

## CHAPTER 5: DISCUSSION

### 5.1 Introduction

The main findings for the TPR mode groups (Experiments 1 and 2) and the IOR mode groups (Experiments 1 and 2) have been presented in Chapter 4. In this chapter, the meaning and implications of these findings will be discussed in depth and related to the main research questions which drive this research.

### 5.2 Research Question 1

*To what extent are IOR and TPR different in how they affect the quality of college students' argumentation in argumentative writing?*

#### 5.2.1 TPR Analysis

Together Experiments 1 and 2 involved a total of 46 essays. These 46 argumentative essays were subjected to, an in-depth content analysis and the quality of their contents was evaluated using the rubric to be found in Appendix 2. The collation of the data from Experiment 1 ( $n = 23$ ) and Experiment 2 ( $n = 23$ ) for the TPR groups are given below in Table 5.1.

**Table 5.1: Overall quality of contents from TPR Experiments 1 and 2**

Quality Content	GOOD		AVERAGE		POOR		TOTAL %	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
Thesis statement	37	80%	7	16%	2	4%	46	100%
Support	39	85%	0	0%	7	15%	46	100%
Counter-arguments	20	43%	8	18%	18	39%	46	100%

The table shows that a large majority of the respondents were able to develop clear and concrete claims in their essays. The thesis statements are also well organized and put in the right position in the essay. No fewer than 80% of the respondents were competent in developing 'Good' thesis statements, while 16% were found to be of 'Average' quality and a minority of 4% wrote 'Poor' thesis statements. These respondents mainly faced difficulty writing a thesis and organizing it in an orderly manner so as to develop their argumentation.

The analysis of the support category is even clearer cut, as there were no respondents who fell into the 'Average' quality category. A majority of the respondents, i.e. 85%, had clear and well-developed support for the thesis statement and the body paragraphs, which included elaboration of points and the incorporation of examples and data. Nevertheless, 7 respondents (totaling 15%) had 'Poor' quality support throughout their essay. So, all the essays had support but for some it was either false or out of topic (i.e. irrelevant) and thus not totally supporting the thesis statements or the main points that were being made. On the whole, it is evident that all the respondents are aware of the importance of support in an essay and are capable of supporting their thesis and main points in their body paragraphs.

As for the counter-arguments, the three categories of 'Good', 'Average' and 'Poor' yield smaller contrasts. It can be seen that 43% of the respondents wrote 'Good' counter-arguments, and that there were 18% who wrote 'Average' counter-arguments, i.e. counter-arguments that lacked depth or originality and were merely stating the apparent. For those who wrote 'Poor' counter-arguments (39%), it can be observed that most of them did not include any form of counter-argument in their essays at all. Thus, the nature of their essays was found to be factual and not aligned to the argumentative essay structure that should include some opposing claims and their subsequent refutation or rebuttal. To conclude, Table 5.1 shows that of the three argumentative essay components, formulating counter-

arguments is the most problematic aspect of argumentative essay writing and that a majority of the respondents have not mastered this aspect well enough to qualify as ‘Good’.

### 5.2.2 IOR Analysis

To compare the quality of argumentative content between TPR mode and IOR mode groups, we also need a comprehensive analysis of IOR mode group from Experiments 1 and 2. The collation of the data from Experiment 1 ( $n = 22$ ) and Experiment 2 ( $n = 22$ ) is combined and shown in Table 5.2 below.

**Table 5.2: Overall quality of contents from IOR Experiments 1 and 2**

Quality Content	GOOD		AVERAGE		POOR		TOTAL %	
<b>Thesis statement</b>	41	93%	3	7%	0	0%	44	100%
<b>Support</b>	39	89%	5	11%	0	0%	44	100%
<b>Counter-arguments</b>	29	66%	6	14%	9	20%	44	100%

The amalgamation of Experiment 1 and Experiment 2 for the IOR groups suggests that almost all, i.e. 93%, of the respondents were able to develop and write clear and concise thesis statements and a small number of 7% only wrote ‘Average’ quality thesis statements. It was also noted that none of the respondents’ thesis statements were of ‘Poor’ quality. Therefore, it is easily seen that the respondents were able to write and develop good thesis statements.

