – Is there a significant difference of academic achievement between debaters and non-debaters in selected international schools in Bangkok?**

The data was analyzed through independent t-test to determine whether or not a difference exists between debaters and non-debaters in terms of academic achievement, or GPA. The mean GPA of debaters and non-debaters are thus determined. The population sample was divided in to non-debaters (150) and debaters (104) The result is presented in Table 4.2.

**Table 4.2 Difference between Debater and Non-Debaters in terms of GPA**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA Non Debaters</td>
<td>150</td>
<td>3.1484</td>
<td>.39041</td>
</tr>
<tr>
<td>GPA Debaters</td>
<td>104</td>
<td>3.4646</td>
<td>.25465</td>
</tr>
</tbody>
</table>
Table 4.2 shows the mean statistics of the GPA of debaters and non-debaters. As suggested in Table 4.2, the mean GPA of non-debaters is 3.1481, and the mean GPA of debaters is 3.4646. The table shows that the mean GPA of debaters are higher than the mean GPA of non-debaters.

In effort to respond to research question 2, a significant difference needed to be proved statistically according to the data collected. The result is presented in table 4.3.

**Table 4.3 Significant Difference of Debaters and Non Debaters in terms of GPA**

<table>
<thead>
<tr>
<th>Equal Variances Assumed</th>
<th>F</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std Error Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal Variances Assumed</td>
<td>10.104</td>
<td>-7.257</td>
<td>252</td>
<td>.000</td>
<td>-.31622</td>
<td>.04358</td>
</tr>
<tr>
<td>Equal Variances not Assumed</td>
<td>-7.809</td>
<td>251.158</td>
<td>.000</td>
<td>-.31622</td>
<td>.04049</td>
<td></td>
</tr>
</tbody>
</table>

*95% Confidence Interval of the Difference*
Table 4.3 shows a t-value of -7.257 and a mean difference of GPA -.31622. The negative value of t and the negative value of the mean difference show that debaters have a higher GPA than non-debaters. In addition, the sig (2tailed) value is 0.000, which is smaller than 0.05, which shows a great significant difference in terms of GPA between debaters and non-debaters.

This answer research question 2. The answer is that there is a significant difference between debaters and non-debaters in terms of GPA, with the debater’s GPA significantly higher than non-debaters.

**Research Question 3 – Is there a correlation between debaters and non-debaters in terms of analytical skills and their academic achievement?**

To answer this question, a Pearson r test is used to determine the correlation between analytical skills and academic achievement. The scores of LSAT of 254 sample participants are keyed in to the statistical software to determine the significant value. The result is presented in table 4.4.
Table 4.4 Correlation between Academic Achievement and Analytical Skills

<table>
<thead>
<tr>
<th></th>
<th>Analytical</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical</td>
<td>Pearson Correlation</td>
<td>.770</td>
</tr>
<tr>
<td>Sig. (2 tailed)</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>254</td>
<td>254</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level. (2 tailed)**

Table 4.4 shows the correlation between analytical skills and GPA of all 254 students. Analytical skill score, as previously stated, are taken from analytical exams of LSAT scores. The table shows a .000 significance value, which suggests that there is a strong correlation between students' GPA and their analytical skills. The Pearson Correlation value is 0.77, which shows a positive relationship between the variables. In addition, as the value is above 0.5, it shows a strong relationship between the two variables.

This answers research question 3. The answer is that there is a correlation between analytical skills of students and their GPA, and the correlation is significant.

**Research Question 4 - -- Is there a correlation between debaters and non-debaters in terms of communication skills and their academic achievement?**

Communication skills score is obtained from the IELTS exam as mentioned in chapter 3. To obtain the results, data were keyed in to the statistical software to determine the correlation between the 2 variables. The result is presented in Table 4.5.
Table 4.5 Correlation between Academic Achievement and Communication Skills

<table>
<thead>
<tr>
<th></th>
<th>Communication</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Skills</td>
<td>Pearson</td>
<td>.566</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
</tr>
<tr>
<td>Sig. (2 tailed)</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>254</td>
<td>254</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level. (2 tailed)**

Table 4.5 shows that there is a sig value of 0.000 after the data of 254 participants are keyed in. This demonstrates that there is a significant correlation between students’ GPA and their communication skills. The Pearson Correlation value is 0.566, which shows a positive relationship between the variables. In addition, as the value is above 0.5, it shows a relatively strong relationship between the two variables.

This answers research question 3. The answer is that there is a correlation between communication skills of students and their GPA, and the correlation is significant.
Research Question 5 – Is there a correlation between debaters and non-debaters in terms of confidence level and their academic achievement?

Confidence level scores were obtained through questionnaires. The data is again keyed in to the statistical software to determine the correlation between confidence level and student’s GPA. The result is presented in Table 4.6.

Table 4.6 Correlation between Academic Achievement and Confidence Level

<table>
<thead>
<tr>
<th>Confidence Level</th>
<th>Confidence Pearson Correlation</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sig. (2 tailed)</td>
<td>.503</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>254</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level. (2 tailed)**

Table 4.6 shows the correlation between confidence level and GPA of all 254 students. Confidence score, as previously stated, are taken questionnaires then further converted into scores. The table shows a .000 significance value, which suggests that there is a strong correlation between students’ GPA and their confidence level. The Pearson Correlation value is 0.503, which shows a positive relationship between the variables. In addition, as the value is above 0.5, it shows a strong relationship between the two variables.

