Faculty of Language and Communication

A Case Study on the Effects of Written Corrective Feedback on Collocation Competence: Evidence from a Public University in Malaysia

Abang Fhaeizdhyall Abang Madaud

Doctor of Philosophy
2023

A Case Study on the Effects of Written Corrective Feedback on Collocation Competence: Evidence from a Public University in Malaysia

Abang Fhaeizdhyall Abang Madaud

A thesis submitted

In fulfillment of the requirements for the degree of Doctor of Philosophy

(Applied Linguistics)

Faculty of Language and Communication
UNIVERSITI MALAYSIA SARAWAK
2023

DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Malaysia Sarawak. Except where due acknowledgements have been made, the work is that of the author alone. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.



……

Signature

Name: Abang Fhaeizdhyall bin Abang Madaud

Matric No.: 18010057

Faculty of Language and Communication

Universiti Malaysia Sarawak

Date : September 4, 2023

ACKNOWLEDGEMENT

I have received a great deal of assistance and support throughout the writing of this thesis.

First, I would like to express my sincere gratitude to my supervisor Dr. Collin Jerome from UNIMAS for his continuous support in my Ph.D. journey. His guidance, patience, critical views, and great commitment have helped me in all the time of research and writing of my thesis. I could not have imagined having a better supervisor for my PhD journey.

Second, I would like to acknowledge my colleagues from Universiti Teknologi MARA Cawangan Sarawak who have contributed their ideas, guidance, and suggestions during the proposal development stage of the thesis. This is especially for senior lecturers in the Academy of Language Studies and the Faculty of Business Management. Furthermore, some lecturers from the Faculty of Mathematics and Computer Sciences deserve to be acknowledged for guiding me during the data analysis stage. Also, my appreciation goes out to my former students who had agreed to participate in the study,thus contributing to the completion of my study.

In addition, I would like to thank my parents for their wise counsel and understanding of my predicament in completing my Ph.D. study. Also, the process of completing the thesis involved many stimulating discussions with friends who are in the same course, completing their own Ph.D.s. Therefore, their support deserves a mention.

Last but not least, the critical feedback from Prof. Dr. Muhammad Kamarul Kabilan, Prof. Dr. Ting Su Hie, and Assoc. Prof. Dr. Shamala Paramasivam on my thesis deserves to be commended. Above all, thank you Allah for answering my prayers.

ABSTRACT

Written Corrective Feedback (WCF) has been and remains one of the most contentious issues in Second Language Acquisition (SLA) studies despite its prevalence in L2 classrooms. The ongoing debate regarding the overall effectiveness of WCF has produced numerous empirical findings that have led to the inconclusiveness of its overall effects. This study was conducted due to the following situations: (1) most undergraduate students in the university, where this study was conducted, had difficulties forming accurate collocations; (2) WCF is broadly used in L2 classrooms despite its inconclusive effects; (3) lack of empirical evidence to support the use of WCF in L2 classrooms in the Malaysian university context. Therefore, this case study was conducted to investigate the effects of direct and indirect WCF on the collocational competence of low and high-proficiency ESL learners in a public university in Malaysia. Four research questions were derived to guide the study: (1) What are the short-term effects of direct and indirect WCF on the collocation competence of the students in the study? (2) What are the long-term effects of direct and indirect WCF on the collocation competence of the students after nine weeks? (3) What WCF type has a greater effect on the students' collocation competence? (4) What are the factors as perceived by the students that can contribute to or hinder the effectiveness of direct and indirect WCF in improving collocation competence? Data were collected from multiple sources which include a quantitative approach of using a series of collocation test instruments (i.e., Test 1, Test 2, and Test 3), an open-ended questionnaire, field notes, and course information document. The study was conducted during the academic session of September 2019-February 2020 with a total of 120 ESL students in a public university in the state of Sarawak, Malaysia. The students were identified based on their performance in the previous semester's English course that was used to determine their proficiency groups which includes several-low-proficiency (e.g., Group 1, Group 2) and high-proficiency

(Group 3, Group 4). The findings have revealed that direct and indirect WCF have positive short-term effects on the collocational competence of all groups. In addition, concerning the students' proficiency inthis case study, the findings suggest that indirect WCF may not provide long-term benefits to low-proficiency ESL students (Group 3), but it may be beneficial to high-proficiency ESL students (Group 4). In highlighting the findings from the third research question,direct WCF is the fittest type of corrective feedback to facilitate their collocation competence. Moreover, this case study has also revealed several causes that can lead to the effectiveness of WCF practices such as learners' factors and the nature of corrective feedback factors. On the other hand, contextual factors and the nature of corrective feedback factors can contribute to the ineffectiveness of WCF. This study has contributed to generating new knowledge in the literature, providing empirical evidence to guide language educators' practices of using WCF, and creating new directions for future researchers.

Keywords: Written corrective feedback, direct, indirect, English collocation, effectiveness, case study.

Satu Kajian Tentang Kesan Maklum Balas Pembetulan Bertulis Terhadap Keupayaan Kolokasi: Bukti daripada Sebuah Universiti Awam di Malaysia

ABSTRAK

Maklum balas pembetulan bertulis (WCF) merupakan satu isu yang berpanjangan didalam Kajian Penggunan Bahasa Kedua (SLA) walaupun ianya merupakan satu teknik yang sering di pakai di dalam kelas bahasa kedua. Kajian ini dijalankan oleh sebab kewujudan pelbagai variasi dapatan kajian mengenai keberkesanan WCF yang tidak konklusif dan penggunaannya masih meluas di dalam kelas bahasa Inggeris sebagai bahasa kedua. Kajian in dijalankan atas sebab-sebab berikut: (1) kebanyakan pelajar di universiti tempat kajian dijalankan mempunyai masalah dalam menghasilkan kolokasi Bahasa Inggeris dengan tepat; (2) WCF kerap digunakan di dalam kelas walaupun tiada petunjuk yang konklusif tentang keberkesanannya; (3) kekurangan sorotan literatur untuk menyokong penggunaan WCF di dalam konteks pendidikan tahap universiti di Malaysia. Justeru, kajian kes-berganda ini dijalankan untuk mengkaji keberkesanan WCF (secara terlus, dan tidak terlus) untuk meningkatkan penguasaan kolokasi bahasa Inggeris pelajar di sebuah universiti awam di Malaysia. Empat soalan kajian telah digubal untuk mengemudi kajian ini: (1) Apakah kesan jangka pendek daripada penggunaan maklum balas bertulis secara terlus dan tidak terlus terhadap keupayaan kolokasi pelajar?(2) Apakah kesan jangka panjang daripada penggunaan maklum balas bertulis secara terlus dan tidak terlus terhadap keupayaan kolokasi pelajar?(3) Apakah jenis maklum balas bertulis yang memberikan kesan terbaik terhadap keupayaan kolokasi pelajar? (4) Apakahfaktor yang boleh membantu atau mengurangkan keberkesanan maklum balas bertulis dalam meningkatkan keupayaan kolokasi pelajar? Data kajian dikumpul melalui beberapa sumber seperti: (1) ujian kolokasi; (2) survey kualitatif; (3) nota lapangan; (4) dokumen yang berkaitan melibatkan

subjek seperti kursus Bahasa Inggeris semester lalu. Kajian telah dijalankan pada sesi akademik 2019/2020 bersama 120 org pelajar bahasa Inggeris sebagai bahasa kedua di sebuah universiti awam di Sarawak, Malaysia. Kumpulan pelajar telah ditentukanmelalui pencapaian subjek Bahasa Inggeris semester lepas dimana dua kumpulan adalah pelajar berkeupayaan rendah bahasa Inggeris (Kes 1 & Kes 2), dan dua kumpulan berkeupayaan tinggi bahasa Inggeris (Kes 3 & Kes 4). Dapatan menunjukkan kedua jenis WCF mempunyai kesan positif terhadap penguasaan kolokasi pelajar di dalam semua kes. Seterusnya, dapatan juga menunjukan WCF secara terlus mempunyai kesan jangka panjang terhadap pelajar di dalam kes 1 dan kes 3. Tetapi, WCF secara tidak terlus hanyamemberi kesan jangka panjang terhadap pelajar kes 4 sahaja. Ini menunjukkan bahawa WCF jenis ini tidak sesuai untuk pelajar berkeupayaan rendah. Melalui soalan kajian keempat, beberapa faktor telah dirungkai, dimana faktor ini mampu memberi kesan kepada keberkesanan WCF: (1) faktor pelajar; (2) faktor ciri-ciri WCF; dan (3) faktor konteks. Kajian ini telah menyumbang kepada perkembangan literatur, menawarkan bukti empirical kepada pendidik bahasa Inggeris tentang penggunaan WCF, dan membukalembaran baru kajian untuk penyelidik masa hadapan.

Kata kunci: *Maklum balas pembetulan bertulis, secara telus, secara tidak telus, kolokasiBahasa Inggeris, keberkesanan*

TABLE OF CONTENTS

		Page
DECLARATION		i
ACKNOWLEDGEMENT		ii
ABSTRACT		iii
ABSTRAK		v
TABLE OF CONTENTS		vii
LIST OF TABLES		xv
LIST OF FIGURES		xix
LIST OF ABBREVIATIONS		xxii
CHAPTER 1: INTRODUCTION		1
1.1	Research Problem	1
1.2	Purpose of the Study	9
1.3	Research Objectives	9
1.4	Research Questions	12
1.5	Significance of the Study	12
1.6	Operational Definitions of Terms	14
1.6.1	Written Corrective Feedback	14
1.6.2	Direct and Indirect Written Corrective Feedback	15
1.6.3	Targeted Linguistic Structure	15
1.6.4	Collocation and Collocational Competence	16
1.6.5	Low and High Proficiency ESL Learners	16
1.7	Thesis Outline and Chapter Summary	17

CHAPTER 2: LITERATURE REVIEW 18

2.1 A Brief View of the Teaching of L2 Writing in the Malaysian Education System 18

2.2 The Role of Corrective Feedback in Second Language Acquisition (SLA) 21

2.2.1 The Shifting Roles from the 1950s to the Present Time 21

2.2.2 Acknowledging the Positive Role of Corrective Feedback on L2 Learners' Accuracy 22

2.2.3 The Recognition of Written CF in SLA 24

2.3 Theoretical Discussions of CF Studies 26

2.3.1 Theoretical Arguments against CF 26

2.3.1.1 Krashen's (1981, 1985) Monitor Model 27

2.3.1.2 Truscott's (1996, 2004) Argument of Pseudo-learning, Learnability, and the Side-effect of CF 29

2.3.2 Theoretical Arguments Supporting Corrective Feedback 32

2.3.2.1 Long's (2000) Focus-on-form Approach 33

2.3.2.2 The Noticing Hypothesis 34

2.3.2.3 The Interaction Approach 35

2.3.2.4 Skill Acquisition Theory 36

2.4 The Theoretical Framework of this Case Study 37

2.4.1 Output Hypothesis 40

2.4.1.1 Output as the Noticing Function and the Role of CF 41

2.4.1.2 Output as the Hypothesis Testing Function 43

2.4.1.3 Output Serves as the Metalinguistic Reflections 44

2.4.1.4 Acquisition as the Final Output 45

2.4.2	The Integrated Model to Investigate Corrective Feedback	46
2.4.2.1	Learner Factors: Learner's Prior Experience and Exposure to WCF	47
2.4.2.2	Contextual Factors: Illegible Handwriting of CF Provider and CF Delivery	52
2.4.2.3	Nature of Feedback Factors: Metalinguistic Information in Direct WCF and Degree of Explicitness of WCF	55
2.5	The Typology of Written Corrective Feedback	59
2.6	The Effects of Direct and Indirect WCF	60
2.6.1	Studies Supporting the Indirect Written Corrective Feedback	61
2.6.2	Studies Supporting Direct Written Corrective Feedback	65
2.6.3	Studies Indicating no Differential Effects among WCF Types	69
2.6.4	Uncovering the Knowledge Gaps of Past Studies on the Effects of WCF	72
2.7	Written Feedback Studies in the Malaysian Education System	75
2.8	English Collocational Competence, L2 Accuracy, and Corrective Feedback	81
2.8.1	Defining English Collocation	81
2.8.2	Collocational Competence and L2 Accuracy	82
2.8.3	Several studies investigating the effect of corrective feedback on collocation	84
2.9	Chapter Summary	87
CHAPTER 3: METHODOLOGY		89
3.1	Research Design	89
3.2	The Case	95
3.3	The Units of Analysis: The Four Groups of Students	98
3.3.1	Group 1: The low-proficiency Group Receiving Direct WCF	104
3.3.2	Group 2: The low-proficiency Group Receiving Indirect WCF	105

3.3.3	Group 3: The High-proficiency Group Receiving Direct WCF	105
3.3.4	Group 4: The high-proficiency Group Receiving Indirect WCF	105
3.4	Researcher Positionality as Teacher-researcher in the Case Study	106
3.5	Data Sources and Instruments	108
3.5.1	The Collocation Tests	108
3.5.2	Constructing Test 1 from COLLMATCH	112
3.5.3	Reliability of Test 1, Test 2, and Test 3	115
3.5.4	The Qualitative Approach of the Open-ended Questionnaire	118
3.5.5	Field Notes	120
3.5.6	Course Information of Past Semester English Course	121
3.6	Data Collection Procedures	121
3.6.1	Exposure to Collocation Subjects Prior to Doing Test 1	124
3.6.2	The Administration of Test 1 and Providing WCF Types on Errors	125
3.6.3	The Administration of Test 2 and Test 3	128
3.6.4	The Administration of Open-ended Questionnaire and Retrieval of Course Information Document	128
3.7	Ethical Consideration	128
3.8	Trustworthiness	129
3.8.1	Internal Validity	130
3.8.2	Reliability	133
3.8.3	Trustworthiness of Qualitative Data	134
3.8.4	Reliability of the Qualitative Analysis	136
3.9	Data Analysis Procedures	138
3.9.1	Within-case Analysis	139

3.9.2	Pattern-matching in Cross-case Analysis	146
3.9.3	Thematic Analysis	148
3.9.3.1	Familiarisation with the data	152
3.9.3.2	Coding	152
3.9.3.3	Searching and Deducing Themes	154
3.9.3.4	Reviewing the Potential Themes	156
3.9.3.5	Defining and Naming Themes	159
3.9.3.6	Producing the Report	160
3.9.4	Content Analysis	160
3.10	Study Limitations	165
3.10.1	The Practice Effect	165
3.10.2	The Researcher's Bias as an ESL Educator Influencing the Interpretation of Data	166
3.10.3	Generalisability of the Results	166
3.10.4	The Context of this Case Study is Limited to One Local University	167
3.11	Summary of the Chapter	167
CHAPTER 4: FINDINGS		168
4.1	Short-term Effects of Direct and Indirect WCF on the Collocation Competence of the Students	169
4.1.1	Group 1	169
4.1.2	Group 2	172
4.1.3	Group 3	173
4.1.4	Group 4	176
4.1.5	Direct and Indirect WCF Can Facilitate Learners' Collocation Competence	178

	in Short-term	
4.2	Long-term Effects of Direct and Indirect WCF on the Collocation Competence of the Students	179
4.2.1	Group 1	179
4.2.2	Group 2	182
4.2.3	Group 3	184
4.2.4	Group 4	187
4.2.5	Indirect WCF was not able to Facilitate Collocation Competence of Low-Proficiency Learners in Long-term as Compared to Direct WCF	190
4.3	Type of WCF that Has a Greater Effect on Students' Collocation Competence	190
4.3.1	Group 1 and Group 2 of Low-proficiency Students	191
4.3.2	Group 3 and Group 4 of High-proficiency Students	196
4.3.3	Direct WCF Has a Better Effect on the Collocation Competence of the Students	202
4.4	Factors Contribute to or Hinder the Effectiveness of Direct and Indirect WCF	202
4.4.1	Within-case Analysis	203
4.4.1.1	Group 1	203
4.4.1.2	Group 2	214
4.4.1.3	Group 3	221
4.4.1.4	Group 4	229
4.4.2	Cross-case Analysis	237
4.4.3	The Effectiveness of WCF is Caused by Learner's and Nature of CF	245

Factors whereas its Inefficiency is Due to Contextual and Nature of CF Factors

4.5 Chapter Summary 247

CHAPTER 5: DISCUSSIONS 248

5.1 Direct and Indirect WCF Positively Affects the Collocation Competence of the Students in Short-term 249

5.2 Direct WCF has a Positive Long-term Effect on Collocate Competence whereas Indirect WCF was Less Effective for Low-proficiency learners 252

5.3 Direct WCF is more Effective than Indirect WCF 257

5.4 Learners' Factors and the Nature of CF Factors can Contribute to the Effectiveness of WCF whereas the Nature of CF and Contextual Factors can Degrade WCF 261

5.4.1 Learners' Factors Contributing to the Effectiveness of WCF 262

5.4.2 Nature of CF Factors Contributing to the Effectiveness of WCF 265

5.4.3 Nature of CF Factors Hinder the Effectiveness of WCF 269

5.4.4 Contextual Factor of Illegible Handwriting of WCF Provider 272

5.5 Chapter Summary 274

CHAPTER 6: CONCLUSION 275

6.1 Summary of Key Findings 275

6.2 Theoretical Contribution 281

6.3 A Guideline for L2 Educators to Use Written CF with ESL Learners 284

6.3.1 Allow Learners to Indicate their Preference of WCF Type 286

6.3.2 Allocate Time for Learners to Review the CF Provided 286

6.3.3 Address Common Linguistic Errors with the Whole Class 287

6.3.4 Inform the students of the types of WCF used at the start of school terms 287

6.3.5 Employ Focused Written CF (instead of unfocused) 288

6.3.6 Use a Printed Form of Written CF 288

6.3.7 Integrate both Types of Written CF 288

6.3.8 Provide any type of WCF as opposed to not provide any 289

6.3.9 Use explicit CF such as direct WCF 290

6.4 Directions for Future Research 290

6.5 Conclusions 292

6.6 Chapter Summary 293

REFERENCES 294

APPENDICES 330

LIST OF TABLES

		Page
Table 2.1	The typology of WCF adapted from Ellis (2009)	61
Table 2.2	The summary of Written CF oriented studies in Malaysia	78
Table 2.3	Types of lexical collocations (Benson et al., 2009)	84
Table 2.4	The summary of WCF studies on English collocation	91
Table 3.1	Descriptive statistics of all groups' performance in ELC151	101
Table 3.2	Mean score difference of performance of all groups in ELC151	101
Table 3.3	Group labels and descriptions	103
Table 3.4	Collocational competence of high-proficiency students (Group 3 & 4) in Test 1	104
Table 3.5	Collocational competence of low-proficiency students (Group 1 & 2) in Test 1	104
Table 3.6	An excerpt of collocation items for COLLMATCH taken from Gyllstad's (2007)	111
Table 3.7	Language focus and categories of errors	127
Table 3.8	Steps in peer debriefing suggested by Janesick (2015)	134
Table 3.9	The Data Sets Selected for ICR	138
Table 3.10	Statistical analysis to determine the short-term effect of WCF	142
Table 3.11	Statistical analysis to determine the long-term effect of WCF	143
Table 3.12	Statistical analysis to identify the fittest WCF type	145

Table 4.1	Levene's test of homogeneity of variances of Test 1 of low-proficiency groups	170
Table 4.2	Descriptive statistics of Group 1 receiving direct WCF	170
Table 4.3	Paired sample t-test of Group 1 receiving direct WCF	171
Table 4.4	Descriptive statistics of low-proficiency students receiving Indirect WCF	171
Table 4.5	Paired sample t-test of the low-proficiency group receiving Indirect WCF	173
Table 4.6	Descriptive statistics of mean score of Test 1 of high-proficiency groups	174
Table 4.7	Test of homogeneity of variances of Test 1 of high-proficiency groups	177
Table 4.8	Descriptive statistics high-proficiency group receiving direct WCF	175
Table 4.9	Paired sample t-test of the high-proficiency group receiving direct WCF	175
Table 4.10	Descriptive statistics of Group 4 receiving indirect WCF	177
Table 4.11	Paired sample t-test of Group 4 group receiving indirect WCF	177
Table 4.12	Tests of within-subjects effects of Group 1	180
Table 4.13	Pairwise comparisons of Test 1, Test 2, and Test 3 of Group 1	180
Table 4.14	Tests of within-subjects effects of Group 2	182
Table 4.15	Pairwise comparisons of Test 1, Test 2, and Test 3 of Group 2	183
Table 4.16	Tests of within-subjects effects of Group 3	185
Table 4.17	Pairwise comparisons of Test 1, Test 2, and Test 3 of Group 3	185
Table 4.18	Tests of within-subjects effects of Group 4	187

Table 4.19	Pairwise comparisons of Test 1, Test 2, and Test 3 of Group 4	188
Table 4.20	Descriptive statistics of Group 1 and Group 2 (low-proficiency students) across three test occasions	192
Table 4.21	Test of normality of Test 1 for Group 1 and Group 2	192
Table 4.22	Test of normality of Test 2 for Group 1 and Group 2	193
Table 4.23	Test of normality of Test 3 for low-proficiency students	193
Table 4.24	Levene's test of equality of error variances of Group 1 and Group 2 across all tests	194
Table 4.25	Multiple comparisons of Test 2 and Test 3 of low-proficiency students	194
Table 4.26	Multiple comparisons of Group 1 and Group 2 in Test 2	195
Table 4.27	Multiple comparisons of Group 1 and Group 2 in Test 3	195
Table 4.28	A comparison of WCF effects in Test 2 and Test 3 of Group 1 and Group 2	196
Table 4.29	Descriptive statistics of Group 3 and Group 4 performance on three test occasions	197
Table 4.30	Test of normality of Group 3 and Group 4 in Test 1, Test 2, Test 3	198
Table 4.31	Levene's test of homogeneity of variances for Group 3 and Group 4	199
Table 4.32	Multiple comparisons of Groups 3 and 4 performances in Test 2 and Test 3	200
Table 4.33	Multiple comparisons of Test 2 (Bonferroni post hoc) of Group 3 and Group 4	200
Table 4.34	Multiple comparisons of Test 3 (Bonferroni post hoc) of Group 3 and Group 4	201

Table 4.35	A comparison of WCF effects in Test 2 and Test 3 of Group 3 and Group 4	201
Table 4.36	Themes and subthemes of factors contributing to the effectiveness of WCF	238
Table 4.37	Themes and subthemes of factors that can hinder the effectiveness of WCF	243

LIST OF FIGURES

		Page
Figure 2.1	Theoretical framework of the current study	39
Figure 2.2	Overview of Output Hypothesis	40
Figure 2.3	Learners' factors affecting the effectiveness of WCF	48
Figure 2.4	Contextual factors affecting the effectiveness of WCF	53
Figure 2.5	Nature of CF factors affecting the effectiveness of WCF	55
Figure 3.1	Several types of case study designs (Yin, 2003, 2018)	91
Figure 3.2	An illustration of an embedded case study	93
Figure 3.3	The conceptual framework of the current study	94
Figure 3.4	The sequence of data sources	109
Figure 3.5	An excerpt from the COLLMATCH test by Gyllstad (2007)	111
Figure 3.6	An excerpt from Test 1 (note differences compared with Gyllstad, 2007)	111
Figure 3.7	Item Facility Index formula	115
Figure 3.8	KR20 formula taken from Howit & Cramer (2020)	117
Figure 3.9	Calculating the KR20 value to determine the reliability of the test	118
Figure 3.10	Data collection procedures	124
Figure 3.11	The provision of direct WCF in this current study	128
Figure 3.12	The provision of indirect WCF in this current study	128
Figure 3.13	The calculation involved to determine the ICR percentage	139
Figure 3.14	An illustration of pattern matching in cross-case analysis in this study	137

Figure 3.15	Pattern matching using actual data	149
Figure 3.16	An illustration of TA performed to analyse the open-ended questionnaire responses	151
Figure 3.17	An illustration of TA performed to analyse the open-ended questionnaire responses	151
Figure 3.18	The six phases of thematic analysis	152
Figure 3.19	First phase in TA	153
Figure 3.20	The second phase in TA	153
Figure 3.21	The third phase in TA	155
Figure 3.22	The fourth phase in TA that shows coherent data and theme	157
Figure 3.23	The fourth phase in TA that shows incoherent data and theme	158
Figure 3.24	The second level of the fourth phase in TA	159
Figure 3.25	The fifth phase in TA	160
Figure 3.26	An illustration of how field notes data are used for triangulation	163
Figure 3.27	Steps to analyse course information document	164
Figure 4.1	Estimated marginal means of low-proficiency students receiving	181
Figure 4.2	Estimated marginal means of Test 1, Test 2, and Test 3 of Group 2	184
Figure 4.3	Estimated marginal means of Test 1, Test 2, and Test 3 of Group 3	186
Figure 4.4	Estimated marginal means of Test 1, Test 2, and Test 3 of Group 4	189
Figure 4.5	Factors that can contribute to or hinder the effectiveness of direct WCF perceived by Group 1	204
Figure 4.6	An excerpt of document analysis of the Course Information document	212
Figure 4.7	Factors that can contribute to or hinder the effectiveness of indirect WCF perceived by Group 2	215

Figure 4.8	Perceived factors contribute to or hinder the effectiveness of direct WCF	224
Figure 4.9	Factors that can contribute to or hinder the effectiveness of indirect WCF as perceived by Group 4	230
Figure 5.1	Perceived factors contributing to and hindering WCF effectiveness	261
Figure 6.1	The original Output Hypothesis proposed by Swain (1995)	282
Figure 6.2	Current view of Output Hypothesis highlighting several factors affecting “noticing”	283

LIST OF ABBREVIATIONS

CF	Corrective Feedback
EFL	English as a Foreign Language
ESL	English as a Second Language
L2	Second Language
RQ	Research Question
SLA	Second Language Acquisition
WCF	Written Corrective Feedback

CHAPTER 1

INTRODUCTION

The first chapter of this thesis begins with the background of the current study. This is followed by the section on the statement of the problem. Then, based on the literature gaps and contextual issues highlighted, the subsequent sections present the study's purpose, research objectives, and research question. The sections on the significance of the study and operational definitions are presented subsequently. The chapter concludes with a section on the organisation of the thesis and a summary.

1.1 Research Problem

Second Language Writing and Second Language Acquisition have only converged recently in a new research direction, centrally focusing on how and why empirically documented linguistic processing that takes place while writing may lead to L2 learning (Bitchener & Storch, 2016). Also, the research focus in this area has embarked in two directions (Bitchener et al., 2017). One area of focus is the comprehensive treatment of the theoretical foundations of language learning potential that may derive from linguistic processing associated with writing and teachers' feedback (Manchon & Williams, 2016). Additionally, another main direction undertaken in L2 empirical research is concerned centrally with teachers' feedback which is expanding at an incredible speed (Bitchener & Storch, 2016).

Gass (2003) and Van Beuningen (2021) claimed that, in addressing the errors, L2 learners have access to two categories of input, namely, positive evidence and negative evidence. Gass (2003) described that positive evidence in writing enlightens learners with

what is acceptable in the target language and includes “the set of well-formed sentences to which students are exposed” (p. 225). Ellis (2009) believed that positive feedback is considered important in pedagogy because it fosters motivation to continue learning and gives effective support to the learners. On the other hand, negative evidence provides L2 learners with information regarding what is impossible in the target language and issupplied via the provision of Corrective Feedback (hereinafter referred to as CF), as a response to learners’ incorrect production of targeted linguistic structures. In other words, Ellis (2009) described that negative feedback involves signalling the learner that his or her utterances lack veracity or are linguistically deviant. Considering these descriptions, negative feedback is corrective in intent and takes the form of a response to a learner’s utterances that have linguistic errors.

The fundamental assumption for providing CF is that it assists L2 learners to become aware of their language errors, and then, produce the correct forms of the targeted structures (Storch, 2010). The notion that CF promotes noticing linguistic errors is explained in several SLA theories. For instance, Schmidt’s Noticing Hypothesis informs that L2 learners should notice the mismatch between their language production and the correct forms in the targeted linguistic structures to learn the target language (Schmidt, 1990). Swain (1995, 2000) in Output Hypothesis, emphasised the noticing function that L2 learners encounter gaps between what they can say and what they want to say. This function (e.g., the noticing function) enables the learners to notice what they do not knowor partially know in the targeted linguistic structures. Therefore, the primary aim of CF is a language learning since it is provided on the basis that CF may not only improve short-term accuracy (or revision effects) but also L2 acquisition in the long term. In other words, it is believed that CF may lead to greater control and mastery over the use of acquired linguistic information (Bitchener, 2009) such as vocabulary choices, grammatical structures, punctuation, and

correct spelling, both in oral and writing contexts.

Based on previous paragraphs, CF is considered an integral part of L2 learning because it permits teachers to highlight learners' incorrect linguistic productions both in oral and written contexts. Therefore, CF can take the form of either oral or written comments (Ellis, 2009). The traits of oral CF are typically immediate, students are subjected to open feedback that is not restricted to their errors only, students mainly serve as addressees and listeners of the CF, and CF may or may not be clear. On the other hand, the traits of written CF are usually delayed, and clear, students mostly serve as recipients of the feedback, and every student is exposed to feedback limited to his errors only.

Written Corrective Feedback (hereinafter referred to as WCF) is a common instructional approach, deemed essential by many, in helping L2 learners improve their accuracy in writing (Benson & DeKeyser, 2019; Farrokhi & Sattarpour, 2012; Ferris, 2010; Hosseiny, 2014). Even though WCF is considered an essential part of the teaching and learning of writing in both contexts of L2 learning (e.g., ESL, EFL), some researchers doubt its role in improving students' accuracy in L2 writing and L2 accuracy in general (e.g., Truscott 1996, 1999, 2004; Truscott & Hsu, 2008). However, many empirical studies have shown that it is logical to assume that some forms of WCF on L2 students' writing drafts are beneficial because struggling to write in a language that one is not accustomed tois typical for L2 writers. For instance, Cole (2006) asserted that some of the purposes of providing WCF to L2 writers are to help them write more often, improve writing accuracy, and establish whether the writing objectives have been met. On a similar note, Ashwell (2000) maintained that WCF is a crucial component in improving the communicative efficacy of writing because L2 learners are trained to employ the correct linguistic structures in communicating their ideas. Other scholars such as Suzuki (2004) argued that WCF is a

pedagogical practice used by L2 teachers to attract students' attention to erroneous linguistic structures, which may subsequently result in a revised output of the targeted structures. Furthermore, Suzuki (2004) claimed that WCF can offer L2 students the opportunity to perceive the differences between their output and input through the process of "negotiation of meaning", which is associated with L2 improvement. These scholars have highlighted the positive role of WCF in L2 classroom which indicate the significance of WCF in SLA.

Written CF carries several forms. The typology of WCF that has been referred to by many recent studies was described by Ellis (2009), in which there are four main types of WCF frequently provided by L2 teachers: focused or unfocused WCF; metalinguisticWCF; direct WCF; and indirect WCF. However, the two most studied dichotomies of WCF, in general, are the direct-indirect WCF and focused-unfocused WCF (Chen &Renandya, 2020; Ellis, 2009; Ferris, 2011). To illustrate, the provisions of direct and indirect WCF are related to the explicit nature of the WCF types (e.g., direct WCF is explicit whereas indirect WCF is implicit, see Chapter Two on the typology of WCF). Additionally, focused WCF is associated with the provisions of WCF used to treat one typeof error. Whereas unfocused WCF is associated with the provisions of WCF used to address multiple errors (e.g., verb errors, preposition errors, and spelling errors) at one time.

Considering the value of CF in L2 classrooms, Amrhein and Nassaji (2010) stated that "a great deal of research has examined the effectiveness of CF for L2 learners" (p. 96). However, the study on CF in the L2 context has mainly focused on oral CF (Bitchener & Storch, 2016; Mitra Samiei, 2016), despite the growing interest of SLA researchers regarding the roles of CF in L2 writing. Moreover, Bitchener and Storch (2016) argued thatin recent years, SLA researchers have recognised the potential of written CF in L2 learning.

Therefore, more studies are needed on written CF to provide a balance of empirical findings for supporting the role of CF both oral and written.

The inconsistencies of findings or "the debate" on the effectiveness of WCF on L2 learners' writing accuracy have garnered much attention since Truscott's (1996) publication criticising the role of CF in L2 classrooms as he downplayed the role of CF in L2 writing. However, many studies later suggested that CF played a significant role in helping L2 learners achieve writing accuracy (e.g., Bitchener & Knoch, 2010b; Chandler, 2003; Ferris, 2006; Hosseiny, 2014; Mitra Samiei, 2016; Stefanou & Revesz, 2015; Wang 2017; Van Beuningen et al., 2008). Truscott claimed further in his study that error correction on L2 learners writing should be abandoned, which has generated many studies revoking his claim because CF used in those studies showed promising results (e.g.,AlHarrasi, 2019; Cerezo et al., 2019; Eslami, 2014; Ghandi & Maghsoudi, 2014; Hosseiny,2014; Jamalinesari et al., 2015; Karim & Nassaji, 2018; Maleki & Eslami, 2013; Septianaet al., 2016; Suzuki et al., 2019; Tan & Manochphinyo, 2017; Westmacott, 2017). These inconsistencies have prompted more studies investigating the effect of WCF on L2 learners'writing accuracy as according to Shao (2015) that "it is still unclear, which type of teacher feedback results in most successful immediate learner uptake" (p. 157). This signals the need for more studies that investigate the effect of CF on L2 writing accuracy.

Written CF scholars such as AlHarrasi (2019), Chen and Renandya (2020), Karim (2013) and Kang and Han (2015) argue that until recently, no strong conclusion has been reached despite multiple studies have investigated the relative merits of direct and indirect WCF which have produced conflicting findings. The CF literature is divided among those who indicate support towards direct WCF, indirect WCF, or no conclusive effects between the two types of CF.

To illustrate, many studies seemed to suggest that indirect WCF is superior to direct WCF (e.g., AlHarrasi, 2019; Cerezo et al., 2019; Eslami, 2014; Ghandi &Maghsoudi, 2014; Hosseiny, 2014; Jamalinesari et al., 2015; Karim & Nassaji, 2018; Maleki & Eslami, 2013;

Septiana et al., 2016; Tan & Manochphinyo, 2017; Westmacott, 2017; Suzuki et al., 2019). However, others suggest that direct WCF has a better effect than indirect WCF (e.g., Bitchener & Knoch, 2010b; Benson & DeKeyser, 2019; Han, 2012; Hashemnezhad & Mohammadnejad, 2012; Karim & Nassaji, 2018; Nusrat et al., 2019; Stefanou & Revesz, 2015; Supraba et al., 2021; Van Beuningen et.al., 2008; Van Beuningen et al., 2012; Zhang & Cheng, 2021). On the other hand, some studies indicate both types of WCF have no differential effect (e.g., Banaruee et al., 2018; Mitra Samiei, 2016; Salimi & Ahmadpour, 2015; Wang, 2017) which suggests that both types are helpfulto enhance L2 learners' writing accuracy. The findings of these studies suggest that there isno definitive answer to which type of WCF is the fittest to address L2 writing errors because there is no "one type fits all" WCF in addressing language errors. Therefore, the future direction of studies could tap into areas less explored by other CF scholars (e.g., investigate the effects of CF on non-grammatical aspects). In addition, the weakness of all studies quoted above rests on the language element that they investigated, in which, none of the studies quoted prior laid focus on the effect of WCF on English collocation.

While there are plenty of studies investigating the effectiveness of WCF on grammatical errors, there are limited studies on the extent to which WCF affects the acquisition of non-grammatical errors (Wang & Jiang, 2015). According to Nesselhauf (2003, 2005) and Wray (2005), non-grammatical errors such as collocation errors are unaccounted for in current WCF studies despite their significance in helping L2 learners achieve fluency and proficiency. Written CF studies in this area are considered important due to several reasons. First, English collocations are frequently used awkwardly by L2 learners which prompted several researchers (e.g., Bahns & Eldaw, 1993; El-Dakhs, 2015; Hong, Rahim, Hua, & Salehuddin, 2011; Ozaki, 2011; Wray, 2005) to suggest that L2 learners often have problems producing accurate collocations. Moreover, Wray (2005)

asserted that collocational competence is regarded as significant for idiomatic and fluent language use while Liontas, Li, and Bangun (2019) argued that collocational competence is closely associated with the four skills in language learning (i.e., writing, speaking, listening, and reading). These have shown that one's collocational competence is regarded as an important indicator of one's overall level of English proficiency (Liontas et al.,2019).

Even though L2 scholars such as Liontas et al. (2019) suggest the importance of collocation in L2 learning, an effective way of addressing collocation errors produced by L2 learners remains unresolved (Wang & Jiang, 2015; El-Dakhs, 2015). Moreover, Wang and Jiang (2015) argued that few collocation studies have focused on addressing collocational errors because most of the studies in the body of literature have been descriptive (i.e., analysing the division of collocation error categories). Considering the role of CF in L2 writing (Liontas et al., 2019) and L2 learners are prone to make collocation errors (e.g., Bahns & Eldaw, 1993; El-Dakhs, 2015; Hong et al., 2011; Ozaki, 2011; Wray, 2005), the current CF literature is not able to provide a definitive answer on the issue.

Also, with the interest of researchers concerning WCF in the body of literature, the focus of recent studies has moved from investigating the merits and effects of direct and indirect WCF to the factors that may mediate the effectiveness of WCF provisions, and the difficulties that students faced when processing WCF (e.g., Dabboub, 2019; Hamouda, 2011; Li, 2010; Li, 2017; Mahfoodh & Pandian, 2011; Sheen, 2010; Westmacott, 2017). Inthis regard, several researchers have proposed a framework or model to investigate the mediating factors of WCF effectiveness. Several models were proposed by Goldstein (2006) and Ellis (2010) that highlight the mediating factors that can affect WCF effectiveness.

A more particularised framework for investigating WCF was proposed by Li (2010) which is more comprehensive than the previous ones. Li's (2010) framework contains four

integral factors underlying the effectiveness of WCF that include learner factors, contextual factors, linguistic factors, and the nature of feedback. The framework acknowledges the joint and independent effects of numerous factors that affect the role of WCF in L2 learning either in written or oral modes. According to Li (2010), studies on CF should not be approached from the perspective of the properties of feedback per se becausethere has been increasing empirical evidence that the effectiveness of CF is subjected to various factors. Additionally, Bitchener and Storch (2016), subsequently suggested future research agendas, among others, to focus on how several factors such as individual and contextual factors may moderate the processing of written CF. Therefore, the investigation of mediating factors that can affect WCF's effectiveness can provide insights concerning why some types of WCF are effective whereas others are not, in the context of this study.

All studies quoted in the previous paragraph focused on investigating the effect of WCF on grammatical items. This has left the non-grammatical aspects such as English collocation under-investigated. Furthermore, several researchers suggest that L2 learners often have problems producing accurate collocations (e.g., Bahns & Eldaw, 1993; El- Dakhs, 2015; Hong et al., 2011; Ozaki, 2011; Wray, 2005). Acknowledging the significant relationship between collocation competence and overall language accuracy as stated by Liontas et al. (2019), Nesselhauf (2003), and Wray (2005), it is unknown whether WCF can help to enhance the collocation competence of L2 learners.

In the Malaysian education context, most studies on WCF were conducted to investigate its effects on grammatical items (e.g., Abdullah & Aziz, 2019; Carolyn, 2017; Ganapathy et al., 2020; Gringo, 2017; Hanif, 2018; Ishak, 2017; Mahmud, 2018; Ng & Ishak, 2018; Rashtchi & Bakar, 2019; Saidon et al., 2018; Sharina, 2019; Sim, 2019; Yunus, 2020). This implies that none of the studies investigated the effect of WCF on collocation. Furthermore, most local WCF studies were performed at schools, which signifies a need to

conduct such studies with university students. Local scholars have also suggested that ESL learners in Malaysia, both at secondary and tertiary levels of education,have demonstrated a significant lack of collocation competence (e.g., Abdullah & Noor, 2013; Abdullah et al., 2015; Kamarudin et al., 2020; Zarifi & Mukundan, 2014). This is also prevalent in the context of this case study, as seen in students' performance in Test 1. Therefore, it is unknown whether WCF can be used to enhance the collocation competenceof Malaysian ESL learners in this case study. Furthermore, past researchers have also suggested that studies on CF should be conducted to identify and explore the factors thatmay affect the effectiveness of WCF (Li, 2010).

1.2 Purpose of the Study

This current study aimed to investigate the effects of WCF on collocation errors produced by low and high-proficiency ESL students in a Malaysian university through a case study approach.

1.3 Research Objectives

To meet the purpose of the study, the specific objectives are outlined as in the following:

i. determine the short-term and long-term effects of direct and indirect WCF on collocation competence.

ii. identify the type of WCF that has a greater effect on collocation competence.

iii. explore the factors perceived by the students that can contribute to orhinder the effectiveness of direct and indirect WCF in improving collocation competence.

The first research objective was outlined to determine the short-term and long-term effects of direct and indirect WCF practices. Following some studies highlighted in Chapter 2 (e.g., Nusrat et al., 2019; Tan & Manochphinyo, 2017; Suzuki et al., 2019) and meta-analysis by Wang and Jiang (2015) and Liu and Brown (2015), the short-term effect was measured by comparing students' performance on a series of tests (e.g., Test 1 and Test 2). To illustrate, Test 1 served as the baseline data whereas Test 2 was used to measure the student's performance after being exposed to WCF. The comparison of students' performance was made within groups only. It is worth mentioning that the effect (short-term) may be subjected to the threat to internal validity that the measured effect may or may not be caused entirely by direct and indirect WCF. This is discussed in Chapter 3 (see Subchapter 3.5 of validity and reliability) and Chapter 3 (see Subchapter 3.11 of study limitation).

The long-term effect was investigated by comparing students' performance between Test 1 and Test 3 in which the effect was measured nine weeks after the students were exposed to WCF. According to Van Beuningen (2010), studies exploring the long-term effects of WCF on L2 accuracy are performed in such a way that accuracy performance on Test 1 and Test 3 are compared. In this current study, the effect was determined by comparing students' performance between Test 1 and Test 3 at each treatment level (i.e., direct WCF, indirect WCF) of every proficiency (i.e., low proficiency, high proficiency). In other words, the comparison of students' performance was made within groups only. It is worth mentioning that the effect (long-term) may be subjected to the threat to internal validity that the measured effect may or may not be caused entirely by direct or indirect WCF. This is discussed in Chapter Three (see the subsections of validity and reliability and study limitation).

Then, the second objective aimed to identify the type of WCF practice that has a

greater effect on students' collocation competence. Considering Shao (2015) that it is still unclear which type of CF results in the most successful learner uptake, the second objective was set to identify the type of WCF that has a greater effect on collocation competence. This is possible by identifying the differential effect between both WCF types. Following most studies mentioned in Chapter 2, the differential effect was measuredby comparing students' performance among those who received direct WCF and indirect WCF, at Test 1 (to measure short-term effect) and Test 2 (to measure long-term effect) levels. For instance, in low-proficiency groups, the performance of direct WCF and indirect WCF was compared at Test 2 and Test 3 levels. Therefore, in Test 2, it was possible to determine which WCF strategy had the most effect on students' collocational competence. It was also possible to determine which WCF had the most effect in Test 3.

Similar comparisons were applied with the high-proficiency groups in this current study. It is worth noting that, the analysis of RO1 is different from RO2. Specifically, the comparisons of students' performance in RO2 were made among groups of every proficiency level (i.e., low-proficiency groups, and high-proficiency groups).

The third objective of the current study was set to identify the factors that contribute to or hinder the effectiveness of written CF in this case study. The third researchobjective was derived considering Li (2010) that "the effectiveness of CF is subject to multiple factors and therefore should not be approached from the perspective of the properties of feedback per se" (p. 22). Therefore, exploring the factors that may enhance orhinder direct and indirect WCF in this current study may contribute to understanding the success factors of WCF in improving collocational competence, as perceived by the students themselves. Moreover, the findings on this aspect can be used to design a guideline for best practices in providing WCF to address collocation errors useful toenhance the pedagogical practice of providing direct and indirect WCF in the L2 classroom.

1.4 Research Questions

Four research questions (hereinafter referred to as RQs) were formed to guide this current study. Specifically, due to the nature of the research objectives, two paradigms of research questions were formed: quantitative research questions (e.g., RQ1, RQ2, and RQ3); and qualitative research questions (e.g., RQ4).

i. What are the short-term effects of direct and indirect WCF on the collocation competence of the students in the study?
ii. What are the long-term effects of direct and indirect WCF on the collocation competence of the students after nine weeks?
iii. What WCF type has a greater effect on the students' collocationcompetence?
iv. What are the factors as perceived by the students that can contribute to or hinder the effectiveness of direct and indirect WCF in improvingcollocation competence?

1.5 Significance of the Study

The significance of this study is separated into the specific contributions it offers (e.g., addressing knowledge gaps). Also, this study may benefit several parties that find the findings valuable.

The study offers to address the knowledge gaps. Most WCF studies in the body of literature have produced inconsistent findings regarding the effects of WCF on L2 learners' accuracy as seen in several meta-analysis studies (e.g., Karim & Nassaji, 2019; Li & Vuono, 2019; Wang & Jiang, 2015). Even though WCF studies are expanding in the literature (Bitchener & Storch, 2016), there are some areas that WCF scholars have yet to tap into which created a prominent knowledge gap. For instance, very few studies investigate the effect of WCF on non-grammatical structures such as English collocation (Wang & Jiang,

2015) thus implying a scarcity of empirical evidence. Before the start of this study, the effects of WCF on the collocation competence of Malaysian ESL learners at the university level were unknown. This is because most local past studies (e.g., Abdullah & Aziz, 2019; Carolyn, 2017; Ganapathy et al., 2020; Gringo, 2017; Hanif, 2018; Ishak, 2017; Mahmud, 2018; Ng & Ishak, 2018; Rashtchi & Bakar, 2019; Saidon et al., 2018; Sharina, 2019; Sim, 2019; Yunus, 2020) were focused on investigating the effects of WCF on grammatical items. Therefore, at the end of this study, it can offer current knowledge of the area of investigation.

The findings offer current theoretical knowledge for CF scholars. The role of learners' proficiency was not clearly mentioned by Swain (1995, 2000, 2008) in Output Hypothesis (Kazemzadeh & Afghari, 2013; Pawlak, 2021). Therefore, this study hoped to reveal or find a connection between learners' proficiency and the effects of WCF as seen from the Output Hypothesis lens.

This study benefits L2 educators (e.g., teachers and language lecturers). In addition, it is hoped that this current study offers a pedagogical contribution of informed practice for L2 educators (particularly for the L2 lecturers where the study took place and L2 educators in general). In this regard, the quantitative and qualitative findings may or may not provide support for WCF used as a strategy to enhance L2 learners' collocation competence. With this information laid out, L2 educators can enhance the practice of providing such WCF type when addressing students' collocational errors.

The findings may benefit L2 educators through a recommended guideline for using WCF to address L2 learners' collocation errors. Collocation is considered an important aspect of language proficiency for it was shown to have a strong relationship with overall proficiency (Namvar, 2012; Qian & Lin, 2019). Moreover, increased knowledge of

collocation not only allows learners to improve levels of L2 accuracy but also contributes to fluency in the language (Bui 2021: Lewis, 2000; Namvar, 2012; Nation, 2001; Xu et al., 2020). Therefore, should written CF have a positive effect on facilitating ESL learners' collocation knowledge, this may imply that it can be considered one of the strategies to address learners' collocation errors which ultimately may benefit them as their collocation competence improves. The findings may benefit L2 educators for they would have a guideline on how to address L2 learners' collocation errors by prioritising the most effective WCF type and avoiding some factors that may hinder WCF effectiveness.

1.6 Operational Definition of Terms

Several terms are used throughout this thesis. This includes written corrective feedback, direct and indirect WCF, targeted linguistic structure, English language settings, and collocational competence. The following sections define these terms.

1.6.1 Written Corrective Feedback

Written corrective feedback (WCF) refers to the written form of corrective feedback (CF). Corrective feedback in its written form is defined as a response to the learner's erroneous output to improve the accuracy of the targeted form (Ellis et al., 2009; Nassaji & Kartchava, 2017). In the context of this study, the feedback is often written near linguistic errors (Bitchener & Storch, 2016). Moreover, WCF is often measured at short or long time intervals to measure its effectiveness.

In this study, the short-term effect is measured by comparing students' results of pre (Test 1) and post-test (Test 2). On the otherhand, to measure the long-term effect of WCF, the student's performance in the delayed post-test (Test 3) is compared with the pre-test (Test 1).

1.6.2 Direct and Indirect Written Corrective Feedback

Bitchener and Knoch (2009) and Lyster and Ranta (1997) described direct WCF as the provision of feedback that provides accurate linguistic structures by the teacher to his student near or above the linguistic errors. In the context of this study, direct WCF was provided in the following ways: crossing out the incorrect collocation structures; providing correct collocation structure; and providing meta-linguistic information (examples of correct collocation usage in a sentence).

Bitchener and Knoch (2009) and Ellis (2009) explained that indirect WCF strategy refers to the provision of WCF that reveals in some way an error has been produced by the student, but no correction is supplied. Specifically, this current study employed indirect WCF that indicated an error was made in the text margin, without any further information.

To establish the fittest type of WCF, the effects of both types are often compared which is often reflected as "the differential effects". The term differential effect is derived from Rosenbaum (2006) which refers to the effect of applying one treatment in place of the other. To investigate the differential effects in this study, students' performances were compared between those who were exposed to indirect WCF with another group which was exposed to direct WCF. The differences in scores of the two groups can be attributedto the different types of WCF which explains that one type of WCF is better than the other.

1.6.3 Targeted Linguistic Structure

Targeted linguistic structure (focused CF addressing one type of error only) or structures (unfocused CF addressing more than one type of error) refer to the English language system that is the focus of WCF treatment. As can be seen in Chapter 2, various studies have examined the effect of WCF (e.g., direct WCF, indirect WCF) on various English structures such as past tenses, articles, prepositions, and non-grammatical structures

such as vocabulary and spelling. In the context of this study, the targetedlinguistic structure was English collocation which is also considered a non-grammatical structure.

1.6.4 Collocation and Collocational Competence

Collocation is commonly defined by Hoey (2005) as "the relationship that a lexical item has with items that appear with greater than random probability in its textual context" (p. 3). For example, one can say or write *happy birthday*, but rarely *merry birthday*, and one can say or write *deeply absorbed*, but not *heavily absorbed*. In a more recent definition, Liontas (2019) defined collocation as the "conjoining or rearrangement ofwords that co-occur with a frequency greater than chance" (p. 64). Besides, collocational competence refers to one's accuracy in producing accurate collocation structures either in oral or written form in which such accuracy may serve as an important indicator of one's overall level of English proficiency (Liontas et al., 2019). This study applies the definition of collocation by Liontas (2019) and Liontas et al. (2019).

1.6.5 Low and High Proficiency ESL Learners

This study used the term "proficiency" which was established by Leeser (2004) which refers to "a learner's general language ability in speaking, listening, reading, and/or writing based in some kind of criteria" (p. 58). Therefore, "lower-proficiency" ESL learners refer to learners who have limited or minimal proficiency in the English language in this study. These learners typically have a limited vocabulary, struggle with grammarand sentence structure, and have difficulty communicating in the language (Leong &Ahmadi, 2017). Therefore, the students can write and speak below-average L2 utterances and find difficulty in producing coherent written text. In addition, they lack motivation and determination towards improving their L2 proficiency, especially writing skills (Hsu & Chuen, 2008). Therefore, these groups of learners need to be supported in their language-

learning processes (David et al., 2015).