As with the thesis statements, the quality of ‘support’ among the IOR mode group was similar, mainly falling into the ‘Good’ and ‘Average’ quality groupings. It was found that the ‘Good’ quality support made up the majority totaling 89%, whereas the ‘Average’ quality category comprised of 11%. Note that none were categorized as ‘Poor’. It was noticed that 100% of the essays contained support, meaning that all the respondents were able to support their thesis statements and main points.

In the overall category of counter-arguments, 66% developed and included ‘Good’ quality counter-arguments and 14% generated ‘Average’ quality counter-arguments. However, 20% had ‘Poor’ counter-arguments as they mainly did not include any counter-arguments or indication of consciousness of opposing points.

As an overall observation, a large portion of the respondents from the TPR and IOR groups relied on their own knowledge and current events to support their points and contents of their essays. A study by Berk (2009) found that when students of Gen Y are ‘exposed to tons of information, they lack an understanding of how to find, evaluate, *use and present* that information’ (p. 9). In this study this was apparent, as much of the contents in these essays referred to ‘Pudu Prison’ as opposed to Alcatraz, which was the main topic of the reading material provided. For instance, for support many respondents referred to the ‘cramped’, ‘unhealthy’ and ‘unhygienic’ environment in prisons, which contradicts the information in the reading material; the input text states that meals are balanced and stresses the importance of cleanliness in Alcatraz. Therefore, it can be concluded that the respondents found it easier to discuss the topic from a local perspective, using local examples, and to build and support their thesis statement on that basis.

Thus, to answer the first research question, the TPR and IOR modes do not differ much in how they affect the quality of content in students’ argumentation in argumentative essays. For all the main components, i.e. thesis statement, support and counter-arguments;

the findings are similar. The IOR mode might correlate with a slight improvement in the quality of content in argumentative essays. It can be observed from Tables 5.1 and 5.2 above that there is a difference between these two modes, of approximately 4% and clearly indicates that regardless of the mode of presenting information and the reading mode, students will still rely on general and prior knowledge of the topic and base a large part of their writing contents on this information.

### 5.3 Research question 2

*To what extent are IOR or TPR different in how they help or hinder college students' use of topic-specific vocabulary in argumentative writing?*

#### 5.3.1 TPR and IOR Analysis

In order to answer the second research question above, findings of Experiment 1 and Experiment 2 were combined for both TPR and IOR groups. Table 5.3 below provides the comprehensive statistics for an unambiguous analysis for both modes.

**Table 5.3: Vocabulary used from TPR and IOR groups from Experiments 1 and 2**

MODE	TPR				IOR			
	Types	Token	Total	%	Types	Token	Total	%
K1 words (1-1000)	626	1143	13639	77.64	616	1098	12419	76.90
K2 words (1001-2001)	216	330	1803	10.26	207	306	1657	10.26
1K + 2k words	...	...	...	87.90	...	...	...	87.16
AWL words	241	353	890	5.07	212	310	799	4.95

The statistics show that usage of K1 level words is very similar for both TPR and IOR mode groups, with a mere 0.74% difference between the respective essays. Additionally,

the percentage of K2 level words used by both groups in the study is the same: 10.26%. The difference in AWL words found in the essays was also marginal, as they only differed by 0.12%. The types and token words tabulated for both experimental groups signify similarities, with only marginal differences in vocabulary used in the essays though the TPR mode group had a slightly higher variety of token words and their types.

The analysis above is an overview of the use of vocabulary in the essays from both experimental groups. Table 5.4 below provides us with the total topic-specific words used by the TPR and IOR groups, helping us to answer the second research question of this study.