This answers research question 5. The answer is that there is a strong correlation between confidence level and GPA of students, and the correlation is significant.
Summary of Research Findings

The research questions stated in this research corresponds to the research objectives. The objectives, in short, was to determine whether or not there’s a lack of debate skills in selected international schools in Bangkok, to determine if there’s a significant difference between debaters and non-debaters and GPA, and finally to determine the correlation between debate skills (analytical, communicative, and confidence) and student’s GPA. As research findings have suggests in the previous tables presented, debater’s demonstrates a higher GPA over non-debaters, and there is a strong correlation between debate skills and GPA.
CHAPTER V

CONCLUSION, DISCUSSION, AND RECOMMENDATIONS

This chapter will be divided in to 3 parts: Conclusion, Discussion, and Recommendation. In the first part, a summary of the research’s finding will be presented. In the second part, a discussion on how or why the conclusions turned out as it is will be presented, and it’ll be supported by literatures presented in chapter 3. Finally, in the last part, recommendations for teachers and curriculum writers will be suggested.

Conclusion

In summary of the result of research findings in research question one, table 4.1 shows that the mean of LSAT score is 149.4173, IELTS score 5.7953, and confidence score of 2.2232. The research objective was to determine whether or not these figures represents that there is a lack of debate skills in the high school students of selected international schools in general. The bar used to measure whether or not a particular skill is lacking is presented in Table 5.1.
Table 5.1 Satisfactory Score and Research Findings Comparison for Debate

<table>
<thead>
<tr>
<th>Skills</th>
<th>Satisfactory Score</th>
<th>Research Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Skills</td>
<td>150</td>
<td>149.4173</td>
</tr>
<tr>
<td>Communicative Skills</td>
<td>6</td>
<td>5.7953</td>
</tr>
<tr>
<td>Confidence Level</td>
<td>2</td>
<td>2.2232</td>
</tr>
</tbody>
</table>

As presented in the table 5.1, the analytical skills and communicative skills of the student population in general is slightly below the satisfactory score, which indicates that there’s a slight lack of analytical and communicative skills in the student population in general. Confidence level, however, shows otherwise. The confidence level of the research finding shows that there’s a higher confidence level of the student population level than the satisfactory score. Thus, there’s no lack of confidence level in the student population in general. In conclusion, 2 out of the 3 debate skills presented earlier are lacking in the student population in selected international schools in Bangkok.

In summary of the result of research findings in research question 2, the mean value of the GPA of students who are debaters has a higher value of 3.4646, which is .31622 higher than of non-debaters. In addition, the significant value shows a value of 0.000, which indicates a very significant difference between GPAs of debaters and non-debaters. In answering research question 2 and completing research objective 2, the conclusion is that there is a difference between GPAs in debaters and non-debaters, and the differences are significant. This confirms research hypothesis 2,
which states that there is indeed a significant difference between GPAs of debaters and non-debaters.

In summary of the result of research findings in research question 3, Table 4.4 in chapter 4 showed a significant value of 0.000, which indicates a very significant correlation between analytical skills and student’s GPA. This fulfills research objective 3 and confirms research hypothesis 3, which states that there is a significant correlation between analytical skills and student’s GPA.

In summary of the result of research findings in research question 4, Table 4.5 in chapter 4 showed a significant value of 0.000, which indicates a very significant correlation between communication skills and student’s GPA. This fulfills research objective 4 and confirms research hypothesis 4, which states that there is a significant correlation between communication skills and student’s GPA.

In summary of the last result of research findings in research question 5, Table 4.6 in chapter 4 showed a significant value of 0.000, which indicates a very significant correlation between confidence level and student’s GPA. This fulfills research objective 5 and confirms research hypothesis 3, which states that there is a significant correlation between analytical skills and student’s GPA.

In conclusion, all 5 research objectives are accomplished, and research finding confirms all 4 research hypothesis to be positive. This means, there’s indeed a very significant relationship between debate skills and student’s GPA in general.
Discussion

This part of the research will compare research findings and previous research results, as well as reasons to why research results turned out the way it turned out to be.

According to the research findings in response to research question 1, there’s a lack of analytical skills and communicative skills and in student population in general. The confidence level of the student population is slightly above the satisfactory level. Students nowadays lack general analytical skills mainly due to the fact that there’s a minimal amount of analytical activities and practices for them. Often times these kinds of analytical skills are presented only through exams and projects, where students are required to present term papers and analyze a particular passage in English subjects. Daily activities, however, lacked practice for students to improve their analytical skills. What many failed to realize is that such analytical skills is very important when it comes to student learning, which will be discussed later. In the LSAT analytical exam, students are given practical logical reasoning situations for students to analyze. As most students are not familiar to these questions and situations, naturally, they won’t score as high on these exams. The result is a lack of analytical skills in the student population in general. In addition, the research findings also demonstrate a lack of communication skills. This can be totally expected, mainly due to the lack of incentive for students to speak out not only during project presentation, but also during group projects and when engaging with teachers during class.