In contrast, high-proficiency ESL learners can demonstrate fluency in both spoken and written English (Raimes, 1985). They have a wide range of vocabulary and canexpress themselves clearly and accurately. This group of students can use cognitive, metacognitive, and affective strategies in producing better L2 text than those from thelower proficiency bracket (Mastan et al., 2017).

1.7 Thesis Outline and Chapter Summary

This current study is composed of six chapters. Chapter 1 has provided the initial view that framed readers' focus on what to expect in the entire thesis. Chapter 2 provides information regarding the position of this current study in the body of knowledge. In detail, the systematic literature review, the theoretical ground of WCF studies, the theoretical framework of this study, and the review of past studies are presented in the chapter. It concludes by introducing the gaps in preceding studies and the need for the current study. In Chapter 3, the methodology employed by this current study is presented thoroughly. Then, Chapter 4 presents the quantitative and qualitative results of the current study. Chapter 5 presents a discussion of the findings. The summary chapter, that is Chapter 6, summarises the key findings according to the RQs. Moreover, the chapter also includes recommendations for future studies.

To this end, Chapter 1 has provided the background of the study, a statement of the problem, research purpose, research objectives, research questions, the significance of the study, operational definitions, and the outline of the study. The next chapter presents the related literature review of this case study.

CHAPTER 2

LITERATURE REVIEW

This chapter discusses the relevant literature associated with this case study. It begins with a section on a brief view of the teaching of L2 writing in Malaysia. Then, a section on the role of CF in SLA is discussed. Next, theoretical debates of past studies highlight the relevant theories used by CF scholars. This is followed by the section on the theoretical framework used by this current study. Then, a more focused discussion is presented on the typology of WCF, a systematic literature review and its findings, and a section on WCF studies in Malaysia. Before the end of the chapter, a section that discussedthe association between English collocation and L2 accuracy is presented which alsohighlights the functions of WCF on collocation competence. Also, the final section presents past studies that investigated the role of WCF on collocation competence which highlights the needs for this current study.

2.1 A Brief View of the Teaching of L2 Writing in the Malaysian Education System

English language learning takes place in classrooms as how it is employed in the Malaysian education system. Since the independence of the country from colonisation, much has changed which includes the reformulation of the education system. As pointed out in Darmi and Albion (2013), some of the changes in the education system included the followings:

- The Education Act of 1971
- The National Education Policy
- Standard-Based Curriculum for Secondary School (KSSR)
- Standard-Based Curriculum for Primary School (KSSR)

It is expected of Malaysian school students that at the end of their school terms, theyshould have acquired the four language skills (e.g., writing, reading, listening, and speaking). This is due to the KBSM English syllabus that advocated Communicative Language Teaching (hereinafter referred to as CLT) which integrates the four language skills as the overall development of English language proficiency before leaving the school. The CLT stresses interactions as both the goal and means of learning the language (Richards, 2002). Based on this concept, the learning of English at the tertiary level (e.g., university and college) is centred around the CLT which aims to get learners engaged in authentic real-life communication using the language (Darmi & Albion, 2013). Considering the classroom environment in a university, the language lecturer should beable to assist individual learners as generally, the number of students in a group is about thirty students per group. Furthermore, the students are engaged in a class lesson of about 60-120 minutes per session. However, this is not the case in the school environment because the classes in Malaysian schools are usually made up of about 40 students.Moreover, English language teachers must ensure, which is sometimes difficult, the active involvement of the school students within 40 to 80 minutes of English class sessions.

The tertiary education providers in Malaysia, particularly universities, play a significant role to promote educational values. It is observed that the norm in universities is to include the learning of English as part of the syllabus in the university. In this regard, Malaysian universities conduct many remedial or complementary courses for the improvement of the English language. This effort was triggered by the situation in which many school students who enrolled in tertiary education demonstrated a significant lack of English language proficiency (see Miskam & Saidalvi, 2019; Rusli et al., 2018; Ting et al., 2017). The lack of English proficiency among Malaysian learners is still prevalent even

though they have received formal learning of the language for at least 11 years, excluding preschool level. Moreover, the students continue learning the language at the tertiary level for another two to five years as undergraduate students. In sum, Malaysian learners have wide exposure to learning the English language in schools and universities but many still exhibit a lack of proficiency (Jain & Sidhu, 2013). These students typically find challenges in many English language components, especially the writing components (Mehat & Ismail, 2021; Mukundan et al., 2013).

The writing component, as part of the overall proficiency in the English language, at the tertiary level, has become a concern among many parties in the Malaysian higher education system (Ghabool et al., 2012; Singh et al., 2017). To address this concern, many universities have introduced English writing courses in their syllabus, regardless of what programmes the students enrolled in. For instance, in the Universiti Teknologi MARA system, an English writing course was introduced to enhance the mastery of the English language among undergraduate students to be at par with the international benchmark of the English language curriculum (e.g., The Common European Framework of Reference for Languages). In addition, the students' performance in, or their mastery of L2 writing courses in universities is reflected by errors made in their writing. This indicates that dealing with learner errors is a critical aspect of L2 teaching. For many L2 educators, correcting errors and giving feedback on their students' written tasks are among the most common functions in the process (Chen et al., 2016). Therefore, to address the writing errors, L2 educators mostly rely on written CF. Based on findings from many past studies, the role of written CF as a "useful editing tool" has been confirmed (Linh, 2018).

2.2 The Role of Corrective Feedback in Second Language Acquisition (SLA)

Since the 1970s, CF has gained so much attention from SLA researchers. Many of the pioneer studies (e.g., Allwright, 1975; Chaudron, 1977) in CF were based on an analysis of the various strategies that were used by teachers when correcting students'errors in their classroom, which to a certain extent, were descriptive. With growing interest in CF, recent studies (Bitchener, 2008; Cerezo et al., 2019; Ellis et al., 2006; Lyster, 2007; Westmacott, 2017) aimed at investigating the relative effectiveness of different types of CF strategies on L2 learning have been applying experimental designs. Additionally, the incongruency in findings has also prompted researchers to conduct meta-analysis studies (Li, 2010; Lyster & Saito, 2013; Russell & Spada, 2006; Wang & Jiang, 2015) to analyse current patterns beneficial for the future direction of studies.

2.2.1 The Shifting Roles from the 1950s to the Present Time

Studies in the SLA field are concerned about how learners acquire their L2 and what measures should be imposed to help these learners deal with errors produced in the target language (Li, 2017). Additionally, there also have been changes in the views towardsthe role of CF and learners' errors among SLA researchers and theorists over the decade. Behaviourists in the 1950s and 1960s claimed that errors should be eradicated whenever they occurred because errors interfered with the learning of target-like language (Bitchener & Ferris, 2012). Furthermore, according to the researchers, learners in the 1950s and 1960s were provided with the correct model and required to memorise these correct patterns to prevent errors from appearing in their text writing. Practitioners and researchers of the audiolingual approach during that era of language teaching and learning argued for minimal or no tolerance of learners' errors and proposed that every effort should be madeto prevent error production (Han, 2002). Twenty years later, researchers in the 1970s and

1980s who were influenced by nativist views about language learning and teaching claimed that Universal Grammar (hereinafter referred to as UG) plays a crucial role in language acquisition (see Hawkins, 2001; White, 2003, 2009).

2.2.2 Acknowledging the Positive Role of Corrective Feedback on L2 Learners' Accuracy

Practitioners and researchers of UG argued that language acquisition is propelled by positive evidence in which any form of grammar instruction such as negative evidence in the form of CF, acted only a minor role in acquiring a target language. Researchers inthe era such as Schwartz (1993) believed that instruction on the form only alters a learner's language behaviour temporarily, but his interlanguage grammar of the target language remained unchanged. Krashen (1985) also argued that CF viewed through his Monitor Hypothesis, is not only unnecessary but harmful as it raises learners' affective filter. Thus, Krashen (1985) proposed for understandable and clear input serving as positive evidence is sufficient for L2 acquisition. Therefore, CF according to these theorists has very little functional role to play in L2 acquisition.

On the other side of the theoretical divide, cognitive theories (Long, 1996; Lyster, 2004) considered CF as an aid to L2 acquisition and as even necessary, especially in the context of the grammatical features that are not readily acquirable from positive evidence (e.g., redundant features of third person-s). Krashen's (1985) view of CF (e.g., in the Monitor Hypothesis) was challenged by Long (1996) who proposed the Interaction Hypothesis. According to Long (1996), positive evidence alone is not enough for L2 learners to acquire the target language. The reason is that language acquisition happens in acommunicative context that involves L2 learners, and their teachers or lecturers modify their input and negotiate for both form and meaning in a situation when a comprehension issue arises.

These modifications of input are possible through the provisions of CF, especially the oral form of CF. Furthermore, the concept of "focus on form" is viewed as an instructional intervention that openly brings learners' awareness to the linguistic aspects(via the provisions of CF) while they arise incidentally in lessons whose dominant emphasis is on communication (Long, 1996). Moreover, teachers and students may shift their attention to linguistic features when there are problems with comprehension, which are highlighted or emphasised by the CF. This action may generate an opportunity for cognitive comparison in the students' minds which aids in the development of their interlanguage system.

Furthermore, sociocultural theory (SCT) also signals its support for CF because it is viewed as assisting the subsequent internalisation of new linguistic forms and helping to scaffold learning in social interaction (Aljaafreh & Lantolf, 1994). However, these theoretical positions do not agree on which type of CF is best equipped to foster acquisition even though they lend support to CF. About the interaction hypothesis, Long (1996) emphasised the significance of positive evidence offered by recasts. Lyster (2007) on the other hand emphasised the skill-learning theory to assert that CF in the form of prompts leading to uptake-with-repair is more probable in leading to better accuracy by allowing students to grasp more control over the linguistic forms that they have partially developed. According to Ellis et al. (2006), feedback needs to be ensured that the corrective force is clear to learners for it to be effective. If the structure and information conveyed by the CF are non-ambiguous, learners can notice the gap between the correctionand their production, and this is best achieved if the feedback is explicit rather than implicit. From the viewpoint of SCT, there is no single type of feedback that is superior. Instead, the feedback should be given in a "graduated" manner, to give learners a minimal level of support needed for repair to occur.

This includes providing learners with the least explicit form of CF that can elicit self-correction when he is exposed to it. Therefore, CF under the provision of the interactionist framework indeed has its role in second language acquisition.

2.2.3 The Recognition of Written CF in SLA

It can be deduced that the role of CF is well recognised in SLA theories especially oral CF until the early 1990s, whereas not much emphasis has been brought to establish the position of WCF in the domain of SLA. However, WCF has begun to draw increasing attention from SLA researchers since the publication of Truscott's (1996) controversial article arguing for the abandonment of CF in writing. The conundrum of WCF effectiveness thus began with Ferris (1999) who issued a rebuttal article to Truscott's claimwhich since then has attracted a great deal of empirical research into the sphere. Scholars have claimed that WCF can work for language acquisition (Bitchener et al., 2005; Chandler, 2003; Ellis et al., 2008; Ferris, 2004, 2006), and WCF was also proven to have a prolonged effect on the development of learners' L2 (Bitchener & Knoch, 2009, 2010a). Reichelt (2001) claimed that learners' attention to linguistic forms in their writing is drawnby WCF given by their teachers or lecturers in writing instruction which significantly promotes L2 acquisition. This is further explained by Sheen (2010) that the role of WCF inSLA is compatible with how SLA scholars view CF in oral interaction.

The decisive advantages of WCF for second language development had been emphasised by theorists and researchers such as Bitchener (2012) who argued that the L2 development of learners is facilitated by the opportunities of students receiving WCF on their written texts. Furthermore, the benefit of WCF for improving linguistic accuracy in learners' written texts is also acknowledged by Bitchener and Storch (2016). According to

the researchers, WCF on written texts may offer adequate time for L2 learners to treat the information given in the WCF and draw the association between their previously acquired knowledge and the WCF points. Therefore, this process creates additional learning opportunities for L2 students to accept the information and eventually gain from WCF itself.

To this end, the previous sections have discussed the positive role of CF in written and oral forms in SLA which highlights the benefits of CF in improving L2 learners' overall accuracy and writing accuracy. Moreover, SLA theories have started to emphasise the role of CF in SLA, especially the oral CF, and recently the written form of CF. However, current WCF studies that are mostly situated within the cognitive perspective, have shown mixed and even conflicting findings regarding in which way WCF should be provided to make it most effective. This prevailing question appears despite the acknowledgement of the significant role of WCF in L2 classrooms. Many aspects of WCF remain open and need further exploration (e.g., the efficacy of various types of WCF, factors moderating the effect of WCF) due to the incongruent empirical findings and other under-explored areas of WCF studies on targeted structures (e.g., non-grammatical structures). Moreover, most WCF studies in the body of literature have compared the efficacy of different types of WCF, which focus on the level of explicitness (e.g., the explicit type of WCF, the implicit type of WCF). Although a wider range of options has been studied within these two types of WCF explicitness, the explicitness of WCF is generally considered in terms of the dichotomy of two WCF strategies, which are, direct and indirect. To illustrate SLA theorists' arguments against and for CF, the following section attempts to discuss the matter.

2.3 Theoretical Discussions of CF Studies

This section highlights the theoretical considerations of CF studies in the literature. Note that, this chapter only explains the theoretical framework commonly employed by CF studies. Two main topics are discussed in this section: (1) theoretical foundations against CF; (2) theoretical foundations supporting CF. The discussion begins at the centre of the debate on CF efficacy that has sparked a wave of research, with the publication of "The Case Against Grammar Correction in L2 Writing Classes" by Truscott (1996). A brief review of Truscott's work is discussed along with the theoretical foundation that supported his controversial view (e.g., The Monitor Hypothesis). Then, other main scholars' rebuttalsof Truscott's views are brought into the picture, with several theoretical frameworks that became the foundations of their rebuttals. This circle of arguments and the inclusion of theories as the foundation for scholars' arguments are important to highlight the theoretical frameworks that have been referred to in the context of supporting or rejecting the role of WCF in L2 acquisition.

2.3.1 Theoretical Arguments against CF

The debates on CF are mainly triggered by Truscott's thought-provoking article in which he questioned the effectiveness of error correction on grammar as a teaching strategy for L2 acquisition. The main arguments in his initial article and several that follows afterwards rest on the following grounds: (1) grammar correction goes against SLAtheories; (2) L2 writers earn very little benefits from WCF based on existing evidence; (3) the practical issues faced by L2 learners and teachers contradict the use of error correction; and (4) grammar correction is time-consuming for both teachers and students (Truscott, 1996, 1999, 2004, 2007).

SLA theories originated from Chomsky's universal grammar (Schwartz, 1993) and Krashen's Monitor Model Theory (1981, 1982, 1985, 1995) are inclined to deny the role of CF in assisting L2 acquisition. Also, Truscott's arguments for rejecting the role of CF in L2 classrooms are based on the problem of pseudo-learning, learnability, and the potentially harmful effect of CF. These theories and Truscott's views are explained in the following sections.

2.3.1.1 Krashen's (1981, 1985) Monitor Model

Krashen's Monitor Model is one of the main and most dominant nativist theories in L2 teaching and acquisition. The model forms the foundation of the Natural Approach and contains five main hypotheses (Krashen, 1981, 1985). Moreover, the role of CF as captured in the model is kept at a minimal function or abandoned.

The first hypothesis is Acquisition-Learning which states two distinct ways for adults to develop L2 competency – acquisition and learning. According to Krashen, acquisition is a subconscious activity comparable to that of a child when he acquires his L1, and it is accomplished through informal learning, implicit learning, and natural learning. Learning, on the other hand, refers to formal and conscious knowledge of L2 which includes being aware of the rules, knowing them, and being able to talk about the rules that are known to language users as grammar. Krashen's discrepancy between learning and acquisition also predicts that error correction has no effect, or in certain cases little effect on acquisition although it might be useful for conscious learning.

The second hypothesis is known as the Monitor Hypothesis which explains the relationship between learning and acquisition. As explained in the hypothesis, learning functions as a monitor or editor, while acquisition is responsible for initiating an utterance for fluency. The "monitor" acts before we write (in the planning stage) or speak or after we

produce (editing and correcting), and it only happens when a learner has ample time to focus on the correctness of the form. This hypothesis reveals that learned knowledge serves as a monitor to remedy the output of the acquired system thus implying a limited role of CF as a learning tool.

The third is the Natural Order hypothesis which indicates the grammatical features of a language are acquired in a fixed and predictable order. In this hypothesis, it is crucial to note that since the order of acquisition is impossible to be altered by explicit teaching of features that the learner is not ready to acquire, the learner rejects grammatical sequencing in language program syllabi. This happens when the goal of the language is the acquisition, and not learning. This indicates that the role of CF in the Natural Order hypothesis is insignificant because the linguistic rules or features of the target language are developed in unchangeable and predictable order even with the intervention of form-focused teaching or CF.

Krashen's fourth hypothesis, the Input Hypothesis suggests that learners move from one stage to another by understanding the language that contains structures that is a little beyond what one knows. It is the learner's shift from the current L2 competence, denoted by the symbol "i", in "i + 1" with comprehensible input as the next stage in the developmental sequence. This hypothesis suggests that there shall be no other factors that affect learning except for the input that the students receive which is referred to as positive evidence in the form of what is correct about the language. The role of positive evidence inthis hypothesis succeeds that of negative evidence (e.g., CF). In other words, exposure to comprehensible input can support language acquisition which rejects the role of CF in formal grammar instructions.

The Affective Filter Hypothesis is the fifth hypothesis in the model which is linked with the fourth hypothesis and suggests that L2 acquisition is influenced by affective factors such as self-confidence, anxiety, and motivation. In other words, learners' attitude toward the input that they receive affects their level of acquisition. For instance, learners with a "high filter" find it difficult to acquire L2 as effectively as learners with a "low filter". Krashen went on to claim that as input may not be processed if the filter is high, CF may delay L2 development because it is assumed to strike at learners' confidence and stir up the affective filter.

Based on the hypotheses in the Monitor Model, the role of CF in language acquisition is downplayed. However, the model acknowledged that CF could play an editing role in L2 learning. Researchers who agree on the role of CF in language acquisition have not employed Krashen's framework as justification (Alroe, 2011). However, researchers who oppose error correction seem to do so from within Krashen's framework. For instance, Truscott (1996, 1999, 2004, 2007) and Truscott and Hsu (2008).

2.3.1.2 Truscott's (1996, 2004) Argument of Pseudo-learning, Learnability, and the Side- effect of CF

Truscott (1996) entered the "conundrum", or so the "debate" with his paper that criticises the practice of error correction in L2 writing and acquisition. He relied on theoretical arguments derived from Krashen (1981, 1985) and several pieces of empirical evidence. Furthermore, his arguments against error correction in writing span three concepts of pseudo-learning, learnability, and the potentially harmful side-effects of error correction in writing.

The first argument against error correction is associated with the problem of pseudo-learning. A simple transfer of information such as WCF can only lead to explicit knowledge rather than the implicit knowledge that is required for L2 acquisition (Truscott, 1996). Explicit knowledge in the field of SLA refers to the conscious knowledge of the grammatical rules of a language and the suitable meta-language for expressing linguistic knowledge. Implicit knowledge, on the other hand, refers to the unconscious knowledge of a language that is non-verbalised and effortlessly accessible when using the language(Ellis, 2004). Although researchers such as Ellis (2005) affirmed that explicit knowledge can be utilised to monitor language use and formulate utterances, others such as Krashen (1985) restricted its value because it can only be utilised in monitoring when there is a focus on form.

Krashen (1985) claimed that the two distinct knowledge (i.e., explicit, and implicit) cannot in any way interact via an interface. Therefore, Truscott (1996) adapted this claim that explicit knowledge gained from using WCF can never be converted to the implicit knowledge that develops the actual language use. In other words, WCF leads to "pseudo-learning", which is described as a superficial and possibly temporary form of knowledge. Furthermore, Truscott (1996, 2004) asserted further that the practice of WCF diverts the learning and teaching resources from other more valuable L2 learning activities such as writing practices. Also, WCF can lead to anxiety due to the learners' inherent dislike of negative evidence or correction. As a result, learners tend to simplify and shorten their writing to prevent more corrections by their teachers. This claim was based on the limited capacity model of attention by Skehan and Foster (1999). The model describes that complexity and accuracy compete against each other for attentional resources. Thus, emphasising accuracy will lead to one's avoidance of using features that are beyond his

control (Skehan & Foster, 2001). He also rejects DeKeyser's (2003) argument that if explicit knowledge becomes automatic, it may form a cognitive block preventing the possibility of real language acquisition. In Truscott's view, grammar correction in writing belongs to the pseudo-learning category and it justifies the strong rejection of the role of WCF in L2 instruction.

The second argument by Truscott to reject error correction is associated with the problem of learnability. This is based on Pienemann's (1989) Learnability Hypothesis. This hypothesis claims that every linguistic structure such as grammatical or non-grammatical structure is learned in a rigorous sequence and learners can only learn the features that they show developmental readiness. Any structure that is beyond the students' developmental readiness will be unteachable because their internal learning system cannot be directed to the instructional requirements. Deducing from this hypothesis, Truscott claimed that no linguistic intake will occur if WCF provides the students with grammatical structures that they are not ready to acquire. Besides, WCF should be given in tune with the current level of L2 development to produce any potentially positive effects in language acquisition.

The problem of learnability according to Truscott was deduced from his analyses of several studies (e.g., Kepner, 1991; Sheppard, 1992). He concluded that error correction does not consider the complex and gradual process of acquiring the structures and forms ofL2 which corresponds with Krashen's (1982, 1985) Natural Order Hypothesis. It is based on these two frameworks that Truscott questions the readiness of L2 learners to acquire and process linguistic structures and forms that are situated outside of the natural order of L2 acquisition. Therefore, WCF cannot be presumed to produce positive effects on L2 learners.

The third argument by Truscott to reject error correction is associated with the problem of potentially harmful side effects of error correction. Van Beuningen (2010) argued that CF opponents have not only argued that CF can be harmful to L2 acquisition, but some even stated that error correction is unable to lead to accuracy development. Truscott (1996, 2004) claimed that CF is counterproductive and advocated that WCF couldeven be harmful to the learning process. A fundamental problem of WCF rests in triggeringa high filter in learners that encourages low self-esteem and increased anxiety and therefore discourages them from experimenting with the language and producing more writing tasks. Furthermore, WCF may trigger learners' avoidance of employing the structure that they have used awkwardly, which results in simplified writings that are structurally and lexically less complex. In other words, WCF may lead to simplifiedwriting by triggering the L2 learners to avoid situations in which they make errors.

The rejection of CF in L2 writing and acquisition as viewed by several scholars in the prior discussion has enlightened us regarding why CF ought to be, if possible, averted in L2 writing and acquisition. Acknowledging the fact that CF is a common pedagogical practice in the L2 classroom, other SLA theorists refuted the claim that "CF is ineffective" in the L2 classroom. In this regard, their views are discussed in the following section.

2.3.2 Theoretical arguments supporting Corrective Feedback

The rationale for the effectiveness of CF in L2 acquisition rests on various theoretical frameworks (e.g., Focus-on-form Approach, Noticing Hypothesis, Interaction Hypothesis, and Skill Acquisition Theory). These frameworks have become the basis for researchers to either reject Truscott's claims or as a foundation to support their findings to strengthen the role of CF in L2 acquisition. All theoretical grounds mentioned previouslyare discussed in the following sections.

2.3.2.1 Long's (2000) Focus-on-form Approach

Second Language Acquisition scholars agree that efficient L2 pedagogy should integrate attention to linguistic features in L2 pedagogy (Norris & Ortega, 2000; Ellis, 2005). Doughty (2003) claimed that without linguistic instruction, L2 acquisition is likely to be more difficult, slower, and less successful. Thus, Long (2000) proposed a focus-on- form approach as one of the approaches in L2 teaching.

The Focus-on-form approach involves the process of gauging learners' attention to linguistic features as they arise incidentally in lessons whose overriding focus is on communication or meaning. In other words, Ellis (2016) simplified it as an approach in language teaching in which learners are made conscious of the grammatical features that they can use in communicative contexts beforehand. The communication setting is the most important facet of this approach as one of its aims is to enhance the L2 communicative capacity of the learners. The significance of communicative context in this approach is explained by Lyster (2007) who stated that the kind of processing activity during communicative language use should resemble the kind of cognitive activity that happens while performing language learning tasks. Furthermore, if learners are exposed to decontextualised grammar approaches, they will encounter difficulty in transferring the information gained from isolated grammar lessons to authentic language use in communicative contexts. Therefore, the focus-on-form approach provides a platform for transfer-appropriate learning.

Long's perspectives of the focus-on-form approach are incidental or unplanned. Other scholars viewed the approach as reactive and pre-emptive or unplanned and planned ways of L2 learning (Doughty & Williams, 2017; Ellis et al., 2002).

The role of CF is seen as a potential pedagogical tool in focus-on-form instruments (Ellis, 2005). Correctivefeedback is a spontaneous focus-on-form instruction to stimulate students' awareness to form by doing a task in a personalised way. It can be argued that written CF provided on students' drafts is likely one of the focus-on-form methods.

2.3.2.2 The Noticing Hypothesis

The second important underlying principle of the focus-on-form approach can be explained through the Noticing Hypothesis (Schmidt, 1990, 2001). Svalberg (2012) explained that the notion of "noticing" in the hypothesis integrates the two important cognitive linguistics concepts of "awareness" and "attention". The Noticing Hypothesis indicates that unconscious L2 acquisition is unachievable, and the acquisition is probable via conscious attention that language input can be transferred into the intake. Therefore, Schmidt argues that noticing is an important requirement in language learning.

Another concept that has been commonly discussed is "noticing the gap" which is associated with attention. This concept refers to the ability of L2 learners to be conscious of a gap between what they can produce and what they need to produce. Similarly, the concept also refers to learners' ability to notice the gap between what they produce and what target language speakers produce. Ellis (1996) explained the concept as "cognitive comparison" rather than "noticing the gap" as learners also must be aware of a condition when their output is like the input.

The role of CF as a noticing facilitator is explained by DeKeyser (1994) and Han (2002) when focus-on-form methods (e.g., error correction) can be expected to assist the L2 acquisition process. This is possible once conscious attention to linguistic form is considered facilitative or even a prerequisite for interlanguage expansion.

Corrective feedback as a noticing facilitator can be considered a cognitive focusing device used to gauge students' attention (Hulstijn & Schmidt, 1994). Also, CF enables students to observethe gaps between their interlanguage output and the target language input (provided with WCF) if their awareness of some linguistic elements is triggered. Therefore, restructuring and destabilisation of learners developing interlanguage grammar are prompted through thenoticing operations (Long, 2015).

2.3.2.3 The Interaction Approach

Long's (1981) interaction hypothesis has become the foundation for the interaction approach in language learning. The interaction hypothesis suggests that interactional modifications and meaning negotiation are two phases in communication with the latter leading to the presence of the former.

However, this hypothesis has received backlash for its inability to address the association between language acquisition and the negotiation of meaning. Long (1996) therefore revised the hypothesis and claimed the significance of negotiation of form. In the revised version, negotiation of form covers responses to incorrect use of target language structures, both when it is addressed for pedagogic intention and when the error hampers the flow of conversation. In this context, the advantages of negotiation activities should contain three elements according to Pawlak (2014): (1) the provision of the positivelanguage input should produce a map of form-meaning-function; (2) the provision of CF in the form of morphology, vocabulary, language-specific features, or other language- facilitated information; and (3) the production of improved output caused by the cognitive comparison, feedback provision, and noticing the gap. In the context of written CF, these three elements are referred to as the input, the feedback, and the output respectively (Fan &Ma, 2018).

Polio (2012) claimed that the interaction approach has its origin traceable to works on oral interaction. Additionally, in the context of written CF, the input is viewed as the process of exposure to the feedback, and the output is considered as the learners' language production. In other words, framed through the interaction approach, input-output- feedback can constitute a chain through which learners' accuracy in writing can be improved.

2.3.2.4 Skill Acquisition Theory

Skill Acquisition Theory (hereinafter referred to as SAT) originates from rule-based theories of automatisation in Anderson's (1987, 1992) Adaptive Control of Thought Theory which has been expanded to the area of language acquisition and learning in the work of DeKeyser (1997, 1998, 2012, 2020) and Johnson (1996). SAT is used to frame the dynamic of WCF which also can be used to predict that the proper use of WCF may assist in improving the writing accuracy of L2 learners (Fan & Ma, 2018).

DeKeyser (2020) argued on the application of SAT in L2 acquisition that declarative knowledge is needed for the development of procedural knowledge, and this phenomenon must be built on numerous examples and explicit rules of the target language.In this context, declarative knowledge refers to what one knows while the latter refers to what one can do. True to its purpose, learning a language is a transmission from declarative knowledge to procedural knowledge. It is regarded in this context that declarative knowledge is provided through WCF, therefore WCF is expected to enhance L2 learners' written accuracy via the transfer of this knowledge to procedural knowledge. Moreover, several researchers (Hartshorn et al., 2010) have stated that extensive and deliberate drill is necessary for "*proceduralisation*" that guides the students toward better automatisation. Correspondingly, Bitchener and Ferris (2012) when discussing Anderson's SAT argued that drill leads to greater automatisation.

Therefore, learners' writing accuracy, through the process of feedback, is likely to improve if they can automatically avoid committing errors that have been revised. The cognitive theories explained prior (i.e., Focus-on-form Approach, Noticing Hypothesis, Interaction Hypothesis, and Skill Acquisition Theory) have paved our understanding of the efficacy of CF, both in written and oral forms the background of such theories. In retrospect, these cognitive theories do not respond directly to Krashen's Monitor Hypothesis, which is the core framework for rejecting the efficacy of CF in L2 acquisition and writing. Another cognitive SLA theory that acknowledges the efficacy of CF in L2 writing and L2 acquisition, in general, is the Output Hypothesis proposed by Swain (1995; 2000; 2005). Interestingly, this hypothesis responds directly to Krashen's Input Hypothesis. Therefore, this theory is adapted for the establishment of the theoretical framework of this case study.

2.4 The Theoretical Framework of this Case Study

The construct of the theoretical framework is derived from Osanloo and Grant (2016) and Kivunja (2018). It refers to a "structure" that summarises theories and concepts which was developed from published research and summarised to enable one to have a theoretical background for data analysis and interpretation, development of research questions, and focus of the literature review.

The study is guided by the theoretical framework which was based on Swain's (1995, 2000, 2005) Output Hypothesis, and the integrated model to investigate CF proposed by Li (2010). At the centre of the framework are the three functions of output as described in Swain's Output Hypothesis, namely, (1) noticing, (2) hypothesis testing, and (3) metalinguistic reflection (see Figure 2.1). Also, notice that two forms of output are identified as output one which refers to the problematic utterances whereas output two refers to a newly reproduced output.

The progression of reaching output two (i.e., acquisition) from output one involves stages of noticing, hypothesis testing, and metalinguistic reflection which according to Swain (1995) the stages between the outputs are considered part of the process of L2 learning. This can be used to explain the role of WCF in facilitating the collocation competence (output 1) of the students at the start of the study towards the acquisition or improved collocational competence stage (output 2). Then,supporting this framework, which is beneficial for explaining the qualitative paradigm (i.e.,RQ4) of this current study, are the numerous factors that affect the effectiveness of direct and indirect WCF, perceived by the students. These factors are derived from the model to investigate CF proposed by Li (2010). Swain's Hypothesis indicates that the explicitness ofthe CF can affect the "noticing" element in the framework her hypothesis did not highlight other factors (e.g., learners, contextual, and linguistic factors) that can affect the "noticing". However, these factors were mentioned by Li (2010) in his study. Therefore, this study proposed a theoretical framework that combines a theory and a model that forms a guide for interpreting the data findings. The theoretical framework in this current study isillustrated in Figure 2.1.

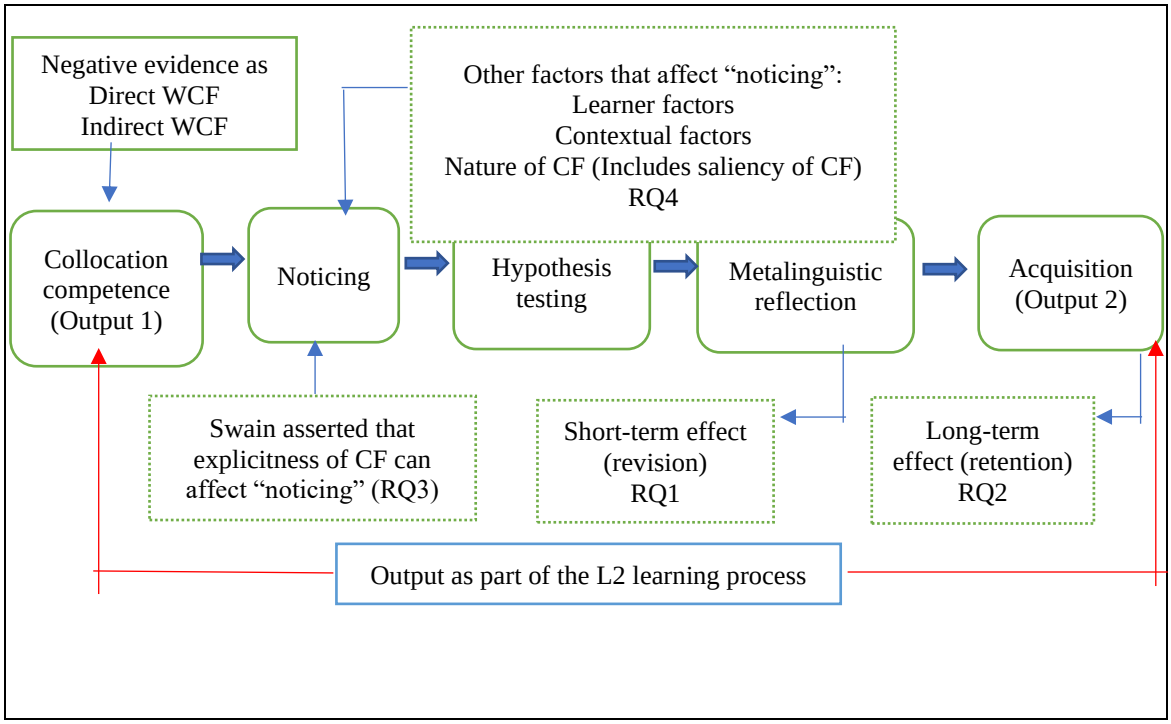


Figure 2.1: Theoretical Framework of the Current Study

The explanation in the following parts will illustrate how the mentioned main elements in the framework relate to each other. It begins at the centre of the framework (i.e., Output Hypothesis,) and moves on to the other components (e.g., short-term effect, long-term effect, other factors affecting "noticing", negative evidence) and how these components relate to Output Hypothesis.

2.4.1 Output Hypothesis

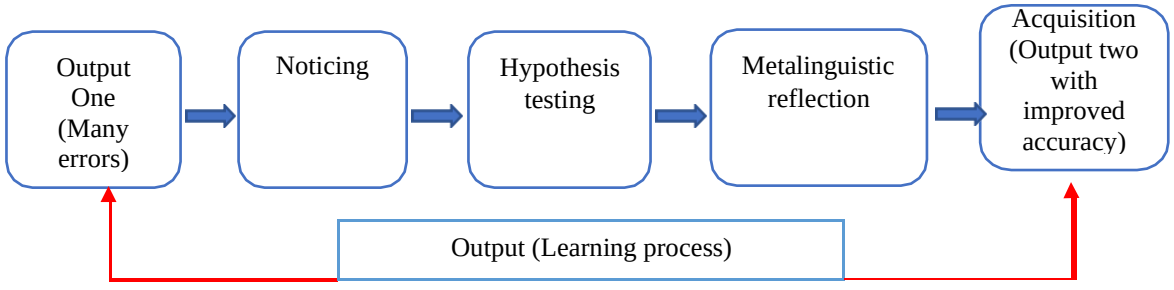


Figure 2.2: Overview of Output Hypothesis

The output Hypothesis was made the central component of the theoretical framework

in this current study. Specifically, it is used to explain the phenomena associated with the role of direct and indirect WCF in this current study. The primary reason for selecting the Output Hypothesis rests on its response to Krashen's (1985) Input Hypothesis.

The output hypothesis (Swain, 1995) is regarded as an important reaction to Krashen's input hypothesis in his Monitor Model Theory (Krashen, 1985). A Canadian linguist herself, Swain founded the hypothesis based on a study on French immersion learners who failed to acquire native-like linguistic skills in output productions such as speaking and writing, even though they were provided with ample comprehensible language input. This has led her to argue that comprehensible input by itself is not sufficient for students in producing error-free grammatical utterances.

Therefore, Swain (1995) proposed that providing input alone is not adequate in language acquisition which isin contrast with Krashen's (1985) input hypothesis that stated the opposite. She proposed that with the addition of producing the language, it is likely to be acquired by learners because they should produce the language that they have learned to know the actual learning level of accuracy that they have achieved.

Generally, the significance of output in language learning may be interpreted in such a way that the cognitive processes are caused by output and learners' active involvement in the process. Learners need to participate in syntactic processing to attempt word comprehensibility rather than comprehension of teacher input which can play a crucial part in the process of acquisition (Gass et al., 1998). Swain (1995) argued that producing the target language can function as the spark that drives the learner to focus on the means of expression required to effectively communicate one's message. In highlighting the role of CF, she acknowledges its importance by stating the association between insufficient output and inadequate CF with L2 learners' poor grammatical performance in immersion classrooms. Swain has refined her hypothesis since it was first published and detailed the

three roles of output that lead to acquisition: (1) noticingfunction; (2) hypothesis testing; (3) metalinguistic reflection.

2.4.1.1 Output as the Noticing Function and the Role of CF

A crucial task of output according to Swain (1995, 2000, 2005) is to force learners to be engaged in the learning process by processing the language more deeply by utilising extra mental effort. The first role of output in the learning process is to serve as a noticing function. According to Ellis (1996), one of the indicators for L2 acquisition is learners can notice certain linguistic patterns or forms that have taken place in oral or written language production. This is where the notion of "noticing" comes in because it has providedlearners with the information in terms of a "gap" existing in their interlanguage system in comparison to the target language. Schmidt (1990, 2001) asserted that the concept of "noticing" is one of the crucial stages of language acquisition. He defined "noticing" as thephase in which learners channel their focus to the existing gap in language production, for instance being conscious of wrongly spelt words or incorrect verb tenses to describe the past.

The concept of noticing is promoted by the Output Hypothesis in such a way that it provides opportunities for learners in producing the target language and become conscious of the gaps and limitations that occur in their interlanguage system. However, Swain(2000) asserted that noticing may happen if the gap is made adequately noticeable to learners through the explicitness of WCF.

Theoretically, this is the phase in which the negative evidence comes in. Negative evidence is defined as an indication that notifies a learner of what is not grammatically right concerning the language that he produces, which can be in the form of either explicit or implicit evidence (Bruton, 2000). Explicit negative evidence in the case of this current study is in the form of direct WCF whereas implicit one is in the form of indirect WCF. Referring to the theoretical framework, output one represents the collocation competence of

the students at the start of this study measured in test one. As shown in the framework, output one which contains problematic utterances was treated with negative evidence (i.e., direct or indirect WCF). This leads to the noticing stage in the framework (represented by the blue arrow pointing right).

Several SLA scholars believe that CF given as a form of negative evidence offers the information that is required by the learners regarding the features of the target language which are distinct from their interlanguage system (Hashemifardnia et al., 2019; Li, 2018; Nasaji, 2020; Panova & Lyster, 2002; White, 2003). Specifically, the function of CF is to divert learners' attention to the gaps that appear in their written output. Leeman (2003) claimed that the target linguistic forms that are made salient will improve L2 acquisition because it encourages noticing the targeted features. Qi and Lapkin (2001) classified noticing into two categories: (1) perfunctory noticing, which is when learners are aware that their L2 production is inaccurate and incorrect but incapable of providing justifications; (2) substantive noticing, which is when learners are aware of the non-target- like L2 production and they can provide justifications for the errors or inaccuracies. In a study conducted by Qi and Lapkin (2001) and Chin et al. (2019), learners who exhibited substantive noticing could produce written work with improved accuracy. This shows that the quality and explicitness of noticing are important to improve the effectiveness of CF and written work (see the green dotted box beneath the Noticing box in the framework).

Panova and Lyster (2002) argued that learners' reflection on the gaps in their writing output can lead to a "cognitive comparison" of the target language. Therefore, the stage of reconstruction of a linguistic system can occur providing that CF is sufficiently salient. Consequently, this has raised a question of how salient the feedback should be for them to efficiently learn from noticing the gaps. The concept of the salient feature of CF refers to the explicitness of the CF when provided on students' errors. For instance, direct WCF is

considered explicit whereas indirect WCF is regarded as implicit.

2.4.1.2 Output as the Hypothesis Testing Function

The second role of output serves as the hypothesis testing function in which learners are involved in the learning process by testing their hypothesis on the function of targeted linguistic forms (Swain, 2008). Learners are involved in this stage by producing modified output and stretching their interlanguage system to discover the native-like use ofthe targeted linguistic forms. As mentioned in Shao (2015), the stage of hypothesis testing enables learners to create and test their hypotheses regarding the clarity and linguistic accuracy of their speeches (in oral form) and words (in written form) in response to feedback. In the context of this current study, this stage involves the learners revising the errors by referring to the metalinguistic information supplied in direct WCF. Whereas inthe indirect WCF, the hypothesis testing stage involves the learners revising the errors by referring to the CF provided, as a form of cognitive processing. This stage is very significant for it is where the students are highly encouraged to participate in "deeper internal processing" which therefore increases the intake of targeted linguistic forms into their interlanguage structure (Ferris, 2002). Other researchers have also claimed that attention must be given to the CF provided by the CF provider and there should be "engagement with the given feedback" as a method to enhance retention and comprehension (Chandler, 2003; Benson & DeKeyser, 2019; Lee, 2012).

In the context of this current study, the concept of "engagement with the given feedback" occurs when the participants in the direct WCF group cognitively process the metalinguistic information provided in the direct WCF whereas, in the case of the indirect WCF group, the participants were involved in cognitively processing the indirect WCF cues only. Besides, several researchers (Qi & Lapkin, 2001; Storch & Wigglesworth, 2010)have also mentioned that the more extensive the engagement with CF is, the greater the

comprehension and retention of the targeted linguistic structures will be. Thus, the correct amount of information given in CF influences the most appropriate condition for the process to effectively occur.

2.4.1.3 Output Serves as the Metalinguistic Reflections

The next stage in the framework is the metalinguistic reflections stage which is reflected in learners' achievement in Test 2 (as in the case of this current study). The reflection of learners' linguistic knowledge and the outcome of a test will be in the form of enhanced or new linguistic knowledge as well as the recognition of the gaps that occur in their interlanguage systems. The presence of WCF as a form of negative evidence plays a significant role in guiding the learners to notice the gap and test their formed hypotheses through the process of cognitive processing of metalinguistic information (in the case of the direct WCF group). The internalisation of metalinguistic knowledge is the next stage in the framework that resulted from the outcome of the hypothesis testing. This is the stage where the learners will be measured for their targeted linguistic accuracy, in the case of this current study, collocational competence. Swain (2008) claimed that the effectiveness in building metalinguistic knowledge and acquisition of the targeted language structures may be enhanced with enough cues to reflect on, such as the saliency or explicitness of the WCF. The term "explicitness of feedback" refers to the strength of the feedback in helping learners to comprehend a targeted linguistic structure. For instance, direct feedback is moreexplicit as it contains metalinguistic information whereas indirect feedback is less explicit (or implicit) in the absence of metalinguistic information.

In the context of this current study, learning is known to have taken place when the students demonstrate a certain level of comprehension of the targeted linguistic features, after receiving WCF. However, at this stage, the acquisition has not yet been embedded in

the learning process.

2.4.1.4 Acquisition as the Final Output

The acquisition takes place when learners demonstrate retention of accurate use of targeted structures in a subsequent long-term test (Storch, 2010; Kassim, 2014). This is because the ability to revise does not provide adequate evidence that the WCF has a lasting effect beyond the revision stage; that is when L2 acquisition has occurred (Guenette, 2007; Truscott, 2007).

The long-term effect of CF is considered as the acquisition depicted at the final stage in the framework, illustrated as output two of improved collocation competence. It is considered that acquisition has taken place when learners can demonstrate the retention effect of the accurate use of the targeted linguistic forms.

In summary of the Output Hypothesis, WCF under certain conditions can facilitate language acquisition by permitting learners to invite feedback from their teachers or lecturers which notifies them of the well-informed and clarity of their interlanguage expressions. Finally, Swain (1995) asserted that, if learners are not given any feedback or given only insufficient feedback about the extent to which their message has successfully been communicated, the output may not serve all the functions mentioned prior.

Considering the role of WCF explained in the Output Hypothesis, it is possible to explain the phenomena being investigated as seen in the research questions. However, investigating the factors that contribute to the success or failure of WCF cannot be explored through the Output Hypothesis. Swain (2008) and other researchers (e.g., Cao & Badger, 2021; Leeman, 2003; Reynolds & Teng, 2021; Sato & Loewen, 2018; Suzuki etal., 2019) have mentioned that the saliency or explicitness of CF can affect its effectivenessat the "noticing" stage. However, they did not highlight other factors that could affect the

"noticing" stage which can affect the whole process of acquisition (i.e., output 2). The other factors were explained by Li (2010) which include learners' factors, contextualfactors, and the nature of CF factors (represented in the dotted box with an arrow pointing towards the Noticing Stage) as seen in the theoretical framework of this current study. The inclusion of these factors into the Output Hypothesis can provide a current understanding of the theory whilst can be used to explore the phenomena investigated in this study. Therefore, these factors are explained thoroughly in the following paragraphs.

2.4.2 The Integrated Model to Investigate Corrective Feedback

The integrated model of investigating CF by Li (2010) is brought into the theoretical framework as a frame for making sense of all the qualitative data (i.e., derived from RQ4) in the current study. This model was revised and enhanced based on the prior two models for investigating CF proposed by Goldstein (2004) and Ellis (2010).

According to Li (2010), studies on CF should not be approached from the perspective of the properties of feedback per se because there has been increasing empirical evidence that the effectiveness of CF is subjected to various factors. The framework by Li (2010) was derived from a meta-analysis study with the inclusion of 22 published studies and 11 dissertations. The findings from the meta-analysis have derived factors that can mediate the effectiveness of CF both in oral and written forms: (1) Nature of CF factor; (2) Learners factors; and (3) Contextual factors. Note that, these four are the main factors in which, each main factor contains a list of sub-factors.

Moreover, the "factors" refer to the "variables" that can mediate the effects of WCF on learners' acquisition. They are derived from the literature, and as they are called "factors" in those studies (e.g., Li, 2010), this study propositioned that they are called "factors". These "factors" are discussed in "the integrated model to investigate CF" which is integrated into

the theoretical framework of this study.

2.4.2.1 Learner Factors: Learner's Prior Experience and Exposure to WCF

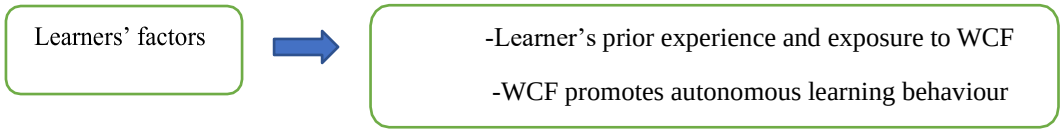


Figure 2.3: Learners' Factors Affecting the Effectiveness of WCF

This study proposes in its framework that learners' factors can contribute to or hinder the effectiveness of written CF. There are two subfactors listed in Learners' Factors which are regarding learners' prior experience and their exposure to WCF.

The importance of students' prior learning exposure in determining the success of WCF was stated by several researchers in the field. For instance, Ferris and Hedgcock (2005) and Li and Vuono (2019) asserted that L2 teachers must consider factors such as learners' learning experiences and the language exposure that they may have experienced previously that can mediate the effectiveness of WCF. Moreover, the educational exposure of learners has been identified as a factor that might influence the extent to which some L2 learners benefit from WCF (Bitchener & Knoch, 2008). Their study has confirmed that prior learning experiences mediate the effectiveness of WCF in which international L2 students performed significantly well than those identified as immigrant L2 learners. Ferris (2010) asserted that in the context of individual differences, teachers should consider that some students benefit more from CF than others for a host of multiple reasons such as learning style (Rahimi, 2015), background knowledge, and proficiency (Lim & Renandya, 2020; Mao & Lee, 2020; Zheng & Yu, 2018), motivation (Han, 2017), and prior exposure to CF and learning strategies (Zhang & Hyland, 2018). Apart from students' prior learning experiences, several

researchers have also emphasised that there is no best way to provide WCF because its success or failure depends on various other factors such as types oferrors, the classroom setting, writing tasks, and other unknown variables (Ellis, 2009; Guenette, 2007; Hyland & Hyland, 2006a; Nguyen, 2019). In supporting the role oflearners' learning experience and prior exposure to WCF strategies, a study by Westmacott (2017) suggested that several factors such as grammar-oriented EFL teaching context, levels of motivation, and students' previous learning experiences affected the students' responses to different types of WCF. These factors reinforce the notion that "one size fits all" WCF strategies are unlikely to be appropriate. Thus, it implies the need for L2 instructors to be conscious of individual differences (e.g., learning experiences and levelsof motivation) and learning context (e.g., either EFL or ESL) when selecting suitable WCF strategies (Hyland, 2003; Storch & Wigglesworth, 2010).

The next factor listed in Learners' Factors is regarding the role of WCF that promotes autonomous learning behaviour. Benson (2001) defined autonomous learning behaviour as "the capacity to take control over one's learning" (p. 2). Furthermore, Bitchener and Storch (2016) defined the concept of self-regulation in learning which refers to how an individual can manage his learning, which is a central concept in Sociocultural Theory (Lantolf, 2000). Moreover, Nassaji (2017) mentioned that learning, as framed fromthe Sociocultural Theory, is a practice of moving from "other regulations" to self- regulation. This suggests that some L2 learners require support from others, for they have not gained control over their learning. This support may come in several forms. Forexample, the students in a study by Westmacott (2017) required some forms of support such as checking reference books, consulting their teachers for clarification, and referringto their studied material (e.g., personal notes) when they faced difficulty in processing WCF. Moreover, other researchers mentioned that this support may come from sources such as students who may recollect and identify CF from

external resources such as prior teacher comments (Yan & Brown, 2017) and reflect on their writing (Nicol, 2010).

Self-regulation is also defined in such a way that a learner has become autonomous in his learning and is equipped with adequate skills to act independently (Nassaji, 2017). This applies to L2 learners who show a positive attitude towards the indirect WCF type because such WCF promotes their autonomy in managing their learning, contributes to self-independence, and allows them to have more freedom for error correction (Hyland & Hyland, 2006a; Wang & Jiang, 2015). Lalande (1982) and Ferris (2011) asserted that indirect WCF can lead to guided learning and problem-solving which encourage L2 learners to be more reflective and analytical about linguistic errors made in writing.Therefore, the learners are required to learn from the process which leads to autonomous learning.