**Table 5.4: Total target vocabulary used by TPR and IOR groups from Experiments 1 and 2 (frequency of occurrence of tokens)**

<b>Mode</b>	<b>TPR</b>	<b>IOR</b>
Experiment 1	413	592
Experiment 2	303	529
<b>TOTAL</b>	<b>716</b>	<b>1121</b>

Table 5.4 above indicates clearly that overall the IOR group was more inclined to use and adapt words from the input text into their essays. There appears to be a significant difference between the TPR group and the IOR group of 405 words. This data also implies that each respondent from the TPR group, on average used 15.56 words either in token or types form, whereas, the IOR group respondents on average used 25.47 words from the IOR text into their essays, as presented in Table 5.5 on the proceeding page:

**Table 5.5: Average words used by TPR and IOR groups from Experiments 1 and 2**

<b>Mode</b>	<b>Frequency of tokens</b>	<b>No. of essays</b>	<b>Average number of target vocabulary</b>
TPR	716	46	15.56
IOR	1121	44	25.47

In a detailed breakdown in Table 5.6 below, it is seen that the TPR total number of words from Experiments 1 and 2 are 3015 words and that for the IOR mode the total is 2806. However, in terms of percentage, between the TPR group and the IOR group, the relative frequencies of the target vocabulary used in argumentative essays were 23.7% and 39.9%. As such, it is evident that the IOR group was more receptive to the target vocabulary and used more of the vocabulary in their essay writing, which resulted in a higher density of target vocabulary in this group of essays.

**Table 5.6: Total target vocabulary and token used from TPR and IOR modes from Experiment 1 and 2**

<b>Mode</b>	<b>Total target vocabulary</b>	<b>Total tokens</b>	<b>%</b>
TPR ( Exp 1 + Exp 2)	716	3015 (1369 + 1646)	23.7%
IOR (Exp 1 + Exp 2)	1121	2806 (1392 + 1414)	39.9%

It was also evident from the essays that the TPR group did not use many of the words from the vocabulary list; however, the respondents used some synonyms of the words from the list, for instance: ‘penitentiary’ was substituted for ‘jail’, ‘notorious’ for ‘bad’ and instead of ‘military’, ‘ army’ was used. Therefore, the TRP group was more inclined towards falling back on their existing knowledge of words and did not attempt to incorporate the vocabulary from the texts into the writing repertoire.

## 5.4 Summary

In this area of study, we compared the two modes (IOR and TPR) from the perspective of argumentative essay writing and usage of vocabulary. The findings from the compiled data in the previous sections indicate that the presentation mode of input reading material in the ESL writing classroom does not make any difference to the content quality of students' argumentative essays: whether in print or shown online, the reading materials do not lead to noticeable differences in content. This conclusion is similar to the research findings reported in Baker (2003), which also recorded 'no significant differences' (p. 5) in content ability between two similar groups.

The data also clearly shows that the most difficult element in this genre of essay writing is developing and refuting counter-arguments. The findings in this component support earlier work, most notably Wolfe et al. (2005), who observed that a majority of respondents of their study 'excluded all other-side information from their written arguments' (p.188), showing that counter-arguments, refutation, and rebuttals are difficult for students to perceive and form.

Vocabulary choice and usage are an integral aspect of high-quality academic writing. Statistical findings in Sections 5.2 and 5.3 clearly show that students are more inclined towards adopting words from the online resource as compared to the print text mode. These findings further corroborate studies on learning vocabulary from the Internet by Friedman (2009), Blachowicz & Obrochta (2005) and McNamara et al. (2009), all of which noticed linguistic improvements with groups using online resources.

The overall findings are parallel to previous findings of recent studies comparing text read in print and online. Studies by Usó-Juan & Ruiz-Madrid (2009) also found that respondents scored similarly and that varying reading modes was not a factor to differentiate in terms of content or writing quality.



Moving on, the findings further support the web-based constructivist learning which strongly believes in the importance of the learning environment for effective teaching and learning improvements. Although our findings have indicated similar quality of argumentation for both groups, nevertheless usage of the target vocabulary was higher in the IOR group. Speculatively, if this means that the students effectively learnt more vocabulary, too, then this supports the overall constructivist learning paradigm. Anyhow, the findings of this study suggest that technology-enriched environments produce mixed learning outcomes.

In other words, the goal of an educational foundation for technology-enhanced education 'is to motivate students to engage in meaningful, constructive, active and productive learning' (Li et al., 2010, p. 29) but the reality is that it may not always be as effective. Thus, it is imperative that educators use eclectic teaching methods in order to produce positive learning results.

## **CHAPTER 6: CONCLUSION**

### **6.1 Introduction**

The final chapter of this study will consolidate the information from the preceding chapters. Therefore, in an attempt to draw a conclusion to this experimental study, this chapter will first begin with recapping the research goals of this study, followed by the general discussion of the findings and their implication for writing pedagogy and the ESL field whilst providing suggestions for further research to be built upon this study.