For the research findings on GPA differences between debaters and non-debaters, it was concluded in the previous section that there is a significant difference
in terms of GPA between the two groups. This finding is comparable to previous studies mentioned in chapter 2, notably studies in students in Chicago, Kansas City, St. Louis, Seattle, and New York (2004), which concluded that “academic debate improves performance at statistically significant levels on reading test scores, diminish high-risk behaviors, and improves academic success and student attitudes towards higher education” In addition, it also further reinforces Mezuk’s work (2009) on African American studies on debate, which suggests a graduation ratio of more than three-quarters in compare to non-debaters. The premise of the correlation between GPA and debater is based on the fact that debaters generally have a higher analytical, communication and confidence level in compare to non-debater, and these skills do indeed have a significant impact on GPAs. Debaters in general are more active in class, and choose to follow up their own mistakes and are more encouraged to ask teachers questions. More of this will be discussed later on in this chapter.

Research findings in this paper that answers research question 3 demonstrates a significant correlation between analytical skills and GPA. Recall back in chapter the concept of constructivism was introduced and prove to have a significant impact on analytical skills. Students, when facing all sorts of problem academically, whether or not it is a group presentation, homework, essays, or even engaging with teachers during class time all requires certain analytical skills to develop their learning process. Through the correct guidance, students are able to learn bits by bits and develop cognitive thinking in their own way, instead of blind following instructions and learning what their instructors tells them to learn. This corresponds to the findings of Kilpatrick as stated in chapter 2 that “…they simply cannot memorize any longer. More important than knowing information knows how to look it up and apply it. This
is the true skill of the lifelong learner” (Kilpatrick, 1925). As this research suggests through table 4.4, the significance value of the correlation between analytical skills and GPA is 0.000, which indicates a very strong relationship. The researches and philosophy behind it further supports the evidence given provided by this research.

Communication skill is another skill that was found to have strong correlation with GPAs of students. The selected international schools in this research are all based in an international curriculum and foreign background, which encourages any sort of educational method that fosters classroom cooperative learning environment. Thus, teaching methods such as cooperative learning and problem base learning are wildly used. The impetus of an out-going educational learning approach is often based on the premise that students are outgoing, and are willing to share ideas with others. For instance, cooperative learning requires each student in the group to engage in a conversation in order to maximize the effects of the learning approach. These come with the ability for students to fully be able to express themselves and their thoughts when it comes to answering questions, asking questions, and expressing opinions. Recall back in chapter 2 Philips & Hooke (1998, p. 30-59), which states that debating communicative skills concerns in with the way in which a speaker communicates ideas to the audience. In the debating clubs in the selected international schools, debaters are each forced to give a 7 minute speech on a daily basis. This fully develops their ability to convey messages to their audience. Research finding, again, shows a significance value of 0.000, which again indicates a very strong correlation between communicative skills and GPA.
Last but not least, confidence level, as shown in this research reached a significance value of 0.000 as well. Again, this shows a strong correlation between confidence level of students and their GPAs. In previous studies stated in chapter 2, Meany and Shuster (2005, p. 44) provided a simple definition of debate as "an organized public argument on a specific topic". To be able to fully analyze and express your opinion in front of an audience crowd requires a great amount of confidence and courage. To make your argumentation sound more interesting and believing, a great amount of confidence needs to be inputted in to the debater's speech. The findings of this research is comparable to the research in Minnesota (2005) which states that debaters averaged 15% higher self-esteem in compare to the student population in general. The fact that confidence is important when it comes to GPA is again reflected in this research finding.
Recommendation

The 3rd part of this chapter is recommendation. In this section, recommendations are suggested to policymakers, principals, teachers, and future researchers as reference and possible guidance.

As far as curriculum goes, it is in no doubt that the current trend in these selected international school is to develop curriculums that fosters classroom engagements and active learning. However, classroom engagements assume that student already possesses confidence, communication skills, and analytical skills to begin with. The addition of classroom activities on learning approaches such as cooperative learning doesn’t necessarily add up to the improvement of these skills individually. Therefore, there’s a need in more integration of forensics in to the school curriculum to help individual students practice these skills. Teachers, on the other hand, can also foster in-class debates in effort to enhance understandings and foster classroom engagements. It is also possible to implement debate in a variety of topics, including social studies, science, history, and English literature. The topics can be based on what the teacher is currently teaching at that point of time. Teachers can also encourage students to respond to certain arguments raised not only by the opponent team but also thought from the teacher. That way, analytical skills, communicative skills, and confidence level can all be boosted and practiced on a daily basis.

The principal or the school can also further allocate more budget to the debating club, and encourage students to join debate. Under the status quo, debate clubs in Ekamai International School is a self-sustaining student club with no advisors
and minimal funds. The debate club needs funding because at times it costs money to participate in tournaments, which usually takes place outside of school time. The school can also endorse the club by hosting its own tournament to encourage students in their own school to join. Finally, achievement for debaters can also be posted on the school’s newsletter, like what Wells International School did right after they won the EU-Thailand Debating Championship.