Additionally, several researchers argued that direct WCF can obstruct autonomous learning in L2 students and may not contribute to the acquisition or long-term learning of the targeted structure (e.g., Ferris, 1999, 2011; Park et al., 2016; Shirotha, 2016). The primary reason is that direct WCF does not allow the learners to edit their errors because the correct forms of such errors are given, which reinforces the positive role of indirect WCF for acquisition or long-term learning. Westmacott (2017) reported in her study thatL2 students of higher proficiency levels benefit from indirect WCF as it triggers autonomous learning behaviour, whereas Shirotha (2016) found that indirect WCF wasable to elicit autonomous learning among lower proficiency L2 students. Furthermore, Shahrani (2013) and Linh (2018) reported that indirect WCF benefited intermediate proficiency L2 learners in raising their autonomous learning behaviour and the students perceived that such WCF type may contribute to learner autonomy. Considering the findings of the effect of indirect WCF on learner autonomy, several researchers were concerned about whether L2 learners can correct their errors with the provision of the indirect WCF approach (Bitchener, 2012).

However, based on the findings, indirect WCF has a better capacity to prompt learner autonomy, providing that the L2 learners aresituated at the appropriate developmental readiness to perform self-correction (e.g., higher intermediate proficiency, advanced proficiency).

Learners' motivation toward WCF is listed in the Learners' Factors that can mediate the effectiveness of WCF. Sheen, Wright, and Moldowa (2009) raised the concern of L2 students that receiving papers flooded with red ink is confusing, overwhelming, and discouraging. It may develop into an unpleasant experience for developing L2 student writers, especially when such an experience is frequent over time. The harmful effect on L2 student writers was echoed by Hairston (1986) in the following:

> If we use a little common sense about learning theory and remember some basic precepts of humanistic psychology, it is not hard to see why the copiousand detailed comments of the instructor often fail to make an impression on the student. (p. 128)

Although CF is significant in L2 classrooms, there is some empirical evidence that shows the negative effect of CF (both in oral and written forms) on student writingmotivation (Lee et al., 2018). Second-language student writers are bound to lose interest in writing as they accumulate negative experiences from CF (Lee, 2019). Consequently, Ferris and Hedgcock (2012) pointed out that students may feel frustrated and become less motivated if the written CF is illegible, ambiguous (e.g., in the form of a single-word question, consisting of unfamiliar symbols), or confusing (e.g., comprising of unclear questions, suggestions that are difficult to integrate into subsequent writings). Such challenges therefore may decrease the efficacy of WCF in L2 writing. However, in a study by Zheng and Yu (2018), L2 students of low proficiency were effectively engaged with focused WCF provided by the teacher. This has suggested that WCF strategies that are focused (e.g., a provision of WCF that treats

one type of error only, as in the case of this current study) could facilitate students' affective engagement with WCF.

From SLA's viewpoint, the acquisition is less likely to happen when a provision of WCF targets multiple or all error types (Ellis et al. 2009; Schmidt, 1994; Ellis, 2005), which also refers to unfocused WCF. This is due to when the students receive their writing drafts filled with circles, underlines, error codes, and corrections, they are overloaded with information (Bitchener, 2008). This information lacks a clear focus, and the experience of being cognitive and information-overloaded has left students with a reduced attentional capacity to cope with WCF provided by their teacher (Bitchener, 2008; Sheen et al., 2009). Furthermore, Truscott (1996) argued that one of the fundamental problems of CF rests in triggering a high filter in learners that includes low self-esteem and increased anxiety and therefore discourages them from experimenting with the language and producing more writing tasks. Practically, error correction that swarms L2 students' writing draft, to a certain extent may demotivate their writing intentions and increase their anxiety in writing.

2.4.2.2 Contextual Factors: Illegible Handwriting of CF Provider and CF Delivery

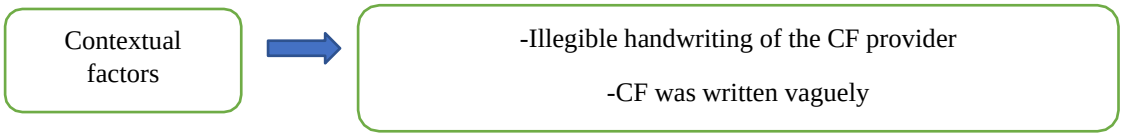


Figure 2.4: Contextual factors affecting the effectiveness of WCF

This study proposes in its framework that contextual factors can contribute to or hinder the effectiveness of WCF. There are two subfactors listed under contextual factors including (1) the illegible handwriting of the CF provider and (2) the delivery method of CF.

Mahfoodh and Pandian (2011) reported the findings of a qualitative case study investigating the contextual factors that may influence students' perceptions and reactions to their teachers' WCF. The study discovered several difficulties faced by the students

when processing their teachers' feedback. One of the factors was related to their teachers' handwriting which influenced students' understanding of teachers' feedback. This finding was also noted in other studies (e.g., Jonsson, 2014; Liu & Lee, 2014). Due to teachers' illegible handwriting, the students indicated in certain instances that they failed to comprehend their teachers' written CF which in turn caused them to show negative reactions such as being unhappy with the feedback and rejecting the feedback. Furthermore, several students expressed their difficulties in understanding the meanings of certain codes and symbols used in teachers' WCF. Therefore, the teacher needs to explain beforehand the codes used in WCF types to avoid confusion when the students refer to the codes (Chiang, 2004). These difficulties influenced the students' perceptions, affective reactions, and understanding of WCF provided by their teachers. Therefore, according to Dabboub (2019), the discussion between teachers or lecturers with their students regarding the best way to provide written CF can help to make feedback more productive and effective. Other studies have also argued that illegible handwriting is not the only main difficulty faced by L2 learners when processing CF. The learners believe that WCF was futile when teachers did not provide a clear explanation on how to fix the errors and their lack of understanding was also caused by the terminology used in WCF to describe their erroneous linguistic structures (Jonsson, 2014; Liu & Lee, 2014).

Hamouda (2011) identified several difficulties faced by learners when processing WCF. One of the difficulties faced by students in revising their papers that had been provided with WCF was their concern about making new errors. Hyland (2003) explained that L2 students' concern about committing new errors was associated with students'carelessness, students' habit of making such errors, and students' struggle to rewrite the papers without understanding what they were correcting. Moreover, several other concerns expressed by

the students in Hamouda's (2011) study were regarding the inability to revise the content and the expressions recommended by the teacher, and in correcting all the grammatical errors. These findings were also noted by Zhan (2016) that several potential sources of dissatisfaction towards WCF among L2 students may include a method of WCF delivery which can play a vital role in the successful application of WCF. Also, Hamouda's study reported that some students claimed that they misunderstood teachers' feedback and had too many errors for correction which made the students unwilling to revise their drafts. Cohen and Cavalcanti (1990) argued that it is true that the teacher's written CF is not always helpful when it is unclear and vague, and students sometimes cannot agree with these comments and suggestions. In fact, in Hamouda's (2011) study, most students associated these two problems (e.g., WCF that is unclear, WCF that is vague) to explain why they sometimes could not revise their papers.

Dabboub (2019) reported that the foremost difficulty faced by the students is in understanding their teacher's WCF. This problem appeared as a result of the explicitness of WCF (e.g., explicit WCF, implicit WCF). Moreover, the study also reported that the L2 students found difficulties in reading the WCF provided due to the illegible handwriting of the teacher. Also, some students in the study reported that the indirect WCF by circling errors was not clear enough for the students to give them sufficient information about the nature of the error had made them unable to correct such errors.

2.4.2.3 Nature of Feedback Factors: Metalinguistic Information in Direct WCF and Degree of Explicitness of WCF

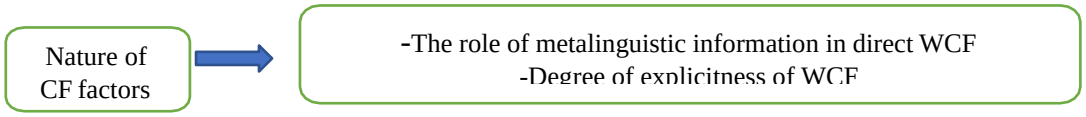


Figure 2.5: Nature of CF factors affecting the effectiveness of WCF

This study proposes in its framework that the nature of CF factors can contribute to or hinder CF effectiveness. There are two subfactors listed, namely, (1) the role of metalinguistic information in direct CF and (2) the degree of explicitness of written CF.

Several studies that have investigated the potential role of CF have also been concerned with determining the utility of enhancing direct WCF with metalinguistic information. For instance, Sheen (2007) investigated whether direct WCF with or without the metalinguistic information of errors has a greater capacity to promote the acquisition of English article use in L2 writing. The study found that the intermediate ESL learners benefited to a greater extent from direct WCF that contains metalinguistic information. Bitchener and Knoch (2009) and Bitchener (2008) investigated the value of metalinguistic information in treating ESL learners' use of the English article system and approved the positive role of metalinguistic information in direct WCF in treating article errors. Shintani and Ellis (2013) argued that metalinguistic information may have enabled L2 learners to develop an awareness of the targeted linguistic structures, which enabled them to apply this information in the revision stage. In a recent study by Jang (2020), metalinguistic information in CF was beneficial for the development of explicit and implicit L2 knowledge.

Ng and Ishak (2018) conducted a study to explore factors that contributed to the accurate use of past tenses resulting from direct WCF and indirect WCF. They found that students' preferences are related to the fact that direct WCF contains metalinguistic information such as correct answers are written, and the information provided in the direct feedback was clear and easily understood which enabled them to produce better writing pieces. Therefore, the correct answers and metalinguistic information are remembered to avoid repeating erroneous structures in future writing drafts. Furthermore, another factor that influences students' performance in their studies is associated with the student's belief about

what error correction can offer. The students in the direct WCF group expressed their understanding in terms of a firm belief that direct WCF has assisted them in noticing their errors.

Another factor listed in the Nature of Feedback factor is the degree of explicitness of CF that can facilitate L2 learners' linguistic accuracy. The positive effects of varying degrees of CF explicitness have been documented in several recent studies (e.g., Suzuki et al., 2019; Zabihi & Erfanitabar, 2021). Bithcener (2012) believed that intuitively one mightassume metalinguistic information to be the most effective type of CF if it gives explanations, explicit rules, and examples. Therefore, learners might be able to improve their comprehension and process more deeply the knowledge they have been providedwith. Nevertheless, it may be dependent on a myriad of other variables such as thefrequency with which they receive WCF; the nature of the information provided; the abilityof learners to relate it to other linguistic knowledge that they may also be consolidating andprocessing; learners' proficiency; and the complexity of the linguistic focus.

Ferris et al. (2000) stated that more explicit WCF types that have labels, codes, or other metalinguistic information may be more beneficial for some students, than the implicit WCF that does not have labels, codes, or metalinguistic information. Moreover, this may apply to L2 learners who have received plenty of grammar instructions previously. The students may benefit from WCF that contains specific rule reminders or terms because the corrections, codes, or metalinguistic explanations may elicit their prior knowledge.

The concept of CF explicitness is defined by Nassaji (2016a) which refers to the degree to which CF provides learners with explicit information regarding the nature of their errors and how they should correct the erroneous structures. Moreover, Nassaji(2016b) also stated that CF can become more corrective as the explicitness of the feedback increases.

Theoretically, if the explicit kinds of WCF are more beneficial than the implicit ones, theoretical justifications that explain and predict how the learners acquire targeted linguistic structures should consider these differences. Pedagogically, this helps L2 teachers in selecting the suitable WCF strategies that may benefit their students the most.

Most WCF studies in the literature have compared the efficacy of different types of WCF, which focus on the level of explicitness. Although a wider range of options has been studied within these two types, the explicitness of WCF is generally considered in terms of the dichotomy between direct and indirect WCF. Findings from several studies indicate direct WCF as the provision of CF that worked better than indirect WCF (e.g., Bitchener & Knoch, 2008; Chandler, 2003; Mitra Samiei, 2016; Nassaji, 2009; Sheen 2010; Suzuki et al., 2019). Furthermore, direct WCF also resulted in the largest accuracy of improvementin both text revision (short-term effect) and retention effect (long-term effect). Eslami (2014) and Wagner and Wulf (2016) argued that direct WCF is more desirable for low- proficiency L2 learners who are unable to perform self-correction of errors committed and do not know what the correct form might be. Also, direct WCF has been shown to increase L2 learners' awareness of their linguistic errors because it promotes "pushed output" and lets learners externalise their language and test their hypotheses around targeted linguistic structures (Swain, 2008). Therefore, it creates the prospects for L2 learners to notice their errors, in which, the process of correcting those errors has been shown to result in decreasing the number of the same type of errors in subsequent drafts (Ghazi & Zamanian, 2016; Hosseiny, 2014).

As a result of noticing their errors, the role of direct WCF that prompts students' awareness has been pointed out in many past studies in which written CF points out the erroneous structures produced by L2 learners in their writing (Li, 2017; Nassaji & Kartchava,

2017; Suzuki, 2004). However, Ellis (2009) argued that direct WCF requires minimal cognitive processing on the part of the learners therefore such feedback type may not contribute to long-term learning. Ng and Ishak (2018) reported in their study that the students might face difficulty in noticing errors if direct WCF was not provided which in turn could affect their performance in the targeted language structures. Besides, their study also discovered that some students indicated that implicit written feedback (e.g., indirect WCF) is insufficient to improve their performance of targeted structures, in which, they required the CF to provide more explanation regarding the errors made.

In highlighting the implicit nature of indirect WCF, Bitchener (2008) and Ellis (2009) described it as an error correction strategy that in some way, an error has been committed in writing. Additionally, this indication can be in the form of either writing errorcodes on top of errors or underlining the errors. Thus, students are made to resolve and correct the errors by themselves instead of having their teacher provide an explicit correction. Several researchers have claimed that indirect WCF is beneficial because it involves the learners engaging in guided learning and problem-solving which promotes autonomous learning behaviour (e.g., Ferris, 1995; Ferris & Roberts, 2001; Tang & Liu, 2018; Westmacott, 2017; Van Beuningen et al., 2008).

Indirect WCF is beneficial because learners can engage in a more thoughtful form of language processing as they are self- editing their output. The reason for this is due to the use of limited metalinguistic information or error codes that push the learners to engage in hypothesis testing. However, researchers such as Wagner and Wulf (2016) argued that the type of WCF that does not provide sufficient information to assist learners in acquiring the correct forms is notcontributing to improving the linguistic accuracy of targeted structures over time. In this regard, it highlights the significance of the degree of explicitness between

direct and indirect WCF strategies.

To this end, the prior explanation has described how negative evidence (i.e., direct and indirect WCF) provided on output one (i.e., learners' collocation competence gauged in Test 1) can facilitate learners' improvement in output two (i.e., enhanced collocation competence). The learning process towards acquisition (reflected in output two) involved several stages, namely, noticing (learners are made aware of their knowledge gaps), hypothesis testing (learners cognitively process the errors facilitated by WCF), and metalinguistic reflections (learners show enhanced linguistic knowledge) which is measured in Test 2. This is where the study investigates the short-term effects of WCF on learners' collocation competence. Learners' ability to revise post receiving WCF, is not an indicator of acquisition as they must be able to show the retention (long-term) of newly acquired linguistic knowledge. Therefore, the acquisition is determined after a significant period (e.g., ten weeks) in which their collocation competence was measured in Test 3 to show the acquisition of the targeted structure. Thus, it is possible to investigate the long-term effects of WCF. Considering that WCF explicitness plays a vital role in determining the success of WCF, as shown in the framework, this study also investigates which type of WCF is the most effective in enhancing learners' collocation competence. Finally, as the literature has suggested that CF effectiveness is mediated by various factors not limited to its explicitness, the final research question was crafted to explore the factors perceived by the students that might enhance or hinder them from benefiting from direct and indirect WCF.

2.5 The Typology of Written Corrective Feedback

The subject of WCF in L2 writing which is also known as error correction (Truscott, 1996, 1999) has been widely debated and studied since the publication of Truscott's landmark paper in 1996 (Ferris et al., 2013). The expanding empirical evidence of WCF in

the literature is associated with the continuing practical need for L2 teachers (inschools) or L2 lecturers (in university) to be equipped with the best available answers regarding WCF efficacy. Also, WCF is considered a common instructional approach, deemed important by many, in helping learners to improve their L2 writing (Benson & DeKeyser, 2019; Farrokhi & Sattarpour, 2012; Ferris, 2010; Hosseiny, 2014). Hence, Ellis (2009) proposed a typology of various options of CF for correcting L2 students' written work. It is vital to identify the options of WCF in a systematic way to determine whether WCF is successful and if it is, what type is the most effective. The typology of CF proposed by Ellis (2009) has identified five strategies (or types) for providing WCF as illustrated in Table 2.1.

Table 2.1: The Typology of WCF Taken from Ellis (2009)

Type of WCF	**Description**
1. Direct WCF	The teacher provides the correct forms to the students.
2. Indirect WCF: A. Indicating + locating theerror B. Indication only	The teacher indicates that an error exists, but no correctionis provided. This takes the form of underlining or using cursors to show errors in the student's written work. This takes the form of an indication in the margin that errors occur in a line of text.
3. Metalinguistic CF: A. Use of error code B. Brief grammatical descriptions	The teacher provides some kind of metalinguistic information as to the nature of the errors. The teacher writes codes in the margin (e.g., N = nouns, PT = Past tense). The teacher writes a grammatical description of errors committed.

Table 2.1: Continued

4. The focus of the feedback: A. Unfocused CF B. Focused CF	This concerns whether the teacher attempts to correct all or most of the students' errors or selects some specific types of errors only. Unfocused CF is extensive in that it covers all (or most) errors. Focused CF only treats one type of error at a time (intensive).
5. Electronic feedback	The teacher indicates an error and provides a hyperlink for correction.
6. Reformulation	This involves the process of reworking the written text to produce one that seems like native-like writing.

The typology of the WCF provisions proposed by Ellis (2009) indicates several types of WCF commonly employed in L2 classrooms to treat students' linguistic errors. The typology is valuable for many empirical studies investigating the effect of WCF, as well as for L2 teachers as a reference for informed pedagogical strategy using CF. As such,many WCF studies in the body of literature have focused on investigating the effect of the CF strategies proposed in the typology. In other words, the WCF studies in the body of literature mostly revolve around Ellis's (2009) typology. Nonetheless, the current focus of recent WCF studies revolves around the direct-indirect WCF and focused-unfocused WCF dichotomies (Ellis, 2009; Ferris, 2011). To highlight past studies investigating the effect of direct-indirect WCF, the following sections present the findings of a systematic literature review that may shed light on what has been done and what has yet to be explored in the WCF literature.

2.6 The Effects of Direct and Indirect WCF

This section discusses the empirical evidence of studies performed to investigate the effectiveness of direct and indirect WCF in the body of literature. It is essential to note that

the studies are categorised into several that show support towards indirect WCF, othersthat show support towards direct WCF, and some that show no significant difference in effect between the two WCF types. Moreover, these are the WCF studies that focused on investigating the effect of the direct-indirect WCF dichotomy.

2.6.1 Studies Supporting the Indirect Written Corrective Feedback

Some of the studies that indicate support for the effectiveness of indirect WCF include Maleki and Eslami (2013), Eslami (2014), Ghandi and Maghsoudi (2014), Hosseiny (2014), Jamalinesari et al. (2015), Septiana, et al. (2016), Tan and Manochphinyo(2017), Westmacott (2017), Karim and Nassaji (2018), Al Harrasi (2019), Cerezo et al. (2019), Suzuki et al. (2019).

Ghandi and Maghsoudi (2014) conducted a study with fifty-six high school EFL learners of intermediate proficiency levels assigned into two experimental groups. The design of their study was true experimental with pre-test and post-test used as the instruments investigating the effect of WCF on the vocabulary accuracy of the learners.

The statistical analysis revealed that indirect WCF was more efficient than direct WCF in rectifying spelling errors committed by the students. In a study to investigate the effect of WCF on lexical problems and discrete grammatical problems, Ruegg (2015) conducted a study on 41 EFL learners of intermediate proficiency level in Japan. The experimental design study formed two experimental groups without the inclusion of a control group, andthe effects were measured via four writing drafts. The findings revealed that indirect WCF was effective for lexical problems relating to essay structure while direct WCF was more successful for surface-level grammatical errors. Additionally, it was also suggested that direct corrections should be given on surface-level grammatical problems, marginal comments, or symbols for meaning-level problems and problems relating to the content

and to simply underline or highlight lexical problems.

Jamalinesari, Rahimi, Gowhary, and Azizifar (2015) conducted a study with EFL learners of lower intermediate proficiency to examine the effect of direct and indirect WCF on English grammatical structures (e.g., subject-verb agreement, plural "S" ending, and regular and irregular past tense verbs). The study utilised a true experimental design with two intervention groups tested through a series of 10 writing assignments. Their findings indicate that students who received indirect WCF performed better than the direct feedback group as their writing accuracy improved over a series of tests. Moreover, the study also revealed that the total accuracy of the students differed significantly across all writing assignments. Another study investigating the grammatical aspect of the language is by Eslami (2014) who investigated the effect of WCF on learners' simple past tense errors. The study employed a true experimental design with random assignment of two experimental groups and one control group. The low-intermediate EFL learners were testedin the pre-test, post-test, and delayed post-test. The study revealed that the indirect feedback group outperformed the direct group in both the immediate post-test and delayed post-test. The findings also showed that indirect WCF leads to either equal or more levels of accuracy in the long term which suggests the advantages of indirect CF on errorcorrection over time.

In another attempt to investigate the effect of direct and indirect WCF on writing accuracy, Septiana et al. (2016) conducted a study with two groups of EFL learners. Their study employed a quasi-experimental design with pre-test, and post-test instruments, and grammatical sensitivity tests aimed to classify the students' grammatical sensitivity levels into high and low levels. The target structures of the study were writing accuracy in grammar, vocabulary, and writing mechanics. The findings revealed that indirect CF was able to improve EFL learners' accuracy in writing in the context of the target structures investigated.

Another example of quasi-experimental design in investigating the effect of WCF was conducted by Tan and Manochphinyo (2017) on 120 Thai EFL undergraduates. The participants were tested in a series of pre-test, immediate post-test, and delayed post- test focusing on English's eight parts of speech. The findings of the study showed that the group that received indirect WCF demonstrated a significant long-term improvement when measured in the delayed post-test. Similarly, Han (2012) reported the same effect ofindirect WCF in the long run measured in delayed post-test. Twelve EFL learners of low-intermediate proficiency were involved in the study to investigate the effect of WCF on simple past tense accuracy in writing. The experimental study consisted of two experimental groups and one control group tested with pre-test, post-test, and immediate post-test instruments. The findings revealed that while direct WCF can successfully improve students' use of simple past tense in the same task, the gains are more prone to be shifted to a different piece of writing in the long run as seen in learners that received indirect feedback. Additionally, Maleki and Eslami (2013) also confirmed the retention effect ofindirect WCF on simple past tense errors of EFL learners.

Moreover, 92 learners were randomly assigned to two experimental groups and one control group as part of theexperimental study design, in which the students were tested with pre-test, immediate post-test, and delayed post-test instruments. The results suggested that the indirect feedback group performed significantly better than other groups when measured in delayed post-test suggesting the lasting effectiveness of the indirect WCF approach.

Suzuki, Nassaji, and Sato (2019) investigated the effect of WCF on EFL students' accuracy in the past perfect and indefinite articles. Eighty-eight elementary proficiency English learners at a national university aged between 18 and 21 participated in the study. The experimental study design had four treatment groups and the participants were tested

with pre-test, post-test, and immediate post-test. The findings revealed that all WCF strategies employed in the study positively affect students' accuracy of the target structure in writing. More interestingly, the provision of indirect WCF was observed to have the most impact on immediate and delayed post-test of the past perfect grammatical structure.

Another study that focused on elementary proficiency EFL learners was conducted by Banaruee, Khatin-Zadeh, and Ruegg (2018). Forty high school pupils between the age of fourteen and sixteen participated in their quasi-experimental study. The participants were tested with pre-test and post-test instruments of writing assigned as homework tasks. The scores of the tasks were following the International English Language Testing System (hereinafter referred to as IELTS) grading norm based on vocabulary level, grammar, coherence, and relevance criteria in writing. The results of participants' post-tests indicate significant progress from the pre-test for both groups of participants. However, a significant difference was observed in the post-tests when a comparison was made betweengroups in which the indirect group achieved higher scores, indicating that the groupperformed better than the direct correction group.

A study by Westmacott (2017) has taken a different approach to investigating the effect of WCF on EFL students' writing accuracy. The study employed an action research design with a group of six females of upper-intermediate proficiency level. The participants received seven assignments with direct WCF and four assignments with indirect WCF over an academic semester. The error corrections were focused on treating various English grammatical and non-grammatical functions. The findings showed that most students in the study stated that indirect WCF was more beneficial because it prompted greater cognitive learning and processing. Additionally, there was evidence derived from a distributed questionnaire and semi-structured interviews that indirect WCF may also support reinforcing

grammatical knowledge and encouraging autonomous learning behaviour. Taken as a whole, the studies have shown the effectiveness of indirect over direct WCF. The following section highlights several studies that are in favour of direct WCF.

The studies discussed in previous paragraphs have highlighted the benefits ofindirect written CF in improving L2 learners' accuracy. Such studies have shown that indirect feedback can facilitate various grammatical and non-grammatical aspects of the language. Even though the findings of each study point to the effectiveness of indirect overdirect feedback, several disparities should be considered. These disparities include learners' age and proficiency, the study design of either experimental or non-experimental, the provisions of feedback either focused or unfocused, and the time duration between immediate and delayed post-test.

Despite the encouraging results on the positive effect of indirect WCF, somescholars warn that this feedback type may not benefit lower proficiency L2 learners (e.g., Bitchener, 2012; Bitchener & Knoch, 2010; Eslami, 2014; Ferris, 2004, 2006; Ferris, 2011;Hyland & Hyland, 2006b; Saragih et al., 2021; Tang & Liu, 2018; Wagner & Wulf, 2016; Zhang et al., 2021).

This is because lower proficiency L2 learners have insufficient linguistic knowledge in applying effective corrections if the provision of the feedback is implicit such as indirect feedback.

2.6.2 Studies Supporting Direct Written Corrective Feedback

Several studies that indicate support for the effectiveness of direct WCF include Van Beuningen et al., (2008), Bitchener and Knoch (2010b), Han (2012), Hashemnezhad and Mohammadnejad (2012), Van Beuningen et al., (2012), Stefanou and Revesz (2015), Karim

and Nassaji, (2018), Nusrat et al. (2019), Benson and DeKeyser (2019), Supraba et al. (2021) and Zhang and Cheng (2021).

Karim and Nassaji (2018) performed a study with 53 intermediate proficiency adult ESL learners. The experimental design study consisted of three experimental groups and one control group tested over a series of pre-test, post-test, and immediate post-test. The study aimed to investigate the effect of WCF on both grammatical and non-grammatical errors. The findings indicated that all three feedback groups significantly outperformed the control group in revision tasks which indicates that all WCF strategies in the study positively affect the short-term performance of participants in the study. Detailed analysis of the result also indicated that short-term accuracy improvements were also uncovered on new writing drafts for direct WCF and indirect metalinguistic feedback, but the effects were largely non-significant. Another study focusing on ESL students was conducted by Nusrat, Ashraf, and Narcy-Combes (2019). Ninety undergraduates partook in a quasi- experimental study that formed intervention groups and one control group. The students were tested with several testing instruments (e.g., pre-test, immediate post-test, and delayed post-test) to investigate the effect of WCF on their accuracy in articles, prepositions, and past tense verbs. The findings revealed that ESL learners exposed to direct feedback reported fewer errors in two out of the three linguistic forms in subsequent drafts when compared with ESL learners who were exposed to indirect written feedback and the control group.

To investigate the effect of WCF on the English grammatical and non-grammatical aspects, Cerezo, Manchón, and Nicolás–Conesa (2019) performed a study with 46 EFL undergraduates of intermediate proficiency level. The study employed an experimental design with two treatment groups and one control group tested with pre-test, post-test, and delayed post-test instruments. The findings were discussed from theoretical and empirical

perspectives: (1) writers adopt only part of the WCF received, therefore only part of the WCF was incorporated into written text; (2) the effect of direct WCF is significantly more beneficial for grammar learning than non-grammatical aspect. This was observed in immediate uptake (or short-term effect) and the decrease of grammatical errors across time in delayed post-test. Similarly, the effectiveness of direct WCF was also observed in Hashemnezhad and Mohammadnejad (2012). Their study was focused on investigating the effect of WCF on grammatical aspects (e.g., simple past tense, relative pronouns, and prepositions) of eighty EFL undergraduates of intermediate proficiency level. The study applied an experimental design with two intervention groups, and they were tested with a pre-test and two post-tests. The findings indicated that both groups showed improvements in new pieces of writing or drafts. However, it was also found that direct WCF enabled the participants to use the simple past tense, preposition, and relative pronoun with significantly greater accuracy in new pieces of writing.

Van Beuningen, De Jong, and Kuiken (2008) conducted a study to investigate the effect of direct and indirect WCF on L2 learners' written accuracy. Sixty-two Dutch learners were selected to form three treatment groups and one control group. The treatments received by the experimental groups were direct WCF, indirect WCF, and writing tasks, whereas the control group received self-correction instruction. Furthermore, the language systems being the focus of the study were word form (i.e., verb tense,singular-plural noun), spelling, word order, word choice, word omission, punctuation, capitalisation, and incomplete sentences. The study revealed that all students who received WCF produced fewer errors in the subsequent texts when a comparison was made with the initial texts, whereas no improvements were observed in the control group. Moreover, the researchers concluded that direct WCF is the more effective treatment for the study's population both in short and long-

term effects. Another study by Van Beuningen, De Jong, and Kuiken (2012) found that only direct CF resulted in grammatical accuracy gains innew writing which showed that the long-term effect of direct WCF was transferred to production in new text measured in delayed post-test, whereas indirect WCF benefited non-grammatical aspects in the long-term effect.

Similarly, the findings by Chandler (2003) indicated a tendency to favour direct WCF over indirect WCF. The researcher suggested that learners who received direct WCF can adopt the correct form while others who are exposed to indirect WCF were not able to do so. The primary reason for this is that the learners exposed to indirect WCF had no clue whether their own hypothesised amendments were correct. Furthermore, the study also found that direct WCF motivated the learners for it could improve their accuracy in writingfrom initial to later drafts.

Another study that favours direct WCF in improving L2 learners' accuracy in writing is by Bitchener and Knoch (2010b). The study involved advanced ESL learnerswho showed excellent use of English article systems in their writing, and the study was performed to investigate the effect of WCF on the targeted structure. The students were tested at three time points; pre-test; post-test (administered several minutes after the treatment); and delayed post-test (administered nine weeks after the treatment).

The findings indicated that a statistically significant difference was prevalent in the level of accuracy of the use of English articles between the treatment and control groups in the post-test. However, in the delayed post-test, differences can be seen between the control and two direct WCF groups. The researcher concluded that direct WCF is effective in improving the learners' accuracy over a nine-week period which indicated that the long-term effect of direct WCF was retained in the study.

Similarly, a finding by Stefanou and Revesz (2015) is in favour of direct WCF over other types of WCF when a comparison was made among the WCF strategies employed in their study. The study employed a pre-test, post-test, and delayed post-test design with two treatment sessions with eighty-nine L2 Greek students. The language element being the focus of the study is article use for generic and specific plural references. The study revealed an advantage of the direct WCF over no feedback however no clear evidence for the benefit of supplying metalinguistic information was identified from the study. The following section describes several studies that indicate no differential effects of both WCFstrategies on L2 students' accuracy.

The studies discussed in previous paragraphs point to the effectiveness of written feedback in improving L2 learners' accuracy. This is proven by one similar pattern observed in the studies – the experimental groups receiving feedback showed better performance than the group deprived of any feedback (i.e., the control group). Moreimportantly, those studies have shown that direct feedback seemed to have caused better accuracy than indirect feedback. In addition, the findings of those studies informed us that many grammatical and non-grammatical structure errors are best treated with direct writtenCF.

2.6.3 Studies Indicating No Differential Effects among WCF Types

Several WCF studies that indicate no differential effects of both WCF strategies include Salimi and Ahmadpour (2015), Mitra Samiei (2016), Wang (2017), and Banaruee et al. (2018).

Mitra Samiei (2016) conducted a study to investigate the effect of WCF on explicit and implicit knowledge of the simple past tense with a group of 105 Iranian EFL learners. The learners were divided into four groups that received either metalinguistic WCF, direct

WCF, indirect WCF, reformulation, and a control group. The effects of treatment were measured with a pre-test, immediate post-test, and delayed post-test. The findings of the study indicated that there was an improvement in the implicit and explicit knowledge of all the experimental groups. This means that all WCF strategies employed were effective in improving the learners' accuracy in writing and that the two WCF types had similar effects on the development of explicit knowledge of the students. Additionally, the study also revealed that direct and indirect WCF affected the learners' knowledge of the simple past tense in the immediate post-test, but only the direct WCF group was able to sustain their performance in the long term.

Salimi and Ahmadpour (2015) investigated the differential effect between direct WCF and indirect WCF on the written accuracy of EFL learners. Their study involved 30 intermediate EFL learners, assigned equally into the direct WCF group and indirect WCF group. The study revealed that the performance of both WCF groups was not statistically significant. However, the means of accuracy for the direct WCF group was larger than the means of accuracy for the indirect WCF group. It was shown from their study that direct and indirect WCF had demonstrated equal short-term effects in developing learners' accuracy which suggests that no differential effects of both WCF strategies. Nevertheless, only the performance of the direct WCF group showed a more significant long-term effect as compared to the performance of the indirect WCF group.

A recent study by Wang (2017) also indicated that statistically significant group differences were not observed in the findings. The researcher conducted a study to examine the extent to which CF improves or facilitates students' writing accuracy and their preferences and expectations for CF. The study employed a quasi-experimental design with a sample of one hundred and five college L2 learners. The respondents were divided into

three groups consisting of a control group that received oral comments on their writing, and the other two groups that received direct and indirect CF, respectively. Data collection includes text error analysis, pre-test, post-test, delayed post-test, and questionnaires. The language focus of the study is grammatical functions (e.g., eight parts of speech). The findings revealed that there were no significant differences in the group performance of the experimental groups and the control group on overall error reduction. Through the questionnaire instrument, the learners believed that CF was important and beneficial for their language learning.

Quite the opposite with studies supporting indirect feedback (e.g., Maleki & Eslami, 2013; Eslami, 2014; Ghandi & Maghsoudi, 2014; Hosseiny, 2014; Jamalinesari et al., 2015; Septiana et al., 2016; Tan & Manochphinyo, 2017; Westmacott, 2017; Karim & Nassaji, 2018; Al Harrasi, 2019; Cerezo et al., 2019; Suzuki et al., 2019) and others on direct feedback (e.g., Beuningen et.al., 2008; Bitchener & Knoch, 2010b; Han, 2012; Hashemnezhad & Mohammadnejad, 2012; Van Beuningen et.al., 2012; Stefanou & Revesz, 2015; Karim & Nassaji, 2018; Nusrat et al., 2019; Benson & DeKeyser, 2019; Supraba et al., 2021; Zhang & Cheng, 2021), some studies indicate no significant different of effects between the two WCF types (e.g., Salimi & Ahmadpour, 2015; Mitra Samiei, 2016; Wang, 2017; Banaruee et al., 2018). The differences can be attributed to various factors (e.g., learners' proficiency, linguistic structures, and provisions of feedback either focused or unfocused).

At this point, the knowledge regarding the effectiveness of direct and indirect WCF is subjected to a debate, due to the inconclusiveness of the findings. However, assuming that direct and indirect WCF practices are effective, the empirical findings discussedpreviously fail to draw a solid line to distinguish which WCF type is more effective in improving L2 learners' writing performance.

2.6.4 Uncovering the Knowledge Gaps of Past Studies on the Effects of WCF

This section summarises what has been researched so far regarding the effect of direct and indirect WCF which uncovers the grey areas that need more empirical research. Thus, the findings of past studies can suggest the knowledge gaps worth exploring in this case study.

Most of the studies mentioned above were conducted in the EFL setting (i.e., 81.25 per cent, n = 13) There are only three studies conducted in the context of ESL (e.g., Karim & Nassaji, 2018; Nusrat et al., 2019; Van Beuningen et al., 2012). This pattern indicates that WCF studies were focusing mainly on EFL, leaving the ESL setting under- investigated. According to Liu and Brown (2015), "Over half of the studies (59%) were conducted in a foreign language context, contradicting the pattern in L2 research." (p. 70). This implies that the research pattern contradicts L2 research patterns because empirical findings of L2 research must be balanced in both settings, ESL and EFL (Liu & Brown, 2015). Thus, this dearth of knowledge in the literature justifies the inclusion of ESL students in this current study.

The pattern of studies in the literature indicates that more direct-indirect WCF studies were conducted with learners of intermediate proficiency level (e.g., Cerezo et al., 2019; Ghandi & Maghsoudi, 2014; Hashemnezhad & Mohammadnejad, 2012; Karim & Nassaji, 2018; Maleki & Eslami, 2013; Nusrat et al., 2019; Tan & Manochphinyo, 2017; Septina et al., 2016; Stefanou & Revesz, 2015; Wang, 2017; Westmacott, 2017; Van Beuningen et al., 2008) with fewer studies focusing on elementary proficiency learners (e.g., Banaruee et al., 2018; Eslami, 2014; Hosseiny, 2014; Jamalinesari et al., 2015; Van Beuningen et al., 2012), whereas no study was conducted with advanced proficiencylearners. This pattern of CF studies was reiterated by Liu and Brown (2015) that these two brackets of proficiency levels

(i.e., low proficiency, and high proficiency) are under-investigated. Thus, this current study was performed with low-proficiency and high- proficiency ESL learners.

The next significant finding is regarding the targeted linguistic structure of WCF studies. The finding shows that most direct-indirect WCF studies in the review were focused on investigating the effect of WCF on the grammatical aspects, leaving non- grammatical aspects under-investigated. Specifically, verb form has become the central focus of these studies. This finding confirms the findings by Wang and Jiang (2015). Moreover, Wang and Jiang (2015) have also argued that very little attempt was made in investigating the effect of direct and indirect WCF on the non-grammatical aspects of the language, in particular English collocation. In this regard, they stated that "no study to datehas pioneered the investigation into the efficacy of WCF on L2 learners' collocation errors" (p. 117). This implies that knowledge on this subject is scarce in the body of literature, thus more empirical studies are needed. Briefly, in Wang and Jiang's (2015) study, the researchers conducted a meta-analysis study that intended to provide a critical review of the expanding number of WCF studies in the literature. Moreover, as noted by the researchers, the study was intended to inspire new directions for future studies onWCF. Therefore, this current study focused on investigating the effect of WCF on non- grammatical structure, specifically English collocation.

In highlighting the overall findings of WCF studies in the literature, indirect WCF was more effective in reducing learners' errors on various components of the language, as opposed to the direct WCF approach. Furthermore, the direct WCF approach also has a role to play in error correction. The findings show that the effects of direct and indirect WCF are inconclusive. At this point, determining the type of WCF that has the most effect on students' L2 accuracy is decisive. As Shao (2015) argued that "it is still unclear, which type of teacher

feedback results in most successful immediate learner uptake" (p. 157), more research is therefore needed. Thus, it is significant to investigate the differential effects of direct and indirect WCF on students' linguistic accuracy, to find the type of WCFthat has the most effect.

The empirical findings have highlighted one prominent feature, among others,which is regarding the targeted linguistic structures of such studies. Specifically, the effect of WCF on the non-grammatical aspect of English collocation was not investigated in any of the studies discussed previously. Considering Wang and Jiang (2015), and studies in the CF literature, knowledge about the effect of direct and indirect WCF on the collocational knowledge of L2 students is scarce. This is also discussed in the following subsection in which very few WCF studies investigated the effect on English collocation (see Table 2.2) which further implies that knowledge in this area is scarce. Therefore, the effectiveness of direct and indirect WCF on collocational competence of low-proficiency and high-proficiency ESL learners is subjected to a debate before the start of this current study. Moreover, empirical evidence regarding the effectiveness of direct and indirect WCF on L2 learners' collocational competence is imperative because, at this point, little is known about whether or not, these two WCF strategies are effective in improving students'collocational competence. Also, collocational competence is one aspect of the language that can demonstrate learners' proficiency, therefore, justifying the inclusion of the English collocation to be studied in WCF literature.

The studies discussed in the previous paragraphs do not include any CF-oriented studies conducted in Malaysia. Considering that each country has a different education system structure, some of the findings may not be able to suit the context of the Malaysian education system. In highlighting the problem statement discussed in the previous chapter,

that ESL undergraduates, in this case, study have difficulties forming accurate collocations, current literature lacks empirical findings to address the issue. The following section attempts to discuss to what extent CF-oriented studies have explored the topic of written CF in the country.

2.7 Written Feedback Studies in the Malaysian Education System

The study on WCF has garnered considerable attention from Malaysian scholars. Most of these current studies over the past five years investigated various aspects of the WCF such as the strategy of providing WCF by teachers (e.g., Mahmud, 2018; Yunus, 2020), the preferences of WCF types among ESL students, teachers and their perceptions (e.g., Abdullah & Aziz, 2019; Ganapathy et al., 2020; Rashtchi & Bakar, 2019; Saidon et al., 2018), factors contributing to CF success (Ng & Ishak, 2018), and a large share of the studies were about investigating the effects of WCF types on students linguistic accuracy (e.g., Carolyn, 2017; Gringo, 2017; Hanif, 2018; Ishak, 2017; Sharina, 2019; Sim, 2019). Table 2.2 illustrates WCF studies conducted in Malaysia through which the significant aspects are highlighted including authors, locality of the study (e.g., school or university), types of WCF provisions, and the targeted linguistic structures, aims, and main findings. The following Table 2.2 briefly illustrates the details of CF-oriented studies in Malaysia.

Table 2.2: The Summary of Written CF Oriented Studies in Malaysia

Authors/Title of study	Location	Focus	Findings
Mahmud (2018). Investigating the practice of providing written corrective feedback types by ESL teachers at the upper secondary level in high-performance schools	School	Investigating the practice of providing WCF types by ESL teachers	Direct and Metalinguistic comments were the perceived WCF types from the questionnaire findings; however, both teacher interviews and sample essay analysis indicated teachers practised Unfocused and Indirect types the most.
Yunus (2020). Written corrective feedback in English compositions: teachers' practices and students' expectations	School	Investigating teachers' practice of using WCF on English compositions and their students' expectations of types of CF	Findings revealed that both students and teachers generally believe that WCF is beneficial in improving students' writing skills. It was also discovered that students preferdirect, specific, and comprehensive feedback over indirect feedback.
Rashtchi & Bakar (2019). Written corrective feedback: what do Malaysian learners prefer and why	University	Finding preferences of types of WCF	The results showed that Malaysian learners react in favour of direct feedback to their written work, and yet they show little tolerance for simply marking the error withoutexplanation.
Sharina Azni, A. (2019). The efficacy of direct and indirect written corrective feedback in ESL learners' writing	School	Investigating the effects of WCF on overall students writing accuracy	Direct WCF outperformed indirect WCF. Several factors contributed to WCF efficacy.

Table 2.2: Continued

Abdullah & Aziz (2019). Between preaching and practising–the incongruities of teachers' written feedback beliefs and practices: a case study	School	Teachers' personal beliefs & their choice of WCF	Incongruencies between teachers' perceptions and actual practices in teaching to write and written feedback strategies adopted in classroom instruction.
Ng & Ishak (2018). Instructor's direct and indirect feedback: how do they impact learners' written performance	School	Exploring factors that contributed to the accurate use of the past tenses resulting from direct WCF and indirect WCF	Findings revealed the importance of teacher-student conferences, theneed for students to be trained over a longer period of time concerning the use of error codes, and the need for the instructor to understand and implement direct and indirect feedback.
Saidon,, Said, Soh, & Husnin (2018). ESL students' perception of teacher's written feedback practice in Malaysian classrooms	School	ESL students' perception of teacher's written feedback practice	Erratic feedback frequency across teachers and the dominance of feedback on writing content rather than form. The participants were also found to be affected adversely emotionally by CF.
Sim (2019). Indirect-focused written corrective feedback on elementary ESL learners' writing	School	The effect of indirect focused WCF on simple past tenseerrors	Effective for the high proficiencygroup but not the low proficiency group, the intended measure was effective in cultivating error identification ability, promoting critical thinking skills, regulating problem-solving skills, and improving implicit knowledge.

Table 2.2: Continued

Ishak (2017). The effects of direct and indirect written corrective feedback on ESL students' use of past tenses	School	Investigating the effect ofdirect and indirect WCF on past tense	The direct group performed slightly better than the indirect group. Both groups performed significantly better over time but no significant difference between them. Some factors influencing students'performance
Carolyn (2017). The effect of focused correctivefeedback on the use of articles in essays by ESL learners	School	Investigating the effect of focused direct WCF (directonly & direct with metalinguistic) on the use ofarticles	Direct WCF can improve students' accuracy in using the article. No difference between the saliency of the direct WCF. Students have positive perceptions towards direct WCF, but receiving DWCF with metalinguistic is preferable.
Gringo (2017). Effects of focused direct and metalinguistic corrective feedback onL2 learners' writing	University	Investigating the effects of focused direct and metalinguistics CF on basic tenses in writing	Findings show MCF is moreeffective than DCF. Quali revealsthe benefit of MCF.
Hanif (2018). The effects of corrective feedback on the written grammatical accuracy of ESL learners	University	Investigating effects of focused direct focused indirect, unfocused direct, and unfocused indirect on grammatical accuracy	Findings show short-termimprovement in FD, UFD, and FI. Also, long-term effect was observedon FD only. Direct CF has a better role in noticing as opposed toindirect CF.

Table 2.2: Continued

Ganapathy, Tan, & Phan (2020). Students' perceptions of teachers' written corrective feedback in the Malaysian ESL classroom	School	Examining students' perceptions of WCF provided in ESL writing classes	Results showed that most learners benefited from and preferred direct feedback, and tended to focus onforms such as grammar, paragraph organisation, content, and clarity of ideas. Students preferred this form of feedback as they were able to understand errors more clearly.

Table 2.2 has revealed a recurring pattern worth highlighting. First, most of the studies were conducted in a secondary school setting involving teachers and school pupils. There were only three studies conducted in a tertiary education setting (e.g., a university). Second, the linguistic structure addressed by WCF types in these studies were grammatical structures such as past tense, basic tenses, use of articles, and overall students' accuracy in writing. Third, the types of feedback investigated in these studies include direct andindirect WCF. Moreover, the provision of direct and indirect WCF was varied in terms of their saliency. For instance, direct WCF was made more explicit by includingmetalinguistic information (e.g., Carolyn, 2017; Mahmud, 2018), and its provisions were either focused (i.e., addressing up to two or three errors in a student's writing) or unfocused(i.e., addressing all errors in a student's writing) as in Hanif (2018). Fourth, it is shown in most of the studies that direct WCF has a better effect on learners' linguistic accuracy than indirect WCF and is perceived as the most preferable type of WCF (Ganapathy et al., 2020). However, the indirect WCF type had a significant effect too as it is appropriate for higher proficiency school pupils or ESL learners in general, and also in some cases showeda comparable effect with direct WCF (e.g., Ishak, 2017).

Considering all these studies, it can be proposed that the literature is lacking in informing us of the following: (1) What are the effects of WCF on non-grammatical structures such as collocation, since all of the WCF studies in the Malaysian context were focused on investigating its effect on grammatical structures? (2) Contextual-wise, to what extent does WCF affect the collocation accuracy of undergraduate students in a university, considering that most of the WCF studies in Malaysia were conducted in the school setting? With a significant lack of knowledge in the literature regarding the effects of WCF on the collocation competence of undergraduate students, the two questions remained

unanswered at the point of this discussion.

2.8 English Collocational Competence, L2 Accuracy, and Corrective Feedback

This section highlights the importance of collocational competence in L2 writing. The discussion focuses on establishing a link between the role of WCF in enhancing collocational competence that leads to L2 writing accuracy. The discussion begins with the important facets of collocations followed by the roles that collocation plays in L2 writing accuracy as well as language proficiency. Then, studies about the effect of WCF on collocation are discussed to emphasise the role of WCF in L2 learners' collocational competence. It is important to note that, the context of English collocation and L2 writing in the following discussion applies to the school and tertiary education contexts.

2.8.1 Defining English Collocation

The term collocation was originally introduced by Firth (1951) in the study of lexical semantics as "the company a word keeps", which suggests that the function and meaning of a word could be decided by a habitual occurrence of the word with other wordsin its nature at syntagmatic, as opposed to paradigmatic level. In brief, collocations are twoor more words that have a sound tendency to co-occur in a language as a prefabricated combination pattern of two or more words in a context. A more recent definition of collocation can be derived from Liontas (2019) who refers collocation to as the "conjoining or rearrangement of words that co-occur with a frequency greater than chance"(p. 64).

Scholars such as Schmitt (2000) and Hoey (2005) have categorised collocations into two constructs: grammatical collocations and lexical collocations. Grammatical collocation is explained by Benson, Benson, and Ilson (2009) as a phrase containing a dominant word such as an adjective, noun, or verb with a preposition. On the other hand, lexical collocation

is described as typical collocations comprising adjectives, nouns, verbs, and adverbs. Benson et al. (2009) provided a classification of lexical collocation illustrated in Table 2.3.

Table 2.3: Types of lexical collocations (Benson et al., 2009)

Type	**Form**	**Example**
L1	Verb + Noun	Have a conflict
L2	Adjective + Noun	Bitter enemy
L3	Noun + Verb	Alarms go off
L4	Noun of noun	Parts of our lives
L5	Adverb + Adjective	Strictly accurate
L6	Verb + Adverb	Write simply

2.8.2 Collocational Competence and L2 Accuracy

Collocational competence has been associated with various functions in L2 learning and writing. Some researchers, for instance, Najafi and Talebinezhad (2018) argued that collocation shapes the foundation for the development of creative language in L2 learners based on the growing evidence that it plays a vital role in language learning. Aitchison (2003) asserted that collocation is essential for fluency and accuracy in both spoken and written forms of L2 learning. This is based on psycholinguistic evidence that suggests the human brain is well-trained for memorising than processing activity. Therefore, language fluency is feasible because the ability to access many collocation units cognitively can lessen the L2 processing efforts. Moreover, comprehension is also supported by the use of collocation as the learners can comprehend the meaning of a sentence without having to attend to every word (Hunston & Francis, 2000). Also, collocational competence performs as an indicator of membership in a particular linguistic group in which one may fulfil "the desire to sound like others" (Wray, 2005). In other words, being able to speak and write native-like expressions is one of the goals of collocational competence for L2 learners.

Second language scholars have been emphasising the importance of collocational

competence in L2 acquisition. For instance, Liontas et al. (2019) established that developing collocational competence in L2 learners is seen as an important indicator of their overall proficiency in English. This is because the collocational competence of an L2 learner is closely associated with the four language skills (e.g., listening, speaking, writing, and reading). Moreover, Nesselhauf (2003, 2005) and Wray (2005) argued that collocation knowledge is regarded to be of main importance to fluent and idiomatic use of L2 both in oral and writing.

In the background of its importance in L2 acquisition, forming collocation seems to be difficult for L2 learners. One of the factors is associated with their learning approaches to the L2 language that they tend to learn English vocabulary as isolated words rather than in combinations (Liontas et al., 2019) which affects their collocational competence development (Li, 2017). Therefore, non-native L2 speakers and writers are known tocommit language inappropriateness in lexical collocations (Bahns & Eldaw, 1993: Hong et al., 2011; Reppen, 2010; Wang & Jiang, 2015). Although some suggestions on the teachingapproaches of collocations in L2 classrooms have been made in recent years (e.g., Liontas et al., 2019; Lewis, 2000; Nesselhauf, 2003), it is still unclear how collocation in L2 classrooms ought to be taught.