### **6.2 Research Goals**

The main research goals and the hypotheses of this study are two-fold, firstly, to examine the effect of two reading modes (IOR and TPR) on students' argumentative essays, comparing them in terms of quality of content and vocabulary used from the input reading text. It could be shown that respondents' argumentative essays in the two conditions were of a very similar level of quality for all of the three components that were analyzed: thesis statements, support and counter-arguments, thus rejecting the first hypothesis. However, the target vocabulary used by the IOR mode group was notably higher in relative frequency than the vocabulary used by the TPR mode group and this confirms the second hypothesis. Thus, these findings help answer the research questions set out by this study.

### **6.3 General Discussion**

Although ICT, the Internet and all its resources are integrated into teaching and learning environments around the world, it is also crucial that educators recognize that the use of technology does not necessarily mean better teaching, let alone, better learning. The Internet clearly does not represent an alternative to replace all printed materials; rather, as the current study shows it represents a useful 'option' for teaching and learning. The findings summarized in the previous section show that the differences between print and online reading modes are nonexistent except for the usage of target vocabulary in the IOR

condition. Whether the lexical gains are a direct result of the deeper and more constructivists learning associated with ICT and the Internet has not been examined in this study. Given the mixed results of our study, we ‘as teachers, must approach technological change by asking ourselves whether our teaching has the potential to be enhanced by technology, and whether technology serves a purpose in aiding student learning’ (Sutherland-Smith, 2002, p 668).

#### **6.4 Implications of this study**

As observed above, the reading mode does not alter the quality of an argumentative essay; conversely, incorporating online activities into classroom pedagogy will help improve the level of target vocabulary usage, which in turn will improve the quality of writing.

The second implication is that although the respondents belong to the Gen Y group, they do not show any difference with respect to the two reading modes. This may have to do with the fact that passivity is still very much associated with ‘reading’, being it in print or online. Even so, web text reading has been reported to be vastly different from print reading in terms of skills needed and strategies implemented when reading web text (Sutherland-Smith, 2002). However, this should be seen as a bane, as not many educators are trained to teach their students’ new reading strategies, which is a disadvantage as ‘online materials increasingly dominate printed media’ (Rowse and Burke, 2009, p. 108).

Nevertheless, overall, this indicates that we may be experiencing a change in teaching pedagogies as the pendulum sways back to more traditional teaching practices once again, and that many of them prove similarly effective. All this is further indicative that educators need to practice and use eclectic teaching methods in their classroom teaching for enhanced learning.

## 6.5 Future research

Long before the e-learning era, Plato (428-348 BC) said:

‘Someday, in the distant future, our grandchildren’s grandchildren will develop a new equivalent of our classrooms. They will spend many hours in front of boxes with fires glowing within. May they have the wisdom to know the differences between light and knowledge.’

(Mullamaa, 2010, p. 44)

Ironically, Plato’s premonition above regarding the ‘boxes with fires glowing’ seems to refer to computers today and suggest that we take the benefits and banes from these ICT environments. Thus, an area of research that should definitely be explored further would be comparing the many different learning environments for impact on foreign language acquisition.

Many similar studies have been undertaken comparing various reading modes in terms of how they affect comprehension ability, as elaborated in Chapter 2. Nonetheless, it would be interesting to assess Malaysian students’ perceptions of online reading activities. Seeing that the current students consist of Gen Y group, in-depth case studies would also be beneficial to help understand their true strengths and weaknesses in using online resources in improving their academic writing skills.

Another interesting area of research would be to experiment on the reading rate of print and online reading. From research in L1 reading, the reading rate drops 10-30% when moving from printed material to online reading (Kurniawan and Zaphiris, 2001). Thus, it would be beneficial to assess the reading rate of L2 learners and to see if content generation and productive vocabulary are also affected by this speed.

Finally, future studies should be undertaken to identify and review websites suitable for ESL teaching. Finding suitable, effective websites for ESL teaching activities would be

beneficial for all parties involved. With this in mind, it is hoped that new studies will follow this research in order to provide more conclusive answers to this area of study.