*Recommendation for future researchers*

Debate has been going along for more than 20 years. Initially, debating was a casual leisure activity stereo-typed for nerds of the school to participate in. Throughout the years, things have changed. Not only have debating become one of the most academic related activities in the world, it had also proved to be beneficial to constructive learning. However, due to the fact that the promotion of debating and its correlation towards academic achievement is still a relatively new idea, there’s a minimal amount of researches conducted on it. Therefore, it would be recommended for future researched to do similar researches of this research, which explores the correlation between academic achievement and debate skills in different countries and demographics. This would further enhance the sense that debating is, indeed, a universal beneficiary activity.

In addition, it is also recommended that more research can be done in defining the how exactly does debate help in modern learning approaches, such as cooperative learning and problem based learning. Another research angle could be how school support of debating club can foster a better learning environment and thus enhancing school academics as a whole. Finally, a research on debater’s portfolio and its
correlation to good universities acceptance can also be made. Typically it has been a common phenomenon that top debaters from high school has a higher tendency to go to famous universities abroad, yet currently under the status quo there are no researches on this just yet. If such a research is conducted, this research paper can provided the paper with basic backgrounds and act as an efficient supporting document.
REFERENCES


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APPENDIX A

Instrumentation
LSAT Analytical Skill Exam (Sample)

Directions: The questions in this section are based on the reasoning contained in brief statements or passages. You should not make assumptions that are by commonsense standards implausible, superfluous, or incompatible with the passage. After you have chosen the best answer, circle your choice.

1. French divers recently found a large cave along the coast of the Mediterranean Sea. The cave is accessible only through an underwater tunnel. The interior of the cave is completely filled with seawater and contains numerous large stalagmites, which are stony pillars that form when drops of water fall repeatedly on a single spot on a cave floor, leaving behind mineral deposits that accumulate over time.

The information above most strongly supports which one of the following?

(A) The Mediterranean Sea was at a higher level in the past than it is now.
(B) The water level within the cave is higher now than it once was.
(C) The French divers were the first people who knew that the tunnel leading to the cave existed.
(D) There was once an entrance to the cave besides the underwater tunnel.
(E) Seawater in the Mediterranean has a lower mineral content now than it had when the stalagmites were being formed.

2. A director of the Rexx Pharmaceutical Company argued that the development costs for new vaccines that the health department has requested should be subsidized by the government, since the marketing of vaccines promised to be less profitable than the
marketing of any other pharmaceutical product. In support of this claim the director argued that sales of vaccines are likely to be lower since each vaccine is administered to a patient only once, whereas medicines that combat diseases and chronic illnesses are administered many times to each patient.

Which one of the following, if true, most weakens the support offered by the company director for the claim concerning the marketing of vaccines?

(A) Vaccines are administered to many more people than are most other pharmaceutical products.

(B) Many of the diseases that vaccines are designed to prevent can be successfully treated by medicines.

(C) Pharmaceutical companies occasionally market products that are neither medicines nor vaccines.

(D) Pharmaceutical companies other than the Rexx Pharmaceutical Company produce vaccines.

(E) The cost of administering a vaccine is rarely borne by the pharmaceutical company that manufactures that vaccine.

3. Manager: Our new computer network, the purpose of which is to increase productivity, can be installed during the day, which would disrupt our employees’ work, or else at night, which would entail much higher installation charges. Since saving money is important, we should have the network installed during the day.

The manager’s argument assumes which one of the following?
(A) The monetary value of the network equipment would not exceed the cost of having the equipment installed at night.
(B) The monetary value of any productivity lost during a daytime installation would be less than the difference between daytime and nighttime installation costs.
(C) A daytime installation would be completed by no larger a crew and would take the crew no more time than would a nighttime installation.
(D) Once the network has been installed, most of the company’s employees will be able to use it immediately to increase their productivity.
(E) Most of the company’s employees would be able to work productively while a daytime installation is in progress.

4. An ingredient in marijuana known as THC has been found to inactivate herpes viruses in experiments. In previous experiments researchers found that inactivated herpes viruses can convert healthy cells into cancer cells. It can be concluded that the use of marijuana can cause cancer.

Which one of the following, if true, most seriously weakens the argument?

(A) Several teams of scientists performed the various experiments and all of the teams had similar results.
(B) The carcinogenic effect of THC could be neutralized by the other ingredients found in marijuana.
(C) When THC kills herpes viruses it weakens the immune system, and it might thus diminish the body’s ability to fight other viruses, including viruses linked to cancers.
(D) If chemists modify the structure of THC, THC can be safely incorporated into medications to prevent herpes.

(E) To lessen the undesirable side effects of chemotherapy, the use of marijuana has been recommended for cancer patients who are free of the herpes virus.

5. Archaeologist: A large corporation has recently offered to provide funding to restore an archaeological site and to construct facilities to make the site readily accessible to the general public. The restoration will conform to the best current theories about how the site appeared at the height of the ancient civilization that occupied it. This offer should be rejected, however, because many parts of the site contain unexamined evidence.

Which one of the following principles, if valid, justifies the archaeologist’s argument?

(A) The ownership of archaeological sites should not be under the control of business interests.

(B) Any restoration of an archaeological site should represent only the most ancient period of that site’s history.

(C) No one should make judgments about what constitutes the height of another civilization.