Considering that collocational competence is significant in L2 accuracy (see Aitchison, 2003; Hunston & Francis, 2000; Liontas et al., 2019; Najafi & Talebinezhad, 2018; Wray, 2002) and WCF is a common instructional approach to help L2 learners in achieving L2 accuracy (see Benson & DeKeyser, 2019; Ferris, 2010; Farrokhi & Sattarpour, 2012; Hosseiny, 2014), not much is known regarding the effect of some WCF strategies (e.g., direct WCF and indirect WCF) on collocational competence of ESL learners. In this regard, the body of literature offers a small number of studies that have investigated the

effect of WCF on L2 learners' collocational competence (e.g., Jafarpour &Sharifi, 2012; Wang & Jiang, 2015; Zarei & Mousavi, 2016). These studies have offered scarce evidence and inconsistent findings. Moreover, some areas (e.g., learners' proficiency, and language settings) which were not the focus of such studies are highlighted in the following section. Therefore, the role of direct and indirect WCF in English collocation competence is debatable at this point.

2.8.3 Several Studies Investigating the Effect of Corrective Feedback on Collocation

Studies investigating the effect of WCF on collocations have gained attention from SLA scholars (e.g., Jafarpour & Sharifi, 2012; Wang & Jiang, 2015; Zarei & Mousavi, 2016). Jafarpour and Sharifi (2012) conducted a study with 181 L2 learners in an Iranian university. The purpose of the study was to examine the effect of error correction on various categories of lexical and grammatical collocations of EFL learners at a universityin Iran. The subtypes of lexical collocations that became the focus of the study were identified as Verb + Noun, Adjectives + Noun, and Noun + Noun. An experimental study of one treatment group and a control group was performed and the data were obtained through a multiple-choice test of common collocation errors focusing on several subcategories of lexical and grammatical collocation errors. Each group consisted of three sub-groups of low, intermediate, and advanced proficiency levels. The findings informed that WCF was positive and beneficial for intermediate and advanced EFL learners but not effective for elementary learners.

Zarei and Mousavi (2016) performed a study to investigate the effects of three types of feedback on learners' recognition of lexical collocations. The study employed an experimental design approach without a control group. The control group in the study was replaced with CF from peers while the other groups received direct or indirect feedback on

their errors. All groups received the same instructions in 10 treatment sessions and every group received a different WCF. The target language of the study was lexical collocations. The findings showed that the group that received indirect feedback had the best performance followed by the group that received peer feedback. The study also found that the last group, one that received direct WCF had the lowest performance. The researchers concluded that different kinds of WCF have different kinds of effects on learners' recognition of lexical performance.

Wang and Jiang (2015) conducted a study with 73 EFL learners of intermediate proficiency in China. Two experimental groups and one control group were formed to be tested with pre-test, post-test, and delayed post-test instruments. The first experimental group received direct WCF, and another one was provided with context-situated CF whereas the control group was deprived of any intervention method. The efficacy of thetwo types of feedback in the study was measured by examining the accuracy of target collocation in multiple-choice and translation tests. Furthermore, the target lexical structures of the study were "adjective + noun" and "verb + noun" collocations. The findings reveal that both experimental groups outperformed the control group in the immediate post-test and delayed post-test. Also, the group that received context-situatedCF showed significant advantages in comparison to the group that received direct CF. The study has suggested that providing EFL learners with WCF was helpful for collocation learning which also suggested that situational context, given in the form of context-situatedCF, could promote the facilitative role of WCF in L2 acquisition. The summary of CF studies on English collocation is summarised in Table 2.4:

Table 2.4: The summary of WCF studies on English collocation

Study	Students' proficiency	WCF types	Collocation types	Testing procedure	Major findings
Jafarpour & Sharifi (2012)	Beginner Intermediate Advanced (EFL)	Unspecified but mentioned as "error correction feedback"	Verb + Noun Adjectives + Noun Noun + Noun	Multiple choice collocation tests were used as pre-test andpost-test	1. Error correction feedback is positive and beneficial at the advanced and intermediate levels, but not at the beginner level. 2. Error correction feedback is better for grammatical collocation than lexical collocation.
Zarei & Mousavi (2016)	Pre-intermediate (EFL)	Direct WCF, Indirect WCF, & Peer feedback	Lexical collocation	Pre-test and post-test (30 multiple-choice items)	1. Indirect WCF group had the best performance followed by the peer-feedback group. 2. Direct WCF group had the lowest performance.
Wang & Jiang (2015)	Intermediate (EFL)	Direct WCF, context-situated CF, Control group	adjective + noun & verb + noun	pre-test, posttest, and delayed post-test (Multiple choice and translation test)	1. Experimental groups outperformed the control group in the immediate post-test and delayed post-test. 2. Context-situated CF group showed significant advantages in comparison to the group that received direct CF

The studies illustrated in Table 2.4 are some of the studies that investigated the effect of written CF on L2 learners' collocational competence. Another study by Nagano and Kitao (2008) was not listed in Table 2.4 because it focuses on the effect of computer- mediated CF on learners' collocation accuracy, thus the exclusion. The body of literature isstill lacking empirical studies that can offer empirical evidence that support the role of direct and indirect WCF on L2 learners' collocational competence. As Wang and Jiang (2015) reported in their findings, "no study to date has pioneered the investigation into the efficacy of WCF on L2 learners' collocation errors." (p. 117). This implies that knowledge on this subject is scarce in the body of literature, thus more empirical studies are needed. Moreover, as discussed in section 2.7, there are no studies investigating the effect of direct and indirect WCF on the collocation competence of ESL learners in Malaysia, particularly among university undergraduates. In addition, previous sections have also discussed the findings of past studies regarding the effects of WCF which further highlight the knowledge gaps in the literature. To highlight the issue with the collocation competence of the students in the case study, they were assessed with a significant lack of collocation knowledge. However, to address the issue, the literature is not able to provide practical solutions, thus, justifying the need for this study.

2.9 Chapter Summary

This chapter has presented the relevant literature related to the case study. From a broader perspective, it begins with a section on the brief view of the teaching of L2 in the Malaysian Education context which is followed by the role of CF in SLA. Moving on to specific discussions, a section on theoretical debates was presented followed by a section on the theoretical framework of this current study.

Then, the next discussions are more focused on the following sections such as the typology of WCF, and findings from past studies investigating the effects of WCF. The last section of the chapter presents the position of English collocation on L2 accuracy and the findings of past WCF studies on collocation. It concludes by highlighting the needs for this current case study. The following Chapter Three presents the methodology employed in this case study.

CHAPTER 3

METHODOLOGY

This chapter presents the methodology employed in this current study. It begins with the description of the research design then followed by the population and samples of the study. The samples of the study are further described in the section on "the four cases" which represent the units of analysis in this study. Next, the position of the researcher as a teacher-researcher in this study is explained. The following section then presents the data sources which include a series of tests, an open-ended questionnaire, field notes, course information from past semester English courses, and a pilot study. The explanation of how the data were collected comes next. The analysis procedures for analysing the data were then presented in the subsequent section. Before the end of the chapter, the ethical consideration and trustworthiness of the study are presented which is then followed by a section on study limitations.

3.1 Research Design

This study employed an embedded case study design that utilised quantitative research methods supported by elements of qualitative techniques (Scholz & Tietje, 2002; Yin, 2003) to develop an understanding of the role of WCF in facilitating collocation competence of ESL undergraduate students in a public university in Sarawak. All elements considered, the basis for selecting an embedded case study design rests on the following reasons:

i. Most written feedback studies discussed in the previous chapter were conducted with either quantitative, qualitative, or mixed-method designs. Thus, using a case study

design for investigating the issue is worth exploring considering the methodological aspects of the findings which also corresponds to the purposive sampling instead of the randomisation method

ii. At the outset, the participants involved in this study had a significant lack of collocation competence thus an empirical inquiry such as a case study that investigates the issue in its authentic or real-life setting is deemed appropriate (i.e., more contextualised).

iii. Guided by Ferris's (2011) suggestion for more CF studies that are contextualised and the phenomenon is best studied in its real-life context (Grauer, 2012).

iv. To allow replication across cases for strengthening the findings (which is impossible to do with a holistic single case study design) – an embedded case study design is opted.

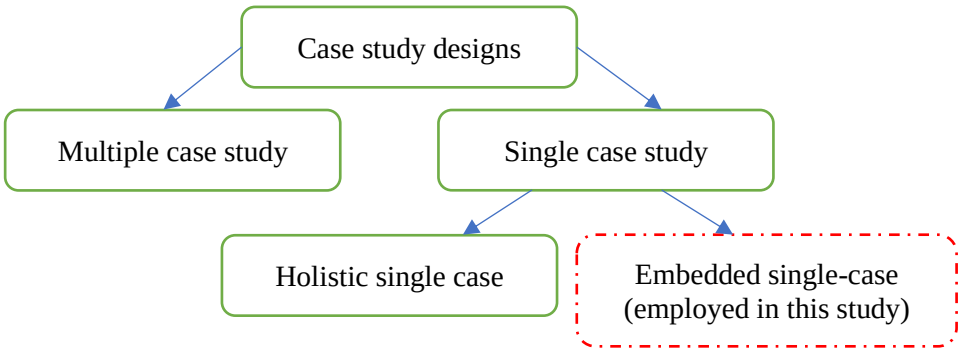


Figure 3.1: Several types of case study designs (Yin, 2003, 2018)

The embedded case study design, as seen in Figure 3.1, was selected because it suits the social constructivist framework most appropriate for addressing the research questions. Moreover, this design was selected because it allows the researcher to beinvolved in the research setting according to Yin (2018) and Grauer (2012), a case study offers an

empirical inquiry that investigates a contemporary phenomenon in its authentic or real-life setting. In addition, this design is embedded in social constructivist ideas such as inductive reasoning, searching for meaning, the researcher as the key instrument, and an in-depth description of a phenomenon in its natural environment (Merriam, 2009; Yin, 2003; 2018). Therefore, the researcher is expected to explore, understand, and present the participants' views by getting close to them in their actual setting (Creswell, 2014; Grauer, 2012). Furthermore, selecting a case study design allows the researcher to have a rich or "thick description" of a situation or an event by drawing on qualitative and often quantitative sources of evidence collected over time (Harrison et al., 2017; Merriam, 2009; Yin, 2003, 2018).

Yin (2009) states that a case study can be based on any mix of quantitative and qualitative evidence which paved the way for selecting the design as the study was based on two sources of data, namely, qualitative, and quantitative. Note that, a mixed method design is also comprised of quantitative and qualitative evidence. However, it does not allow a "replication design" – a trait used in a case study to strengthen its findings (Yin, 2018). Moreover, the participants in this case study were not pooled from the case (i.e., the university) but were selected purposely as the units (groups) in the case.

In addition, referring to Figure 3.1, a multiple case-study design was not preferred because the locality of the study involved only one university as stated in the statement of the research problem. Also, a holistic single-case study was not encouraged for this study because this design is bound by a comprehensive qualitative approach that commits to narrative and descriptive phenomena, neglecting theoretical replication across cases (Yin, 2003, 2008). Moreover, the present study selected an embedded case study design because four groups of undergraduate students were studied within a larger context of a

selected public university in Malaysia. The four groups of students are considered the unit of analysis as reflected in Figure 3.2:

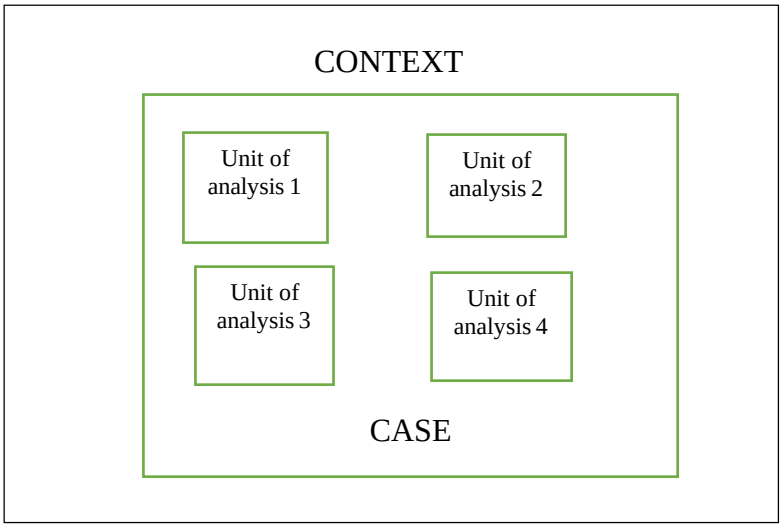


Figure 3.2: An illustration of an embedded case study

To explain the illustration, the context refers to the study itself that investigates the role of written CF in facilitating the collocational competence of undergraduate ESL students. Focusing on the inner square, the case refers to the university where the study was conducted. The four squares inside the case represent the groups of students purposely selected for the study and they are the main units of analysis. A benefit of the embedded case study design is that this type of research is often considered more compelling than single-case studies and is "more likely to lend itself to valid generalisation" (Fraenkel etal., 2012, p. 431). Furthermore, this design allows for theoretical replication across the groups which amplifies the validity of its findings. Therefore, by having more than one sampling group, the researcher hopes that the results will be more generalisable than a single case study. To demonstrate how the concepts portray the current study, the followingconceptual framework describes about the relationship of the elements in the study.

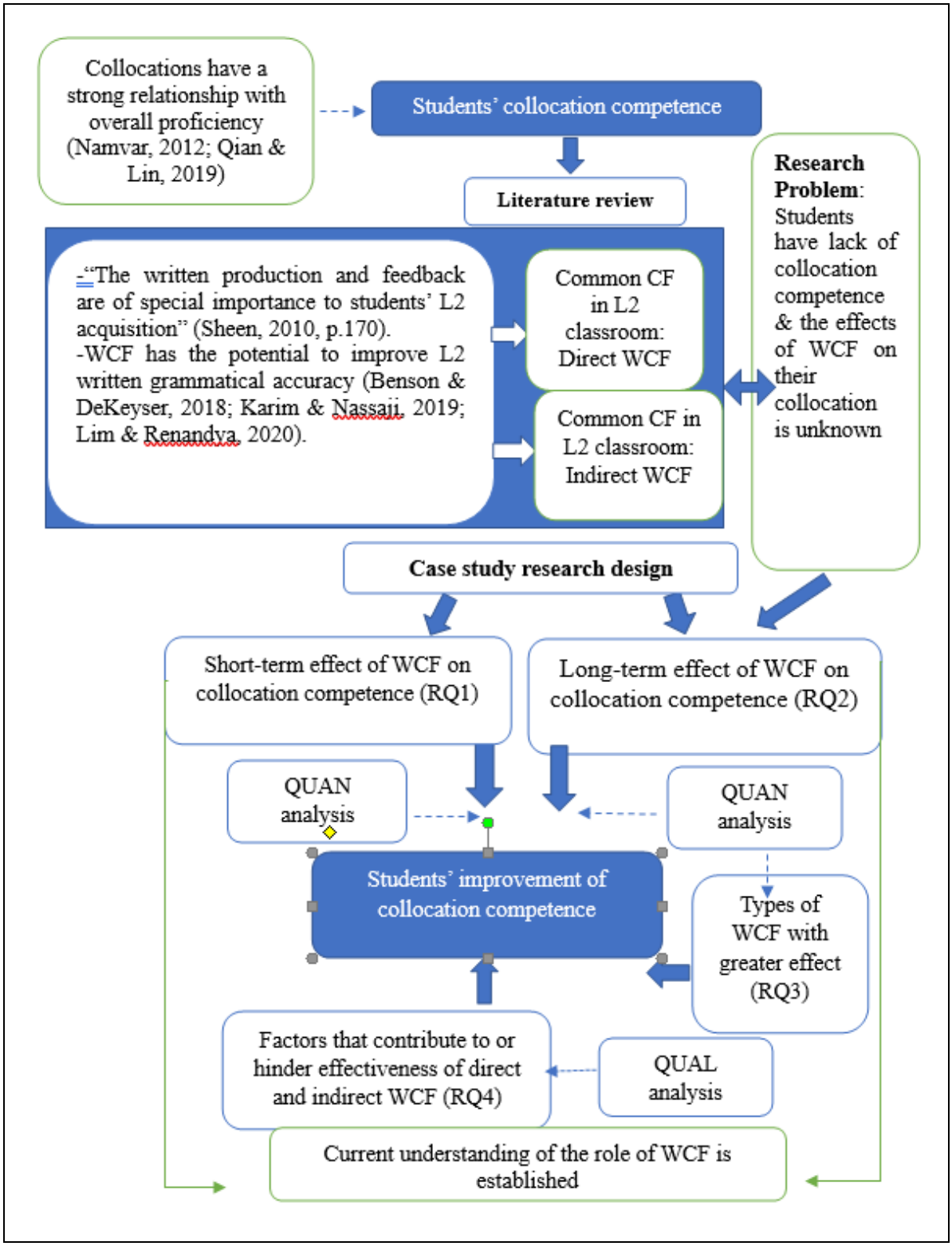


Figure 3.3: The conceptual framework of the current study

The term conceptual framework is derived from Osanloo and Grant (2016) which reflects the researcher's understanding of how the research problem will best be explored, the specific direction it will take, and the relationship between variables in the study. Moreover, Carroll and Swatman (2000) stated that the concept represents the researcher's understanding, aims, and the research cycle that guides data collection, analysis, and interpretation.

Figure 3.3 illustrates the conceptual framework of the current study which is based on the concept proposed by Sheen (2010) that CF has special importance on L2 acquisition because it promotes learning through noticing the gap. This is also supported by the literature that WCF has the potential to improve L2 students' proficiency (Benson & DeKeyser, 2018; Lim & Renandya, 2020: Karim & Nassaji, 2019). There are two commontypes of CF used by L2 educators, namely, direct CF and indirect CF.

Referring to Figure 3.3, the framework illustrates the flow of the study begins at the top with an issue of the students having a lack of collocation competence and the significance of collocation in L2 proficiency. Moving down the framework (see the blue downward arrows), it shows how WCF can affect the students' short-term and long-term collocation competence. At the outset, most of the students were identified as having a significant lack of collocation competence. The students' collocation competence at the start of the study is the main variable to be investigated in this study. Considering the issue (i.e., lack of collocation competence), the literature is not able to provide a concrete answeron whether or not WCF can facilitate the students' collocation competence even though theliterature has generally shown that WCF has a significant positive effect on ESL learners' proficiency.

Therefore, to investigate the issue in its actual context, a case study design is the most fitted design as suggested by Yin (2018) and Merriam (2009). Moreover, the most common types of WCF were identified to be included in this study, namely, direct and indirect WCF which have shown significant positive effects on L2 students' proficiency in the literature.

Following most WCF studies in the literature, the effects of WCF types were investigated in the short-term (uptake) and long-term (retention). The investigations of these two effects are reflected in RQ1 and RQ2 in the framework. In light of the literature that different linguistic error requires a different type of WCF to have a significant effect, the next research question concerns identifying the type of WCF that has a greater effecton the students' collocation competence, reflected in research question three. These three RQs involved quantitative data analysis (see dashed arrows in Figure 3.3). As the primary aim of a case study is to have a "thick description" of a case, RQ4 explores the factors that may enhance or hinder students from benefiting from direct and indirect WCF. This RQ involved a qualitative data analysis (see dotted arrows in Figure 3.3). To this end, the current study aims to develop an understanding of the role of WCF in facilitating students' collocation errors through a case study approach, considering that the students have a lack of collocation competence, to which the effects of WCF on their collocation is unknown before this study. This aim is achievable through the findings of four RQs in this current study (see the green arrows pointing towards the aim of the current study).

3.2 The Case

This section provides the site description of the locality of the case (i.e., the university, the English course structure in the university, the issue faced by the case, and the units of analysis).

This current study was conducted with 120 diploma students at one of the public universities in Kuching, Sarawak. The university, Universiti Teknologi MARA (UiTM) is the largest in Malaysia with branches all over the country. The university has campuses all over the country including Sarawak, where there are three campuses located in the state (i.e., Samarahan, Samarahan 2, and Mukah). The Samarahan and Samarahan 2 campuses are located in Kota Samarahan, a developing area, better known as the "knowledge hub" due to many public learning institutions in the vicinity. UiTM Samarahan was the first campus established in the state back in 1973. Over the years, as the number of students expanded and more courses were offered by the university to meet the State Government's demand, two more campuses were built (i.e., UiTM Samarahan 2 and UiTM Mukah). Bothcampuses in Kota Samarahan offer undergraduate and postgraduate programs from variousscience stream and art stream faculties. Whereas the UiTM Mukah campus offers pre- diploma and diploma programs mostly from the business faculty and the plantation faculty.The two campuses (i.e., UiTM Samarahan and UiTM Samarahan 2) were selected as the site of the current study. Reasoning, the researcher is a faculty member on both campuses which allowed him unrestricted access to all participants in the study. Moreover, the UiTMMukah campus was not selected because of the distance of the campus which is situated in another division of the state (i.e., 500 KM away from Kota Samarahan).

All diploma students in the UiTM system are required to enrol in three English courses throughout their studies. In the first semester, the students register for Integrated Language Skills 1: Listening course (ELC121). This course is designed to build the listening, speaking, and reading skills to help students perform effectively and competentlyin social and academic contexts. This is done through the integration of language skills with an emphasis on listening.

It aims to raise students' proficiency to the intermediate level. This course focuses on enhancing the student's abilities to use the language by exploiting a variety of materials in varied situations. Appropriate consideration is given to the development of higher-level grammatical construction, vocabulary expansion, andextensive reading activities which are intended to increase students' lexical density.

In the second semester, the students enrolled in the Integrated Language Skills 2: Reading course (ELC151). This course is designed to help students become confident and independent readers. Specifically, students are exposed to intensive reading skills which include skimming and scanning, recognising structures and mechanics used in texts, and summarising and evaluating texts. By exposing them to a variety of reading materials and short stories, extensive reading strategies are introduced to create enjoyable reading experiences outside the classroom and to enrich and strengthen their knowledge of words. In addition, speaking and listening skills are integrated into the course to help students perform effectively and competently in social and academic interactions. This course aims to raise their proficiency to a high intermediate level by exploiting a variety of materials in varied situations. The document about course information is seen in Appendix 1.

The issue that has been observed by the researcher is that most diploma students in the university had problems forming accurate collocations. To verify this claim, the identified low-proficiency ESL students were assessed with a significant lack of collocation accuracy in Test 1 (i.e., 70% scored less than half of overall marks). Inaddition, despite their profile as high-proficiency ESL students, more than half of the students from this group scored less than half of the overall marks in Test 1. This justifies the situation that the selected ESL undergraduates have a significant lack of collocation knowledge.

However, there is a lack of literature support to inform the pedagogical practice of L2 educators in the university regarding whether written CF can facilitate the students' collocation accuracy. Thus, this case study paves the way to solve the issue.

The primary units of analysis in this study are four intact groups of ESL students in UiTM Sarawak who were in their third academic semester. These groups are the subunits of the case in this study. The construct of the unit of analysis was based on Trochim (2001) who referred to it as the major entity (i.e., individuals or groups) that a study investigates. Specifically, the units of analysis in this study were identified as the groups since the data to be analysed are the average scores of each group in the tests (Test 1, Test 2, and Test 3). Moreover, Crowe et al. (2011) asserted that in embedded case studies, several groups are carefully selected. This offers the privilege of allowing comparisons to be made across the case. The following section describes the details of the students' backgrounds and the selection process for identifying the four groups for this embedded case study.

3.3 The Units of Analysis: The Four Groups of Students

Note that, the terms groups and units of analysis are used interchangeably throughout this section. The study involved 120 students who were in their third semester and enrolled in ELC231. These groups were identified at the start of the academic semester, thus the four cases. These students belong to the age bracket of 19–21 years old. The data collection was scheduled for the academic semester of September 2019 to February 2020. The university was selected for the study due to the ease of access to participants identified for the study. Most importantly, the researcher himself is one of the faculty members of the university. Therefore, it was trouble-free to conduct this research, particularly involving students in the university.

According to the purpose and objectives of this study, purposive sampling was used as the method for identifying the participants. Also, this study was not aimed to make generalisations or test some hypotheses, thus, purposive sampling is most appropriate. Creswell (2014) asserted that researchers who employ the purposive sampling technique intentionally select individuals and sites to learn and understand the central phenomenon.

Considering the purpose of the study, four intact groups were identified at the start of the study. Specifically, two groups were labelled as low-proficiency ESL, whereas the other two groups were identified as high-proficiency ESL learners. The basis of selecting two proficiency levels was based on Liu and Brown (2015) and the current pattern of WCF studies in the literature. It was not possible to randomly form the groups for this current study due to several restrictions by the university in conducting research involving students. Therefore, the only option was to choose from already-formed groups of students at the beginning of the semester.

The groups of students were selected from semester three of their study whoenrolled in ELC231, a course registered as Integrated Language Skills for Writing. However, before selecting the groups, several procedures for identifying prospective groups were performed.

First, to get a general view of the student's performance in their third semester, several senior lecturers from the language faculty (e.g., Academy of Language Studies, UiTM) were consulted. These senior lecturers have taught the three English courses (i.e., ELC121, ELC151, ELC231) for many years at the university. All of them agreed that low-proficiency groups posit below-average performance in ELC151 with most of them, obtaining a C grade for the course. This course is a prerequisite course (enrolled in the

second semester) before the students enrol in ELC231 in the third semester. Furthermore, the high-proficiency groups posit advanced performance in ELC151, with most of them, achieving an A grade for the course. From the discussion with the senior language faculty members, two faculties were identified as having the most low-proficiency ESL students. Then, the other two faculties were identified as having the most high-proficiency ESL students.

Second, with a brief view of low and high-proficiency groups of ESL students, the selection of faculties that met the study's requirements began. The groups belonging to each level of proficiency (i.e., low-proficiency, high-proficiency) were selected based on overall performance in their previous semester's English course results (e.g., ELC 151). An effort was made to access the students' ELC151 overall results in the systems. As discussed with the senior lecturers, there were four prospective faculties deemed suitable for the context of this current study. However, after a thorough process of comparing students' results of ELC151 was made, in which, the final four groups of students were identified which belong to only two faculties (see Table 3.3). These two faculties are identified as the Faculty of Information Management (identified as low-proficiency groups) and the Faculty of Applied Sciences (identified as high-proficiency groups). Furthermore, the criteria used to determine the proficiency levels of the students were as agreed in the discussion with the senior language faculty members, in which, low-proficiency groups gained a C grade the most, whereas high-proficiency groups obtained an A grade the most.

To prove that the performance of low-proficiency and high-proficiency groups in this study is different from one another, a statistical analysis was performed. The student's overall performance scores in the second-semester English course (e.g., ELC151) were

obtained from the system. Independent samples t-test was performed in SPSS to detect a difference in mean scores between low-proficiency and high-proficiency students. Table 3.2 shows a significant difference was detected between the mean scores of the two groups with a *p*-value less than .05 ($p < .05$). Moreover, the high-proficiency groups exhibited a higher mean score value of 70.7651 than that of the low-proficiency groups, 57.7500, a mean difference of 13.01506.

Table 3.1: Descriptive statistics of all groups' performance in ELC151

	Proficiency	N	Mean	Std. Deviation	Std. Error Mean
Students' performance in ELC151	Low (Group 1 & 2)	62	57.7500	5.49132	.56639
	High (Group 3 & 4)	58	70.7651	7.08758	.77796

Table 3.2: Mean score difference of performance of all groups in ELC151

		Levene's Test for Equality of Variances					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Test Scores of ELC151	Equal variances assumed	7.762	.006	-13.738	121	.000	-13.01506
	Equal variances not assumed			-13.525	160.295	.000	-13.01506

These three actions of consulting experienced faculty members, referring to previous English course results, and statistically proving students' overall performance in the second-semester English course were important to select and verify the suitable faculties that represent the domain of students' proficiency levels for this current study.

In this regard, the groups that best represent the proficiency levels for this current study arepresented in Table 3.3:

Table 3.3: Group labels and descriptions

Faculty	**Program**	**Proficiency**	**WCF type Given**	**Case label**	**N**
Information Management	Diploma in Information Management	Low-proficiency ESL	Direct WCF	Group 1	30
			Indirect WCF	Group 2	32
Applied Sciences	Diploma in Science	High-proficiency ESL	Direct WCF	Group 3	33
			Indirect WCF	Group 4	25

It should be noted that the overall performance of the students in the previous semester's English test does not justify that they have problems with their collocation competence (in the case of this study), even though the literature suggests a significant association between the two. Thus, a further test to justify that the students have collocation problems is needed, in which the results of Test 1 were used to justify that the students indeed have collocation problems at the start of the study.

Tables 3.4 and 3.5 illustrate the students' collocational competence in Test 1. Their performance was compared using the Independent Samples T-Test in SPSS, in which the significant *p*-value was less than 0.05. This indicates that the collocation performance between the two groups is distant from one another. Tables 3.4 and 3.5 illustrate the students' performance in Test 1 test at the start of the study.

Table 3.4: Collocational competence of high-proficiency students (Groups 3 & 4) in Test 1

Test 1 scores	N	%
12.00	3	5.2%
13.00	2	3.4%
14.00	4	6.9%
15.00	2	3.4%
16.00	2	3.4%
17.00	7	12.1%
18.00	3	5.2%
19.00	3	5.2%
20.00	4	6.9%
21.00	5	8.6%
22.00	3	5.2%
23.00	3	5.2%
24.00	3	5.2%
25.00	1	1.7%
26.00	4	6.9%
27.00	2	3.4%
28.00	3	5.2%
29.00	1	1.7%
30.00	3	5.2%

51.7% high-proficiency students scored less or equal to 20 marks

It is prevalent in Table 3.4 that more than half of high-proficiency students scored at least 20 marks or below (51.7%). This indicates that the students had some level of difficulty in producing correct collocation as it was measured in the test.

Table 3.5: Collocational competence of low-proficiency students (Group 1 & 2) inTest 1

Test 1 scores	N	%
7.00	1	1.6%
8.00	2	3.2%
10.00	3	4.8%
11.00	2	3.2%
12.00	7	11.3%
13.00	3	4.8%
14.00	2	3.2%
15.00	8	12.9%
16.00	1	1.6%
17.00	4	6.5%
18.00	5	8.1%
19.00	4	6.5%
20.00	2	3.2%
21.00	10	16.1%
25.00	4	6.5%
26.00	2	3.2%
27.00	1	1.6%
30.00	1	1.6%

70.9% low-proficiency students scored less or equal to 20 marks

The issue with forming correct collocation is more obvious with the students from the low-proficiency ESL group in which 70.9% of them scored at least 20 marks or less. This data justify that the students selected for this study lack collocation competence thus meeting the purpose of this current study.

3.3.1 Group 1: The low-proficiency Group Receiving Direct WCF

Group one consisted of thirty low-proficiency ESL students from the faculty of Information Management who enrolled in a diploma in Information Management. This group of students was considered low-proficiency ESL students based on the following criteria: (1) their performance in the previous English courses' examinations indicates that most students obtained a C grade; (2) as shown in the Test 1 results, a high percentage of students from this group have problems forming correct collocations in the test. This group

was exposed to direct WCF to determine its effect on their collocation competence.

3.3.2 Group 2: The low-proficiency Group Receiving Indirect WCF

Group two comprised thirty-two low-proficiency ESL students from the faculty of Information Management. This group is equal to case two in terms of (1) most of them obtained a grade C in the previous semester's English tests; (2) they had an issue with collocation competence seen in Test 1. This group was exposed to indirect WCF todetermine its effect on their collocation competence.

3.3.3 Group 3: The High-proficiency Group Receiving Direct WCF

Group three constituted thirty-three high-proficiency students from the faculty of Applied Sciences. These are the students who enrol in the Diploma of Science. They are labelled as a high-proficiency group based on the following criteria: (1) most of thestudents obtained A grades in the previous semester's English courses; (2) slightly more than half of the students in high-proficiency groups have collocation issues. This groupwas exposed to direct WCF to determine its effect on their collocation competence.

3.3.4 Group 4: The high-proficiency Group Receiving Indirect WCF

Group four comprised twenty-five high-proficiency students from the faculty of Applied Sciences. This group is equal to case three in terms of (1) their performance in the previous semester's English courses; and (2) to some extent, the students from this group have problems forming correct collocation. The students received indirect WCF to determine its effect on their collocation competence.

3.4 Researcher Positionality as Teacher-researcher in the Case Study

Researcher positionality is defined as "the positioning or stance of the researcher

concerning the social and political context of the study – the community, the organisation, or the participant group" (Rowe, 2014, p.627). The researcher took the role of the teacher-researcher within the context of the case study beginning from the proposal development stage until the data collection stage. Then, the researcher was off for a study leave which allowed for a full-time researcher role for completing the study.

By taking the role of the teacher-researcher in the study, it is hoped to minimise the effects of confounding factors (e.g., different teachers following different instructional approaches) and ensure the consistency of WCF received by the students in the study. The role of the teacher-researcher was also indicated in several WCF studies (e.g., AlHarasi, 2019; Mubarak, 2013; Min, 2018). In a broader research area particularly in education-oriented research, the role of a teacher as the researcher is highlighted in such studies (e.g., Tabach, 2011; Turpin, 2019; Ramirez & Vacacela, 2020). Moreover, the role of the researcher as the teacher was also identified in several education-oriented case studies (e.g., Jocius, 2015; Naghdipour, 2017; Wilcox, 2015).

Furthermore, this role allows the researcher to ready and easily access information, an explosion of available classroom-related data, and a realisation by the teacher that engagement with research activity leads to improved practice whilst enhancing student learning outcomes (Lynch & Sell, 2014; Madden, 2012). To avoid conflict between the roles of a teacher and a researcher, the researcher constantly reminded himself of the following distinctions mentioned by Tabach (2011):

i, in the classroom, the teacher must act as a teacher to meet the student's needs for knowledge, keeping the researcher's voice silent

ii, in analysis, the main perspective should belong to the researcher by employing rigorous empirical standards

iii, activities like planning learning sequences or data analysis must be temporarily separated from the teaching itself

Moreover, to address the quality concern of practice-oriented educational research involving the role of a teacher as the researcher, the researcher constantly reminded himself of his role as the teacher-researcher throughout the entire study by referring to Groothuijsen et al. (2020). The observed quality concerns in the study included truth value (results are accurate and correspond with empirical reality), applicability (results are feasible and relevant to the study context), consistency (clarity of methods), neutrality (results are not biased), and cumulatively (results contribute to scientific or practicalknowledge).

The researcher's personal experience qualified him to pursue this specific line of research. Considering his teaching experience at the university, he has been a faculty member since 2015 and taught various English language courses at diploma and degree levels at the university. This has exposed him to students who hail from three different proficiency groups of English learners at diploma level (e.g., beginner, intermediate, advanced). Therefore, the researcher specifically has a background knowledge of theproficiency levels of groups of students in the university. This knowledge is beneficial for identifying the units of analysis (groups) that meet the purpose of this study, albeit the recommendation by other senior members of the faculty was needed for that cause. Furthermore, the researcher has written and co-authored several research articles before thestudy. This empirical knowledge is useful for proposing, designing, implementing, writing,and completing this current study.

3.5 Data Sources and Instruments

The researcher used four data sources throughout the study: (1) Test 1, Test 2, and Test 3; (2) an open-ended questionnaire; (3) field notes; and (4) course information on past semester English courses. The data sources are illustrated in Figure 3.4. The first data source

(i.e., Tests 1, 2, and 3) was used to answer RQ1, RQ2, and RQ3. The rest of the datasources, on the other hand, were used to answer RQ4. The following sections describe the development of every data source.

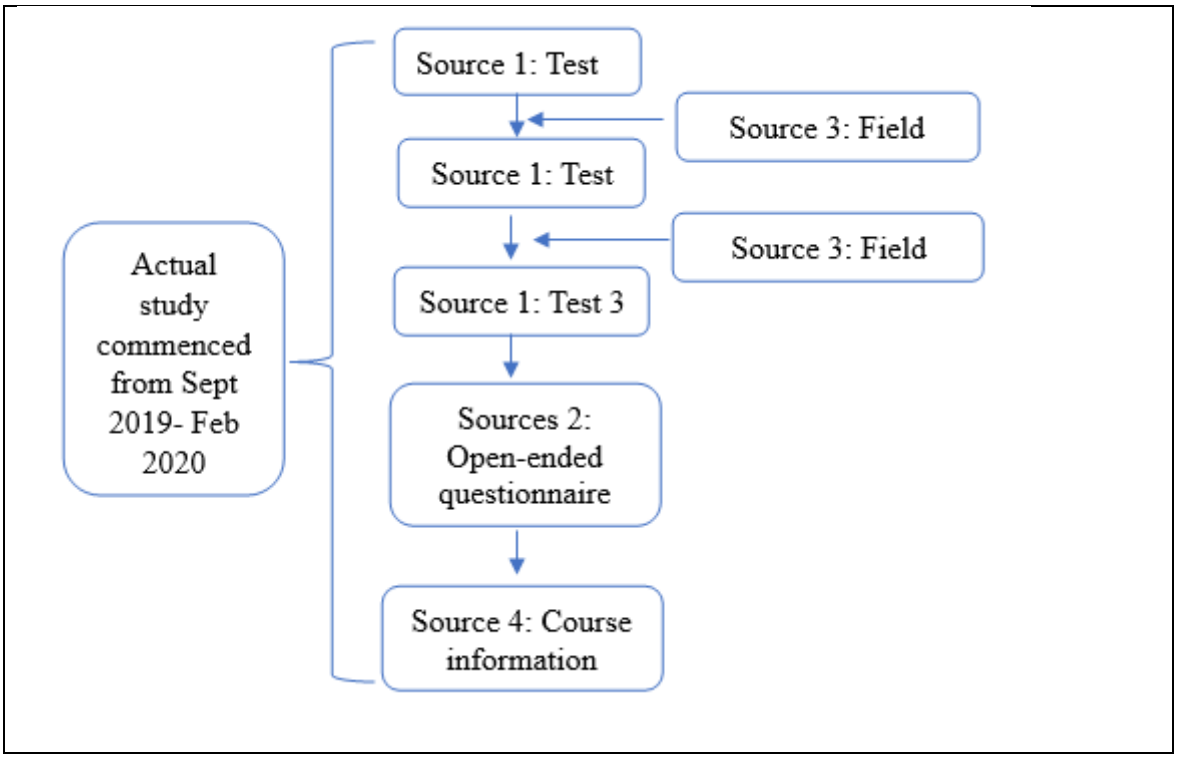


Figure 3.4: The sequence of data sources

3.5.1 The Collocation Tests

The first, second, and third research questions in this study were quantitative which required an element of a testing instrument. A COLMATCH test, developed by Gyllstad (2007) was adopted from the literature to be used as Test 1, Test 2, and Test 3.

Specifically,Test 1 was used as the baseline data of students' collocation competence, Test 2 was used to measure the short-term (revision) effect of WCF on their collocation competence, and finally, Test 3 was used to determine the long-term (retention) effect of WCF. It is worth noting that Test 1 and Test 2 are identical whereas Test 3 is slightly different in terms of thearrangement of the items, as a means to counter the effect of doing similar

tests repeatedly.

A reliable and valid testing instrument to measure the receptive knowledge of collocation is scarce in the literature. Nevertheless, several testing instruments that meet the reliability and validity constructs of measuring ESL learners' collocational competence are the Collocation Matching test (hereinafter referred to as COLLMATCH) and Collocating Lexis test (hereinafter referred to as COLLEX) designed by Gyllstad (2007). The design process of the tests followed a series of rigorous test development procedures which included selecting the collocation items from the British National Corpus andVocabulary Levels Test (Nation, 2001), defining the construct theoretically, and administering the test to a battery of 300 Swedish ESL learners (See Gyllstad, 2007, 2009 for a detailed description of the procedures and results). In his work, the development of COLLMATCH came about through a series of COLLEX test developments. Specifically, the first two versions of COLLEX (e.g., COLLEX 1 & 2) were developed and tested, before the final two versions (e.g., COLLEX 3 & 4) were considered as the refined versions of the previous ones. Finally, the COLLMATCH was then developed to address issues emerging in previous test versions which were also pre-tested together with COLLEX 4. This study adopted the COLLMATCH over other tests due to the following reasons: (1) it is the refined version of other collocation tests such as COLLEX; (2) it addresses flaws in the other types of tests; (3) it limits the respondents' consumption of time when attempting the test; (4) other tests were prone for guessing by the test takers whereas COLLMATCH can eliminate this issue.

In the COLLMATCH test, the test takers were presented with several grids, each consisting of a 3 X 6 field design (see Figure 3.5). The grids contain 3 verbs (left rows of the grids) and 6 noun phrases (on top of the grids). The test taker was asked to identify which of the 6 nouns may collocate with the verbs. The number of possible combinations was not

known to the test taker, at this stage. Moreover, the same verb may be combined with more than one noun. Therefore, according to Gyllstad (2007), the test taker cannot arrive at the correct answer by the process of elimination. The instruction required the test taker to mark (e.g., by indicating with X) in the intersecting box of those words that they think may form correct collocations.

	Suicide	*A problem*	*Damage*	*A murder*	*Someone a favour*	*Justice*
Solve		*X*				
Commit	*X*					
Do			*X*		*X*	*X*

Figure 3.5: An excerpt from the COLLMATCH test by Gyllstad (2007)

	a leg	a promise	one's breath	a position	a secret
A) Break *(2)*	*X*	*X*			
B) Hold *(2)*			*X*	*X*	

Figure 3.6: An excerpt from Test 1 (note differences compared with Gyllstad, 2007)

After a series of testing routines employed with Swedish ESL learners of intermediate proficiency both at schools and university levels, Gyllstad (2007) deduced a list of collocation items that can be integrated into COLLMATCH and used as an instrument to test collocational knowledge of Swedish advanced ESL learners. This list of collocation items was referred to as the source for collocation items to be used in Test 1,Test 2, and Test 3 of this current study (see Table 3.6 for an excerpt of the list).

Item No.	Item	Item Facility	Corrected Item-total Correlation
134	Tough drugs	1.00	0.00
7	Lose charges	.99	.07
9	Lose weight	.98	.04
127	Hard meat	.88	.25
126	Light skin	.58	.06

Table 3.6: An excerpt of collocation items for COLLMATCH taken from Gyllstad's (2007)

Before having the testing instrument in this study, the researcher had to modify the test as developed by Gyllstad (2007), that is COLLMATCH, to meet the context of this study explained in section 3.6.2. In brief, the modification includes: (1) reducing the grids from 3X6 (see Figure 3.4) to 2X5 only (see Figure 3.6); (2) providing numbers for possible collocation combinations on each grid (Gyllstad does not include this feature in his COLLMATCH test). These slight modifications came about after the phase of reconstructing the test which is described in section 3.5.2.

Moreover, the students also provided several suggestions for the improvement of the COLLMATCH test. It included having 2 X 6 grids (as opposed to 3 X 6 grids in Gyllstad's) as shown in Figure 3.5, indicating specifically how many possible combinations for each item, and integrating sentence constructions based on respective collocation types.

It was also discovered from the marking phase that having three possiblecollocations in one item (as in the case of the verb *do* in Figure 3.5) produced a 0.1 score discrepancy. Therefore, Test 1 for this current study should have a maximum of only two possible collocations in one grid. This enables the mark for such item to be divided by onlytwo, instead of three – thus eliminating the 0.1 score discrepancy.

Based on the findings in the phase of reconstructing the test, all recommendations by the participants were accepted and used to modify the COLLMATCH test by Gyllstad (2007). A revised version of the COLLMATCH test is now called Test 1 (see Appendix 2 for sample) which was used as the baseline data of students' collocation competence. It had two sections; section A consisting of Noun-Verb collocations and section B of Verb-Adverb collocations. Each test consisted of forty collocation items. The total score for the test was forty, and each correct item was awarded 1 mark. The same structure of the test was used to measure the short-term effect of WCF, in which the test was renamed Test 2 (see Appendix 3). To eliminate testing effects and practice effects, some modifications were made to Test 3 by rearranging the items in the test. Following the modification, the test wasrenamed Test 3 (see Appendix 4) which was used to determine the long-term effect of WCF.

3.5.2 Constructing Test 1 from COLLMATCH

This section describes the phase of constructing Test 1 from COLLMATCH. The tests used in this study were adopted from Gyllstad's (2007) COLLMATCH test which was modified to meet the context (e.g., students' proficiency levels) of this current study.

In the list of collocation items prepared by Gyllstad (2007), there are one hundred forty-three collocation items. All items are not necessary to be included in a test but a fraction of them can be used depending on the contexts of the test takers. In selecting the collocation items for this current study, the item facility index (hereinafter referred to as IF) of each item was referred to. In Item Response Theory as explained by Carlson andVon Davier (2017), the facility index (or difficulty index) measures how easy or difficult the question/items are for test-takers. Additionally, it is suitable for judging and analysing the performance of each question/item for the function of an assessment. The value of eachitem falls between 0.1 – 1.0. The highest value (e.g., 1.0) indicates that all test takers point to the

right answer whereas the lowest value (e.g., 0.1) indicates almost none of the test takers point to the right answer. From another perspective, the test item that has a 1.0 IF score can be considered the easiest item whereas one that has a 0.1 value indicates the mostdifficult item in the test.

To have a COLLMATCH version that suited the context of learners in this current study, fifty items from the list were selected, which belong to the 0.5 IF value. The selected items then were included in the COLLMATCH intended to be used for this current study. This newly developed COLLMATCH in this study is called Pre-COLLMATCH, to differentiate it from the actual COLLMATCH by Gyllstad (2007). Twenty-five items were included in section A of Verb-Noun collocation, whereas the remaining were included in section B of Verb-Adverb collocation. It is important to note that, the list of collocations by Gyllstad (2007) was intended for Swedish advanced ESL learners. Therefore, some of the items may not be suitable for low-proficiency ESL learners in this current study.

The Pre-COLLMATCH test was distributed to two groups of intermediate proficiency ESL students in the university. There were sixty-three of them from the faculty of Public Administration who enrolled in a diploma in public administration. Two weeks prior, these groups of students had two sessions with the researcher, learning about English collocation. Then, in the following week, the Pre-COLLMATCH test was administered. The session lasted for forty minutes and the testing instrument was collected afterwards.

In terms of the scoring procedure, each correct item was awarded 1 mark. However, there were several items in the Pre-COLLMATCH in which more than one combination (Verb + Noun) is possible (see Figure 3.5 on the verb *do*). In that case, the total mark for the item was divided by three. The overall score for the test instrument is fifty marks (50 collocation items X 1 mark).

The Item Facility index for each item in the test was calculated with the following formula as appeared in Moses (2017):

FI = X *average* / X *max*
where X *average* is the mean credit obtained by all test-takers attempting the item,and X *max* is the maximum credit achievable for the item.

Figure 3.7: Item Facility Index formula

This phase of data collection was aimed to have the best version of COLLMATCH that suited the context of this current study. Therefore, based on the IF value of each collocation item in the Pre-COLLMATCH, only 40 items were selected. The items were retained because of IF values in the 0.4-0.7 bracket. Following Gyllstad (2007), items with values close to 1.0 were too easy whereas those close to 0.1 were too difficult.

Moreover, the students also provided several suggestions for the improvement of Pre-COLLMATCH. It included having 2 X 6 grids (as opposed to 3 X 6 grids), indicating specifically how many possible combinations for each item, and integrating sentence constructions based on respective collocation types.

It was also discovered from the marking phase that having three possible collocations in one item (as in the case of the verb *do* in Figure 3.5) produced a 0.1 score discrepancy. Therefore, the revised version of Pre-COLLMATCH for this current study should have a maximum of only two possible collocations in one grid (see Figure 3.6). This enables the mark for such item to be divided by only two, instead of three – thus eliminating the 0.1 score discrepancy.

A revised version of the Pre-COLLMATCH test was ready to be used for the pilot study before the actual study scheduled in September 2019. The revised Pre- COLLMATCH

is now renamed Test 1.

3.5.3 Reliability of Test 1, Test 2, and Test 3

Reliability is the consistency of measurement or the degree to which an instrument measures the same way each time it is used under the same condition with the same subjects (Howit & Cramer, 2017). In other words, it is the repeatability of measurement. Inthis study, the construct of internal consistency was used which refers to the consistency ofthe subject's responses across items on a multiple-item measure. The researcher analysed the internal consistency of Test 1 (note that Test 2 and Test 3 have the same structure and items as in Test 1). The Kudar-Richardson Estimate of Reliability was used to obtain the internal consistency of the test. The indicator that should be observed in the reliability values is a Kuder-Richardson 20 Test (KR-20). This statistic measures the test reliability ofinter-item consistency. According to Sener and Tas (2017), this type of consistency measure is more appropriate than another type (e.g., Cronbach's Alpha) because it is a measure of reliability for a test with a binary variable (i.e., the item with a 0-scorerepresent the wrong answer whereas 1-score represents correct answer).

$$r_{KR20} = \left(\frac{k}{k-1}\right)\left(1 - \frac{\Sigma pq}{\sigma^2}\right)$$

Therefore, Cronbach's Alpha was not used to measure the reliability of Tests because it is more appropriate for items with scales, like the Likert Scale. To determine the KR-20 value ofTest 1, the following formula as illustrated in Figure 3.9 was used:

Where:

- r_{KR20} is the Kuder-Richardson formula 20
- k is the total number of test items
- Σ indicates to sum
- p is the proportion of the test takers who pass an item
- q is the proportion of test takers who fail an item

– σ^2 is the variation of the entire test

Figure 3.8: KR20 formula taken from Howit & Cramer (2017)

The first step in the process is to tabulate the data into a Microsoft Excel Spreadsheet. For this purpose, the Test 1 samples of one group of students (n = 26) who participated in the pilot study were taken and used. The construct of internal consistency was measured on Test 1 only because the same test was used for the subsequent tests (e.g., Test 2, Test 3).

The second step is to determine the value of each symbol in the formula. The first value is k, which is the number of items in the test. Test 1 has 40 items; thus, k is determined as 40. Then the p-value for each item was calculated as the proportion of the sample who answered each item correctly. To calculate the p-value for each item, two steps were involved. First, the number 1 (represents the correct answer by the student) for each item is calculated. Then the p-value is calculated by dividing the "number of 1's" by the number of students. The next value to determine in the equation is q (i.e., the proportion of the sample who answered each item incorrectly). To get the q-value, consider that the proportion of a whole item is always 1, since the p-value was determined prior, the q-valuecan be derived from 1 minus p.

Now that the p and q values for each item are determined, the next process according to the formula is to multiply p by q for each item. Once the values of p multiplesby q are determined for each item, all of these values are summed up, which is denoted by the symbol Σpq in the formula, and the value is 6.82. Finally, the variance of the total test scores is calculated ($\sigma^2 = 30.254$). All values in the equation have been determined, and calculating the rKR20 is now possible as illustrated in Figure 3.10:

k = 40
Σpq = 6.82
σ^2 = 30.254

The equation is,

$$r_{KR20} = \left(\frac{k}{k-1}\right)\left(1 - \frac{\Sigma pq}{\sigma^2}\right)$$

Therefore,
rKR20 = (10/10-1) (1 – 6.82/30.254)
= (1.03) (1 – 0.225)
= (1.03) (0.775)
= 0.79

Figure 3.9: Calculating the KR20 value to determine the reliability of the test

The third step is to interpret the KR-20 value of the test. The interpretation of scores for KR-20 range from 0-1, in which 0 represents no reliability and 1 is perfect reliability. The acceptable value of KR-20 ranges between 0.7-1.00 as indicated in Almanasreh, Moles, and Chen (2020). Moreover, a KR-20 value of less than 0.7 to 0.5 indicates low reliability, whereas a value of less than 0.5 suggests the need for revision of the test (Fatimah et al., 2020). The KR-20 value of Test 1 is 0.79 which suggests that the test has an acceptable reliability (i.e., internal consistency) value that ranges from 0.7 to 1.0. Therefore, the test is a good fit to be used in the actual study.