(D) Only those with a true concern for an archaeological site’s history should be involved in the restoration of that site.

(E) The risk of losing evidence relevant to possible future theories should outweigh any advantages of displaying the results of theories already developed.
6. Besides laying eggs in her own nest, any female wood duck will lay an egg in the nest of another female wood duck if she sees the other duck leaving her nest. Under natural nesting conditions, this parasitic behavior is relatively rare because the ducks’ nests are well hidden. However, when people put up nesting boxes to help the ducks breed, they actually undercut the ducks’ reproductive efforts. These nesting boxes become so crowded with extra eggs that few, if any, of the eggs in those boxes hatch.

The statements above, if true, most strongly support which one of the following?
(A) Female wood ducks will establish nests in nest boxes only when natural nesting sites are not available.
(B) Nesting female wood ducks who often see other female wood ducks are the most successful in their breeding efforts.
(C) The nesting boxes for wood ducks have less space for eggs than do natural nesting sites.
(D) The nesting boxes would be more effective in helping wood ducks breed if they were less visible to other wood ducks than they currently are.
(E) Nesting boxes are needed to supplement the natural nesting sites of wood ducks because of the destruction of much of the ducks’ habitat.

7. The crux of creativity resides in the ability to manufacture variations on a theme. If we look at the history of science, for instance, we see that every idea is built upon a thousand related ideas. Careful analysis leads us to understand that what we choose to
call a new theme or a new discovery is itself always and without exception some sort of variation, on a deep level, of previous themes.

If all of the statements in the passage are true, each of the following must also be true EXCEPT:

(A) A lack of ability to manufacture a variation on a previous theme connotes a lack of creativity.

(B) No scientific idea is entirely independent of all other ideas.

(C) Careful analysis of a specific variation can reveal previous themes of which it is a variation.

(D) All great scientific discoverers have been able to manufacture a variation on a theme.

(E) Some new scientific discoveries do not represent, on a deep level, a variation on previous themes.

8. Millions of female bats rear their pups in Bracken Cave.

Although the mothers all leave the cave nightly, on their return each mother is almost always swiftly reunited with her own pup. Since the bats’ calls are their only means of finding one another, and a bat pup cannot distinguish the call of its mother from that of any other adult bat, it is clear that each mother bat can recognize the call of her pup.
The argument seeks to do which one of the following?

(A) derive a general conclusion about all members of a group from facts known about representative members of that group

(B) establish the validity of one explanation for a phenomenon by excluding alternative explanations

(C) support, by describing a suitable mechanism, the hypothesis that a certain phenomenon can occur

(D) conclude that members of two groups are likely to share a certain ability because of other characteristics they share

(E) demonstrate that a general rule applies in a particular case

9. Someone who gets sick from eating a meal will often develop a strong distaste for the one food in the meal that had the most distinctive flavor, whether or not that food caused the sickness. This phenomenon explains why children are especially likely to develop strong aversions to some foods.

Which one of the following, if true, provides the strongest support for the explanation?

(A) Children are more likely than adults to be given meals composed of foods lacking especially distinctive flavors.

(B) Children are less likely than adults to see a connection between their health and the foods they eat.

(C) Children tend to have more acute taste and to become sick more often than adults do.
(D) Children typically recover more slowly than adults do from sickness caused by food.

(E) Children are more likely than are adults to refuse to eat unfamiliar foods.

10. Premiums for automobile accident insurance are often higher for red cars than for cars of other colors. To justify these higher charges, insurance companies claim that, overall, a greater percentage of red cars are involved in accidents than are cars of any other color. If this claim is true, then lives could undoubtedly be saved by banning red cars from the roads altogether.

The reasoning in the argument is flawed because the argument

(A) accepts without question that insurance companies have the right to charge higher premiums for higher-risk clients

(B) fails to consider whether red cars cost the same to repair as cars of other colors

(C) ignores the possibility that drivers who drive recklessly have a preference for red cars

(D) does not specify precisely what percentage of red cars are involved in accidents

(E) makes an unsupported assumption that every automobile accident results in some loss of life

11. A certain credit-card company awards its customers bonus points for using its credit card. Customers can use accumulated points in the purchase of brand name merchandise by mail at prices lower than the manufacturers’ suggested retail prices.
At any given time, therefore, customers who purchase merchandise using the bonus points spend less than they would spend if they purchased the same merchandise in retail stores.

Which one of the following is an assumption on which the argument depends?

(A) The merchandise that can be ordered by mail using the bonus points is not offered at lower prices by other credit-card companies that award bonus points.

(B) The bonus points cannot be used by the creditcard customers in the purchase of brand name merchandise that is not available for purchase in retail stores.

(C) The credit-card company does not require its customers to accumulate a large number of bonus points before becoming eligible to order merchandise at prices lower than the manufacturers’ suggested retail price.

(D) The amount credit-card customers pay for shipping the merchandise ordered by mail does not increase the amount customers spend to an amount greater than they would spend if they purchased the same merchandise in retail stores.

(E) The merchandise available to the company’s credit-card customers using the bonus points is frequently sold in retail stores at prices that are higher than the manufacturers’ suggested retail prices.