3.5.4 The Qualitative Approach of the Open-ended Questionnaire

The qualitative approach in this current study employed an open-ended questionnaire adapted from Li (2017) and Mubarak (2013). In their dissertation work, questions were formulated to elicit students' responses associated with the factors mediating the success of direct and indirect WCF from the perspectives of the students. The open-ended questionnaire contains five prompts that elicit students' responses to answer the qualitative research question (i.e., RQ4). The sample can be seen in Appendix 5(a sample of the used questionnaire is seen in Appendix 6). The questionnaires have five prompts that can provide

qualitative data for RQ4. For instance, prompts one, two, & four are tailored to identify "themes" leading to the ineffectiveness of WCF, whereas prompts two, three, & five are tailored to identify "themes" leading to the effectiveness of WCF.

Grounded on the postpositivist worldview, the qualitative approach was employed to complement the quantitative results and to offer a rich or "thick description" of the issuein the case study. Bryman (2015) asserted that the qualitative approach can be used as a research strategy that frequently highlights words rather than quantification in the analysis and collection of data. It enables the collection of data that is rich in the investigation of topics in a context, description of people, and understanding of traits from the perspectives of the participants (Bogdan & Biklen, 1997). Moreover, the qualitative approach also provides the chance for the participants to talk about the topic being investigated in their own words which are free from the constraints of fixed-response questions usually employed in the quantitative approach (Guest et al., 2013). This approach enables the researcher to study his subjects in natural settings and interpret phenomena in the words of the people who brought them (Denzin & Lincoln, 2011). Therefore, this approach enables him to answer the information related to the "why" and "how" of human opinion, behaviour, and experience (Guest et al., 2013). In this regard, the qualitative approach wasemployed to explore the perceived factors that may enhance or hinder students frombenefiting from direct and indirect WCF.

Open-ended questionnaire instruments are frequently used in the qualitative approach. Albudaiwi (2017) asserted that open-ended question allows participants to respond in their own words instead of choosing from a predetermined set of answer choices. Furthermore, it is often used in exploratory studies and qualitative research methods. A qualitative study that employs an open-ended questionnaire allows the

researcher to take a comprehensive and holistic look at the issues being studied because the approach permits participants to give more opinions and options (Albudaiwi, 2017). Additionally, this is not achievable with a closed-question or forced-choice questionnaire measure. Also, Erickson and Kaplan (2000) claimed that open-ended questionnaires can offer greater anonymity to respondents and regularly provoke more honest responses in comparison to interviews or focus groups. The arguments support the use of qualitative questionnaires in this study.

Creswell and Plano Clark (2017) reasoned that the qualitative approach utilising interview protocol as a data collection method presents a drawback in generalising its findings to a larger population due to the limited number of participants involved.

Several studies in the literature that investigated students' views and perceptions of the effectiveness of WCF have employed interview protocols as the main component of the qualitative approach (e.g., Li, 2017; Karim, 2014; Wong, 2017). Due to the time constraint factor and voluminous information obtained from the interview protocol, it is challengingto include all participants in the interview session. Thus, researchers must select several participants from the main population. However, it is believed that perceived views from every student in the study regarding the factors that contributed toward WCF effectiveness and difficulties faced when processing WCF are worth exposing and investigating. Thus, considering the drawbacks of the interview protocol and focus group by Creswell andPlano Clark (2017), these serve as the fifth reason for opting to use the open-ended questionnaire in the study.

Therefore, considering the reasons discussed, the qualitative approach of using an open-ended questionnaire was considered the more appropriate method for the qualitative phase in this case study. Several WCF studies have also used a similar qualitative approach.

To compensate for the absence of an interview approach, the researchers instead applied a qualitative instrument with open-ended questions as a source to obtain qualitativedata about students' perceptions, views, and preferences (e.g., Amrhein & Nasaji, 2010; Alshahrani & Storch, 2014; Chen et al., 2016; Hamouda, 2011).

3.5.5 Field Notes

Field notes are one of the sources of evidence in this case study. According to Yin (2018), field notes refer to the researcher's notes resulting from doing fieldwork and the notes may vary in formality from jottings to formal narratives.

In this case study, field notes were used to document any activities, acts, students' behaviour, and crucial information worth documenting during the data collection phases in the classroom setting. Field notes were documented in the classroom setting during all stages of data collection as illustrated in Figure 3.11. To document the field notes, the researcher followed the guide to field notes for qualitative research that was developed by Phillippi and Lauderdale (2018). Initially, the notes were written informally in a notebook which was more of jotted information documenting valuable events in the classroom. Once the class session ended, the researcher allocated some time to type the notes into Microsoft Word detailing the events as the researcher's memory was still fresh (see sample inAppendix 7).

3.5.6 Course Information of Past Semester English Course

The final source of data in this study is the course information of the English courses that the students enrolled in previously (e.g., ELC151). This document can be usedto triangulate the data obtained from the questionnaire, concerning RQ4. Moreover, to havea "thick description" of phenomena being investigated in a case study, having various data

sources can meet the purpose. The course information document contains information such as course learning outcomes, course description, syllabus content, teaching methodology, and assessment composition (see Appendix 1).

3.6 Data Collection Procedures

To answer the research questions, the researcher had to consider how to collect and analyse the data. This case study integrated quantitative and qualitative research instruments to answer the research questions. It first began with the pilot study phase, which was then followed by actual data collection.

A pilot study was conducted at the end of August 2019 with two groups of students from the Faculty of Public Administration at the university. The pilot study had several purposes: (1) to test the clarity of the procedures and instructions; (2) to identify potential ambiguities, poorly worded questions, and questions that are not understood in the qualitative instrument; (3) to refine the instruments (i.e., Test 1, Test 2, Test 3, Open-ended questionnaire); (4) to determine the reliability of Test 1, Test 2, and Test 3.

The newly developed Test 1 and Test 2 were used to replicate the actual study. The duration of the pilot study was one week which began with the administration of Test 1 to Group One received direct WCF (n = 28 students) whereas Group 2 received indirect WCF (n = 26 students). Test 1 was then collected, and assessed by the researcher, and respective WCF types were provided on students' test papers. Then, three days later, the assessed Test 1 was returned. The students were given 15 minutes to revise the errors and WCF provided, before doing Test 2. At the end of the session, the open-ended questionnaire was administered and collected afterwards.

A brief post-mortem session was held with the students to discuss potential issues

when completing the open-ended questionnaire, Test 1, and Test 2. Several issues were highlighted including prompt five in the questionnaire was confusing and required paraphrasing, and the time for revising the errors in Test 1 was not enough which required an extension of at least 30 minutes. Moreover, several students had also suggested sentence construction to be incorporated in Test 1 and Test 2. The issues with the instruments were addressed and the suggestions were taken into consideration. The finalised version of Test 1, Test 2, Test 3, and the open-ended questionnaire were ready to be used in the actual study.

The overall view of data collection begins with the phase of exposing the students to collocation types and ended with the course information retrieval phase illustrated in Figure 3.10. The following sections explain every phase of data collection procedures.

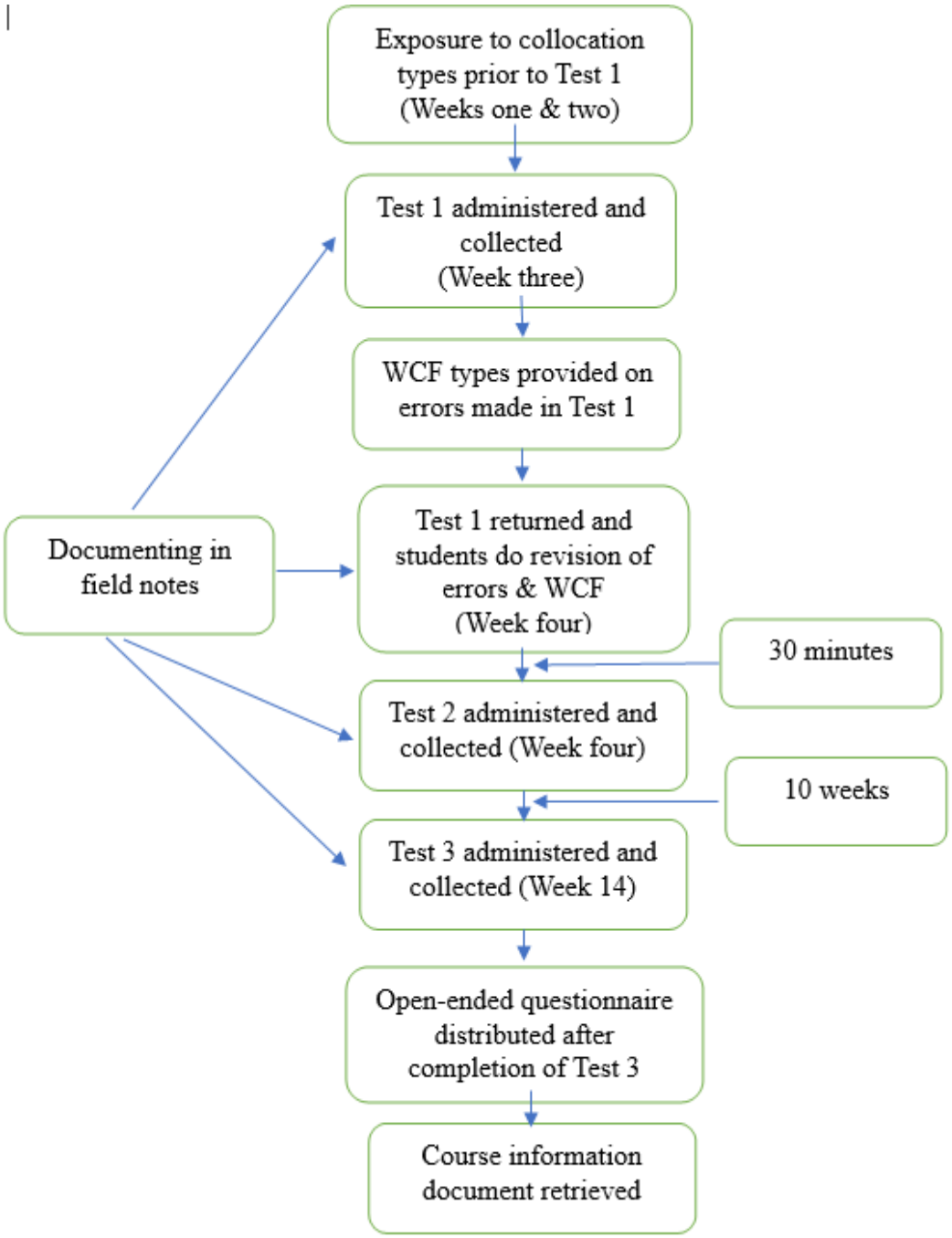


Figure 3.10: Data collection procedures

3.6.1 Exposure to Collocation Before Doing Test 1

Before doing Test 1, all groups received explicit rule explanations about the target structures to ensure that the learners possessed explicit knowledge that they could practise and "proceduralise" in the test (e.g., DeKeyser, 2020; Lyster & Saito, 2013). This has been the norm in several CF studies (e.g., Al Harasi, 2019; Sato & Loewen, 2018). It is because the researchers must ensure that the participants in their study have explicit knowledge of the targeted linguistic structures before doing the pre-test, receiving the treatment, and finally doing the post-test. Therefore, the changes between the pre-test and post-test are caused by the treatment rather than any activity before the treatment. To ensure that the students, in this case, study have explicit collocation knowledge, the students went through two collocation classes with the researcher before doing Test 1. Each collocation class lasted for two hours. It should be noted that four hours of collocation class was sufficientto ensure that the students had explicit knowledge of collocation at the start of the studydue to the following reasons: (1) the students had received instructions on the targeted structures in the previous semesters especially concerning about the topics on Nouns, Verbs, and Adverbs; (2) at this stage, most students can identify what are Nouns, Verbs, and Adverbs; (3) referring to the purpose of the study, it is to determine the effects of WCFbut not the effect of the students' explicit knowledge on collocation competence.

To meet the purpose of students possessing explicit knowledge that they could practise and proceduralise in Test 1, a lesson plan was developed as a guide for the researcher in teaching the students. The lesson plan can be seen in Appendix 8 while the teaching materials can be seen in Appendices 9-10.

The lesson plan consisted of three mainobjectives: (1) to introduce the students to English collocation (2) to allow the students to realise the importance of learning English collocation; (3) to learn about the types of collocation, especially verb-noun and verb-adverb. To meet these objectives, the topics introduced in the lesson plan included: (1) what is collocation; (2) why we learn collocation; (3) verb-noun collocations; and (4) verb-adverb collocations. Moreover, the teaching methods included lectures, matching tasks, constructing sentences, exercises, and class discussions. It should be noted that it was the responsibility of the researcher toensure all teaching methods, activities, topics, exercises, and prompts, documented in the lesson plan were delivered to all groups at the start of this study. This can guarantee each group received an equal amount of explicit knowledge at the start of the study.

3.6.2 The Administration of Test 1 and Providing WCF Types on Errors

Before the actual data collection scheduled in the academic semester of September 2019-February 2020, the quantitative and qualitative instruments had gone through a series of preliminary tests (i.e., the pilot test).

The academic semester at the university lasted for 14 weeks. In the first and second weeks of the semester, the students had two sessions with the researcher, learning English collocation. These two sessions of learning collocation accumulated up to four hours of teaching. Then in the third week, Test 1 was administered to the groups. Written consent was applied to denote ethical concerns in a study. Therefore, the students were asked to indicate their agreement to participate in the study by signing the consent agreement displayed on the cover page of Test 1 (see Appendix 2).

The test took only 40 minutes, andit was collected afterwards. Also, while the students were completing the test, the researcher made an observation and documented the event in his field notes.

The fourth week was used to evaluate Test 1, record the scores, and provide relevant WCF types on students' tests. It should be noted that WCF was provided on Test 1 only. The targeted structures of this study are English lexical collocation of the Verb- Noun type and Verb-adverb type. These are the two types of collocations being the focus ofthis study and they are included in Test 1. To illustrate, the test contains two sections: (1) Section A of Verb-Noun collocations; and (2) Section B of Verb-Adverb collocations. The errors committed by the students in the test were treated with either direct or indirect WCF.The structure and description of both collocation types are illustrated in Table 3.6.

Table 3.7: Language focus and categories of errors

Target structure: English Lexical Collocation				
No.	**Subtypes**	**Acronyms**	**Example**	**Sentence**
1	Verb + Noun	V + N	Keep + a diary	She *keeps a diary* to document her journey.
2	Verb + Adverb	V + A	Think + carefully	We need to *think carefully* about the model.

In highlighting how the researcher provided WCF on errors made by each group, this current study applies the types of direct and indirect WCF suggested by Ellis (2009) and Bitchener and Knoch (2009). As explained before, each group received either direct or indirect WCF depending on the group label mentioned in section 3.4.

Direct WCF was provided to the students in the direct WCF groups in terms of giving the correct answer or accurate collocation structure on the collocation errors.

Also, metalinguistic information was provided on errors committed. This information was in terms of a sentence that shows the correct use of collocation written near the grids (see Figure 3.12 on how the researcher used direct WCF to address errors).

However, due to space constraints, some sentences were written on available space with arrows drawn toward the grids where the errors appear. A sample of used Test 1 instruments that shows the provision of direct WCF type is available in Appendix 11.

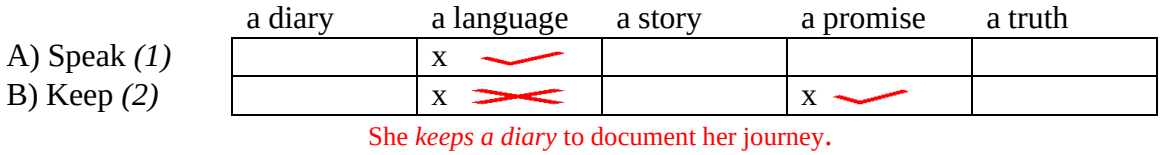


Figure 3.11: The provision of direct WCF in this current study

In highlighting the indirect WCF type used, it was provided in terms of error indication only. Moreover, no metalinguistic information was provided which made the indirect WCF implicit. Figure 3.13 illustrates how the researcher provided indirect WCF on errors made by the students in Test 1. A sample of the used Test 1 instrument that shows indirect WCF provision can be seen in Appendix 12.

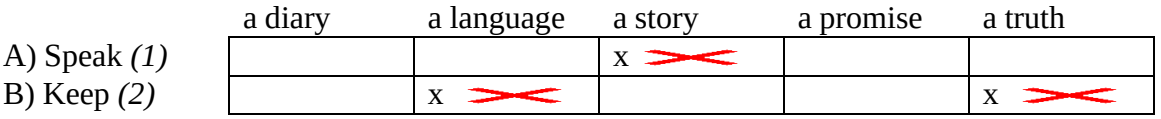


Figure 3.12: The provision of indirect WCF in this current study

3.6.3 The Administration of Test 2 and Test 3

In the fifth week, Test 1 was returned to each group of students. At this stage, the students were given thirty minutes to revise their errors and the WCF provided. Also, when they were doing their revision, the researcher made the observation and documented the activities in his field notes. Then, test 2 was administered and collected at the end of the session. All test papers were assessed, and scores were recorded.

Test 3 was administered in week 14 to all groups. It is worth noting that slight changes were made to test 3 to counterbalance the testing effect. The observation was made and recorded in the field notes when students were completing Test 3.

3.6.4 The Administration of Open-ended Questionnaire and Retrieval of Course Information Document

The phase of distributing the open-ended questionnaire began once the students had completed and submitted their Test 3. They were allowed twenty to thirty minutes to complete the questionnaire and the instrument was collected at the end of the session. Furthermore, the course information document was retrieved from the faculty and kept for data analysis in a later phase of the study.

3.7 Ethical Consideration

In conducting research, several ethical issues need to be considered. Ethical issues emerge in all phases of research. Creswell (2014) stated that data needed to be collected ethically, with sensitivity to participants and populations being studied, and the research sites.

The privacy of the participants is very important in a study. Therefore, all names

were assigned pseudonyms and their matrix numbers were concealed to preserve anonymity. Moreover, it was also necessary to securely store all study data to protect the students' information.

This is especially concerning the students' past semesters' results and other information that might reveal their identity (e.g., names, matrix numbers). Also, the students in this study needed to be completely aware of the risks and procedures in the study. Therefore, they were briefed at the start of the study regarding the purpose of the study, their roles, and the researcher's roles. The students were also told that they could choose not to participate in the study or withdraw at some point during the study should they feel uncomfortable being the participants. Moreover, they were reminded that their performance in Test 1, Test 2, and Test 3 of the study would not affect their overall results in the current semester. Thus, the students were provided with a consent form which needed to be signed at the start of the study (see Appendix 2 of Test 1, indicated on the firstpage).

One of the sources of data in this study was the course information document. This document describes important details of the English subjects being taught in the university, in which, such information may be beneficial for data triangulation in this study. The researcher must ensure that the document is solely used for this current study only. Therefore, it is the responsibility of the researcher to ensure the safekeeping of the document right from its retrieval from the source until the completion of this study.

3.8 Trustworthiness

The trustworthiness of a study is about addressing the issues related to its validity and reliability. The following subsections describe how the researcher handled issues related to internal validity and reliability.

3.8.1 Internal Validity

Mackey and Gass (2005) stated that internal validity refers to the extent to which the results of a study are caused by the factors the researcher expects at the start of theexperiment. Therefore, it is important to control the outside influences and extraneous variables that could potentially affect the results. In this regard, the outside influences must be controlled to ensure that the effects measured were caused by the intervention provided. In the case of this study, the sources of the effects are the direct and indirect WCF provided on learners' collocation errors in which the effects were measured as their improvements as a result of exposure to WCF.

Necessary steps were taken to ensure that the validity threats were controlled as much as possible which followed the steps taken by Al Harrasi (2019) to possibly reduce the threats of internal validity. First, to ensure that the students, had procedural knowledge of collocations before doing Test 1, they were exposed to the explicit rule explanations about the target structures that they could practise and "proceduralise" in the test (e.g., DeKeyser, 2017; Lyster & Saito, 2013). This has been the practice in several CF studies (e.g., Al Harasi, 2019; Sato & Loewen, 2018). It is because the researchers must ensurethat the participants in their study have explicit knowledge of the targeted linguisticstructures before doing the pre-test, receiving the treatment, and finally doing the post-test. Therefore, the changes or effects can be associated with the interventions given before the measurement.

Second, considering the role of the researcher as the teacher-researcher in the study, sincerity is the most significant aspect in the phase of exposing the students to the targeted structures at the start of the study. Tracy (2006) notes that another characteristic of excellent qualitative research is what she terms "sincerity," which can be achieved through the practice of self-reflexivity and transparency.

Sincerity was attained by ensuring the followings: (1) the researcher developed a lesson plan that can be used with all groups and to ensure the consistency of the lesson across all groups; (2) the researcher consistently andthoroughly deliver the lesson plan to each group by covering the same topics, contents,used the same resources, did the same drills, and asked the same prompts during classroomdiscussions; (3) the researcher showed transparency beginning from the start of the study by documenting, illustrating, and explaining in detail of every process, in which all ofthese processes or methods were replicated from past studies (e.g., teacher-researcher role as in Al Harasi, 2019; Jocius, 2015; Liu, 2016; Mubarak, 2013; Min, 2018; Naghdipour, 2017;Wilcox, 2015, exposing students to explicit rule explanations as in Al Harasi, 2019; Sato & Loewen, 2018) and (4) the researcher constantly reminded himself of his role as theteacher-researcher throughout the entire study by referring to Groothuijsen et al. (2020) to address the quality concern in a research involving the role of teacher-researcher.

Third, none of the students was informed at the start of the study that they had to take several tests regarding collocation throughout the study. This is to prevent them from preparing for the tests employed. According to Creswell (2014), participants may become familiar with the outcome measure and remember the responses for later testing. This threat is categorised as the testing effect. As suggested by Creswell (2009, 2014), thisthreat is addressed by employing a longer time interval (10 weeks) between Test 2 and Test3, and the students were made unaware of the administration of Test 3 before doing it.

Another threat to internal validity is concerned with the practice effect. This is categorised under the carryover effect as the primary disadvantage of using multiple sets of similar testing instruments (Shaughnessy et al., 2015).

The practice effect concerns the condition where the participants perform better in a subsequent task because they have been exposed to it in a prior stage or had a chance to practise it. In the case of this current study, the students were exposed to three different time-point of tests (e.g., Test 1, Test 2, Test 3). Therefore, the student's performance in Test 3 may be caused by this effect. Thus, to counterbalance (this term is used because it was not possible to eradicate the effect) the practice effect, Creswell (2009) suggested a longer time interval for administering Test 3. In this study, Test 3 was administered ten weeks after Test 1. Also, this may reduce the possibility of the students memorising the answers. Moreover, Creswell (2014) also suggested using different items in a later test than were used in the earlier test. In this regard, Test 3 was slightly different from Test 2. The differences between both tests can beseen in terms of the arrangement of the test items, whilst maintaining the structures across the two sets of the instruments (i.e., sections A & B, instruction for answering the test, the collocation items, and scoring procedures).

The next validity issue is concerned with bias in a qualitative research design. According to Polit and Beck (2014), the term "bias" in research is commonly understood to be any influence that gives a distortion in the findings of a study. It is a term most commonly associated with quantitative research design but has seen much attention in the qualitative approach recently (Galdas, 2017). Moreover, Anderson (2010) argued that one of the limitations of a qualitative research design is the role of the researcher in a study, which is unavoidable and can affect the subjects' responses. In this study, the researcher's role is the teacher-researcher. Therefore, the student's responses in the qualitative phase of the study (e.g., the questionnaire) are subjected to potential respondents' bias.

In this regard, the students may not respond naturally to the questions in the questionnaire but indicate their responses in a positive or affirmative response (e.g., saying

"yes" to all questions when in fact the responses do not reflect the affirmative answer). The students may feel that their negative responses to the questionnaire instrument can affect their academic results in the course being taught by the researcher. To balance respondents' biasin this current study, measures were taken as suggested by Anderson (2010) which include: (1) the researcher reflects his influence in the data set; (2) the researcher includes how his role may introduce bias to the results. Furthermore, the students were also remindedseveral times that the study had no effect on their course results and that their responses to the questionnaire should not influence any part of their performance in the course enrolled (e.g., ELC231).

Hence, efforts were made to control the threats of validity in this current study with the steps discussed previously. However, readers must also consider these threats when interpreting the findings.

3.8.2 Reliability

The construct of reliability adheres to the ability of a measure to produce consistent results every time it is used (Drost, 2011), which according to Mackey and Gass (2005), concerns interrater reliability and instrument reliability.

The choice of statistical tests was performed with the help of two statisticians from the Faculty of Computer and Mathematical Sciences, UiTM Sarawak. The quantitative analyses were performed with the help of the first statistician whereas another senior statistician was consulted for further checking and feedback.

Both statisticians agreed on the proper use of statistical tests to answer the quantitative research questions. This is to ensure that the statistical tests used in the quantitative analyses are valid and able to produce accurate results to answer the quantitative

research questions.

3.8.3 Trustworthiness of Qualitative Data

According to Lincoln and Guba (1985), qualitative researchers are obliged to convey evidence of four main criteria to ensure the trustworthiness of the study's findings, which are, credibility, transferability, dependability, and confirmability. This current study strives to achieve the four main criteria explained in the following paragraphs.

Credibility asks "how congruent are the findings with reality?" in a qualitative study (Stahl & King, 2020). Credibility in a qualitative study refers to construction on the part of the researcher and the subsequent readers. As suggested by Stahl and King (2020), one way to pursue credibility is to involve informants (e.g., faculty members,coresearchers, and colleagues) in verifying the researcher's interpretations after the fact. This has often been called peer checking, where "peer" refers to various participants in multiple roles in a qualitative study.

The researcher consulted a senior lecturer in UiTM Shah Alam from the Faculty of Education to perform a peer debriefing of the qualitative findings. Additionally, his current PhD supervisor has also provided insights and reviews during the coding stage of the qualitative data. The feedback received in the peer debriefing process was considered for improvement of the qualitative analyses, presentation, and reporting. Table 3.7 provides the steps involved in peer debriefing as suggested by Janesick (2015) and the actions performed and outcomes derived in this study.

Table 3.8: Steps in peer debriefing suggested by Janesick (2015)

Steps	Descriptions	Actions/Outcomes
1	Select someone who has at least the methodological expertise, if not also the content expertise.	Two reviewers identified: 1. A senior lecturer 2. Own PhD supervisor
2	In terms of methodology, the peer needs to understand the purpose, methods, and types of analysis and the interpretation of the study	The reviewers have vast experience as researchers & educators. They have experience in writing qualitative research articles.
3	Have the peer aware of the theoretical framework for the research and conversant with the literature on qualitative research methods, particularly the methods used in the study under review	The reviewers were given acopy of Chapters 1, 2, and 3.Also, the qualitative findingswere given to be reviewed.
4	The peer may assess whether or not a researcher has missed a key point, overemphasised a minor one, or repeated one or more points.	Both reviewers provide comments and feedback on the coding method, qualitative data analysis, and similarity percentage (Inter Coder Reliability percentage)

The second criterion is transferability. Transferability addresses the applicability of the findings to similar contexts or individuals not to broader contexts (Lincoln & Guba, 1985). According to Stahl and King (2020), transferability is achieved by a "thick description" that provides a rich enough portrayal of circumstance for application by other institutions. That said, the details about contextual information of the participants, the university, the courses they enrolled in, and participants' proficiency levels were described and reported thoroughly in the thesis. Moreover, methods and time frames for the collection of data in the current study were completely described to provide a thorough description of the qualitative process.

Next, a qualitative study must pursue dependability as part of trustworthiness (Lincoln & Guba, 1985). Dependability can be ensured through rigorous data collection methods and techniques and analysis that are well documented. In this study, the researcher thoroughly reported the process involved in collecting, analysing, interpreting, and reporting the qualitative data. Moreover, an inquiry audit using an outside reviewer can assure dependability, which was achieved through peer debriefing.

The final aspect of trustworthiness is confirmability. Confirmability is assuredwhen data are checked and rechecked during data collection and analysis to ensure findings are repeatable by others (Stahl & King, 2020). This is done by documenting a clear coding schema that identifies the codes and patterns identified in the analysis. All codes, patterns, and themes derived from the qualitative data are illustrated in the tables of analysis in the appendices. Moreover, Koch (1994) recommended that a qualitative researcher include markers such as "reasons" for theoretical, methodological, and analytical choices, so others can understand why and how decisions are made. In thatsense, the researcher explained thoroughly his selection of theoretical framework, study design, methodology, and analysis procedures in this chapter.

3.8.4 Reliability of the Qualitative Analysis

This section explains the procedure underlying the process of determining the intercoder reliability (ICR) percentage of the qualitative data by referring O'Conner and Joffe (2020). A senior lecturer from the faculty was employed as the second coder whereas the researcher acts as the first coder. This study has four groups of students, and five prompts are in the questionnaire. In total, there are 20 data sets. O'Conner and Joffe (2020)mention that the researcher can select 10 to 25 per cent of the overall data set to calculate the ICR percentage.

Therefore, three data sets were selected (equivalent to fifteen per cent) from the overall data as seen in Table 3.8.

Table 3.9: The data sets selected for ICR

Data set	Details	Appendices
1	Group 1 Responses to Prompt 1	13
2	Group 2 Responses to Prompt 2	14
2	Group 3 Responses to Prompt 3	15

A meeting was arranged with the second coder to discuss the following: (1) appropriateness of analysis, (2) interpretation decisions, & (3) coding validation. Several days prior to the meeting, the second coder was handed a copy of the raw and condensed data and the section on the Theoretical Framework of this study which illustrates the relevant knowledge beneficial for constructing the codes. On the day of the meeting, both coders discussed the appropriateness of data analysis and ICR percentage.

The data sets one, two, and three were transferred into tables in Appendices 13-15. In the tables, it can be seen that codes derived by Coder 1 and Coder 2 are placed side by side. If the codes produced by both coders are in a similar fashion, they are labelled as “1” in the “Agreement level” column. However, if the codes are not similar, they are labelled as “0”. In data set one, there are 19 similar codes produced whereas six non-similar codes were identified. In data set two, there were 25 similar codes whereas two non-similar codes were identified. Lastly in data set three, 22 similar codes and seven non-similar codes were identified. In total, there were 66 similar codes and 15 non-similar codes identified among the data sets.

Previous reviews of the literature indicate the most common method issimply reporting the percentage of data units on which coders agree (Feng, 2014). Miles and Huberman (1994) suggest reliability can be calculated by dividing the number of agreements by the total number of agreements plus disagreements. Figure 3.14 illustrates the calculation method.

ICR percentage formula, (Total number of agreements / total number of agreements plus disagreements) X 100%,(66 / 81) X 100% = 81.4 %

Figure 3.13: The calculation involved to determine the ICR percentage

Based on the calculation in Figure 3.14, the reliability percentage of the inter-rater reliability of the open-ended questionnaire data is 81.4 per cent. There is no universally accepted threshold for what indicates acceptable reliability according to O'Conner and Joffe (2020) but Miles and Huberman (1994) suggest a standard of 80 per cent is recommended. In sum, the codes derived by both coders in this study are about 81.4 per cent similar to each other.

3.9 Data Analysis Procedures

Note that, in the embedded case study, the terms groups or cases are used interchangeably in this section that refers to the units of analysis. Concerning Yin's (2018) discussion of case study analysis procedures, he encourages a researcher to start by referring to the questions posed at the start of the study rather than the data obtained, then identifies the evidence that addresses the question(s). This current study has both quantitative and qualitative research questions.

Therefore, two types of analyses were performed, within-case (to address quantitative RQs) and cross-case (to address qualitative RQ), where four groups of students served as the subunits of the investigation.

Moreover, these two analyses were selected because they correspond with the research questions and are considered the best fit for providing answers to the research questions. Yin (2018) also noted that in an embedded case study design, the researcher can present data about individual groups or cases. Therefore, in a case-based approach, the goal is to maintain the integrity of the entire case and then to compare or synthesise any within-case patterns across the case. In this sense, the first phase of analysis involved within-case analysis to answer RQ1, RQ2, and RQ3 which was then followed by cross-case analysis to answer RQ4.

3.9.1 Within-case Analysis

Each group in this embedded study is regarded as a single group and each group's findings can be considered as information contributing to the whole research. The within-case analysis is used in the first phase of data analysis and then to implement cross-case analysis, namely, between groups to detect what each group has in common (Yin, 2018).

In the within-case analysis phase, time-series analysis was chosen as the primary analysis to answer the quantitative RQs. This is based on the following reasons as stated by Yin (2018): (1) there may be only a single relevant measure that needs to be tracked over time, such as the effects of WCF on collocation in this study; (2) statistical test can be used to analyse the data, such as paired sample t-test, one-way ANOVA, and repeated measures ANOVA in the case of this study; (3) it is possible to test the difference in data trends before and after a critical event, such as determining the possible changes in collocation competence of the students after exposure to WCF several WCF types; (4) it is possible to match between

the observed data trend and a theoretically important trend specified before the conduct of the case study.

Thus, in analytical generalisation, the theory is compared with the empirical results, leading to the modification or extension of the theory (Ridder, 2017). Considering the quantitative nature of RQ1, RQ2, and RQ3 that require: (1) statistical analysis of data using SPSS version 26; (2) an interpretation of the difference in data trends before and after an event, the statistical analyses employed in this study are explained in the following paragraphs.

The first research question focuses on investigating the short-term (also known as revision) effect of direct and indirect WCF on the collocational competence of the students. It is important to note that the short-term effect was measured 30 minutes after the students performed their revision on errors made in Test 1, following several studies in the literature (e.g., Nusrat et al., 2019; Tan & Manochphinyo, 2017; Suzuki et al., 2019) and the analysis was performed within-group levels only.

The short-term effect of WCF was determined by mean score improvement from Test 1 to Test 2. Specifically, a paired sample t-test was used to detect a difference between the two mean scores which follows a study by Mubarak (2013). Furthermore, Hsu and Lachenbruch (2005) explained that the paired t-test is used to compare mean differences when the observations have been obtained in pairs and are thus dependent. For instance, it includes comparing mean differences before and after the intervention stage. In the context of this study, it involves comparing the mean scores of Tests 1 and 2.

However,before proceeding to investigate the effect of WCF, it is important to determine thehomogeneity of the participants' scores (Nemati et al., 2019). This is tested by

Levene's test of equality of error variances (Ho, 2014) which tests the hypothesis that the population of variances across the groups is equal.

This step is vital as it is performed to show that all participants are homogeneous in terms of their collocational competence before they were exposed to WCF. Additionally, the researcher can attribute any improvement noticed in thepost-test or delayed post-test scores to initial differences between groups before the intervention (Mubarak, 2013). Table 3.9 illustrates the analysis procedures to answer RQ1.

Table 3.10: Statistical analysis to determine the short-term effect of WCF

Proficiency	**Groups**	**Mean scores**	**Analysis**	**Purpose**
Low proficiency	Group 1 Group 2	Test 1	Levene's test	To determine the homogeneity of scores
		Test 1 & Test 2	Paired sample t-test	to compare mean differences
High proficiency	Group 3 Group 4	Test 1	Levene's test	To determine the homogeneity of scores
		Test 1 & Test 2	Paired sample t-test	to compare mean differences

The second research question investigates the long-term (also known as retention) effect of direct and indirect WCF. It is important to note the following aspects: (1) as part of the study limitation, the long-term effect is subjected to the testing effect and the practice effect, albeit efforts were made to control the extraneous effects; (2) the long-term effect was measured ten weeks after exposure to direct and indirect WCF; (3) and the analysis was performed within-group levels only (e.g., comparing between Test 1 and Test 2 performance of LDS group) which differentiates the analysis of RQ2 with RQ3.

A repeated-measures ANOVA with post hoc comparison was used to analyse the long-term effect using SPSS. This statistical test provides an array of analysis of variance procedures to use when the identical measurement is made several times on each subject

(Leech, Barrett, & Morgan, 2005).

In the context of this study, the same instrument (or measurement) was used several times or at several time points (e.g., Test 1, Test 2, and Test 3). Thus, a comparison of variances can be made between several time points. The inclusion of Test 3 in this current study is to measure the long-term effect of WCF. Hence, following Van Beuningen et al. (2012), studies exploring the long-term effects of WCF on L2 accuracy are performed in such a way that accuracy performance on the pre-test and delayed post-test (Test 3 in the case of this study) are compared. Moreover,several scholars argued that the long-term effect of WCF on a targeted linguistic structure may denote learners' acquisition of the structures which can be measured with delayed post-test (Guenette, 2007; Kasim, 2014; Storch, 2010; Truscott, 2007; Zhang & Cheng, 2021). In this current study, a comparison of mean scores was made among the following: (1) Test 2 and Test 3, and (2) Test 3 and Test 1. The long-term effect is not observed when no significant difference exists between Test 3 and Test 1 scores. This translates to the pattern that their scores in Test 3 are almost at par with their initial scores in Test 1. Vice versa, the long-term effect is observed when a positive significant difference is detected between the two mean scores (i.e., Test 1 and Test 3). This denotes that their performance in Test 3 is better than that in Test 1. Table 3.10 illustrates the statistical analysis applied toanswer RQ2.

Table 3.11: Statistical analysis to determine the long-term effect of WCF

Proficiency	Groups	Mean scores	Analysis	Purpose
Low proficiency	Group 1 Group 2	(1) Test 2 & Test 3 (2) Test 3 & Test 1	Repeated measures ANOVA with post hoc comparison	To compare mean scores across a 3-point time
High proficiency	Group 3 Group 4	(1) Test 2 & Test 3 (2) Test 3 & Test 1		To compare mean scores across a 3-point time

The third research question (RQ3) investigates the differential effect of direct and indirect WCF on the collocational competence of the students. Specifically, this research question was posed to identify the type of WCF that has a greater effect on the collocation competence of the students. This research question was investigated with a one-wayANOVA with Bonferroni Post Hoc Comparisons (Ho, 2014) which also followed several studies that investigated the same course (Alkhawajah, 2016; Purnawarman, 2011). It is important to note that the analysis of RQ3 was performed between-group levels (e.g., comparing the performance between the direct WCF group and indirect WCF group of low-proficiency learners). This differentiates the analysis of RQ3 from other quantitative RQs (e.g., RQ1 and RQ2).

Furthermore, before a statistical test using ANOVA can be performed on a data set, the data must meet several statistical assumptions (Delacre et al., 2019). Violating these assumptions may invalidate the use of ANOVA. It is also common for a data set to violate some assumptions with several suggestions to overcome them. Therefore, according to Skidmore and Thompson (2013), the question is not whether ANOVA assumptions are precisely met in actual context, but rather, whether the assumptions are sufficiently met, that

reasonable confidence can be entrusted in the result. According to Rutherford (2000), there are three assumptions to be met before computing a data set in ANOVA: (1) no outliers; (2) normality; and (3) homogeneity of variances.

The assumption of normality claims that the distribution of dependent samplemeans is normal (Curran-Everett, 2017; Ghasemi & Zahediasl, 2012). In other words, the assumption of normality indicates that the distribution of means across samples is normal or that the sampling distribution of the mean is normal. The assumption of normality is important when constructing reference intervals for variables in a study. Furthermore, it is impossible to draw accurate and reliable conclusions about reality when this assumption does not hold, which highlights the importance of "normality" and other assumptions that should be taken seriously (Oztuna et al., 2006). The assumption of normality was tested with the Shapiro-Wilk test of normality in the SPSS following Razali and Wah (2011) due to its good power properties (Mendes & Pala, 2003). This test was applied to Test 1, Test 2,and Test 3 scores of all groups by referring to the *p*-value in the Shapiro-Wilk test of normality table. The results can be seen in Chapter 4.

The next statistical assumption is regarding the outliers in all test scores. Outliers in the scores refer to a feature that differs dramatically from what may be expected and occurs in almost all statistical data (Ritter & Gallegos, 1997). In other words, outliers are some values at the upper or lower end that distance themselves from the distribution. To detect the potential outliers, the boxplot in SPSS was referred to, in which no outliers were detected across all data sets.

The final statistical assumption to be met is associated with the homogeneity of variances. In this regard, the assumption of homogeneity of variances is tested by Levene's test for equality of variances, which tests the hypothesis that the population variances are

equal (Ho, 2014). The corresponding level of significance should be large ($p > .05$) to retain the hypothesis, thus the assumption of homogeneity.

Once the statistical assumptions have been met, the inferential statistical analysis can be performed by one-way ANOVA with Bonferroni post hoc test to confirm if significant differences of effect exist between groups (e.g., direct WCF group, indirect WCF group,) in Test 2 and Test 3.

In other words, the analysis was used to investigate which WCF type had the most effect on the collocational competence of the students in this current study. Table 3.11 summarises the statistical analyses applied in RQ3.

Table 3.12: Statistical analysis to identify the fittest type of WCF

Proficiency	**Groups**	**Mean scores**	**Analysis**	**Purpose**
Low proficiency	ALL	Test 1, Test 2, Test 3	Shapiro-Wilk test of normality, Boxplot, & Levene's test for equality of variances	Preliminary analyses before conducting one-way ANOVA
		Test 2 & Test 3	One-way ANOVA with Bonferroni post hoc	To detect differences among groups and determine the WCF type that produces the most effect
High proficiency	ALL	Test 1, Test 2, Test 3	Shapiro-Wilk test of normality, Boxplot, & Levene's test for equality of variances	Preliminary analyses before conducting one-way ANOVA
		Test 2 & Test 3	One-way ANOVA with Bonferroni post hoc	To detect differences among groups and determine what CF type produces the most effect

3.9.2 Pattern-matching in Cross-case Analysis

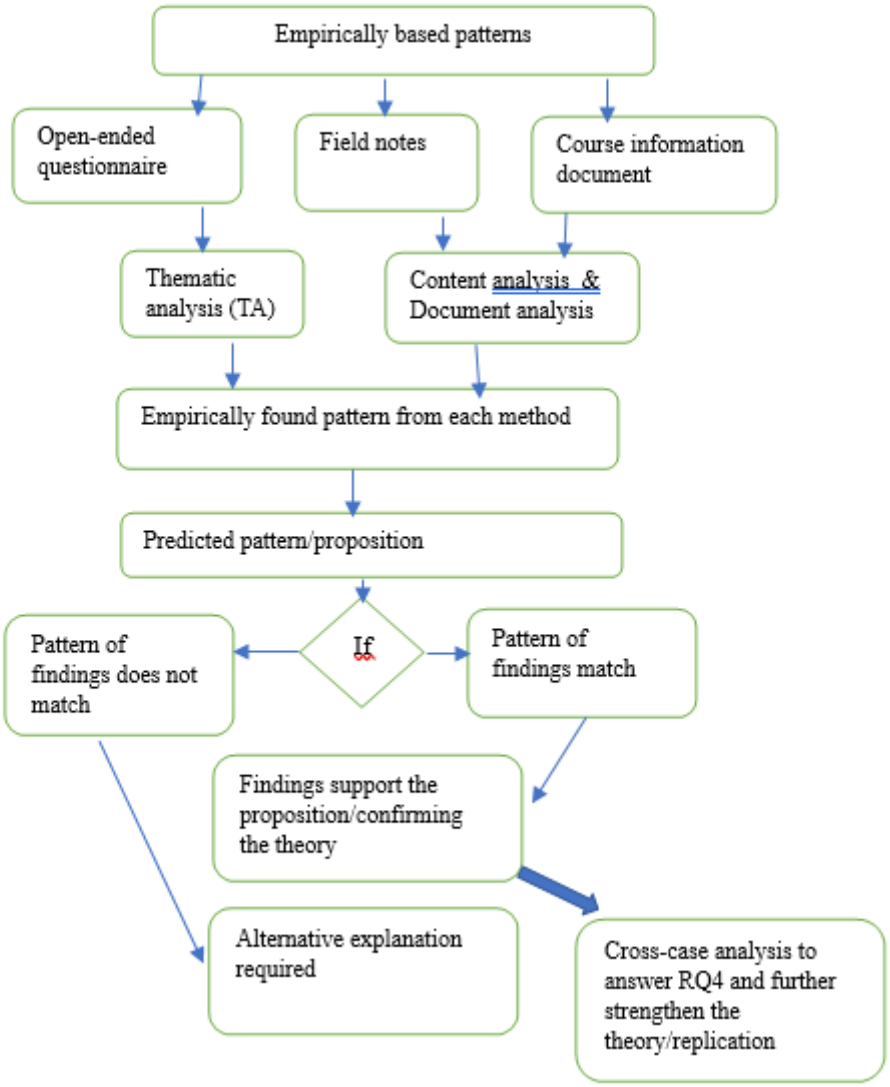


Figure 3.14: An illustration of pattern matching in cross-case analysis in this study

An illustration in Figure 3.15 describes the pattern-matching in cross-case analysis employed to answer RQ4 in this study. The qualitative analyses began with the pattern-matching analysis of each case, which was then followed by a cross-case analysis to answer RQ4.

Pattern-matching, according to Yin (2018) is the most desirable techniquethat compares an empirical pattern derived from one's study with predicted ones (see theoretical

framework about the proposition of findings) made before data collection. In other words, pattern-matching techniques subsequently identify and compare the patterns evident in the data against one or several hypothesised patterns that the researcher has developed from the literature (Swanborn, 2010; Yin, 2009). If the empirical and predicted patterns appear to be similar, the results can help a case study strengthen its internal validity. Also, the pattern-matching technique in cross-case analysis, according to Yin (2018) is valuable for theoretical replication across the case which draws a stronger conclusion about the investigation. Therefore, pattern-matching in the cross-case analysis is selected for theoretical significance, aiming to accomplish replication, diverse profiles,an extension of theory, or alternate explanations (Eisenhardt & Graebner 2007; Yin 1994).

This study refers to the practical guidance for using a pattern-matching technique by Almutairi, Gardner, and McCarthy (2014) as a guide. The first phase begins by stating the study's proposition. The proposition is illustrated in the Theoretical Framework that "noticing" is affected by several factors such as (1) Learners' factors, (2) Contextual factors, and (3) Nature of CF factors (see Theoretical Framework in Figure 2.1). The next phase is the testing phase. In this phase, the researcher used a pattern-matching techniqueto examine the correctness of the propositions in the Theoretical Framework with the empirically based pattern from the open-ended questionnaire. See the illustration in Figure
3.15. The comparison process indicated that the pattern of the findings (obtained from the questionnaire) matched the predicted pattern (derived from the literature and integrated into the Theoretical Framework. The significance of the findings now supports the Theoretical Framework that explains the positive effects of WCF on learners' collocation competence.

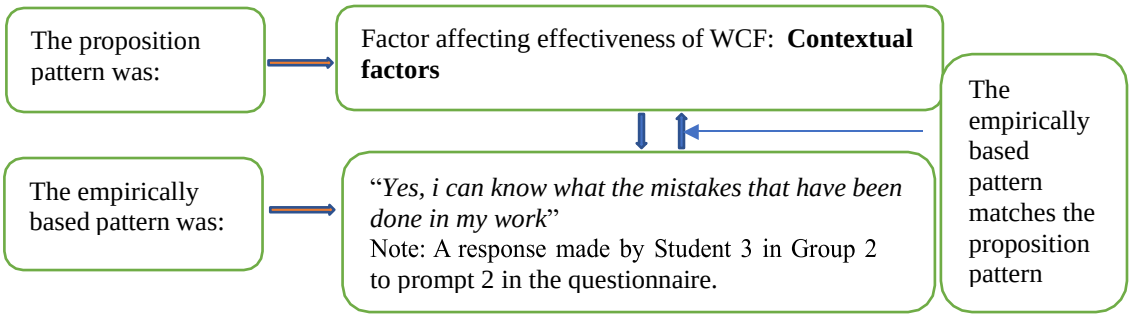


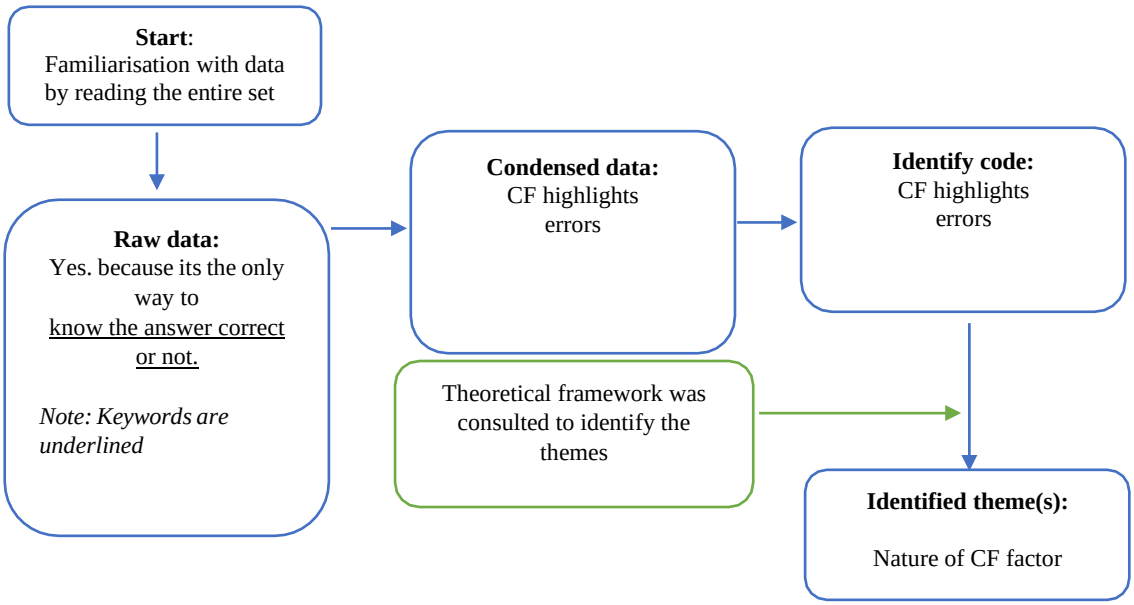
Figure 3.15: Pattern matching using actual data

3.9.3 Thematic Analysis

To analyse the quantitative raw data in the pattern-matching technique, Thematic Analysis (hereinafter referred to as TA) approach by Braun and Clarke (2006) was employed. The TA method was used for identifying, analysing, and reporting patterns or themes within a data set. Furthermore, the data set can be obtained from transcripts of interviews, responses to qualitative questionnaires (as in the case of this current study), audio recordings, or video sources (Clarke et al., 2015). In this study, the data were analysed thematically by hand. Creswell (2014) asserted that the hand analysis of qualitative data includes several processes of the researcher reading the data, marking it by hand, and dividing it into parts. Thus, the researcher could easily locate text passages and keep track of files. In doing so, the qualitative data were transferred into a Word document and printed out. Then, the printed document was laid out on a table, so the researcher couldsee all responses displayed at once. Common themes and sub-themes were identified and marked with different colour highlighters, pens, and coloured pencils. The primary case study that was made as a reference for analysing qualitative data using TA was that of Cedervall and Aberg (2010).

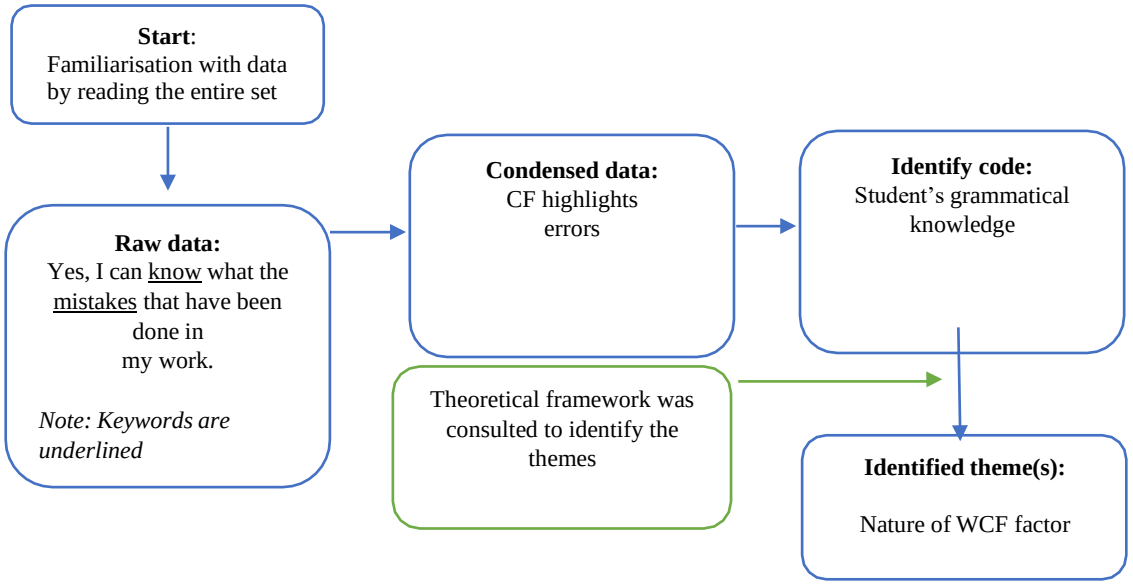
Thematic analysis was selected because it works with a wide range of research questions. This includes when the research questions explore about individual's understandings or experiences regarding the construction and representation of specific events in a particular context. There are several other qualitative analysis techniques such as grounded theory analysis (see Charmaz, 2014; Glaser & Strauss, 2017) and consensual qualitative research analysis (see Hill et al., 2005; Hill, 2012) but they are not selected due to the rigorous analysis techniques suitable for theory building. In this current study, thematic analysis is sufficient to provide an understanding of what these qualitative data show concerning the qualitative research questions. In this regard, TA provides a foundation of basic skills needed to engage with qualitative data (Clarke et al., 2015). Notethat TA was used to analyse students' responses obtained from the open-ended questionnaire. Figures 3.16 and 3.17 provide illustrations of how TA was performed with actual data from the open-ended questionnaire.

Before analysing the qualitative data, students' responses were transferred into tables. These tables are labelled as "table of analysis" which corresponds to every question in the instrument (see Appendices 16-19 for a sample of the tables). For instance, Appendix 16 shows the Table of Analysis of Question 1 for Group 1. As illustrated in the table, actual students' responses are assigned to the "Students' replies" column. The other columns to the right were filled as data analysis progressed toward the stage of producing themes. The following Figures 3.17 and 3.18 illustrate the TA process starting from raw data to the emergence of a final theme.



Note: A response made by Student 3 in Group 2 to prompt 2 in the questionnaire.

Figure 3.16: An illustration of TA performed to analyse the open-ended questionnaire - responses



Note: A response made by Student 13 in Group 2 to prompt 2 in the questionnaire.

Figure 3.17: An illustration of TA performed to analyse the open-ended questionnaire responses

The comprehensive explanation of how the raw data were analysed from the beginning until the reporting phase is illustrated in a six-phase model of the recursive process in the TA approach (Braun & Clarke, 2006; Clarke et al., 2015) illustrated in Figure 3.19. The analysis does not follow a linear process concerning time because a researcher may move back and forth as needed throughout the phases. Note that, inductive reasoning is primarily identified with TA as a data analysis process that involves reading and interpreting raw contextual data to develop concepts, themes, or a process model through interpretations based on data.

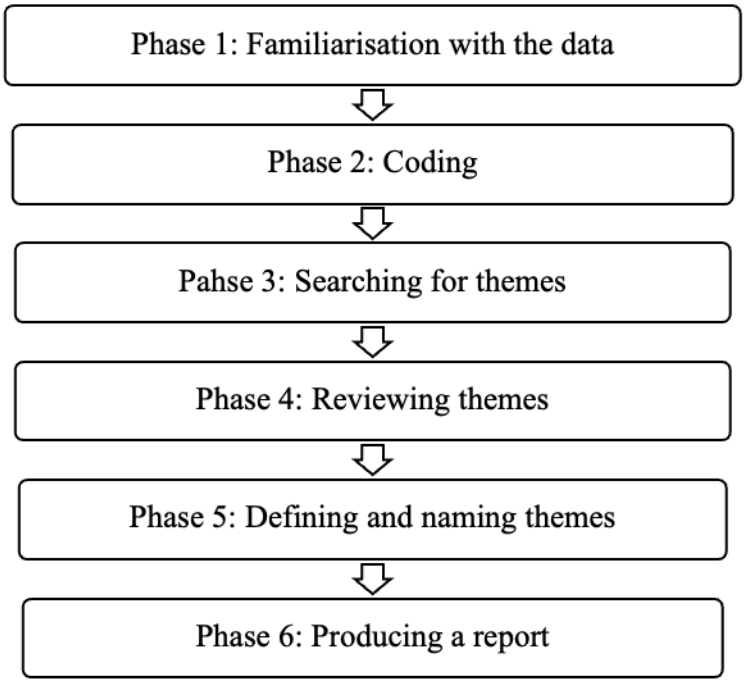


Figure 3.18: The six phases of thematic analysis

Figure 3.19 illustrates the flow that was used to analyse students' responses to the open-ended questionnaire. The following sections provide a thorough description of the process along with illustrations. Note that, before phase 1 began, all students' responses were transferred into the Table of Analysis as seen in Appendices 16-19.

3.9.3.1 Familiarisation with the data

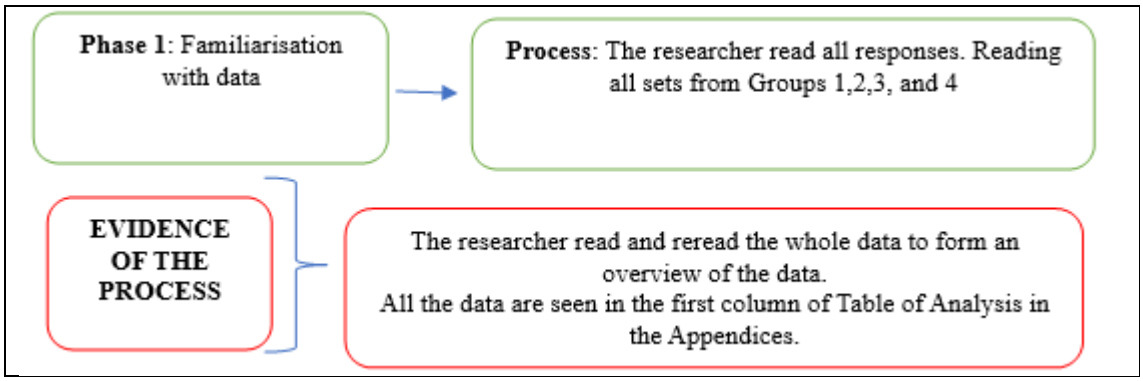


Figure 3.19: First phase in TA

The first phase of TA (Figure 3.20) involved familiarisation with the data which is acommon step in most qualitative analyses. In this regard, the researcher read and reread thewhole data to form an overview of the data. Additionally, the phase of reading the data several times provides the bedrock for the rest of the analysis, though it is time-consuming (Braun & Clarke, 2006).

3.9.3.2 Coding

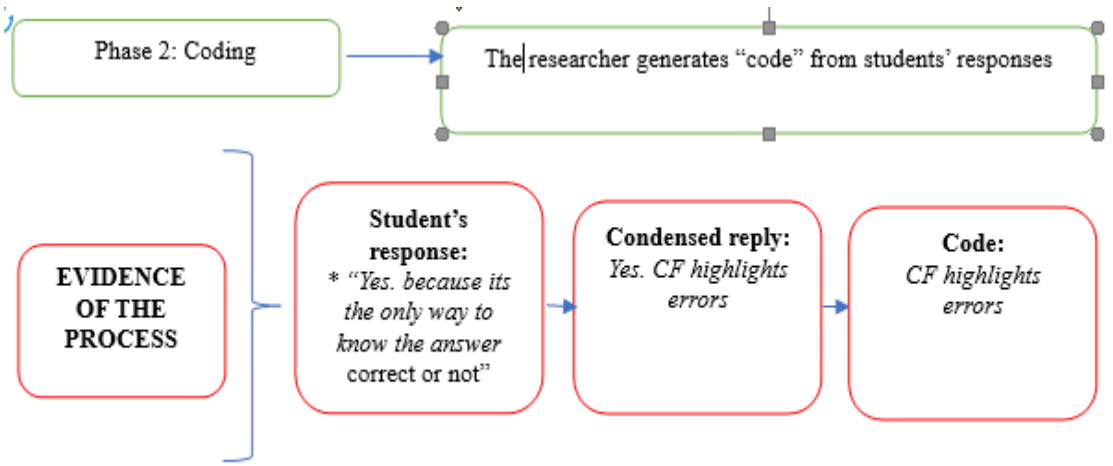
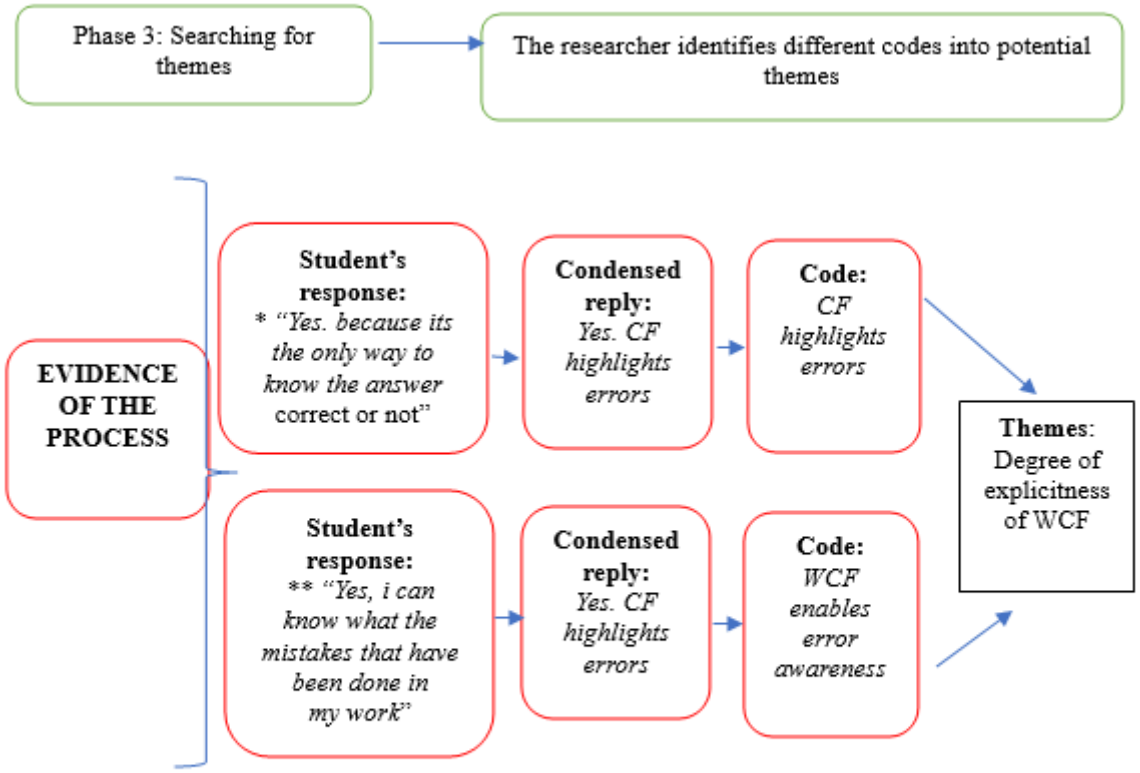


Figure 3.20: The second phase in TA

The second phase was coding. The process is illustrated in Figure 3.21. This phase required the researcher to generate a preliminary list of ideas regarding what was in thedata and what was noteworthy about them. In this current study, the coding process was performed by writing notes on the texts, underlining, or highlighting to specify potential patterns or keywords that can be deduced to codes (see Figure 3.21). To do this, in the following response by a student, "*Yes. because it's the only way to know the answer corrector not*", the keywords were highlighted as "*Yes, know the answer correct or not*". Then, thestudent's response is transferred to the column labelled "Condensed student's replies" as seen in Figure 3.20. At this stage, the response has been derived into more meaningful datathat can be deduced to codes. Next, "the code" is derived by eliminating any words that arenot relevant to the question in the questionnaire. For instance, the word "*yes*" that appearedin the "condensed reply box" carries little meaning to explain the code. Finally, the data derived from Student 3 of Group 2 to prompt two is coded as "*CF highlights errors*".

3.9.3.3 Searching and Deducing Themes



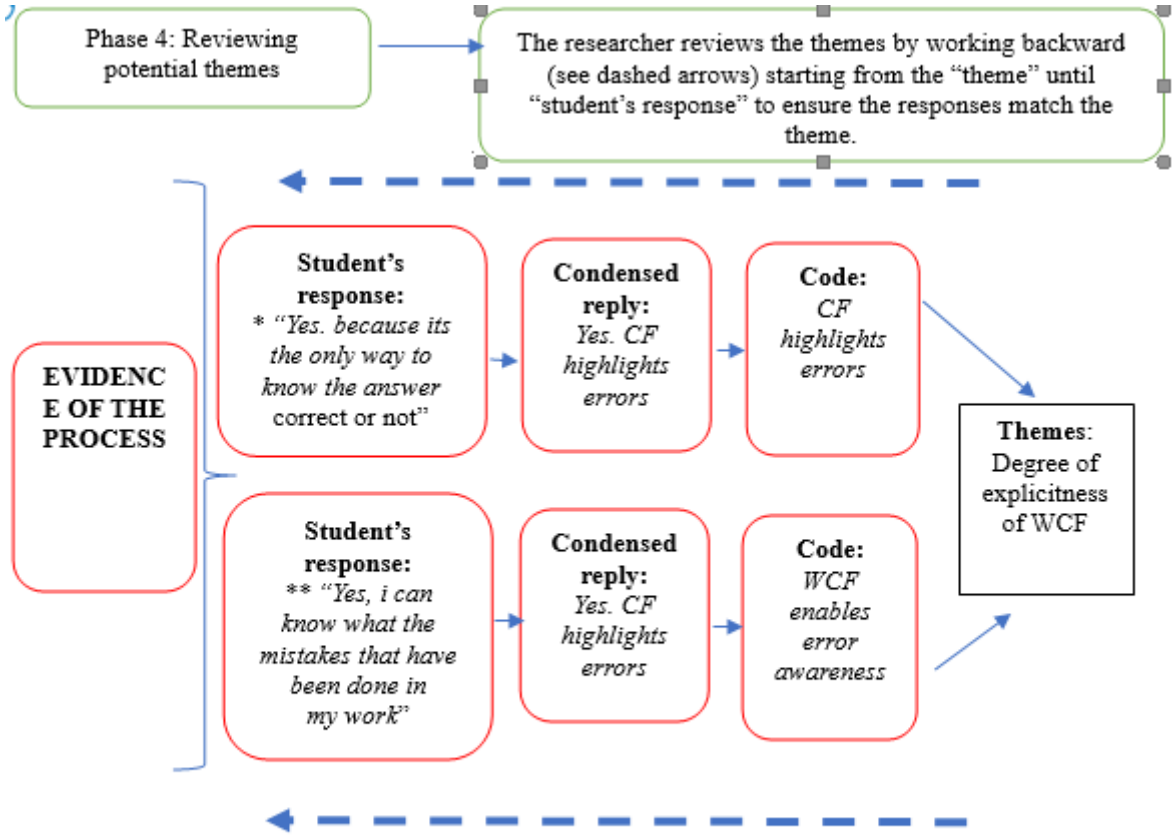
* A response made by Student 3 in Group 2 to prompt 2 in the questionnaire.
** A response made by Student 13 in Group 2 to prompt 2 in the questionnaire.

Figure 3.21: The third phase in TA

The third phase involved searching for and deducing themes as in Figure 3.22. This phase included categorising different codes into potential themes and compiling all relevant data extracts within the identified themes. This is an active process in which the researcher generates and constructs the themes. At this stage, the code has been identified, which is based on the students' responses. As shown in Figure 3.22, the two codes are "*CFhighlights errors*" and "*WCF enables error awareness*".

Following Nowell et al. (2017), the potential themes were derived from the theoretical framework of this current study that identified the factors that may contribute to the effectiveness of WCF. In this process, the theoretical framework in Figure 2.1 of Chapter 2 was consulted. As seen in Figure 2.1, the "nature of CF factors" was identified as a variable that can affect WCF's effectiveness. Furthermore, in Figure 2.5 of Chapter 2, there are two themes associated with it, namely, "*the role of metalinguistic information in direct WCF*" and "*degree of explicitness of WCF*". At this point, it is possible to identify and categorised the codes in Figure 3.22 with any two themes listed in Figure 2.5. In the case of the students' responses in Figure 3.22, their responses are used to support the "*degree of explicitness of WCF*" that contributes to the effectiveness of WCF.

3.9.3.4 Reviewing the Potential Themes



* A response made by Student 3 in Group 2 to prompt 2 in the questionnaire.
** A response made by Student 13 in Group 2 to prompt 2 in the questionnaire.

Figure 3.22: The fourth phase in TA that shows coherent data and theme

The fourth phase involved reviewing the potential themes as in Figure 3.23. This phase had two levels of reviewing and refining the themes. Specifically, the first level involved reviewing themes against the collated extracts of data. In other words, the compiled extracts for every theme were read to ensure that they formed a coherent pattern with the themes. To illustrate this process, the researcher works backwards (see Figure 3.23identified with dashed arrows).

First, looking at the theme, which is, "*Degree of explicitness of WCF*", the researcher read the code, which is, "*CF highlights errors*". The code and the theme are relatable. Then, the researcher read the student's response, whichis, "*Yes. because it's the only way to know the answer correct or not*". At this point, the researcher can verify that the theme, the code, and the student's response are relatable and coherent. This confirms the condition that the raw data supports the theme. However, if thedata and the theme are not coherent, some codes might need to be discarded or relocated toanother theme. For instance, as illustrated in Figure 3.24, the theme derived from the student's response is "Learner's experience and exposure to WCF". However, upon rehearsing the fourth phase, it was discovered that the student's responses could not beused to support the final theme. It was because the raw data points to the "degree of explicitness of WCF" theme. This shows that the data, the code, and the final theme are notcoherent. Therefore, the data and the code were removed and placed under the theme that they lend support as shown in Figure 3.24.

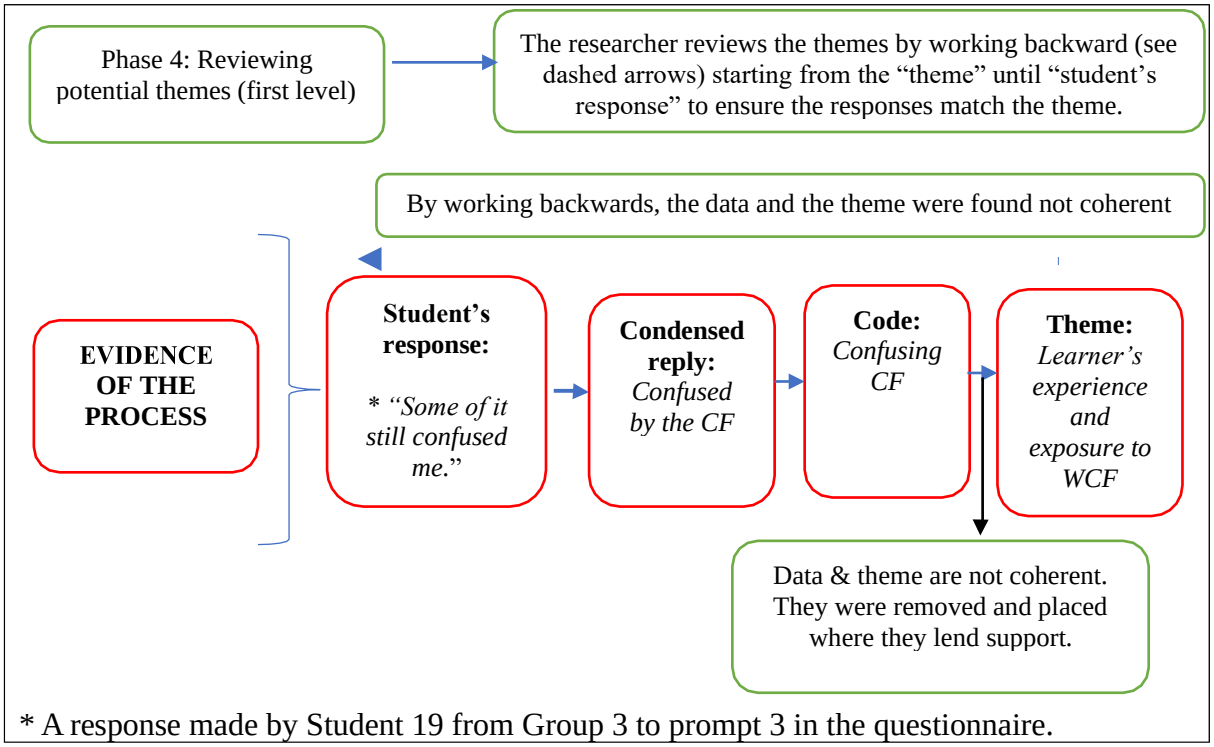


Figure 3.23: The fourth phase in TA shows incoherent data and theme

The second level required the researcher to review the themes concerning the entire data set. This level aimed to have a set of themes that capture the most relevant and important features of the data concerning the research questions. To illustrate the process, all students' responses and codes that support the theme of "degree of explicitness of WCF" are listed together. For instance, students' responses seen in Figure 3.25 are a fraction of all data sets that support the theme "degree of explicitness of WCF". Then, the theme (i.e., degree of explicitness of WCF) was reviewed against the data set that supports it. This was to ensure that the themes captured the most important features of the data which were then used to answer the fourth RQ.

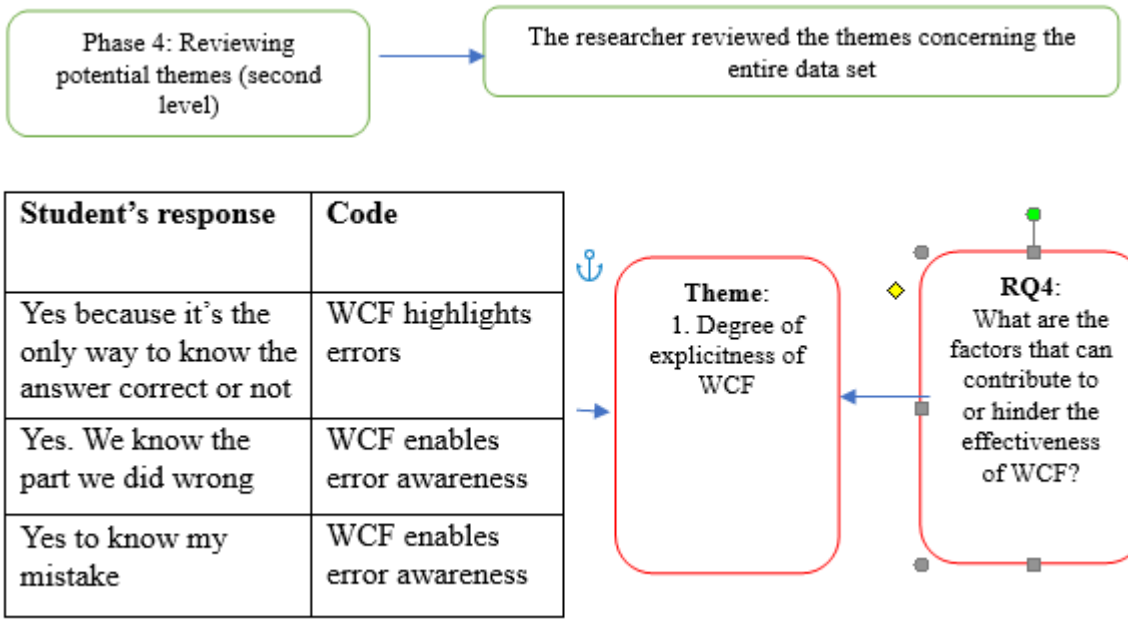


Figure 3.24: The second level of the fourth phase in the TA

3.9.3.5 Defining and Naming Themes

Phase five was associated with defining and naming the themes. This phase involved the researcher refining the themes that are presented for analysis. In refining the themes, the theoretical framework of this current study was constantly referred to establish and confirm the themes. To illustrate the process, the researcher subsequently identifies and compares the patterns or themes evident in the data against one or several hypothesisedpatterns that the researcher has developed from the literature, particularly referring to the theoretical framework. As seen in the theoretical framework in Figure 2.1, the "nature of CF factors" is identified as the hypothesised pattern that can affect the effectiveness of WCF. Moreover, listed under it are two sub-components, which are, "the role of metalinguistic information in direct WCF" and "degree of explicitness of WCF" (see Figure 2.5 in Chapter 2). Subsequently, it is now possible to answer the fourth research question.

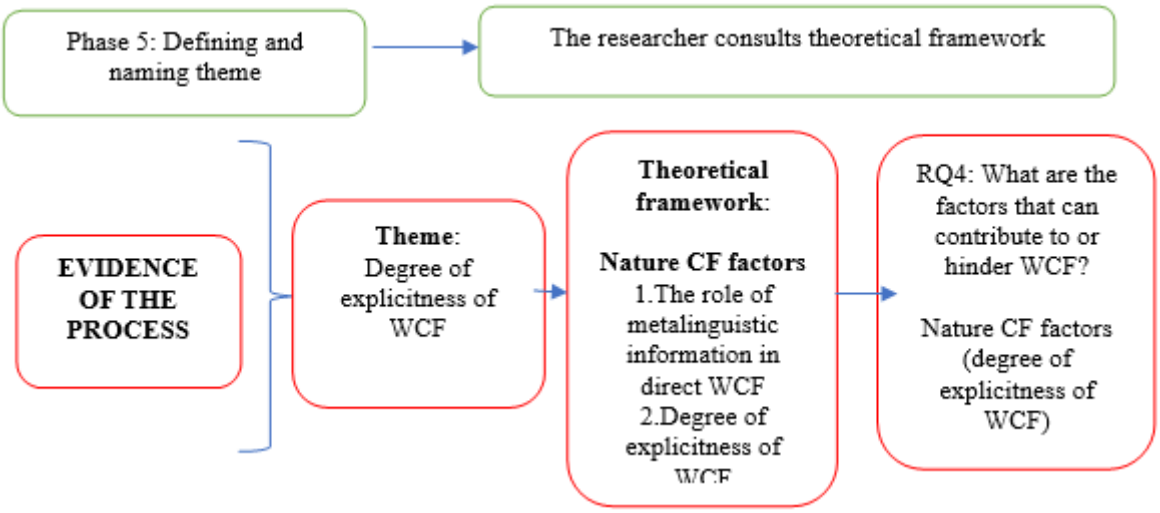


Figure 3.25: The fifth phase in TA

3.9.3.6 Producing the Report

Finally, the sixth phase is about producing the report. In this final phase, the researcher provided a succinct, logical, clear, non-repetitive, and interesting account of the themes presented in a story-like structure. Sufficient evidence in terms of participants' accounts was also provided to demonstrate the commonness of the themes as they appeared in the data set.

3.9.4 Content Analysis

Another qualitative analysis method was also employed which was the content analysis technique. This method was used to qualitatively analyse the field notes. Note that, TA was employed to analyse the qualitative data from the open-ended questionnaire whereas content analysis was used to analyse the qualitative data from the field notes. To guide the researcher in analysing the field notes, a guideline by Phillippi and Lauderdale (2018) was referred to.

The field notes and the course document were used to "add-back" critical nonverbal content into the open-ended questionnaire responses. The example of how the content in the filed notes is added to the main findings from the open-ended questionnaire is illustrated in Figure 3.27. For instance, the findings from the field notesare triangulated with findings from the open-ended questionnaire.

To explain the process, it first began with the researcher recording students' activities or behaviour during the phases of doing Tests 1, 2 and 3 on a piece of paper. Once each phase has ended, the researcher transfers everything that he has written on the paper into a Microsoft Word document. It is vital that the step is done promptly while the researcher's mind is still fresh about what transpires in the class. This step is repeated in the following phases, namely, (1) doing Test 1, (2) revising Test 1, (3) doing Test 2, and (4) doing Test 3. All the information gathered and recorded during the phase can be seen in thefield notes documentation in Appendix 7. For instance, during the phase of revising errors in Test 1, it was observed that "*A student in Group 4 was seen referring to his phoneduring revision. He was approached. The student admitted that he looked for metalinguistic information of collocations that he made errors on. He was told not to do that again*". This information was recorded in the field notes.

As mentioned before, information from the field notes was used to "add-back" critical nonverbal content to the open-ended questionnaire responses. In order to do this, the data was used to support the data obtained from the questionnaire. For instance, the data derived from the questionnaire as "*No. It is because I have to find more examples of the sentences to help me understand more*" was supported by the data from the field notes, which is, "*The student admitted that he looked for metalinguistic information of collocations that he made errors on*".

These two data help the researcher to support the theme of “Direct WCF encourages autonomous learning behaviour learning behaviour” which provides the answer for the fourth RQ. Moreover, A standard notation system (i.e., using a highlighter) was used that marks the information when the researcher has added thecommentary or content (from field notes) into the main content (findings from questionnaires).

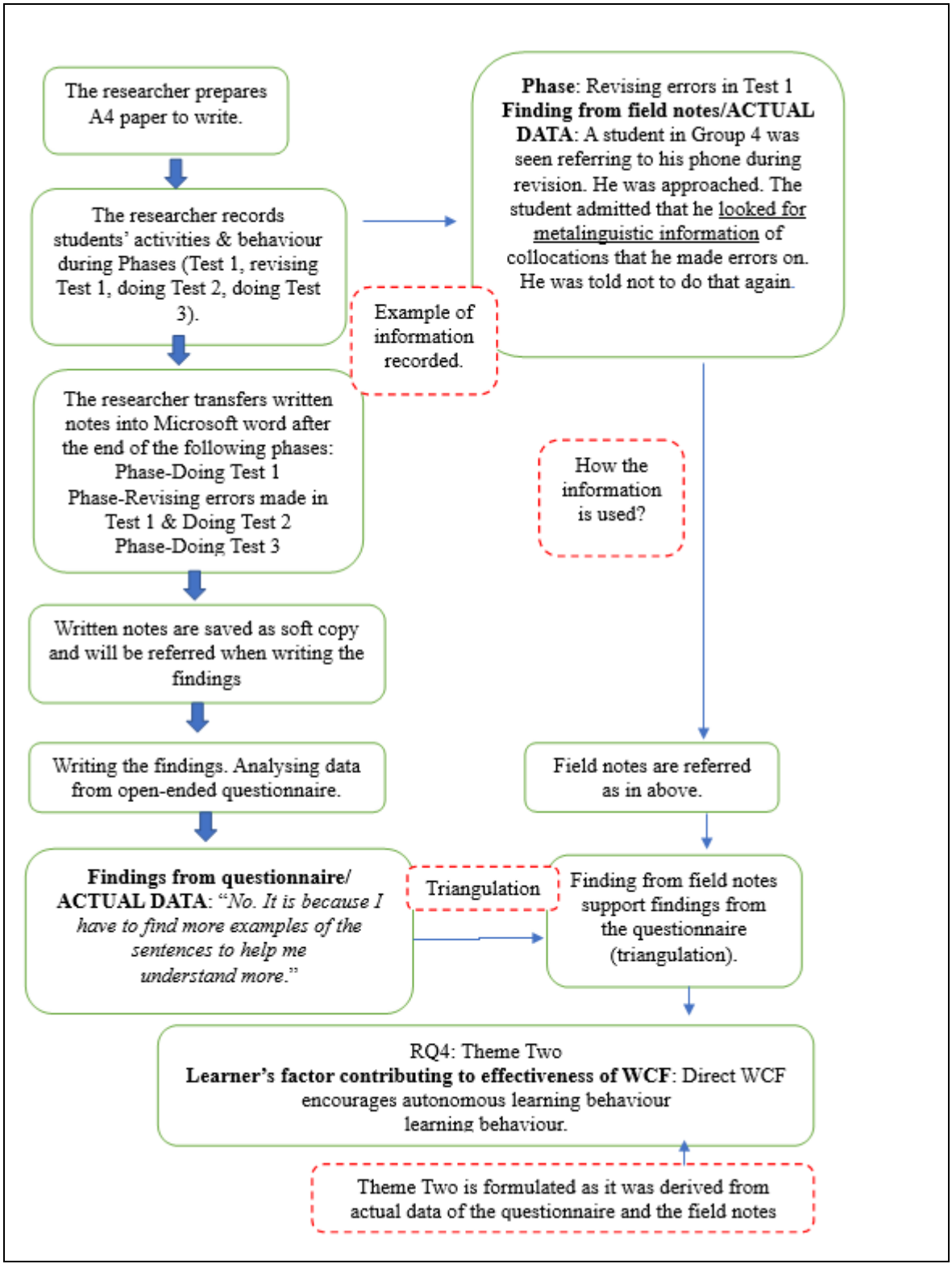


Figure 3.26: An illustration of how field notes data are used for triangulation

The final source of data is the course information document (see Appendix 1). To analyse its content, the Document Analysis procedure by O'Leary (2004) was referred to. There is an eight-step process to analyse the document as illustrated in Figure 3.28.

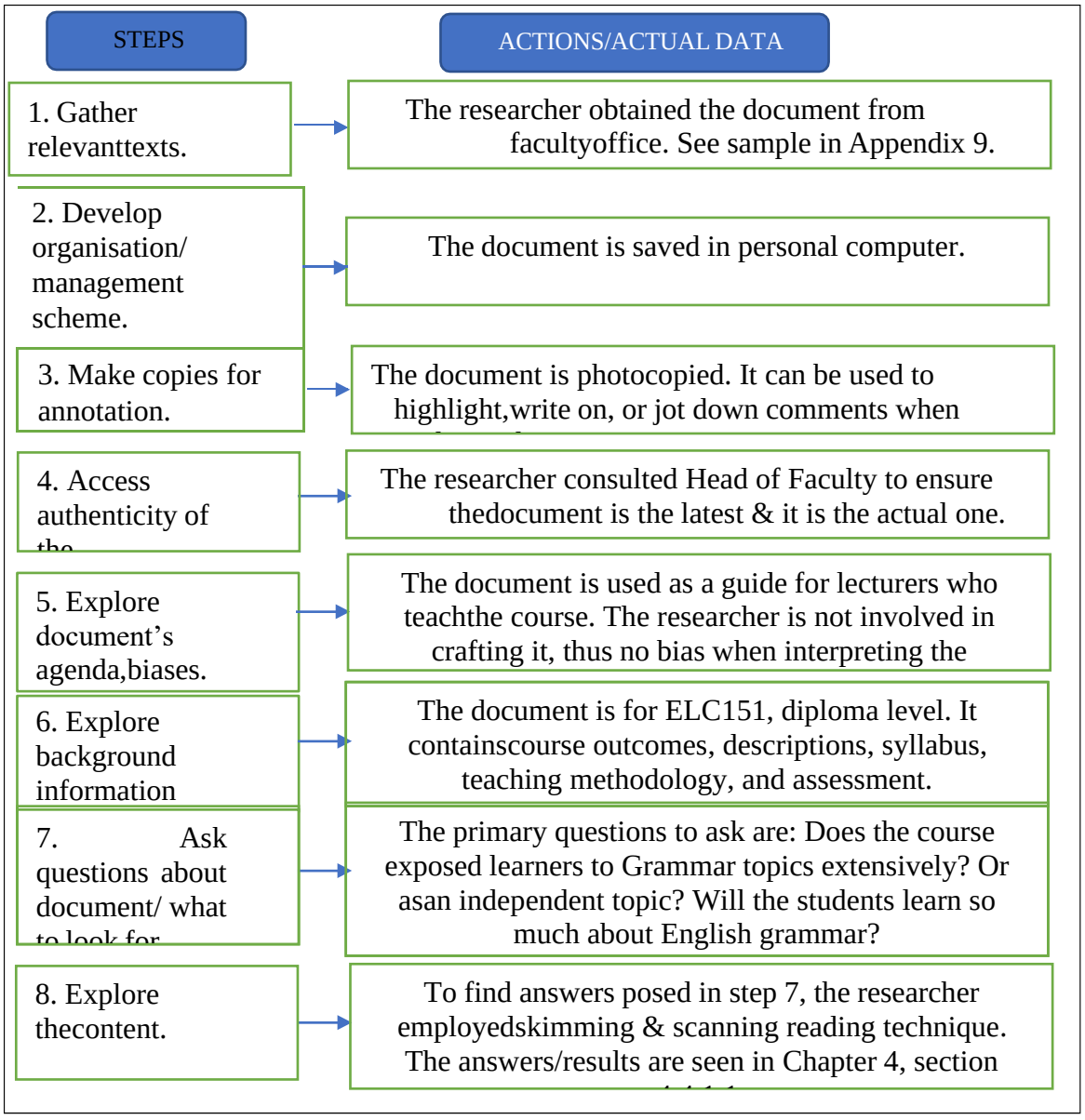


Figure 3.27: Steps to analyse course information document

To this end, patterns derived from each case were matched with the empirical findings in the literature. To answer RQ4, whilst strengthening the proposition in the theoretical framework via theoretical replication across cases, the cross-case analysis was performed. In this analysis method, the themes and subthemes that appeared across the four groups were compared and contrasted correspondingly. As stated in the previous chapter, the purpose of RQ4 is to explore the factors perceived by the students that might enhance or hinder them from benefiting from direct and indirect WCF. Therefore, the themes and subthemes derived from each case are combined and integrated to have a synthesis of the responses for answering RQ4. This refers to Yin (2018, p.247) that "out of the cross-case synthesis emerged the finding that consensus appeared to occur when all members of a group had developed not just an agreement over a course of action, but a common vision".

3.10 Study Limitations

This current study has several limitations. Specifically, the limitations include practice effect, researcher bias, generalisability of the results, and study context.

3.10.1 The Practice Effect

The practice effect concerns the condition where the participants perform better in a subsequent task because they have been exposed to it in a prior stage or had a chance to practise it. This effect is categorised under the carryover effect as one of the primary disadvantages of test-pre-test study design (Shaughnessy et al. 2015). In the case of this current study, the students were exposed to three different time-point of tests (e.g., Test 1, Test 2, and Test 3). Therefore, the student's performance in Test 3 is subjected to the

practice effect. However, this effect was counterbalanced with several strategies (e.g., The organisation of items in Test 3 was rearranged so that they were in different positions than in Test 2, with a longer time interval between Test 2 and Test 3). Nonetheless, this effect must be considered when interpreting the findings of the long-term effect of direct and indirect WCF in this current study.

3.10.2 The Researcher's Bias as an ESL Educator Influencing the Interpretation of Data

As the study progressed, the researcher reflected on how his bias affected his interpretations and perceptions of the data, specifically the qualitative data. This is because the researcher's deep involvement in the issue being investigated can potentially compromise the investigation. The researcher constantly reminded himself that his background as an ESL educator could influence how the data are interpreted. Therefore, the researcher constantly monitored any strong reactions he might have toward anything being observed or reported during the investigation. To strengthen the trustworthiness of his interpretation of the findings, a continuous reflection on how his views and biases shaped his methodological decisions, known as a subjectivity audit (Bradbury-Jones, 2007), became the essential practice in this study.

3.10.3 Generalisability of the Results

The case study design is often associated with a lack of generalisation of findings, seen by most scientific field scholars, as the extent to which the data can describe situations or phenomena beyond the scope of a particular study. However, Yin (2014) advocates analytical generalisation, in which the researcher compares or "generalises" case study findings to existing theory–a method employed by this current study.

From Yin's view, a particular case study is driven by the need to test, develop, or modify a theory, that gives a single-or multiple-case study research explanatory power. Therefore, the findings of this case study, to a certain extent, are generalisable based on Yin's perspective.

3.10.4 The Context of this Case Study is Limited to One Local University

This current study was conducted in a public university in Sarawak, Malaysia. There are many public universities in the state, not to mention in the whole country. Therefore, considering all these universities, it is fairly unrealistic to generalise the context to suit other universities in the country.

3.11 Chapter Summary

This chapter has thoroughly described the methodology employed by theresearcher. It begins with a description of the research design. Then, it is followed by the sections on the population and the units of analysis. The next section describes the researcher's position as the teacher-researcher in this case study. In addition, the sectionson data sources, data collection procedures, and data analysis techniques provide a clear picture illustrating the work done on the data. At the end of this chapter, the researcher discusses ethical considerations and several issues related to the trustworthiness of a case study design. The study limitations conclude the chapter. The next chapter presents the results.

CHAPTER 4

FINDINGS

As stated in Chapter One, the purpose of this embedded case study was to develop an understanding of the role of WCF in addressing ESL students' collocation errors. It was driven primarily by several factors such as the students in the university had a significant lack of collocation competence and a dearth of literature knowledge to support the role of WCF in addressing collocation errors among undergraduates in Malaysia. To address this issue, four research questions were framed to guide the study:

i What are the short-term effects of direct and indirect WCF on the collocation competence of the students in the study?

ii What are the long-term effects of direct and indirect WCF on the collocation competence of the students after nine weeks?

iii What type of WCF has a greater effect on the students' collocation competence?

iv As perceived by the students, what factors may enhance or hinder students to benefit from direct and indirect WCF?

The researcher collected data from various sources to answer the research questions. As presented in section 3.6, the data sources include a series of Tests, an open- ended qualitative questionnaire, field notes, and a course information document. To presentthe data analysis, the reporting is grouped into a respective research question. In every research question, results from each group are presented.

A summary is provided at the end of every research question. Also, it is important to note that, the reporting on RQ1 and RQ2 is based on within-case analysis, whereas the reporting on RQ3 and RQ4 is based on cross-case analysis.

4.1 Short-term Effects of Direct and Indirect WCF on the Collocation Competence of the Students

The objective of this research question is to determine the short-term effect of direct and indirect WCF on the collocation competence of the participants in this study.The effect was measured by comparing the students' performance between Test 1 and Test 2. Before doing Test 2, the students were given the chance to revise the errors containing respective WCF types. Then, Test 2 was administered 30 minutes later. Positive effects may indicate the effectiveness of the WCF types on the collocation competence of the students. The results of each case are reported in the following sections.

4.1.1 Group 1

The background of students in Group 1 is described. It consisted of 30 low-proficiency ESL students from the faculty of Information Management who enrolled in a diploma in Information Management. They were in their third academic semester when they participated in this study. In the preliminary discussion with senior faculty members inthe university, they agreed that most of the students from this faculty had satisfactory English proficiency, as most of the students from the group obtained a C grade in past English courses. Their overall proficiency is reflected in the previous semester's English course (e.g., ELC151) as shown in Appendices 20-23. Moreover, Test 1 results (see Table 3.4) indicate that most low-proficiency students in this study have problems formingcorrect collocations in the test.

To determine the short-term effect of WCF on their collocation competence, indirect WCF was used to address the collocation errors made in Test 1. The first step to answering RQ1 was to determine the homogeneity of Test 1 scores at the outset (Nemati et al., 2019) for both groups identified as low-proficiency groups (Group 1 and Group 2). This step was vital as it was performed to show that all participantswere homogeneous in terms of their collocational competence at the start of the study. Levene's test of homogeneity of variances was performed in the SPSS and the results are reflected in Table 4.1.

Table 4.1: Levene's test of homogeneity of variances of Test 1 of low-proficiency groups

Levene's Statistic	df1	df2	Sig.
1.392	2	62	.344

The homogeneity of Test 1 scores of Group 1 and Group 2 in the study are seen in Table 4.1 which shows that the scores have met the assumption of homogeneity of variances, F (2, 63) $p = 0.344$. The p-value which is over .05 ($p > 0.05$) indicates that the variances are not significantly different across all groups. In other words, the variances were almost equal statistically among students in Group 1 and Group 2 at the start of the study.

To determine the short-term effect of direct WCF on the collocational competence of Group 1, a series of paired sample t-tests were performed. Table 4.2 shows the descriptive statistics of Group 1 across two sets of tests (Test 1 and Test 2). The following Table 4.3 shows the results of paired sample t-test.

Table 4.2: Descriptive statistics of Group 1 receiving direct WCF

		N	Minimum	Maximum	Mean	Std. Deviation	Variance
Test 1		30	7.00	30.00	17.2812	5.06241	24.737
Test 2		30	14.00	34.00	25.3000	5.76643	33.252

Table 4.3: Paired sample t-test of Group 1 receiving direct WCF

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Test 1 and Test 2	7.866	4.39226	.80191	-9.50676	-6.22657	-9.810	29	.000

The result in Table 4.4 shows that $t(29) = -9.810$, $p < .05$. Moreover, the mean scores increased from Test 1 mean of 17.2812 to Test 2 mean of 25.300, an improvementof 8.0188, and the *p*-value is less than .05 ($p < .05$). These results indicate that there was a positive significant difference between the mean scores of both tests. It can be concluded from the direction of the t-value and the means of Test 1 and Test 2 scores that there was a statistically significant improvement observed after direct WCF was used to address collocation errors made in Test 1. The mean scores increased from Test 1 (17.2812) to Test 2 (25.300), an improvement of 8.0188, and the *p*-value is less than .05 ($p < .05$). Therefore, it can be deduced from the statistical data that direct WCF type provided on errors made in Test 1 can facilitate the students' collocational competence as measured in the subsequent test.

4.1.2 Group 2

This is another group of low-proficiency ESL students in the university identified for the study. As agreed during the discussion with senior faculty members, this group of students that represent Group 2 was selected from the faculty of Information Management who enrolled in the diploma of Information Management program. Group two is made up of 32 students. Group 2 was identified as a low-proficiency ESL group based on their performance in the previous semester's English course (e.g., ELC151). To illustrate, Appendix 20 shows that most students from this group obtain a C grade in ELC151. Another feature associated with the low-proficiency group was that Group 2 showed a lack of collocational competence at the start of this study (see Table 3.4 which shows poor performance of low-proficiency students in Test 1 with 70.9% of the students obtaining below 20 marks). The low-proficiency students in Group 2 were exposed to indirect WCF type for addressing the errors they made in Test 1. Then, they were given Test 2 to determine the effect of indirect WCF on their collocation competence.

To determine the short-term effect of indirect WCF on their collocational competence, a paired sample t-test was performed on the data (i.e., Test 1 and Test 2 scores) and the results are presented in Table 4.4 which shows descriptive statistics whereas Table 4.5 presents the results of paired sample t-test.

Table 4.4: Descriptive statistics of low-proficiency students receiving Indirect WCF

	N	Minimum	Maximum	Mean	Std. Deviation
Test 1	32	8.00	30.00	17.2812	5.06241
Test 2	32	12.00	31.00	21.4375	4.82559

Table 4.5: Paired sample t-test of the low-proficiency group receiving Indirect WCF

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Test 1 and Test 2	-4.15625	2.60408	.46034	-5.09512	-3.21738	-9.029	31	.000

The results in Table 4.5 show that $t(31) = -9.029$, $p < .05$. The mean scores illustrated in Table 4.4 show the scores in Test 1 improved from 17.2812 to 21.4375 in Test2, an improvement of 4.156, and the *p*-value is less than .05 ($p < .05$). The results in Table 4.5 show that there was a positive significant difference between the mean scores of both tests. It can be concluded from the direction of the t-value and the means of Test 1 and Test 2 scores that there was a statistically significant improvement observed after the students were exposed to indirect WCF type. The mean scores improved from 17.2812 to 21.4375, an improvement of 4.156. and the *p*-value is less than .05 ($p < .05$). Therefore, it can be deduced from the statistical data that indirect WCF provided on errors made in Test 1 can facilitate the students' collocational competence as measured in the subsequent test.

4.1.3 Group 3

Group 3 is a group of high-proficiency ESL students. As stated previously, this group of students was identified based on several criteria, which include their performance in the previous semester's English course (e.g., ELC151).

Senior faculty members have agreed that the students from this faculty were among the high-proficiency ESL students in the university. As seen in Appendix 22, most students from the faculty of Applied Sciencesin the university obtained an A grade in the previous English course which justifies their overall proficiency, meeting the context of this current study. There are 33 high-proficiencyESL students in Group 3. At the start of the study, 51.7% of students from high proficiencystudents in this study scored less than 20 marks on Test 1 which indicate that they had some difficulties forming correct collocation despite their profile as high proficiency students in the university.

Before further testing can be employed to investigate the research question, a one-way ANOVA was run in the SPSS to ensure the homogeneity of variances of the high-proficiency groups (i.e., Group 3 and Group 4). As mentioned earlier, this was the first step to determining that the student's performance was equal across all groups at the start of the study. Table 4.6 illustrates the descriptive statistics of Test 1 mean scores of high-proficiency groups in this study.

Table 4.6: Descriptive statistics of mean scores of Test 1 of high-proficiency groups

					95% Confidence Interval for Mean			
	N	Mean	SD	SE	Lower Bound	Upper Bound	Minimum	Maximum
Group 3	33	20.84	4.988	.86834	19.0797	22.6172	12.00	30.00
Group 4	25	20.56	5.315	1.06314	18.3658	22.7542	12.00	30.00

The statistical result of Levene's test of homogeneity of variances in Table 4.7 shows that there are no statistical differences in the mean scores of Test 1 in high-proficiency groups, $F(2, 58) = 1.959$, $p = 0.148$. Therefore, this implies that both groups are

homogeneous in terms of their collocational competence at the start of the experiment.

Table 4.7: Test of homogeneity of variances of Test 1 of high proficiency groups

Levene Statistic	df1	df2	Sig.
1.959	2	80	.148

To determine the short-term effect of direct WCF on the students' collocation competence, the students in Group 3 completed Test 1. Then, errors made in Test 1 were treated with direct WCF, and the students were given the chance to revise them afterwards. Thirty minutes later, Test 2 was assigned to determine whether or not direct WCF had facilitated the students' collocational competence. A paired sample t-test was performed on the data and the results are presented in Table 4.8 which shows descriptive statistics whereas Table 4.9 presents the results of the paired sample t-test. The results in Table 4.9 show that $t(32) = -7.044$, $p < .05$ which shows a statistically significant improvement in mean scores from Test 1 to Test 2. Specifically, the mean scores of Test 1 improved from 20.8485 to 26.1818 when measured in Test 2, an improvement of 5.3333.

Table 4.8: Descriptive statistics of the high-proficiency group receiving direct WCF

	N	Min	Max	Mean	Std. Deviation	Variance
Test 1	33	12.00	30.00	20.8485	4.98824	24.883
Test 2	33	10.00	37.00	26.1818	6.35145	40.341

Table 4.9: Paired sample t-test of the high-proficiency group receiving direct WCF

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval				
				Lower	Upper			
Test 1 & Test 2	-5.33333	4.34933	.75712	-6.87554	-3.79113	-7.044	32	.000

The results shown in Tables 4.8 and 4.9 indicate that there was a significantdifference between Test 1 and Test 2. It can be concluded from the direction of the *t*-value and the means of Test 1 and Test 2 scores that there was a statistically significant improvement observed after the students in Group 3 were exposed to direct WCF. The mean scores increased from Test 1 mean of 20.8485 to Test 2 mean of 26.1818, an improvement of 5.333, and the *p*-value is less than .05 ($p < .05$). Therefore, it can be deduced from the statistical data that direct WCF provided on errors made in Test 1 can facilitate the students' collocational competence as measured in the subsequent test.