12. It is probably not true that colic in infants is caused by the inability of those infants to tolerate certain antibodies found in cow’s milk, since it is often the case that symptoms of colic are shown by infants that are fed breast milk exclusively.

Which one of the following, if true, most seriously weakens the argument?
(A) A study involving 500 sets of twins has found that if one infant has colic, its twin will probably also have colic.

(B) Symptoms of colic generally disappear as infants grow older, whether the infants have been fed breast milk exclusively or have been fed infant formula containing cow’s milk.

(C) In a study of 5,000 infants who were fed only infant formula containing cow’s milk, over 4,000 of the infants never displayed any symptoms of colic.

(D) When mothers of infants that are fed only breast milk eliminate cow’s milk and all products made from cow’s milk from their own diets, any colic symptoms that their infants have manifested quickly disappear.

(E) Infants that are fed breast milk develop mature digestive systems at an earlier age than do those that are fed infant formulas, and infants with mature digestive systems are better able to tolerate certain proteins and antibodies found in cow’s milk.

Questions 13–14

Yolanda: Gaining access to computers without authorization and manipulating the data and programs they contain is comparable to joyriding in stolen cars; both involve breaking into private property and treating it recklessly. Joyriding, however, is the more dangerous crime because it physically endangers people, whereas only intellectual property is harmed in the case of computer crimes.

Arjun: I disagree! For example, unauthorized use of medical records systems in hospitals could damage data systems on which human lives depend, and therefore computer crimes also cause physical harm to people.
13. An issue in dispute between Yolanda and Arjun is
(A) whether joyriding physically endangers human lives
(B) whether the unauthorized manipulation of computer data involves damage to private property
(C) whether damage to physical property is more criminal than damage to intellectual property
(D) whether the unauthorized use of computers is as dangerous to people as is joyriding
(E) whether treating private property recklessly is ever a dangerous crime

14. The reasoning in Arjun’s response is flawed because he
(A) fails to maintain a distinction made in Yolanda’s argument
(B) denies Yolanda’s conclusion without providing evidence against it
(C) relies on the actuality of a phenomenon that he has only shown to be possible
(D) mistakes something that leads to his conclusion for something that is necessary for his conclusion
(E) uses as evidence a phenomenon that is inconsistent with his own conclusion

15. A report of a government survey concluded that Center City was among the ten cities in the nation with the highest dropout rate from its schools. The survey data were obtained by asking all city residents over the age of 19 whether they were high school graduates and computing the proportion who were not. A city school official objected that the result did not seem accurate according to the schools’ figures.
The school official can most properly criticize the reasoning by which the survey report reached its result for failure to do which one of the following?

(A) take into account instances of respondents’ dropping out that occurred before the respondents reached high school

(B) ask residents whether they had completed their high school work in fewer than the usual number of years

(C) distinguish between residents who had attended the city’s schools and those who had received their schooling elsewhere

(D) predict the effect of the information contained in the report on future high school dropout rates for the city

(E) consider whether a diploma from the city’s high schools signaled the same level of achievement over time

16. Brown dwarfs—dim red stars that are too cool to burn hydrogen—are very similar in appearance to red dwarf stars, which are just hot enough to burn hydrogen. Stars, when first formed, contain substantial amounts of the element lithium. All stars but the coolest of the brown dwarfs are hot enough to destroy lithium completely by converting it to helium. Accordingly, any star found that contains no lithium is not one of these coolest brown dwarfs.

The argument depends on assuming which one of the following?

(A) None of the coolest brown dwarfs has ever been hot enough to destroy lithium.
(B) Most stars that are too cool to burn hydrogen are too cool to destroy lithium completely.

(C) Brown dwarfs that are not hot enough to destroy lithium are hot enough to destroy helium.

(D) Most stars, when first formed, contain roughly the same percentage of lithium.

(E) No stars are more similar in appearance to red dwarfs than are brown dwarfs.

17. Whenever a company loses a major product-liability lawsuit, the value of the company’s stocks falls significantly within hours after the announcement. Cotoy has long been involved in a major product-liability lawsuit, and its stocks fell significantly in value today. Therefore, we can be sure that an unfavorable judgment against Cotoy in that lawsuit was announced earlier today.

Which one of the following contains flawed reasoning that most closely parallels that in the argument above?

(A) Whenever a business treats its customers discourteously, its customers begin to shop elsewhere. Shopwell wants to keep all of its customers; therefore, its employees will never treat customers discourteously.

(B) Whenever the large airlines decrease fares, the financial stability of smaller competing airlines is adversely affected. Therefore, the smaller competing airlines’ financial stability must be seriously threatened when the large airlines announce a large price decrease.
(C) Whenever a country shows a lack of leadership on international issues, respect for
the country’s policies begins to decline. Therefore, to gain respect for its policies, a
country should show leadership on international issues.

(D) Whenever an entering student at Cashman College wins the Performance
Fellowship, he or she receives $10,000. Therefore, Eula, a student who has enrolled at
Cashman, must have won the Performance Fellowship, because she just received
$10,000 from the college.

(E) Whenever a company advertises its products effectively, the company’s sales
increase. Oroco’s sales have not increased; therefore, it is likely that the company did
not advertise its products effectively.

18. In recent years the climate has been generally cool in northern Asia. But during
periods when the average daily temperature and humidity in northern Asia were
slightly higher than their normal levels the yields of most crops grown there increased
significantly. In the next century, the increased average daily temperature and
humidity attained during those periods are expected to become the norm. Yet
scientists predict that the yearly yields of most of the region’s crops will decrease
during the next century.

Which one of the following, if true, most helps to resolve the apparent paradox in the
information above?

(A) Crop yields in southern Asia are expected to remain constant even after the
average daily temperature and humidity there increase from recent levels.
(B) Any increases in temperature and humidity would be accompanied by higher levels of atmospheric carbon dioxide, which is vital to plant respiration.

(C) The climate in northern Asia has generally been too cool and dry in recent years for populations of many crop insect pests to become established.

(D) In many parts of Asia, the increased annual precipitation that would result from warmer and wetter climates would cause most edible plant species to flourish.

(E) The recent climate of northern Asia prevents many crops from being farmed there during the winter.

19. No one in the French department to which Professor Alban belongs is allowed to teach more than one introductory level class in any one term. Moreover, the only language classes being taught next term are advanced ones. So it is untrue that both of the French classes Professor Alban will be teaching next term will be introductory level classes.

The pattern of reasoning displayed in the argument above is most closely paralleled by that in which one of the following arguments?

(A) The Morrison Building will be fully occupied by May and since if a building is occupied by May the new tax rates apply to it, the Morrison Building will be taxed according to the new rates.

(B) The revised tax code does not apply at all to buildings built before 1900, and only the first section of the revised code applies to buildings built between 1900 and 1920, so the revised code does not apply to the Norton Building, since it was built in 1873.
(C) All property on Overton Road will be reassessed for tax purposes by the end of the year and the Elnor Company headquarters is on Overton Road, so Elnor’s property taxes will be higher next year.

(D) New buildings that include public space are exempt from city taxes for two years and all new buildings in the city’s Alton district are exempt for five years, so the building with the large public space that was recently completed in Alton will not be subject to city taxes next year.

(E) Since according to recent statute, a building that is exempt from property taxes is charged for city water at a special rate, and hospitals are exempt from property taxes, Founder’s Hospital will be charged for city water at the special rate.

Questions 20–21

Some people have been promoting a new herbal mixture as a remedy for the common cold. The mixture contains, among other things, extracts of the plants purple coneflower and goldenseal. A cold sufferer, skeptical of the claim that the mixture is an effective cold remedy, argued, “Suppose that the mixture were an effective cold remedy.

Since most people with colds wish to recover quickly, it follows that almost everybody with a cold would be using it. Therefore, since there are many people who have colds but do not use the mixture, it is obviously not effective.”

20. Each of the following is an assumption required by the skeptical cold sufferer’s argument EXCEPT:
(A) Enough of the mixture is produced to provide the required doses to almost everybody with a cold.

(B) The mixture does not have side effects severe enough to make many people who have colds avoid using it.

(C) The mixture is powerful enough to prevent almost everybody who uses it from contracting any further colds.

(D) The mixture is widely enough known that almost everybody with a cold is aware of it.

(E) There are no effective cold remedies available that many people who have colds prefer to the mixture.

21. Which one of the following most accurately describes the method of reasoning the cold sufferer uses to reach the conclusion of the argument?

(A) finding a claim to be false on the grounds that it would if true have consequences that are false

(B) accepting a claim on the basis of public opinion of the claim

(C) showing that conditions necessary to establish the truth of a claim are met

(D) basing a generalization on a representative group of instances

(E) showing that a measure claimed to be effective in achieving a certain effect would actually make achieving the effect more difficult

22. To hold criminals responsible for their crimes involves a failure to recognize that criminal actions, like all actions, are ultimately products of the environment that forged the agent's character. It is not criminals but people in the law-abiding majority
who by their actions do most to create and maintain this environment. Therefore, it is law-abiding people whose actions, and nothing else, make them alone truly responsible for crime.

The reasoning in the argument is most vulnerable to criticism on the grounds that (A) it exploits an ambiguity in the term “environment” by treating two different meanings of the word as though they were equivalent (B) it fails to distinguish between actions that are socially acceptable and actions that are socially unacceptable (C) the way it distinguishes criminals from crimes implicitly denies that someone becomes a criminal solely in virtue of having committed a crime (D) its conclusion is a generalization of statistical evidence drawn from only a small minority of the population (E) its conclusion contradicts an implicit principle on which an earlier part of the argument is based.

23. Chronic back pain is usually caused by a herniated or degenerated spinal disk. In most cases the disk will have been damaged years before chronic pain develops, and in fact an estimated one in five people over the age of 30 has a herniated or degenerated disk that shows no chronic symptoms. If chronic pain later develops in such a case, it is generally brought about by a deterioration of the abdominal and spinal muscles caused by insufficient exercise.

The statements above, if true, most strongly support which one of the following?
(A) Four out of five people over the age of 30 can be sure they will never develop chronic back pain.

(B) People who exercise their abdominal and spinal muscles regularly are sure to be free from chronic back pain.

(C) Patients rarely suffer even mild and fleeting back pain at the time that a spinal disk first becomes herniated or degenerated.