4.1.4 Group 4

Group 4 was selected from the Faculty of Applied Science. This group was identified as Group 4 and most students from this group shared the same features as Group 3 in terms of their proficiency. Furthermore, this group was identified as high-proficiency ESL learners based on several criteria such as most of the students obtained A grades in theprevious English courses. This is reflected in their performance as seen in Appendix 23 of the past semester's English course performance. Despite their profile as a high-proficiency ESL group, it was observed that some students from this group also had difficulty forming correct collocations (see Table 3.4). There are twenty-five students in Group 4.

To determine the short-term effect of indirect WCF on the students' collocation competence, the students in Group 4 completed Test 1. Then, errors made in Test 1 were treated with indirect WCF, and the students were given the chance to revise them afterwards. Thirty minutes later, Test 2 was assigned to determine whether or not indirect WCF had facilitated the students' collocational competence. A paired sample t-test was performed on the data and the results are presented in Table 4.10 which shows descriptive statistics whereas Table 4.11 presents the results of the paired sample t-test. The results in Table 4.11 show that $t(24) = -2.820$, $p < .05$ which indicates a statistically significant improvement in mean scores from Test 1 to Test 2. Moreover, the mean scores improved from 20.5600 to 22.800, an improvement of 2.2400.

Table 4.10: Descriptive statistics of Group 4 receiving indirect WCF

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Test 1	25	12.00	30.00	20.5600	5.31570	28.257
Test 2	25	14.00	31.00	22.8000	4.55522	20.750

Table 4.11: Paired sample t-test of Group 4 group receiving indirect WCF

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Test 1 and Test 2	-2.24000	3.97157	.79431	-3.87938	-.60062	-2.820	24	.009

The results in Table 4.11 indicate that there was a significant difference in mean scores between the two sets of tests. It can be concluded from the direction of the *t*-value and

the means of Test 1 and Test 2 scores that there was a statistically significant improvement observed after the students were exposed to indirect WCF treatment. The mean scores increased from Test 1 mean of 20.5600 to Test 2 mean of 22.8000, an improvement of 2.240, and the *p*-value is .009 which is less than .05 ($p < .05$). Therefore, itcan be assumed from the statistical data that indirect WCF provided on errors made in Test1 can facilitate the students' collocational competence as measured in the subsequent test.

4.1.5 Direct and Indirect WCF Can Facilitate Learners' Collocation Competence in Short-term

The results obtained from all groups in this case study seem to support the role of WCF in facilitating ESL learners' collocational competence. This is justified by the statistical data that: (1) Group 1 showed improvement in collocational competence after their exposure to direct WCF; (2) Group 2 exhibited significant development of their collocational competence post-exposure to indirect WCF; (3) Group 3 displayed some progress in terms of their collocation competence after revising the direct WCF; and (4) Group 4 showed a significant increase of collocation competence. Moreover, considering the proficiency of the cases, in which Groups 1 and 2 are low-proficiency ESL students whereas Groups 3 and 4 are high-proficiency ESL students, both types of WCF were observed as positively affecting the collocational competence of the students from these two proficiencies. This may suggest that regardless of the student's proficiency, direct and indirect WCF were effective in facilitating their collocation competence. It is worth noting that the WCF effects were short-term as it was measured 30 minutes after revision.

Thus, direct and indirect WCF have positive short-term effects on the collocational competenceof low-proficiency (Groups 1 and 2) and high-proficiency (Groups 3 and 4) students in thiscase study.

4.2 Long-term Effects of Direct and Indirect WCF on the Collocation Competence of the Students

The objective of this research question was to determine the long-term effects of direct and indirect WCF on the collocational competence of the students in this study. To meet the objective, the students had to complete Test 3 which was given ten weeks after the revision of errors. A repeated-measures ANOVA with post hoc comparison was used to analyse the long-term effect using SPSS software. This statistical test provides an array of analysis of variance procedures to use when the identical measurement is made several times on each subject (Leech, Barrett, & Morgan, 2005). In the context of this study, the same instrument (or measurement) was used several times or at several time points (e.g., Test 1, Test 2, and Test 3). Thus, a comparison of variances can be made between several time points. To illustrate the objective, students' performance between Test 3 and Test 1 was compared. The long-term effect is not observed when no significant difference exists between Test 3 and Test 1 scores. Whereas the long-term effect is observed when a positive significant difference is detected between the two mean scores (i.e., Test 1 and Test 3). Results for each case are presented in the following sections.

4.2.1 Group 1

A repeated-measures ANOVA with a Greenhouse-Geisser correction was used to investigate the long-term effect of direct WCF on the collocational competence of students in Group 1. The Greenhouse-Geisser correction value was referred to because Mauchly's

test for the sphericity assumption was violated. Therefore, the Greenhouse-Geisser correction determined that the means across all tests in Group 1 differed statistically significantly between test points (F,1.760, 51.032) = 37.725, $p < .05$) as illustrated in Table 4.12. These data are to ensure that the scores across the three test points differed statistically.

Table 4.12: Tests of within-subjects effects of Group 1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Test	Sphericity Assumed	928.356	2	464.178	37.725	.000	.565
	Greenhouse-Geisser	928.356	1.760	527.554	37.725	.000	.565
Error (Test)	Sphericity Assumed	713.644	58	12.304			
	Greenhouse-Geisser	713.644	51.032	13.984			

Table 4.13 on the other hand illustrates the pairwise comparisons among the three points of tests (e.g., Test 1, Test 2, & Test 3) of Group 1. The post hoc test using Bonferroni correction was computed in the software to detect a significant difference between Test 2 and Test 3. The results in Table 4.13 show that a significant difference was detected between both tests with a mean difference of 4.000 ($p < .05$). The drop in students' performance can also be seen in Figure 4.1. Following Van Beuningen et al. (2012), Test 3 scores were compared with Test 1 scores to see how far the drop in students' performance was. A significant difference was also observed between the two tests with a mean difference of 3.867 ($p < .05$).

Table 4.13: Pairwise comparisons of Test 1, Test 2, and Test 3 of Group 1

(I) Test	(J) Test	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
Test 1	Test 2	-7.867*	.802	.000	-9.904	-5.829
	Test 3	-3.867*	.834	.000	-5.986	-1.747
Test 2	Test 1	7.867*	.802	.000	5.829	9.904
	Test 3	4.000*	1.059	.002	1.309	6.691
Test 3	Test 1	3.867*	.834	.000	1.747	5.986
	Test 2	-4.000*	1.059	.002	-6.691	-1.309
*. The mean difference is significant at the .05 level						

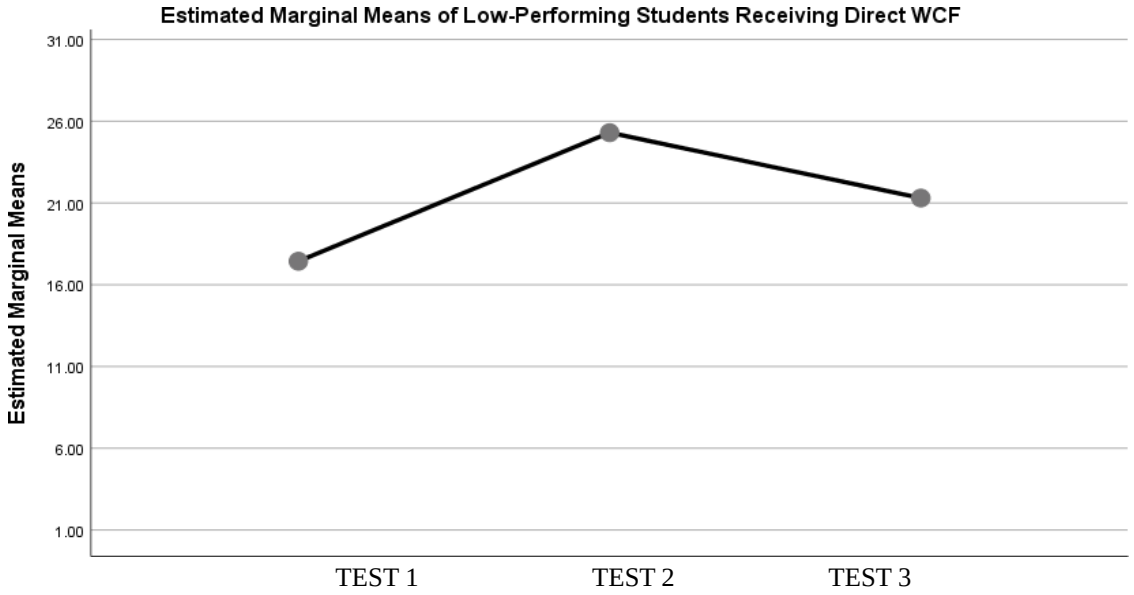


Figure 4.1: Estimated marginal means of low-proficiency students receiving direct WCF

The results presented in Table 4.13 showed a significant difference was detected between the mean scores of immediate and delayed post-tests. Referring to Figure 4.1, the drop in students' performance is seen clearly. However, it should not be assumed that the effect of direct WCF on collocational competence was not retained, because, at this point, it was unknown how much was the drop in their performance. Following Van Beuningen et al. (2012), a further analysis that involved comparing the mean scores between Test 3 with

Test 1 indicates that a significant difference was also detected. This implies that despite a drop in performance when measured in Test 2, their scores were still significantly greater than Test 1 scores. From another perspective, students' performance in the delayed post-test was considered greatly decreased should the following criteria be met: (1) no significant difference exists between Test 3 and Test 1 means, and (2) the mean differencebetween Test 1 and Test 3 is large. However, this is not the case for Group 1. Therefore, due to significant differences that exist between Test 3 and Test 1, it can be implied that direct WCF was able to retain the collocational competence because the students performed significantly well in Test 3.

4.2.2 Group 2

At the outset, Group 2 consisted of low-proficiency students who received indirect WCF type as a means to facilitate their collocational competence. The analysis procedures in Group 1 were replicated in Group 2 to determine the effect of indirect WCF on the students' collocational competence. The Greenhouse-Geisser correction indicated that the means across all tests in Group 2 differed statistically significantly between test points (F, 1.926, 59.715) = 38.095, $p < .05$) as illustrated in Table 4.14. This indicates that the mean scores across all test points are significantly different. Table 4.15 presents the results of the post hoc test using Bonferroni correction students in Group 2.

Table 4.14: Tests of within-subjects effects of Group 2

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Test	Sphericity Assumed	293.312	2	146.656	38.095	.000	.551
	Greenhouse-Geisser	293.312	1.926	152.267	38.095	.000	.551
Error (Test)	Sphericity Assumed	238.687	62	3.850			
	Greenhouse-Geisser	238.687	59.715	3.997			

Table 4.15: Pairwise comparisons of Test 1, Test 2, and Test 3 of Group 2

(I) TEST	**(J) TEST**	**Mean Difference (I-J)**	**Std. Error**	**Sig. [a]**	**95% Confidence Interval for Difference**	
					Lower Bound	**Upper Bound**
Test 1	Test 2	-4.156*	.460	.000	-5.321	-2.991
	Test 3	-1.188	.472	.052	-2.382	.007
Test 2	Test 1	4.156*	.460	.000	2.991	5.321
	Test 3	2.969*	.536	.000	1.612	4.325
Test 3	Test 1	1.188	.472	.052	-.007	2.382
	Test2	-2.969*	.536	.000	-4.325	-1.612
*. The mean difference is significant at the .05 level.						

It can be seen in Table 4.15 that the performance of Group 2 students dropped in the comparison between Test 2 and Test 3 with a mean difference of 2.969 which also suggests a significant difference between the two tests ($p < .05$). Moreover, no significant difference was detected between Test 3 and Test 1 with a mean difference of 1.188 ($p > .05$) because the means of the two tests are close. Figure 4.2 illustrates the estimated marginal means of performance of Group 2 which shows the pattern of students' performance across three points of tests.

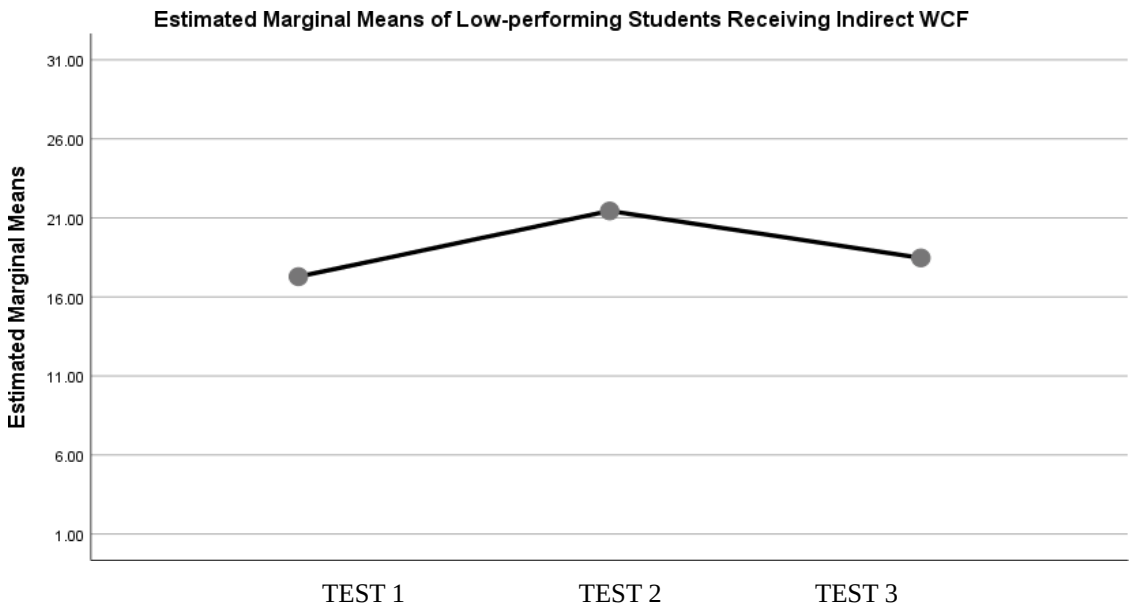


Figure 4.2: Estimated marginal means of Test 1, Test 2, and Test 3 of Group 2

The results presented in Table 4.15 indicate that Group 2 performance in Test 3 declined from Test 2 to the point that the scores were almost at par with Test 1 scores. Figure 4.2 shows the pattern of students' performance which indicates a significant drop in Test 3 scores. Specifically, two points worth considering from the statistical data in Table 4.15: (1) a significant difference was observed between Test 2 and Test 3 scores which suggests a drop in performance; (2) no significant difference was observed between Test 1 and Test 3 scores which indicated that the two scores were relatively close. Therefore, the results indicate that indirect WCF was not able to retain the collocational competence of students in Group 2, as measured in Test 3.

4.2.3 Group 3

As a start, Group 3 consisted of 33 high-proficiency students in the university. This group of students was exposed to direct WCF to see its effect on their collocational

competence. Considering RQ2, to determine the long-term effect of direct WCF, thestudents completed Test 3. A series of analysis procedures were employed to answer the research question. A repeated-measures ANOVA with a Greenhouse-Geisser correction was used. Once again, as in the case of low-proficiency students, the Greenhouse-Geisser correction value was referred to in the context of Group 3 because Mauchly's test for the sphericity assumption was violated. Therefore, the Greenhouse-Geisser correction determined that the means across all tests in Group 3 differed statistically between test points (F, 1.924, 61.581) = 33.499, $p < .05$). This result is presented in Table 4.16.

Table 4.16: Tests of within-subjects effects of Group 3

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Test	Sphericity Assumed	534.970	2	267.485	33.499	.000	.511
	Greenhouse-Geisser	534.970	1.924	277.992	33.499	.000	.511
Error (Test)	Sphericity Assumed	511.030	64	7.985			
	Greenhouse-Geisser	511.030	61.581	8.299			

Table 4.17 shows the results of *posthoc* tests using Bonferroni correction across three points of tests. In the comparison between Test 2 and Test 3, a slight decrease in performance was detected in Test 3 with a mean difference of 0.939. However, the difference was not statistically significant ($p > .05$). In another pairwise comparison,between Test 1 and Test 3 means, the value was statistically significant with a mean difference of 4.394 and $p < .05$. The pattern of students' performance in this group is illustrated in Figure 4.3.

Table 4.17: Pairwise comparisons of Test 1, Test 2, and Test 3 of Group 3

(I) Test	(J) Test	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Test 1	Test 2	-5.333*	.757	.000	-7.246	-3.421
	Test 3	-4.394*	.640	.000	-6.010	-2.778
Test 2	Test 1	5.333*	.757	.000	3.421	7.246
	Test 3	.939	.685	.540	-.792	2.671
Test 3	Test 1	4.394*	.640	.000	2.778	6.010
	Test 2	-.939	.685	.540	-2.671	.792

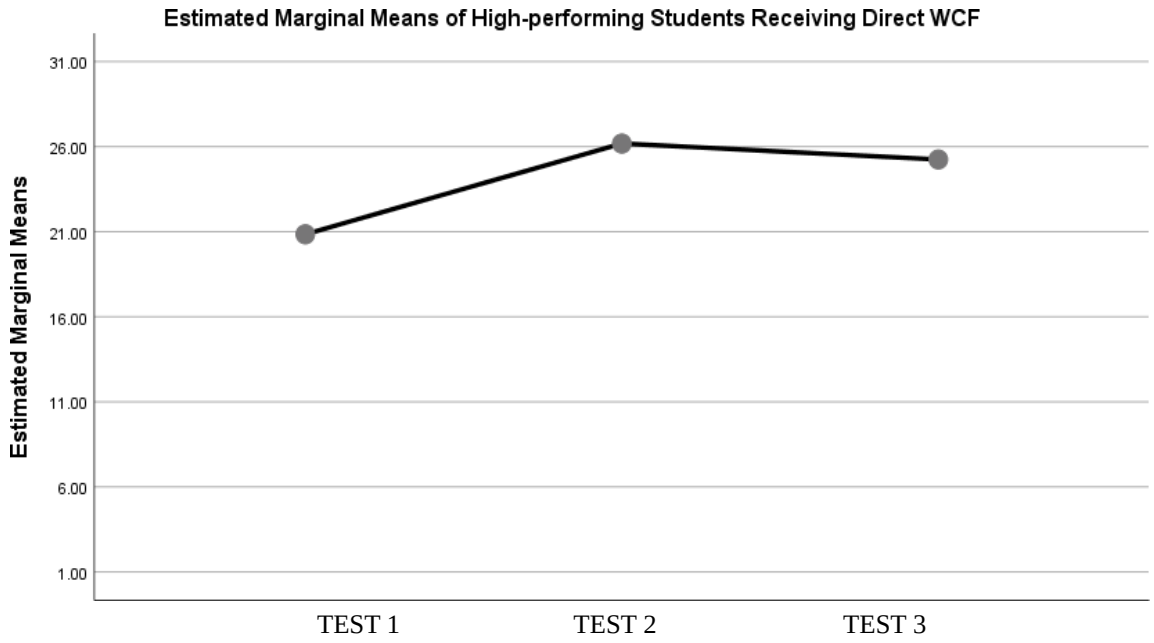


Figure 4.3: Estimated marginal means of Test 1, Test 2, and Test 3 of Group 3

The results in Table 4.16 show a slight decrease in Group 3 performance in a comparison between Test 2 and Test 3. Another pairwise comparison of mean scores must

also be considered which is between Test 3 and Test 1. This comparison shows a statistically significant difference in mean scores, which indicates that their performance in Test 3 was significantly better than how it was in Test 1. Putting these two details together, although the students in this group showed a decrease in long-term performance, the drop was not very significant. In other words, the direct WCF strategy was able to retain its effect when measured in Test 3. Thus, it can be implied that direct WCF was able to retain the collocational competence because the students in Group 3 performed significantly well in Test 3.

4.2.4 Group 4

Group 4 was identified with high-proficiency students who were provided with indirect WCF as a means to facilitate their collocational competence. Concerning RQ2, the long-term effect of indirect WCF was determined in their performance in Test 3. A series of analysis procedures were replicated from the previous groups in this case study. A repeated-measures ANOVA with a Greenhouse-Geisser correction was used. The Greenhouse-Geisser correction showed that the means across all tests in the indirect WCF group differed statistically between test points (F,1.336, 32.057) = 7.028, $p < .05$ ispresented in Table 4.18.

Table 4.18: Tests of within-subjects effects of Group 4

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Test	Sphericity Assumed	65.387	2	32.693	7.028	.002	.227
	Greenhouse-Geisser	65.387	1.336	48.952	7.028	.007	.227
Error (Test)	Sphericity Assumed	223.280	48	4.652			
	Greenhouse-Geisser	223.280	32.057	6.965			

Table 4.19 shows the results of the *posthoc* test using Bonferroni correction. The results show that there was no significant difference between Test 2 and Test 3 scores with a mean difference of 0.720 ($p > .05$). Although their performance shows a drop as can be seen in Figure 4.4, it is not statistically significant ($p > .05$). Another result of the pairwise comparison can be seen between Test 3 and Test 1 mean scores which indicates a statistical difference mean of 1.520 ($p < .05$).

Table 4.19: Pairwise comparisons of Test 1, Test 2, and Test 3 of Group 4

(I) Test	(J) Test	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Test 1	Test 2	-2.240*	.794	.028	-4.284	-.196
	Test 3	-1.520*	.530	.025	-2.883	-.157
Test 2	Test 1	2.240*	.794	.028	.196	4.284
	Test 3	.720	.453	.375	-.445	1.885
Test 3	Test 1	1.520*	.530	.025	.157	2.883
	Test 2	-.720	.453	.375	-1.885	.445
*. The mean difference is significant at the .05 level.						

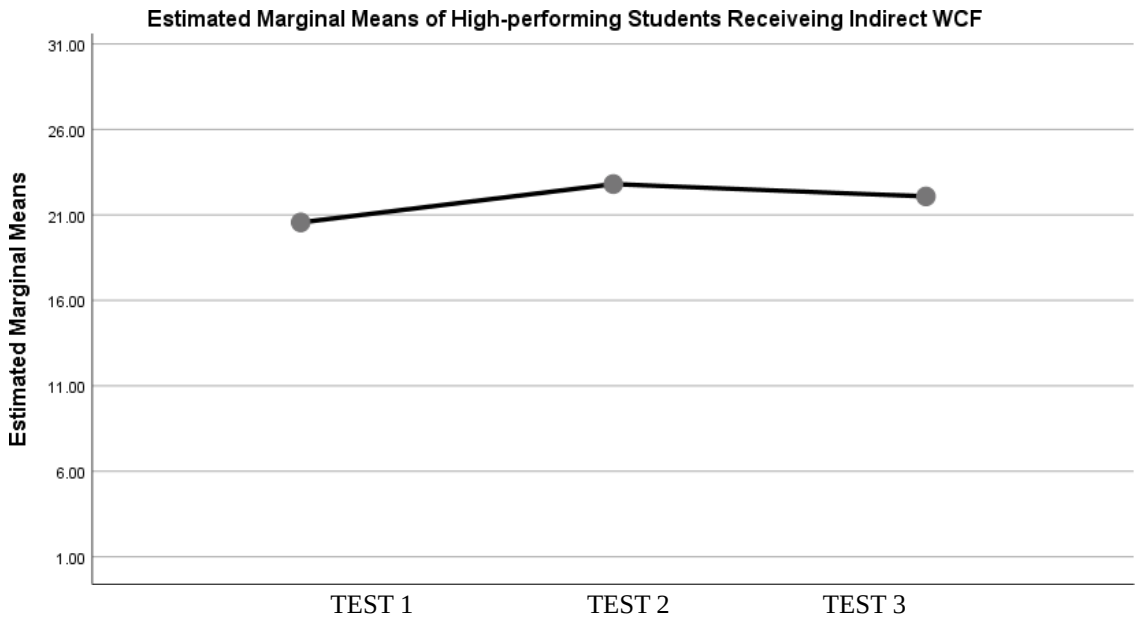


Figure 4.4: Estimated marginal means of Test 1, Test 2, and Test 3 of Group 4

The results in Table 4.19 indicate a drop in the collocation performance of Group 4 when measured in Test 3. However, the drop was not statistically significant. Another comparison of mean scores, specifically between Test 3 and Test 1 showed a statistically significant difference. These two details may suggest that, even though the students' performance dropped in long-term assessment, it was observed that the mean scores in Test 3 were better than that in Test 1. This has suggested a long-term effect and the effect can be associated with indirect WCF provided in Test 1. Therefore, it can be assumed that the long-term effect of indirect WCF on the collocational competence of Group 4 was retained over time.

4.2.5 Indirect WCF was not able to Facilitate Collocation Competence of Low-Proficiency Learners in Long-term as Compared to Direct WCF

The findings of RQ2 seem to emphasise the positive role of WCF in facilitating the collocational competence of the students in this case study. However, it should be noted that only several groups of students benefit from WCF, whereas one group did not. As far as the results on Test 3 across all groups are concerned, direct WCF was able to facilitate the collocational competence of Group 1 and Group 3 in the long term. However, indirect WCF was only able to facilitate the long-term collocational competence of Group 4. The results also indicate that indirect WCF failed to retain its long-term effect on students in Group 2. Concerning the students' proficiency in this case study, the results seem to suggest that indirect WCF may not provide long-term benefits to low-proficiency ESL students, but it may be beneficial to high-proficiency ESL students, as far as the findings ofthis study are concerned. However, direct WCF as indicated in the findings of RQ2 may benefit students from both proficiencies (i.e., Group 1, Group 3).

4.3 Type of WCF that Has a Greater Effect on Students' Collocation Competence

The objective of RQ3 was to identify the type of WCF that has a greater effect on the collocation competence of students in this case study. Note that, there are four groupsof students, represented as Groups 1-4, and each group has different traits of proficiency and received either direct or indirect WCF. To answer this research question, the data were analysed with a one-way ANOVA with Bonferroni Post Hoc Comparisons (Ho, 2014) which also followed several studies that investigated the same course (e.g., Alkhawajah, 2016; Purnawarman, 2011).

It is important to note that the analysis of RQ3 was performed between-group levels (e.g., comparing the performance between the direct WCF group andindirect WCF group of low-proficiency learners). Thus, the analysis of data to answer RQ3involved cross-case analysis. To illustrate, in identifying the best WCF type for low-proficiency students in this study, Group 1 and Group 2 performances were compared. Similarly, to identify the best WCF types for high-proficiency students, Group 3 and Group4 performances were compared. This analysis differentiates the analysis of RQ3 from otherquantitative RQs (e.g., RQ1 and RQ2). Note that, the reporting of results in the following sections begins with low-proficiency students (Group 1 and Group 2) followed by high-proficiency students (Group 3 and Group 4). The summary placed at the end of this sectionprovides the overview to answer RQ3.

4.3.1 Group 1 and Group 2 of Low-proficiency Students

To answer RQ3, one-way ANOVA was computed in SPSS and pairwise comparisons using Bonferroni Post Hoc were referred to as a means to identify the WCF type that has the greatest effect. However, before the one-way ANOVA statistical test couldbe used to investigate RQ3, the quantitative data must meet several statistical assumptions (Harwell, Rubinstein, Hayes, & Olds, 1992; Skidmore & Thompson, 2013). This section reports the descriptive statistics of one-way ANOVA, the statistical assumptions, and the inferential statistics to answer the RQ3.

The analysis begins with the presentation of the descriptive statistics of Group 1 and Group 2. Table 4.20 shows the descriptive statistics of Group 1 and Group 2 in Test 1, Test 2, and Test 3. The descriptive statistics in Table 4.20 indicate that the mean scores of Groups 1 and 2 improved from Test 1 and Test 2.

In another comparison, between Test 3 and Test 1, only Group 1 shows a significant improvement. These patterns have been highlighted in the previous RQs. It is important to note that, to identify the WCF type that has the most effect, a cross-case analysis was performed.

Table 4.20: Descriptive statistics of Group 1 and Group 2 (low-proficiency students) across three test occasions

Test	Case/WCF Type	N	Mean	Std. Deviation	Std. Error	Min	Max
Test 1	Group 1 (Direct WCF)	30	17.4333	4.97361	.90805	10.00	30.00
	Group 2 (Indirect WCF)	32	17.2813	5.06241	.89492	8.00	30.00
Test 2	Group 1 (Direct WCF)	30	25.3000	5.76643	1.05280	14.00	34.00
	Group 2 (Indirect WCF)	32	21.4375	4.82559	.85305	12.00	31.00
Test 3	Group 1 (Direct WCF)	30	21.3000	4.51931	.82511	15.00	34.00
	Group 2 (Indirect WCF)	32	18.4688	4.98374	.88101	10.00	32.00

Next, as a prerequisite to proficiency in ANOVA analysis, the data must meet several statistical assumptions. This includes (1) no outliers; and (2) homogeneity of variances. A test of normality was performed in the SPSS and the Shapiro-Wilk test of normality result was referred to. Table 4.21 shows the results for Test 1, whereas Table 4.22 presents Test 2, and Table 4.23 illustrates Test 3.

Table 4.21: Test of normality of Test 1 for Group 1 and Group 2

		Shapiro-Wilk		
	Group /WCF type	Statistic	df	Sig.
Test 1	Group 1 (Direct WCF)	.947	30	.139
	Group 2 (Indirect WCF)	.971	32	.522

Table 4.22: Test of normality of Test 2 for Group 1 and Group 2

		Shapiro-Wilk		
	Group/WCF type	Statistic	df	Sig.
Test 2	Group 1 (Direct WCF)	.948	30	.146
	Group 2 (Indirect WCF)	.965	32	.384

Table 4.23: Test of normality of Test 3 for low-proficiency students

		Shapiro-Wilk		
	Group /WCF type	Statistic	df	Sig.
Test 3	Group 1 (Direct WCF)	.945	30	.126
	Group 2 (Indirect WCF)	.921	32	.022

As the *p*-value is greater than 0.05, it can be concluded that the test scores of low-proficiency students in all cases, in every test, were normally distributed. Therefore, the first assumption of normality was met. As for whether the data contained any outliers, the boxplots of immediate post-test and delayed post-test were assessed which showed no appearance of any outliers in the data across all cases. Therefore, the second assumption was met.

The third assumption was regarding the homogeneity of variances. To test this assumption, Levene's test of equality of error variances in SPSS was used. Table 4.24 shows the results of Levene's test which indicate that all variances in three test occasions were homogeneous ($p > .05$).

Table 4.24: Levene's test of equality of error variances of Group 1 & 2 in all tests

		Levene Statistic	df1	df2	Sig.
Test 1	Based on Mean	1.392	2	61	.254
Test 2	Based on Mean	1.310	2	61	.275
Test 3	Based on Mean	.928	2	61	.399

With the three assumptions that had been met, the next step was to use inferential statistics to answer RQ3. A one-way ANOVA was performed in SPSS to confirm if significant differences of effect exist between Group 1 and Group 2 in Test 1 and Test 3. The result in Table 4.25 reveals multiple comparisons of Group 1 and Group 2's test scoresin Test 2 and Test 3.

Table 4.25: Multiple comparisons of Test 2 and Test 3 of low-proficiency students

		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Test 2	Between Cases	904.826	2	452.413	15.060	.000
	Within Cases	2673.642	62	30.041		
	Total	3578.467	64			
Test 3	Between Cases	251.021	2	125.511	4.936	.009
	Within Cases	2262.935	62	25.426		
	Total	2513.957	64			

The result indicates that there is a significant difference in test scores of means as measured in Test 2, $F (2, 62) = 15.060$, $p < .05$ and Test 3 $F (2, 62) = 4.93$, $p < .05$. However, the statistical data in Table 4.25 does not specifically inform us about which typeof WCF performs better than the other.

Thus, one-way ANOVA with Bonferroni post hoc analysis was performed separately on Test 2 and Test 3 scores to locate where thedifferences exist. These results are presented in Tables 4.26 and 4.27.

Table 4.26: Multiple comparisons of Group 1 and Group 2 in Test 2

(I) Groups	(J) Groups	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Group 2	Group 1	-3.86250*	1.39289	.020	-7.2613	-.4637
Group 1	Group 2	3.86250*	1.39289	.020	.4637	7.2613
*. The mean difference is significant at the 0.05 level. *Note: Group 1 represents direct WCF whereas Group 2 represents indirect WCF*						

The results in Tables 4.26 and 4.27 are important to answer RQ3. The students in Group 1 outperformed those in Group 2 when measured in Test 2 with a mean difference of 3.86250 ($p < .05$). Another one-way ANOVA with Bonferroni post hoc comparison was performed to examine the differential effects in Test 3 which can be seen in the Table 4.27.

Table 4.27: Multiple comparisons of Group 1 and Group 2 in Test 3

(I) Groups	(J) Groups	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Group 2	Group 1	-2.83125	1.28145	.089	-5.9581	.2956
Group 1	Group 2	2.83125	1.28145	.089	-.2956	5.9581
*. The mean difference is significant at the 0.05 level. *Note. Group 1 represents direct WCF whereas Group 2 represents indirect WCF*						

The results in Table 4.27 show that no significant difference in effect was detected when the scores of Test 3 were compared between Group 1 and Group 2 with a mean difference of 2.83125 ($p > .05$).

However, the performance of Group 1 in Test 3 is slightly better than that of Group 2, a difference of 2.83125, even though it was not statistically significant. To highlight the differential effect of both types of WCF provided in Group 1 and Group 2, Table 4.28 can offer a better synthesis:

Table 4.28: A comparison of WCF effects in Test 2 and Test 3 of Group 1 and Group 2

Tests	**Case (Type of WCF)**
Test 2	Group 1 (Direct WCF) > Group 2 (indirect WCF) *
Test 3	Group 1 (Direct WCF) = Group 2 (indirect WCF) Mean scores in Group 1 are greater than in Group 2 although not significant

Note. The symbol ">" indicates "better than", while "*" implies that $p < .05$

It is shown in Table 4.28 that both WCF types, in this case, study have differential effects in improving the collocational competence of Group 1 and Group 2 (low- proficiency ESL students). It was shown from the statistical analyses that Group 1 who wasexposed to direct WCF performed better than Group 2 who received indirect WCF when measured in Test 2 (see Table 4.26). However, no statistically significant difference was detected in the comparison between Group 1 and Group 2 as measured in Test 3, althougha difference in mean scores indicates Group 1 was slightly better than Group 2 (see Table 4.27). Concerning the proficiency level of Group 1 and Group 2, these results can be used to deduce that direct WCF was better than indirect WCF to improve the short-term and long-term accuracy of their collocation competence.

4.3.2 Group 3 and Group 4 of High-proficiency Students

To begin this section, Group 3 and Group 4 consisted of high-proficiency ESL students identified in the university. These are groups of students who mostly scored A grades in the previous semester's English course. However, despite their profile, they were assessed for having difficulties forming accurate collocation at the start of the study.

Group3 was provided with direct WCF whereas Group 4 was given indirect WCF on Test 1, as a means to identify which type of WCF has the greatest effect on their collocational competence. To answer RQ3 in the context of high-proficiency students in this study, similar procedures used in section 4.3.1 were applied to meet the statistical assumptions, before a one-way ANOVA can be performed. The first step is to display the overall performance of Group 3 and Group 4 in the tests. The reporting on each case performance was presented in RQ1 and RQ2 within-case analyses. Table 4.29 shows the descriptive statistics of Group 3 and Group 4 performance on three test occasions (e.g., Test 1, Test 2, and Test 3).

Table 4.29: Descriptive statistics of Group 3 and Group 4 performance on three test occasions

Test	Case/WCF Type	N	Mean	Std. Deviation	Std. Error	Min	Max
Test 1	Group 3 (Direct WCF)	33	20.8485	4.98824	.86834	12.00	30.00
	Group 4 (Indirect WCF)	25	20.5600	5.31570	1.06314	12.00	30.00
Test 2	Group 3 (Direct WCF)	33	26.1818	6.35145	1.10565	10.00	37.00
	Group 4 (Indirect WCF)	25	22.8000	4.55522	.91104	14.00	31.00
Test 3	Group 3 (Direct WCF)	33	25.2424	5.04994	.87908	14.00	37.00
	Group 4 (Indirect WCF)	25	22.0800	5.01597	1.00319	12.00	30.00

Then, the next report involves cross-case analyses of Group 3 and Group 4 performance in the tests. The descriptive statistics in Table 4.29 show that the mean scores of both groups improved from Test 1 to Test 3.

As a common procedure in any statistical analysis of inferential statistics, the data must meet several statistical assumptions. The first assumption was related to the normal distribution of the data in the tests. Atest of normality was performed in the SPSS, and the Shapiro-Wilk test of normality table in the output was referred to. Table 4.30 shows the results of the test of normality of alltests for Group 3 and Group 4.

Table 4.30: Test of normality of Group 3 and Group 4 in Test 1, Test 2, Test 3

Test	Group/WCF Type	Shapiro-Wilk		
		Statistic	df	Sig.
Test 1	Group 3 (Direct WCF)	.968	33	.420
	Group 4 (Indirect WCF)	.959	25	.395
Test 2	Group 3 (Direct WCF)	.965	33	.357
	Group 4 (Indirect WCF)	.976	25	.786
Test 3	Group 3 (Direct WCF)	.990	33	.988
	Group 4 (Indirect WCF)	.959	25	.396

The Sig. values of the Shapiro-Wilk test of normality of variances shown in Table 4.30 for Test 1 indicates that the values across all groups are greater than .05 ($p > .05$). Therefore, it can be assumed that Test 1 scores for all groups are normally distributed. Similarly, it can be seen in Table 4.30 that the variances of Test 3 are normally distributed across Group 3 and Group 4 ($p > .05$). These results signify that the first statistical assumption is met for the data. As for whether the data contained any outliers, the boxplot of Test 2 and Test 3 was assessed, in which no outliers were detected across all data sets. Therefore, the second statistical assumption was met.

The next statistical assumption was related to the homogeneity of variances. Levene's test of equality of error variances was performed in the SPSS to test this assumption. Table 4.31 shows the results of Levene's test which indicate that the data have met the assumption of homogeneity of variances in Test 1, F (2, 58) = 1.959, $p > .05$, and Test 3, F (2,58) = 1.162, $p > .05$. However, the variances in Test 2 were violated, F (2, 58) = 6.794, $p < .05$. Therefore, according to Field (2013), a researcher can use the alternative *F* statistics such as Welch's or Brown-Forsythe to determine if statistical significance exists, in the case of this study, variances of Test 2.

Table 4.31: Levene's test of homogeneity of variances for Group 3 and Group 4

	Levene Statistic	df1	df2	Sig.
Test 1	1.959	2	58	.148
Test 2	6.794	2	58	.002
Test 3	1.162	2	58	.318

A Welch's test was performed in ANOVA to determine the homogeneity of variances of Test 2 which produced the following result, F (2, 52.387) = 9.742, p = 0.137. The result indicates there was no significant difference in variances in Test 2 ($p > .05$). Towards the end of the statistical assumption analyses, the data had met all three assumptions which implies that ANOVA analysis may present the best form of analysis to answer RQ3.

The next analysis involves inferential statistics to answer the research question posed at the start of this section. A one-way ANOVA was performed in SPSS to investigate if significant differences in the WCF effect exist between Group 3 and Group 4 when measured in Test 2 and Test 3. The results in Table 4.32 reveal multiple comparisons of Test 2 and Test 3 scores of Groups 3 and 4.

Table 4.32: Multiple comparisons of Groups 3 and 4 performances in Test 2 and 3

		Sum of Squares	df	Mean Square	F	Sig.
Test 2	Between Groups	483.316	2	241.658	9.290	.000
	Within Groups	2081.069	58	26.013		
	Total	2564.386	60			
Test 3	Between Groups	378.750	2	189.375	8.408	.000
	Within Groups	1801.901	58	22.524		
	Total	2180.651	60			

The result in Table 4.32 indicates that there was a significant difference in test scores of means as measured in Test 2, F (2, 58) = 9.290, $p < .05$ and Test 3 F (2, 58) = 8.408, $p < .05$. However, the statistical data do not specifically inform us about what WCF type performs better than the other. Thus, one-way ANOVA with Bonferroni post hoc analysis was performed separately on Test 2 and Test 3 to locate where the differences exist.

Table 4.33: Multiple comparisons of Test 2 (Bonferroni Post Hoc) of Group 3 and 4

(I) Groups	(J) Groups	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Group 3	Group 4	3.38182*	1.35234	.043	.0749	6.6888
Group 4	Group 3	-3.38182*	1.35234	.043	-6.6888	-.0749
*. The mean difference is significant at the 0.05 level.						

It can be observed in Table 4.33 that Group 3 outperformed Group 4 in Test 2 with a mean difference of 3.38182 ($p < .05$). Another one-way ANOVA with Bonferroni post hoc comparison was performed to examine the differential effect of direct and indirect WCF in Test 3.

The results in Table 4.34 show multiple comparisons as measured in Test 3.

Table 4.34: Multiple comparisons of Test 3 (Bonferroni post hoc) of Group 3 and 4

(I) Groups	(J) Groups	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
GROUP 3	GROUP 4	3.16242*	1.25837	.042	.0853	6.2396
GROUP 4	GROUP 3	-3.16242*	1.25837	.042	-6.2396	-.0853
*. The mean difference is significant at the 0.05 level.						

It is shown in Table 4.34 that Group 3 outperformed Group 4 in Test 3 with a mean difference of 3.16242 ($p < .05$). In two successive tests, the direct WCF type seems to have a greater effect on the collocational competence of high-proficiency students in this case study. Table 4.35 illustrates the pattern of WCF effects in both cases.

Table 4.35: A comparison of WCF effects in Test 2 and Test 3 of Group 3 and Group 4

Tests	**Case (Type of WCF)**
Test 2	Group 3 (Direct WCF) > Group 4 (Indirect WCF)*
Test 3	Group 3 (Direct WCF > Group 4 (Indirect WCF)*

Note. The symbol ">" indicates "better than" while the asterisk implies that $p < 0.05$.

It is evident in Table 4.35 that the WCF provisions employed in this study have differential effects on improving the collocational competence of high-proficiency ESL students in the university. It is shown from the statistical analyses that high-proficiency students who were exposed to direct WCF (Group 3) performed better than the students who received indirect WCF (Group 4) when measured in Test 2 (see Table 4.33).

Additionally, it can be seen from the results in Table 4.34 that the group that receiveddirect WCF (Group 3) outperformed the indirect WCF group (Group 4) when measured in Test 3. Therefore, this statistical evidence may justify that there exists a significant difference in effects between both WCF types, in which, direct WCF seems to have the upper hand.

4.3.3 Direct WCF Has a Better Effect on the Collocation Competence of the Students

The findings on RQ3 seem to emphasise that direct WCF had the most effect on the collocational competence of the students in this case study, based on a cross-case analysis of the results. In highlighting the effects of WCF on low-proficiency students (i.e., identified as Group 1 and Group 2), Group 1 performed significantly better than Group 2. This pattern of effect was observed in Test 2 (i.e., measuring short-term effect) and slightlybetter in Test 3 (i.e., measuring long-term effect). Similarly, the effects of WCF on high-proficiency students indicate that Group 3 performed significantly better than Group 4 when measured in both tests. In essence, direct WCF was best for low-proficiency students (Group 1 & Group 2) and high-proficiency students (Group 3 & Group 4), as far as cross-case analysis is concerned. Therefore, regardless of the proficiency of the students in this case study, direct WCF appeared to be the best WCF provision to facilitate the students' collocational competence in the long term and short term.

4.4 Factors Contribute to or Hinder the Effectiveness of Direct and Indirect WCF

The objective of RQ4 is to explore the factors perceived by the students that might enhance or hinder them from benefiting from direct and indirect WCF. The data to answer RQ4 was derived from several sources such as qualitative open-ended questionnaires, field

notes, and course information documents. The analyses to answer RQ4 involved cross-case analysis. Note that, the qualitative analyses began with the pattern-matching analysis of each group, which was then followed by a cross-case analysis to answer RQ4. To illustrate how pattern-matching was done, the researcher linked the findings (e.g., the themes) with the propositions made in the theoretical framework (see factors affecting "noticing" in the framework). Therefore, it is possible to validate and support or modify the theoretical framework underpinning the study (Yin, 2003). Students' responses are labelled with G1, G2, G3, or G4 which refers to their respective groups. Then individual students are labelled with S1, S2, S3 and so on.

4.4.1 Within-case Analysis

This section presents the first level of analysis to answer RQ4. Note that, Thematic Analysis was employed to analyse the qualitative data from the open-ended questionnaire whereas content analysis was used to analyse the qualitative data from the field notes and course information documents.

4.4.1.1 Group 1

The qualitative data that emerged from Group 1 has produced two primary themes that can contribute to the effectiveness of direct WCF in this study: (1) Learner's factors; and (2) the Nature of WCF factors. The analysis of themes from Group 1 also revealed that (1) the nature of WCF factors, (2) contextual factors, and (3) learner's factors can hinder students to benefit from direct WCF. Figure 4.5 illustrates the themes that emerged from Group 1. Note that, to illustrate Group 1 responses, the acronym "G1S" is used, preceded by numbers (e.g., S1, S2, S3). Also, it is worth mentioning that every main theme contains in it several sub-themes. These themes support the proposition made in the theoretical

framework.

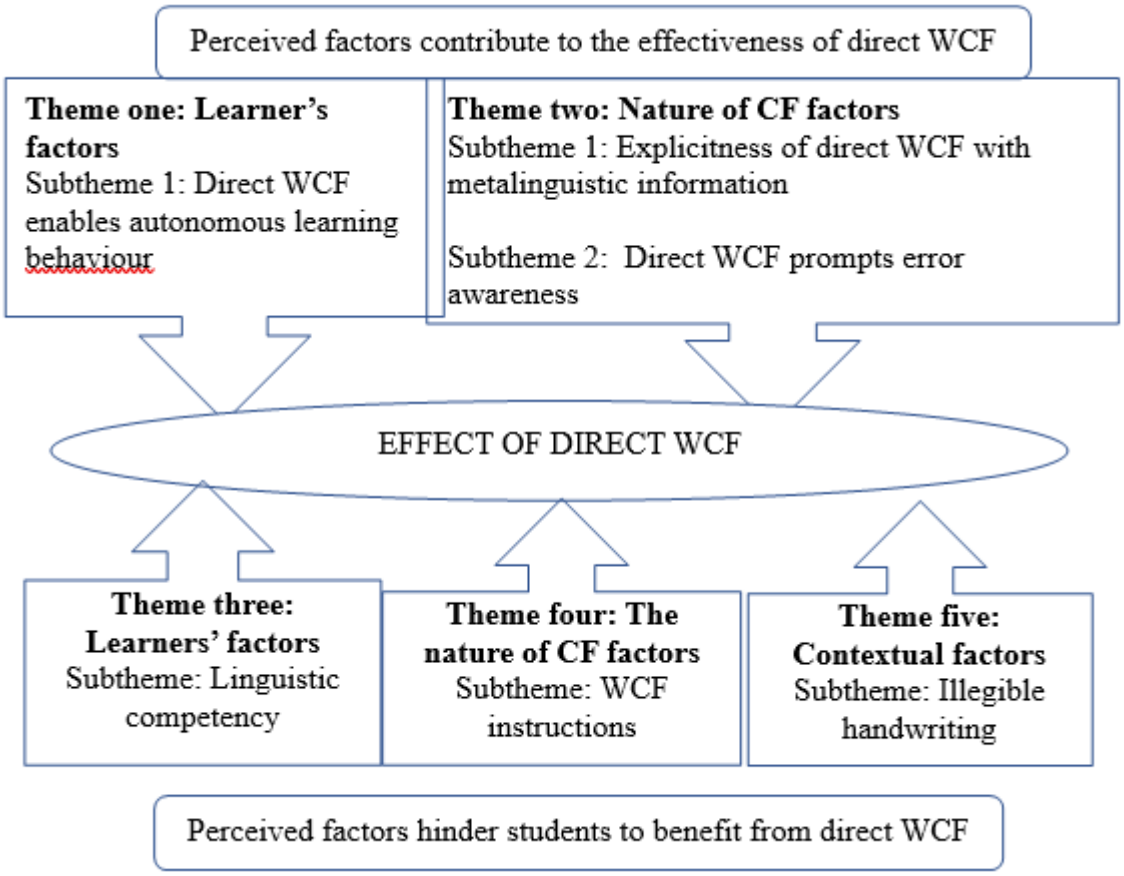


Figure 4.5: Factors that can contribute to or hinder the effectiveness of direct WCF perceived by Group 1

Theme one: Nature of CF factors contribute to the effectiveness of direct WCF

This main theme is supported by three sub-themes. The first sub-theme is associated with direct WCF used as a learning strategy to identify and differentiate erroneous collocation structures from the correct ones.

Several responses (n = 15) derived from the students showed that they agreed to have direct WCF because the provision of direct WCF given by their lecturer was beneficial for them as a tool for learning purposes. The descriptors that describe this sub-theme include "Avoid errors", "Understand errors", "Reduce errors", "WCF eases learning", and "Aware of errors" mentioned by students G1S9, G1S24, G1S25, G1S27, and G1S17. This theme of learning from error correction is encapsulated by student G1S23 who wrote that direct WCF had made him/her realise the collocation errors produced in Test 1 that may assist in reducing such errors in future tests and tasks.

G1S23: *Yes, I am. I can understand more about where my collocation mistake is. So, I can learn more from my mistake*.

Moreover, the role of direct WCF as a learning strategy was also derived from prompt four which enabled the students to differentiate collocation structures between the correct and incorrect ones. This was mentioned in unison by students G1S4 "*I can comparemy wrong answer with the correct answer given by my lecturer*", G1S14 "… *helps me to identify correct collocation from the wrong one.*", G1S17 "… *to compare lecturer's correction and my work*", and G1S20 "*identify the correct collocation*". These excerpts show that they can differentiate between the correct and incorrect collocation structures through the provision of direct WCF, which was used as a learning strategy.

Moreover, considering the role of direct WCF as a learning strategy, one respondent wrote that he/she employed memorising the correct collocation structures for a future test. According to student G1S5, the correct collocation structures in the metalinguistic information are memorised to do future tests as well as in other writing-related tasks.

G1S5: *Yes, I do benefit from WCF to produce/identify the correct collocation. I try to memorise the correct collocation, the structure, and the example of sentences for other tests*.

The second sub-theme is the explicitness of direct WCF. Most of the students in Group 1 mentioned that the factor leading to students' grasp of direct WCF was related to its explicitness which contains the metalinguistic information of collocation. Most of the respondents (n = 11) mentioned that they understood the direct WCF provided because the information of errors contained no ambiguity that could potentially hinder their understanding, and the correct examples of answers were also written. The "information" stated by the students refers to metalinguistic information that was provided in terms of a sentence containing the correct use of collocation. This metalinguistic information that contains correct collation structures and examples of sentences on using the correct collocation has benefited the students as mentioned by student G1S15, "*Yes because it is our lecturer who gives us the example of other correct sentences so we can form the correct ones in next test*". Moreover, some of the key descriptors that describe this theme are "Clearly written explanation", "Specific details and explanation", "Errors are explained", "Understandable explanation", and "Correct answers are explained well" mentioned by students G1S24, G1S8, G1S20, G1S10, and G1S27, respectively. This themeis supported by the responses from G1S8 and G1S18 in the following excerpts:

G1S8: *Yes, I strongly can understand the corrective feedback. It is because my lecturer writes the specific details and explanations…*

G1S18: *Yes, I understand the written corrective feedback given by my lecturer. It is very useful, and it helps me a lot to minimise my error.*

Furthermore, some students also perceived the positive role of metalinguistic information in direct WCF that had made it an explicit type of WCF. This is explained by student G1S21 in prompt five who wrote that direct WCF is sufficient for him/her to learn about collocation because the lecturer's feedback itself contains metalinguistic information and the correct collocation structures that he/she can refer to.