(D) Doctors can accurately predict which people who do not have chronic back pain will develop it in the future.

(E) There is a strategy that can be effective in delaying or preventing the onset of pain from a currently asymptomatic herniated or degenerated spinal disk.

24. Each December 31 in Country Q, a tally is made of the country’s total available coal supplies—that is, the total amount of coal that has been mined throughout the country but not consumed. In 1991 that amount was considerably lower than it had been in 1990. Furthermore, Country Q has not imported or exported coal since 1970.

If the statements above are true, which one of the following must also be true on the basis of them?

(A) In Country Q, more coal was mined in 1990 than was mined in 1991.

(B) In Country Q, the amount of coal consumed in 1991 was greater than the amount of coal mined in 1991.

(C) In Country Q, the amount of coal consumed in 1990 was greater than the amount of coal consumed in 1991.
"(D) In Country Q, the amount of coal consumed in 1991 was greater than the amount of coal consumed in 1990.

(E) In Country Q, more coal was consumed during the first half of 1991 than was consumed during the first half of 1990.

25. Tom: Employers complain that people graduating from high school too often lack the vocational skills required for full-time employment. Therefore, since these skills are best acquired on the job, we should require high school students to work at part-time jobs so that they acquire the skills needed for today's job market.

Mary: There are already too few part-time jobs for students who want to work, and simply requiring students to work will not create jobs for them.

Which one of the following most accurately describes how Mary's response is related to Tom's argument?

(A) It analyzes an undesirable result of undertaking the course of action that Tom recommends.

(B) It argues that Tom has mistaken an unavoidable trend for an avoidable one.

(C) It provides information that is inconsistent with an explicitly stated premise in Tom's argument.

(D) It presents a consideration that undercuts an assumption on which Tom's argument depends.

(E) It defends an alternative solution to the problem that Tom describes.
Questionnaire (Confidence Level)

**School Subjects Attitude Scale**

Below is a series of statements. There are no correct answers for them. They have been set up in a way which permits you to indicate whether you agree or disagree with the ideas expressed. If you agree with the sentence, circle “agree”. If you disagree with it, circle “disagree”. If you are not sure about it, circle “unsure”.

<table>
<thead>
<tr>
<th>No.</th>
<th>Statements</th>
<th>Agree</th>
<th>Unsure</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I like school subjects.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I find school subjects interesting and motivating.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I think learning school subjects will help me in my daily life.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td>I am usually at ease during school projects.</td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td>I enjoy learning school subjects.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6</td>
<td>I think learning in school is fun.</td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td>I can get good scores generally during tests.</td>
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<tr>
<td>8</td>
<td>School subjects are an important part of my life.</td>
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<tr>
<td>9</td>
<td>I usually do well in school subjects.</td>
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</tr>
<tr>
<td>10</td>
<td>I learn things quickly in school subjects.</td>
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</tbody>
</table>
IELTS Oral Exam Band Scale (From IELTS Board)

IELTS | Institutions - IELTS band scores

This unique 9-band system measures scores in a consistent manner – wherever and whenever the test is taken. It is internationally recognized and understood, giving you a reliable international currency. IELTS scores have a recommended validity period of two years.

The IELTS 9-band scale

Each band corresponds to a level of English competence. All parts of the test and the Overall Band Score can be reported in whole and half bands, eg 6.5, 7.0, 7.5, 8.0.

Band 9: Expert user: has fully operational command of the language: appropriate, accurate and fluent with complete understanding.

Band 8: Very good user: has fully operational command of the language with only occasional unsystematic inaccuracies. Misunderstandings may occur in unfamiliar situations. Handles complex detailed argumentation well.

Band 7: Good user: has operational command of the language, though with occasional inaccuracies, and misunderstandings in some situations. Generally handles complex language well and understands detailed reasoning.
Band 6: Competent user: has generally effective command of the language despite some inaccuracies and misunderstandings. Can use and understand fairly complex language, particularly in familiar situations.

Band 5: Modest user: has partial command of the language, coping with overall meaning in most situations, though is likely to make many mistakes. Should be able to handle basic communication in own field.

Band 4: Limited user: basic competence is limited to familiar situations. Has frequent problems in understanding and expression. Is not able to use complex language.

Band 3: Extremely limited user: conveys and understands only general meaning in very familiar situations. Frequent breakdowns in communication occur.

Band 2: Intermittent user: no real communication is possible except for the most basic information using isolated words or short formulae in familiar situations and to meet immediate needs. Has great difficulty understanding spoken and written English.

Band 1: Non-user: essentially has no ability to use the language beyond possibly a few isolated words.

Band 0: Did not attempt the test: No assessable information provided.
BIOGRAPHY

Personal Profile

Name of Researcher: Liu I Wei

Date of Birth: 15 December, 1985

Nationality: Belize

Educational Background

2010-2012 – Master Degree of Education in Curriculum and Instruction, Assumption University, Bangkok, Thailand.

2010-2011 – Master Degree in Arts of Business Economics Chulalongkorn University, Bangkok, Thailand

2006-2010 – Bachelor Degree in Business Administration Chulalongkorn University, Bangkok, Thailand

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