G1S1: *It is enough for me to learn from my mistake because of my lecturer's written corrective feedback (WCF) on my test which is also written with the explanation of the errors.*

Furthermore, student G1S19 wrote that direct WCF has played a role to helphim/her understand the cause of his/her errors. This was possible through the metalinguistic information provided with direct WCF in the intervention. Once the cause was pinpointed or explained, it served as a reference to avoid committing the same errorsin future writing.

G1S19: *Yes. It is because WCF is very important to understand why we make errors in grammar and to learn from it.*

The third sub-theme to support the main theme is that direct WCF prompts awareness of erroneous collocation structures. Several students (n = 8) provided their responses related to this sub-theme with some descriptors such as "Realise own mistake", "Useful to minimise errors", "Differentiate correct and wrong answers", "Aware of own errors", and "Aware of

errors" mentioned by students G1S12, G1S18, G1S19, G1S22, and G1S29, respectively. The analysis showed that the direct WCF strategy was responsible for triggering error awareness on erroneous structures that they made in Test 1. Some of theexcerpts that support this theme are mentioned by students G1S11:

G1S11: *I can understand perfectly because I can know what my mistake is and learn from it.*

Being aware of the erroneous structures, the students who were exposed to direct WCF were able to improve their collocation competence. Several students responded that providing direct WCF had increased their comprehension of the targeted structures. Some of the descriptors related to improving comprehension are "Improved understanding" and "Understand more collocation". As student G1S25 reiterated, the direct WCF provided was responsible for improving his/her understanding of the collocation, "… *I can understand more about collocation after corrective feedback was given*". This is also supported by student G1S15 who stated that direct WCF given by his/her lecturer that contains correct examples of collocation had increased his/her chances of producing the correct ones in upcoming tests, "… *because it is our lecturer who gives us the example of other correct sentences so we can form the correct ones in next test*".

The students from Group 1 found direct WCF beneficial in improving their collocation competence. Most of them attributed the success of direct WCF to several factors such as the explicitness of direct WCF, the role it plays in prompting their awareness of erroneous collocation structures, and the function of WCF that helps them differentiate between the correct and incorrect collocation structures. All these factors are listed under the main factor of the nature of CF.

Theme two: Learners' factors contribute to the effectiveness of direct WCF

Theme two has only one sub-theme which is direct WCF encourages autonomous learning behaviour. Several students from Group 1 mentioned that they required additional metalinguistic information to enhance their comprehension of collocation (n = 5). These responses were derived from prompt five in the qualitative instruments. It should be noted that the nature of direct WCF in this current study was provided with metalinguistic information. However, these students required additional metalinguistic information as they perceived the nature of direct WCF applied in the study was not enough to enhance their comprehension. Therefore, students G1S16, G1S17, and G1S29 opted to search for such information from other sources through unspecified methods, as portrayed in the following excerpts:

G1S16: *No. It is because I have to find more examples of the sentences to help me understand more*.

G1S29: *Not sure. I still need to search for more information on the internet to help me learn English*.

The data were also triangulated with the field notes data. As written in the field notes, the researcher observed one student who was seen referring to his phone during the revision of Test 1. The student was approached, and he admitted that he searched for metalinguistic information to aid his comprehension of collocation items in the test. What these students did not realise was that direct WCF had triggered their intention to look for supplemental metalinguistic information which they perceived as beneficial for improving their comprehension of the subject matter.

It was evident from the responses of student G1S16, "find more examples of the sentences", student G1S17, "need more resources",and student G1S29, "search more information on the internet" that they had to put on their effort to enhance their understanding of the subject matter because they perceived direct WCF was not enough to enhance their collocational competence. The next analysis of qualitative data concerns the factors that may hinder the students to benefit from WCF.

Theme three: Learners' factors hinder the students to benefit from direct WCF

The third main theme has only one sub-theme which is associated with the students' linguistic proficiency. Several students (n = 5) who mentioned this theme were identified with descriptors such as "could not differentiate verb-noun" stated by G1S3, "unfamiliar words" by G1S24, and "limited grammar" by G1S28. Student G1S3 wrote thathe/she was not able to differentiate between a verb, a noun, and an adverb which affected his/her scores in Test 1 because the collocation types tested in the testing instruments were noun-verb and verb-adverb collocations. The following excerpt indicates the student's difficulty regarding linguistic competency:

G1S3: *Difficulties in understanding the noun, adverbs, and verbs. So, my marks on the first test were not good enough.*

Moreover, students G1S23 and G1S24 mentioned that they had problems related to vocabulary which pointed to restricted vocabulary proficiency. Limited vocabulary and grammatical knowledge of the students in this group was expected before the start of this case study because they were identified as low-proficiency ESL students in the university. This was also supported by their performance in the previous semester's English course.

The following excerpts support this theme:

G1S23: *It was difficult when I found unusual words that I cannot understand*.

G1S24: *The difficulties that I find in revising the written corrective feedback are some words that I cannot understand*.

Moreover, through document analysis of course information documents from previous English courses, the topics on English grammar were not taught as the main topic in classes but rather incidentally in reading, speaking, and listening components. Figure 4.6 shows an excerpt from the course information document that indicates the students were not taught extensively about English grammar (see the highlighted content).

1.0 COURSE LEARNING OUTCOMES

Upon completion of this course, students should be able to:

1.1 demonstrate the ability to read and write coherently based on various reading materials at higher intermediate level. (A3)

1.2 demonstrate the ability to verbally express and justify opinions while interacting during social communication at higher intermediate level. (A3)

1.3 demonstrate the ability to listen and respond to various discourse at higher intermediate level. (A3)

2.0 COURSE DESCRIPTION

This course is designed to help students become confident and independent readers. Specifically, students will be exposed to intensive reading skills which include skimming and scanning, recognising structures and mechanics used in texts, and summarising and evaluating texts. By exposing them to a variety of reading materials and short stories, extensive reading strategies are introduced to create enjoyable reading experiences outside the classroom and to enrich and strengthen their knowledge of words. In addition, speaking and listening skills are integrated into the course to help students perform effectively and competently in social and academic interaction. This course aims to raise their proficiency to high intermediate level by exploiting a variety of materials in varied situations.

3.0 COURSE SYLLABUS

Grammar items are taught incidentally in reading, speaking, and listening: review of parts of speech, basic tenses, perfect tenses, passive forms, and transitional words & phrases.

Figure 4.6: An excerpt of document analysis of the course information document

Therefore, it was possible that for some of the students who perceived that they had restricted linguistic competency, this might have contributed to the situations in which they were not able to differentiate verbs, nouns, and adverbs from one another. Indirectly, it could affect the effectiveness of direct WCF when they were exposed to it.

Theme four: Nature of CF factors hinders students to benefit from direct WCF

Theme four has only one sub-theme which is related to the nature of direct WCF

instructions. This sub-theme was derived from several descriptors such as "vague explanation", "unable to comprehend instructions", and "unclear explanation" as mentioned by students G1S4, G1S20, and G1S16, respectively. There are several respondents (n = 11) who informed their difficulties were related to this theme. Students G1S2, G1S4, G1S5, and G1S16 collectively echoed that they did not understand theinstructions attached to the direct WCF provided. Furthermore, the instructions on what to do with WCF and how it was presented on their test instrument have posed difficulty to thestudents. The following excerpts show students' difficulties related to WCF instructions which provide support for the theme:

G1S5: *I have a problem understanding the meaning of WCF given by my lecturer and what do the arrows mean that point on several answers*.

G1S16: *I do not understand some of the sentences that my lecturer trying to explain*.

This sub-theme was also supported by the data from the field notes. The researcher wrote in his notes that during the phase of revising the errors, several students from Group 1 were seen talking to each other when others were revising Test 1. These students were approached and asked about their actions. They informed the researcher that they wanted to clarify the WCF provided because the way WCF was written on the paper was confusing (e.g., arrows pointing to metalinguistic information).

Theme five: Contextual factors hinders students to benefit from direct WCF

Theme five has only one sub-theme to support it. Specifically, this theme is associated with the contextual factor of the lecturer's illegible handwriting. Student G1S12 associated his/her difficulties with the handwriting of the CF provider which hindered his/her

ability to fully grasp the metalinguistic information supplied in direct WCF. This difficulty is categorised under the instructors' factor of illegible handwriting. The followingexcerpt supports this theme.

G1S12: *I do not understand the handwriting and disrupt me to understand the explanation of the answer.*

To this end, Group 1 has shown that two factors can enhance the effectiveness of direct WCF whereas three other factors can hinder them from benefiting from direct WCF (see Figure 4.5). The following section presents the qualitative analysis of Group 2.

4.4.1.2 Group 2

The qualitative data that emerged from Group 2 has produced two primary themes that can contribute to the effectiveness of indirect WCF in this study: (1) Learner's factors; and (2) the Nature of CF factors. The analysis of themes from Group 2 also revealed that (1) the nature of WCF factors and (2) contextual factors can hinder students to benefit from indirect WCF. Figure 4.7 illustrates the themes that emerged from Group 2. Note that, to illustrate Group 2 responses, the acronym "G2S" is used, preceded by numbers. It indicates that the students from Group 2 were low-proficiency and given indirect WCF. It is worth mentioning that, every main theme contains in it several sub-themes. These themes support the propositions made in the theoretical framework.

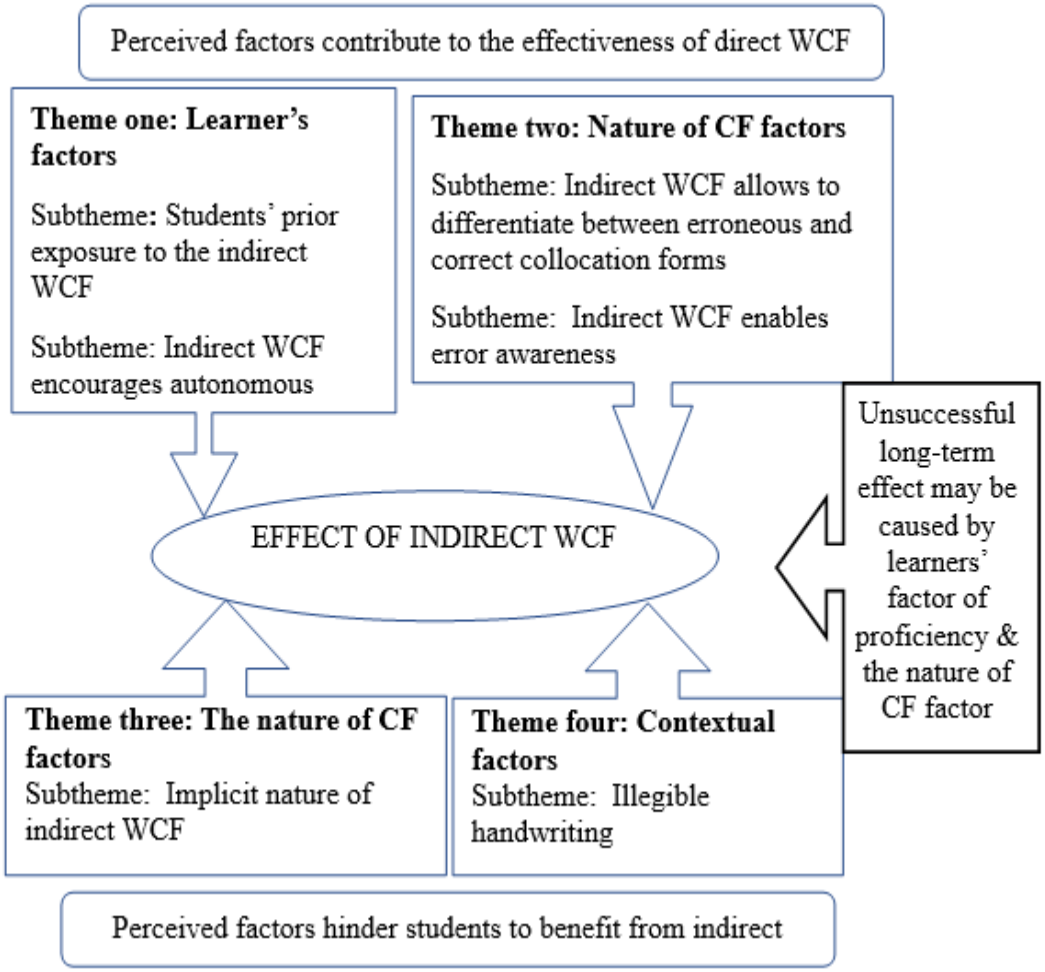


Figure 4.7: Factors that can contribute to or hinder the effectiveness of indirect WCF perceived by Group 2

Theme one: Learner's factors contribute to the effectiveness of indirect WCF

The analysis of the qualitative data has revealed the primary reason for the effectiveness of indirect WCF in this case study is associated with learner's factors. The two sub-themes were developed to support the primary theme. The first sub-theme is related to the students' prior exposure to indirect WCF. Students G2S2 and G2S18 mentioned that they were able to comprehend indirect WCF strategy because of prior exposure to it in previous learning experiences.

The students in this study were in their second year at the university. This indicates that they have been exposed to indirect WCF provision since the primary, secondary, and half of their tertiary education. Therefore, thesetwo students were able to comprehend indirect WCF type due to their prior learning experiences. The following reflects their responses that support this sub-theme.

G2S2: *It is the most common way to show mistakes in exercises.*

G2S18: *…because it's easy to understand error correction that I always get in school and last semester*.

The second sub-theme listed under the main team is about the implicitness of indirect WCF that motivates the students to perform autonomous learning behaviour. The lack of metalinguistic information in indirect WCF prompted several students to consult other methods and references to rectify collocation errors. This encouraged autonomous learning behaviour as an effort to search for supplementary information on targeted linguistic structures. For instance, student 19 indicated that indirect WCF had triggered him/her to find his/her way of rectifying the errors made:

G2S19: *…because I can ask for help from my lecturer where can I find the right answer.*

Referring to the field notes, the researcher recorded two students from Group 2 who approached him to ask for clarification on the WCF provided. They asked for more clues on how to form accurate collocation on several items in Test 1. The researcher complied with their request by providing metalinguistic information on specified items they pointed out. These results triangulate the responses of such students from Group 2 who showed autonomous learning behaviour.

Theme two: Nature of CF factors contribute to the effectiveness of indirect WCF

The second theme derived from Group 2's responses to RQ4 was related to the nature of CF factors. Under this second theme, two sub-themes were developed to support it. The first sub-theme is regarding indirect WCF that enables error awareness of erroneous collocation structures. These students (n = 17) indicated that they were able to comprehend indirect WCF because it enabled error awareness of erroneous collocation structures. In other words, the indirect WCF had drawn students' attention to erroneous language forms to trigger conscious analysis of targeted language structures. Thus, error correction (e.g., indirect WCF) was perceived as a strategy in writing that helps learners to produce well-organised composition and accurate use of language structures. In the context of Group 2, it was a strategy perceived in improving their collocational competence in such a way that the students were made aware of errors that they committed in Test 1. Most students (n = 17) from Group 2 who associated the success of comprehending indirect WCF wrote that it led them to be aware of the collocation errors made in Test 1. The responses from the following students support this theme:

G2S1: *... because the lecturer highlights the errors of collocation using red colour.*

G2S12: *... the mistake shown is clear in Test 1.*

G2S10 *... It's notifying the unclear collocation part for us.*

The next sub-theme is regarding indirect WCF which allows the students to differentiate between erroneous and accurate collocation forms. The most articulated explanation by the students was that indirect WCF had highlighted the errors they made in Test 1 as mentioned by a total of six students (e.g., G2S3, G2S7, G2S9, G2S13, G2S14, & G2S20).

Some of the excerpts that can be used to support this theme are "…*shows where my mistakes are*", "*easy to knows the wrong answer*", and "it *shows my errors and I can ask the lecturer…*" written by students G2S3, G2S13, and G2S20 respectively.

Due to the role of indirect WCF highlighting students' errors, they were able to differentiate and distinguish between the erroneous collocation forms and correct forms. Student G2S2 wrote that indirect WCF had benefited him/her in such a way that the CF strategy enabled the student to differentiate between the correct collocation forms with the erroneous ones, "*because it helps me find the correct answer after knowing the wrong one*". As mentioned by the student, it refers to the role of indirect WCF that triggers "noticing" in his/her cognitive process that he/she now can differentiate between thecorrect and incorrect collocation structures. In supporting the previous student, student G2S19 responded the following, "*WCF showed the wrong answer so it left me with the possibly correct answer in the test*".

Students G2S5, G2S6, and G2S10 wrote that they were able to improve their accuracy of targeted linguistic structures because indirect WCF had enabled them to be aware of the erroneous collocation structures. Their responses are represented by student G2S5 in the following excerpt:

G2S5: *…it helps us to improve our knowledge of mistakes we make because now we know the wrong collocation.*

As a result of highlighting the errors, the students were able to avoid repeating the errors in future writing tasks. For instance, student G2S23 wrote the following, "*Yes because it is a reminder/warning to us to not give the wrong answer again*" which shows indirect WCF reminds him/her to avoid erroneous structures in future tasks. The following

sections highlight the perceived factors that might hinder the students in Group 2 to benefit from indirect WCF.

Theme three: The nature of CF factors hinders students to benefit from indirect WCF

Theme three is identified as the factor that might hinder the students to benefit from indirect WCF which is associated with the nature of CF. Listed under this theme is a sub-theme on the implicit nature of indirect WCF provision used to facilitate the students' collocation competence. The provision of indirect WCF provided to the students was only in the form of error notification, without any metalinguistic information. This is the most recurring difficulty mentioned by students in Group 2. Most of them (n = 14) wrote that indirect WCF had insufficient metalinguistic information about the collocation errors they made in Test 1. For instance, student G2S3 wrote, "*Sometimes I don't understand because it lacks information*". The student's view was also supported by student G2S8 who failed to understand his/her error because indirect WCF had no further information beyond error indication.

G2S8: *I do not understand the error correction and lack of information in WCF written on my Test 1*.

Furthermore, other students reported that indirect WCF was implicit because it did not point to specific errors in a sentence. This posed a challenge for students to specifically locate the errors because the error indication was placed in the text margin. As explainedby student G2S20, who wrote that he/she could not locate the errors because the error indication using the "X" symbol was very generic.

G2S20: *I cannot locate my errors because using the "X" symbol is too general*.

Considering indirect WCF was not pointing at specific errors but rather was provided on text margin only, the students were referring to how items number 9-13 in section A and items number 9-12 in section B of sentence construction (see Appendix 2 of Test 1) were corrected with indirect WCF. These students perceived that the indirect WCF was not specific in revealing such errors. Additionally, student G2S7 also mentioned that it was difficult to process indirect WCF that had only an error indication, "*Don't understand the symbol. If lecturers use the "X" symbol it is hard to process the correction*.". Due to insufficient information in indirect WCF, it had caused the students several drawbacks in which students G2S5 and G2S12 wrote that they were not able to gauge why they made such errors in Test 1. Furthermore, student G2S21 perceived indirect WCF did not help him/her to understand the errors committed, which was important for learning collocation from error correction. The following excerpts show the students' responses regarding the explicitness of indirect WCF:

G2S12: *I do not know why and what is my mistake in the question that was written with "X*".

G2S21: *WCF was not able to help me understand my errors and learning collocation.*

Theme four: Contextual factor hinders students to benefit from indirect WCF

Another factor that can hinder the students from benefiting from indirect WCF is identified as the illegible handwriting of the CF provider. This factor is categorised under the contextual factor as illustrated in the theoretical framework. According to student G2S6, the illegible handwriting of his/her lecturer had hindered the student from comprehending the indirect WCF provided in Test 1, "*bad handwriting of the lecturermade us not understand the WCF written*".

On a similar note, student G2S13 echoed that the lecturer's handwriting was the main difficulty that he/she encountered when processingindirect WCF which resulted in his/her inability to process the WCF provided during the intervention stage. The following excerpt supports this theme:

G2S13: *The difficulty that I find is the handwriting. Hard for me to understand what is the error that I made.*

In summary of Group 2, The analysis of qualitative data obtained has derived several themes useful for answering RQ4. Specifically, two themes of learner's factors and the nature of CF factors have contributed to the effectiveness of indirect WCF. Moreover, the analysis has also revealed the implicit nature of indirect WCF and the illegible handwriting of WCF providers can hinder its effectiveness. The next section presents the analysis of data from Group 3.

4.4.1.3 Group 3

The qualitative data that emerged from Group 3 have produced one primary theme that can contribute to the effectiveness of indirect WCF in this study. This primary theme is supported by four sub-themes: (1) the explicitness of direct WCF; (2) direct WCF as a platform for learning from errors; (3) direct WCF enables error awareness; and (4) the positive role of metalinguistic information in direct WCF. The analysis of themes from Group 3 also revealed that (1) the nature of WCF factors and (2) contextual factors can hinder students from benefiting from indirect WCF. Figure 4.8 illustrates the themes that emerged from Group 3. Note that, to illustrate Group 3 responses, the acronym "G3S" is used, preceded by numbers.

It indicates that the students from Group 3 were high-proficiency and given direct WCF. It is worth mentioning that, every main theme contains in it several sub-themes. Moreover, the themes support the propositions made in thetheoretical framework.

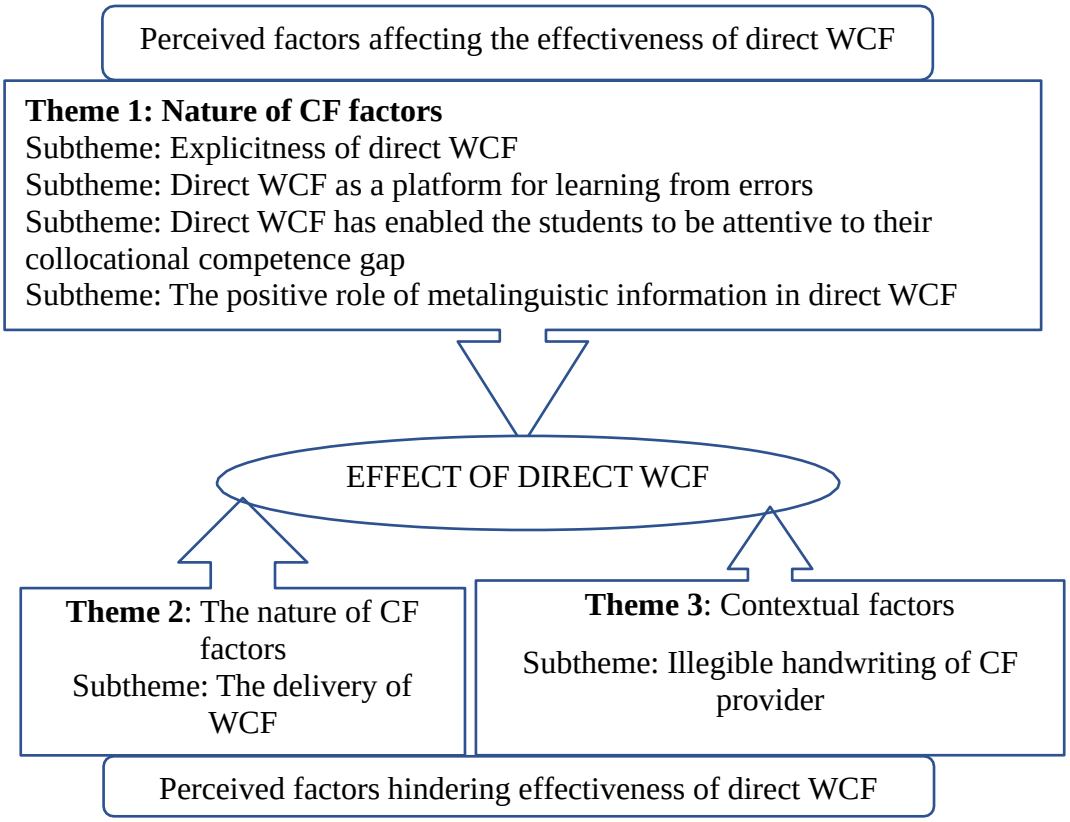


Figure 4.8: Perceived factors contribute to or hinder the effectiveness of direct WCF

Theme one: Nature of CF factors contribute to the effectiveness of direct WCF

The qualitative data analysis of responses from Group 3 has produced one main theme. In essence, the students perceived that the nature of CF is the primary factor that contributes to the effectiveness of direct WCF in this case study. This primary theme is supported by four sub-themes: (1) explicitness of direct WCF; (2) direct WCF perceived as a means for learning from errors; (3) direct WCF enabled them to be attentive to their knowledge gaps; and (4) the positive role of metalinguistic information in direct WCF.

The first sub-theme that was perceived as the contributing factor to the effectiveness of direct WCF is associated with its explicitness. The theme of explicitness ofdirect WCF stemmed from four condensed codes: (1) "correction and explanation are provided" as mentioned by student G3S1; (2) "*simple sentences used to describe WCF*" as written by students G3S4, G3S12, and G3S20; (3) "*clear explanation*" as mentioned by students G3S16 and G3S10; and (4) "*WCF was written with details*" mentioned by students G3S11, G3S15, and G3S22. These codes served as the main descriptors that led todeducing the current sub-theme, mentioned by several students (n = 9) who indicated that direct WCF was written with metalinguistic information that had assisted students' comprehension of collocation. The explicitness of direct WCF, provided on errors made in Test 1 had led to the improvement of their collocational competence. Student G3S22 wrote that he/she managed to comprehend direct WCF because it had examples of the targeted structures written in sentences. Furthermore, another student also stated that a clear explanation was provided in WCF which helped his/her understanding of collocation. The following excerpts provide support for this sub-theme.

G3S22: *Yes, I do understand as he would include more details and some examples which improve my understanding.*

G3S4: *Yes, I understand. My lecturer explained it in the simplest sentence that I can understand.*

G3S29: *Yes. I do. The WCF that was given to me was extremely clear and super easy to understand. He made sure to write each point down for better understanding.*

The second sub-theme supporting the primary theme refers to direct WCF which was perceived as a means for learning from errors. Several students (n = 14) in Group 3 mentioned that they are motivated to receive direct WCF because of its role as a platform

for learning from error. The extraction of this sub-theme stemmed from codes such as "*I can improve and learn from mistakes*" as mentioned by students G3S4 and G3S5, "*prompts error awareness*" as stated by student G3S26, "*learning from a mistake*", as stated by student G3S14, and "*improve writing error*" as mentioned by students G3S8, G3S11, G3S18, and G3S23. The direct WCF strategy as indicated by such respondents had playeda significant role in highlighting erroneous linguistic structures that eventually led them to be conscious of not repeating such errors in future tasks, which informed how they learned from WCF. This was echoed by student G3S30 who wrote that he/she preferred to have direct WCF in his/her work because it can enhance the linguistic knowledge of targeted structures whilst avoiding erroneous structures in future writing.

G3S30: *I would like to. This is because it can improve our skills in English essays by focusing on the mistakes. So, we will not repeat the errors in the future.*

Moreover, responses from the following students showed support for this sub-theme, G3S8 indicated that "*I find it easier to understand collocation after the lecturer gave WCF in my error*", and G3S6 stated that "*WCF has guided me to answer correctly and use it in my writing*", and G3S25 wrote that "*WCF helps me to identify the correct collocation*". These responses indicated that the students learned via direct WCF (e.g., WCF differentiates erroneous structures from correct ones, and WCF guides the students to form correct structures in writing). Moreover, some students mentioned that direct WCF helped them to identify collocations that were unfamiliar in the past and that it had enabledthem to use correct collocation in future writings as mentioned by students G3S3 "I have learned something new through the lecturer's WCF", and G3S30 that is illustrated in the following excerpt.

G3S30: *Yes, I do. After receiving WCF from my lecturer, I noticed that I can produce and identify the correct collocation and use them in my writing*.

The third sub-theme is regarding direct WCF that enabled the students to be attentive to their collocation knowledge gaps. Derived from prompt two in the qualitative instruments, students G3S6 and G3S12 wrote that direct WCF had enabled them to be attentive to their weaknesses and knowledge gaps in collocation. With that in mind, they were moved to look for the "answer" to overcome the weaknesses and fill the knowledge gap promptly. As a result, it was possible to improve their comprehension of the targeted linguistic structures. The following excerpts support this theme.

G3S6: *So that we could know our weaknesses in collocation types and learn how to get the right answers right away*.

G3S12: *So from the feedback, I can know what is my weakness and mistakes in writing, and at the same time, I can make more improvements.*

Moreover, this sub-theme was also derived from a student's response to prompt five. For instance, student G3S3 wrote that he/she learned a lot from the direct WCF provided because it highlighted certain areas or collocation types that he/she needed togive more focus on. This enabled the student to double his/her revision efforts on such collocation types.

G3S3: *I currently believe that through the lecturer's advanced level of English language, I learned much more when he/she provide feedback on my mistakes so that from there, I know in which area I can improve myself.*

The fourth sub-theme was about the positive role of metalinguistic information in direct WCF. The direct WCF employed in this study was made more explicit by providing metalinguistic information that might assist learners' comprehension of collocation. Therefore, Group 3 students acknowledged the explicit direct WCF that was perceived as beneficial in improving their collocational competence. The benefits of linguistic information in the direct WCF according to student G3S7 was that it contained examples of collocation and some sentences that showed the correct use of it. This information enlightened the students to form correct collocation in their subsequent tests which were reflected in significant improvement in scores.

G3S7: *Because lecturer feedback helps me to know the correct collocation and it also contains examples of sentences that use correct collocation*.

Furthermore, the role of metalinguistic information was also highlighted by student G3S22 who stated that his/her comprehension of collocation was improved in a way that he/she was able to distinguish between the correct and incorrect collocations. This was possible due to the metalinguistic information provided in direct WCF.

G3S22: *Yes. Because my lecturer wrote some correct examples of the mistakes that I have made so it helps to improve my understanding of why certain things I thought were right, were wrong*.

Another positive value of metalinguistic information was highlighted by a student in this group that it had enabled student G3S27 to use it as a repertoire of collocations that are revisited when he/she produces a writing draft. In other words, this information is referred to in producing correct collocations in his/her writing.

G3S27: *In my essay writing, I tend to remember the example provided by the lecturer, when he used it to write the correct forms in corrective feedback. Hence, help me to think and set examples to have better writing*.

Theme two: The nature of CF factors hinders students to benefit from direct WCF

The analysis of qualitative data of responses from Group 3 has revealed two factors that can hinder the effectiveness of indirect WCF in this study. First, the students in Group 3 were concerned about how the direct WCF was provided in Test 1, which caused some difficulty for the students to comprehend it. Students G3S7, G3S9, and G3S25 wrote that they had an issue with direct WCF instructions provided by the lecturer. They stated that it was difficult to interpret the instructions given. Student G3S25 wrote that the lecturer "*spoke too fast*" when delivering his instructions on what they were supposed to do with direct WCF. Similarly, student G3S9 reported that he/she failed to comprehend the instruction given, "*I don't fully understand the instructions given when we were asked to study the feedback.*" and G3S7 echoed that he/she could not interpret fully the instructions to study the CF provided in Test 1. The following excerpts provided support for the theme:

G3S7: *It was quite difficult because I can't truly understand the instruction given by my lecturer when he returned the first test.*

G3S25: *Sometimes it is confusing because my lecturer explained everything too fast.*

The excerpts have shown that failing to comprehend the instructions regarding what to do with the WCF had shaped some students' view of difficulty processing direct WCF in this current study which in turn can hinder its effectiveness.

Another difficulty associated with direct WCF delivery was identified as the improper organisation of metalinguistic information. To illustrate the strategy used in providing metalinguistic information during the intervention stage, the information was written near incorrect question items. However, due to space constraints, some information was written on available space. An arrow was drawn to indicate that a specific metalinguistic explanation belongs to a specific incorrect question item (see Appendix 11 which shows how the metalinguistic information was provided when space constraint was the issue). This hurdle was described by G3S14 who wrote that the metalinguistic information was not arranged properly which could lead to confusion. The following excerpt supports this theme:

G3S14: *The difficulty is when the correction is not arranged in order and can make me confused.*

Theme three: Contextual factor hinders students to benefit from direct WCF

Another factor that can hinder the student to benefit from direct WCF is associated with the handwriting of the feedback provider. This was mentioned by several students (e.g., G3S22, G3S28). One respondent, G3S22 wrote that he/she felt it was slightly difficult to comprehend the CF written by his/her lecturer, but it can be overcome simplyby asking the coursemates or the lecturer himself. The issue of feedback providers' handwriting has become a concern because the nature of WCF is mostly written by hand.

G3S22: *For me, I find it a little difficult to understand his handwriting, but it is not a big deal as I can ask him or my course-mates if I cannot read or understand his handwriting*.

From the analysis of the field notes, the researcher recorded that he was approached by one student from Group 3 to enquire about the feedback provided on his/herTest 1. The researcher provided clarification on what was written to clear up the confusion caused by illegible handwriting.

To conclude, the analysis of qualitative data obtained from Group 3 has identified several themes. Specifically, the students perceived that the effectiveness of direct WCF in this study is influenced by the nature of CF factors (e.g., explicititness of direct WCF, and the positive role of metalinguistic information in direct WCF). Furthermore, Group 3 has also informed that factors such as the delivery of direct WCF in this study and the illegible handwriting of the WCF provider can hinder its effectiveness.

4.4.1.4 Group 4

The qualitative data that emerged from Group 4 have produced two primary themes that can contribute to the effectiveness of indirect WCF in this study: (1) Learner's factors; and (2) the Nature of CF factors. Further analysis also revealed that (1) the nature of WCF factors and (2) contextual factors can hinder students to benefit from indirect WCF. Figure 4.9 illustrates the themes that emerged from Group 4. Note that, to illustrate Group 4 responses, the acronym "G4S" is used, preceded by numbers. It indicates that the students from Group 4 were high-proficiency and given indirect WCF provisions. It is worth mentioning that every main theme contains in it several sub-themes. Also, the themes support the propositions made in the theoretical framework.

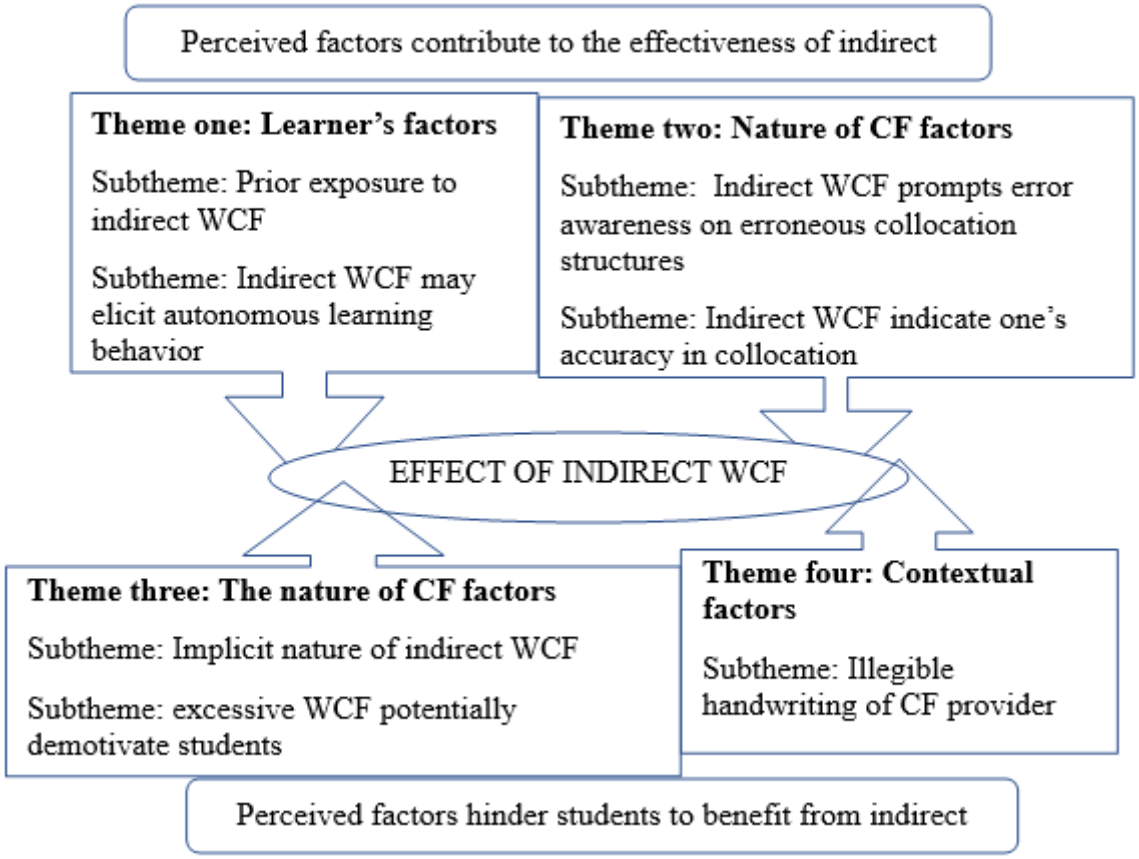


Figure 4.9: Factors that can contribute to or hinder the effectiveness of indirect WCF as perceived by Group 4

Theme one: Learner's factors contribute to the effectiveness of indirect WCF

The analysis of the qualitative data has derived the first theme of learner's factors that can contribute to the effectiveness of indirect WCF as perceived by Group 4. There are two sub-themes listed under this primary theme: (1) students' prior exposure to indirect WCF; and (2) autonomous learning behaviour shown by the students.

The first sub-theme to support theme one is associated with students' prior exposure to indirect WCF provision in this study. Due to that, the students were able to comprehend

the indirect WCF provided in Test 1 without much effort. The following student wrote that he/she was able to understand indirect WCF provided in Test 1 because he/she had used it as it was also practised by other lecturers in the university as well as in previous education stages such as in secondary school. The following excerpt supports this theme.

G4S14: *Yes, because it's always used by other lecturers. So, I have to get used to the WCF*.

The next sub-theme listed under theme one is about the role of indirect WCF that elicits autonomous learning behaviour. The learner autonomy in learning was caused by the implicit nature of indirect WCF that contains a lack of metalinguistic information on collocation. This was stated by several students (n = 8). It began with the role of indirect WCF that highlighted students' collocational errors in the test. However, indirect WCF did not offer further information beyond error indication as stated by G4S12, "*Even though very little information in WCF…*" and G4S4, "I *still don't know why my answer is wrong*". Therefore, as the nature of indirect WCF was implicit, it triggered students' intention to search for more information about collocation from various sources. G4S22 wrote the following:

G4S22: *... From the WCF, I will want to learn more and find out more about why I did such mistakes. along the way, I will gain more information.*

Autonomous learning behaviour triggered by indirect WCF was also echoed by the respondents G4S7, G4S10, and G4S11 who took the initiative to do more revision and drills on targeted structures apart from consulting the lecturer and textbook. Their responses are illustrated in the following excerpts:

G4S7: *Yes. Because the error correction shows that I need to find the correct n accurate answer, and that is through studying or recap back the topics.*

G4S10: *Yes, because WCF shows my error, and I will ask again about certain errors till I understand so that I can lessen the errors in the following task given to me.*

G4S11: *... once I know the error, I will revise and make more exercises about the topic/chapter.*

This sub-theme was also derived from prompt five in which learner autonomy was mentioned by G4S2 who wrote that he/she "*double my effort to study my mistakes*", G4S3 who reported that he "*needs to do more revision*", G4S5 who stated that "*it stimulates self-learning*", G4S8 who intended to "*search for the correct answer by myself*", G4S20 who intended to "*work on the errors by ourselves*", and G4S25 who "*refer to my lecturer or find answers in the textbook*". This has shown that indirect WCF promoted autonomous learning behaviour among several students in Group 4. Furthermore, G4S2 stated that the WCF strategy had created awareness of his/her errors and thus motivated him/her toincrease his/her revision efforts on the errors committed, "*Yes... It has created awareness and motivation to double my effort to study my mistakes*". Similarly, G4S3 echoed that he/she had to do a lot of practice on the topic to improve his/her comprehension of collocation, "*WCF highlights error that I made, and this means that I still need to do more revision for collocation topic*".

Furthermore, indirect WCF that promoted autonomous learning behaviour was also mentioned by other students such as students G4S8, G4S20, and G4S25 who wrote that the WCF strategy had urged them to consult their lecturer, textbook, or other means to rectify the errors committed.

G4S8: *Yes, if it's a simple question then I can search for the correct answer by myself practicing self-learning. Others are where it is too difficult to understand then I would ask my lecturer about it*

G4S25: *Yes, it is enough for me because, from the mistakes, I can refer to my lecturer or find answers in the textbook*

In reference to some students from Group 4 who wrote that they approached their lecturer to ask for clarification of the errors committed in Test 1, the data from the field notes also indicate that there were certain instances in which some students from this groupasked for assistance from the lecturer.

Theme two: Nature of CF factors contribute to the effectiveness of indirect WCF

The next theme perceived by Group 4 that can contribute to the effectiveness of indirect WCF is identified as the nature of CF factors. There are two sub-themes listed under this main theme which are (1) Indirect WCF prompts error awareness and (2) indirect WCF shows one's accuracy in collocation.

In highlighting the first sub-theme, several students from Group 4 (n = 8) indicated that they were able to comprehend indirect WCF because it highlighted collocation errors which promoted them to notice the errors, thus promoting awareness of these errors.

This sub-theme is supported by the excerpts from the following students such as G4S3 who stated, "*I know where are my errors in Test 1*.", G4S7 reported that, "*easy to search for mymistak*e", G4S9 pointed out that, "*to point out your mistake and let you figure out what is the error*", G4S13 reported that, "*shows that our answers in the collocation test are inaccurate*", and G4S20 who wrote that, "*to show an error has been made*". Moreover, the excerpt from student G4S9 shows the role of indirect WCF that prompts their awareness of

erroneous structures in the next excerpt:

G4S9: *I guess I understand why my lecturer uses WCF. To point out your mistake and let you figure out what is the error.*

Furthermore, the role of indirect WCF in promoting error awareness was also mentioned by students G4S2, "*I know which part of the question contains errors*", and G4S16 "*WCF points to wrong collocation answer*" in their responses.

The second sub-theme describes the role of indirect WCF that indicates one's accuracy in collocation types. In other words, indirect WCF has drawn their attention to how well was their collocation accuracy when tested in the tests. This theme is supported by the excerpts from students G4S3, "…*a mistake which shows that I may not understand that particular topic*", G4S17, "…*I need to improve about collocation subject because I have so many errors*", G4S19, "*it can show whether I truly understand the topic or not*", and G4S23, "*because I know that I still not fully understand about the topic*". As student G4S17 puts it, indirect WCF revealed his/her competency in the subject based on the number of errors he/she made in Test 1.

G4S17: *Yes, it clearly shows that as a student, I need to improve on the collocation subject because I have so many errors on the test.*

Therefore, the students can put more effort into studying the parts where errors occur the most. In the context of this study, the tests were developed to test the collocational competence of the two types of collocation, which are, noun-verb collocation,and verb-adverb collocation. Thus, the indirect WCF benefited the students to focus on any of the collocation types that they were not competent at.

Theme three: The nature of CF factors hinders students to benefit from indirect WCF

The analysis of qualitative data of Group 4 has indicated that the primary factor that can hinder the students to benefit from indirect WCF is its implicit nature. A large fraction of the students (n = 13) from Group 4 pointed to this barrier. The indirect WCF provided during Test 1 was not explicit but rather implicit as stated by several students. For instance, student G4S5 indicated that it was "*difficult to understand the answer if the lecturer did not explain why it is wrong*". Moreover, student G4S8 reported that indirect WCF had a "*lack of information in the WCF*". Similarly, G4S 11 reported that indirect WCF had "…*no explanation of the right answer in the test*" which was supported by student G4S14 who reported "*No comments or description on why I (he/she) got the answer wrong*". Furthermore, student G4S16 reported that indirect WCF contains "… *no explanation on why the errors are made*" which was also supported by G4S18 who stated that "*the lecturer did not explain more about the error and we student cannot identify…why the answer is wrong*".

Indirect WCF was perceived as implicit by these students because it contained insufficient information about students' errors and metalinguistic information about collocation. As reported by student G4S18, the student was not able to gauge the cause of his/her errors because it was not explained by the lecturer, and only error indication was provided as a form of indirect WCF.

His/her view was also echoed by student G4S19 who wrote about his/her difficulty in not knowing the reason for errors made in Test 1.

G4S18: *Like, the lectures did not explain more about the error and we students cannot identify and understand why the answer is wrong.*

G4S19: *I don't get to know the reasons behind the mistakes I made in Test 1.*

Insufficient metalinguistic information in indirect WCF made it difficult for the students to understand indirect WCF itself. Student G4S21 wrote that he/she had difficulty understanding indirect WCF because there was no brief explanation of errors provided. Indeed, the indirect WCF was provided in the form of "error indication only" but it was only enough to inform them that they had made an error. However, beyond error awareness, such as why they made such errors, was made unknown.

G4S21: *I don't think that I can understand the WCF provided unless a brief explanation is written of the errors.*

Theme four: Contextual factor hinders students to benefit from indirect WCF

The contextual factor of illegible handwriting of feedback providers becomes the next theme that can hinder the students to benefit from indirect WCF. It was identified in the responses from six students in Group 4. Some of the descriptors related to the theme are "bad handwriting", and "lecturer's handwriting". The illegible handwriting had confused student G4S10 to the extent that he/she was not able to differentiate between a "tick" that represents the correct answer and an "X" that indicates the wrong answer. The following excerpt provides support for the theme:

G4S10: *When the error correction symbol, my lecturer used to show my mistakes looks like a tick which can confuse me.*

The qualitative data analysis of Group 4 has produced several factors beneficial that can contribute to and hinder the effectiveness of indirect WCF in this study. Specifically, two themes of learners' factors and the nature of CF factors were identified as the stimulus for the effectiveness of indirect WCF perceived by Group 4. Furthermore, the analysis has also revealed that the implicit nature of indirect WCF and the contextual factor of illegible

handwriting of feedback providers can hinder its effectiveness. The following section reports on the cross-case analysis to answer RQ4.

4.4.2 Cross-case Analysis

This section reports the second level of analysis, the cross-case analysis of data from the individual case presented previously. The primary goals are to answer RQ4 and to provide a stronger conclusion through theoretical replication across several cases. Revisiting RQ4, it was posed to explore the factors that may contribute to or hinder the effectiveness of direct and indirect WCF in this case study. Moreover, the findings are matched with the propositions made in the theoretical framework (see Chapter 2) regardingthe factors that can affect the "noticing stage" in the framework. Therefore, the findings, asthey were derived from the words of the respondents in this case study, can be used to support the theoretical framework proposed in this case study, whilst expanding the currenttheory. Table 4.36 illustrates the intersections of factors that contribute to and hinder the effectiveness of direct and indirect WCF.

Based on analysing the all-inclusive data and comparison of themes across the four cases, the same two themes were detected as the factors that can contribute to the effectiveness of both direct and indirect WCF in this case study. These two main factors are Learners' factors and the nature of CF factors. Note that, each theme consists of several subthemes. The themes and the subthemes across the four groups detected by the researcher are presented in Table 4.36.

Table 4.36: Themes and subthemes of factors contributing to the effectiveness of WCF

Themes and subthemes	
Theme 1: Learners' factors	**Theme 2: Nature of CF factors**
Subtheme 1. Direct & indirect WCF enables autonomous learning behaviour (Group 1, Group 2, & Group 4) Subtheme 2. Students' prior exposure to WCF (Group 2 & Group 4)	Subtheme 1. The explicitness of WCF(Group 1 & Group 3) Subtheme 2. WCF enables error awareness (All groups) Subtheme 3. Direct and indirect WCF enabled students to be attentive to their collocation competence gaps (Group 3 & Group 4)

The cross-case analysis points to the first factor that may contribute to the effectiveness of WCF in this case study – learners' factors. Categorised under this factor are two subfactors, namely, (1) WCF enables autonomous learning behaviour and (2) Students' prior exposure to WCF.

The first subfactor was detected in Group 1 of low-proficiency students who were given direct WCF, Group 2 of low-proficiency who received indirect WCF, and Group 4 of high-proficiency students who were given indirect WCF. Findings derived from these groups of students showed that the effectiveness of WCF in this study was caused by their initiative to perform autonomous learning. Autonomous learning was evident in their responses that these students consulted their lecturer, referred to external sources such as the internet, revisited notes and textbooks, self-revision, and did more revisions on the topic.

It is also found that despite the nature of the explicitness of direct WCF in this study, several students from Group 1 still performed autonomous learning to seek more information and clarification about collocation. This may suggest that the provision of direct WCF was not explicit enough in the context of Group 1 (note that these are low-proficiency students).

Also, this finding may refute the notion that direct WCF can obstruct autonomous learning in L2 students because it does not allow the learners to edit their errors as the correct forms of such errors are given. Furthermore, autonomous learning wasalso perceived by students in Group 2 and Group 4 which can contribute to the effectiveness of indirect WCF in this case study. Several studies suggested that indirect WCF has the most capacity to incite self-regulated learning providing that the learners are situated at the appropriate developmental readiness to perform self-correction, particularly learners at higher proficiency levels (e.g., Ferris,2011; Hyland & Hyland, 2006; Wang & Jiang, 2015). The findings, however, indicate that not only Group 4 perceived that they performed self-regulated learning, but also Group 2 of low-proficiency learners. This may suggest that despite Group 2's proficiency, students from this group can perform autonomous learning which contradicts the common proposition in the literature. The reason for their accomplished autonomous learning is perhaps due to the implicitness of indirect WCF that did not offer any metalinguistic information. To illustrate their way of accomplishing autonomous learning, students in Group 2 wrote that they approached the lecturer to rectify the errors made in Test 1.

Interestingly, autonomous learning was not found in Group 3. Note that Group 3 consisted of high-proficiency students given direct WCF. Considering their profile, and the fact that direct WCF was explicit in this case study, the students in Group 3 did not show any autonomous learning behaviour as opposed to other cases. This may suggest that students from this group perceived that the provision of direct WCF was fairly explicit enough to facilitate their collocation competence without the need to refer to other external sources as a means to enhance their knowledge on the topic. However, this is far from agreeing with the proposition in the literature that direct WCF may obstruct self-regulated learning because such WCF has in it the corrected forms.

The next subfactor contributing to the effectiveness of WCF was perceived as students' prior exposure to direct and indirect WCF. This subfactor was detected across Group 2 and Group 4. Note that, both groups are of different levels of proficiency but were exposed to the same WCF type – indirect WCF. Both groups perceived indirect WCF as effective because they had been exposed to such WCF type since previous education levels (e.g., previous semesters, secondary schools). Revisiting the students' responses, Group 2 and Group 4 informed that indirect WCF was the most common error-correction method employed by teachers at schools and other lecturers from other courses in the university. The learners' prior learning exposure is significant in determining the success of WCF because such experience may have built a foundation for dealing, comprehending, processing, and reacting to indirect WCF. This is true especially when the students are dealing with and processing indirect WCF which is implicit and contains a lack of metalinguistic information. When compared with Group 1 and Group 3, which received direct WCF, students' prior learning exposure did not seem to play many roles because thisfactor was not detected across the two cases. This may suggest that direct WCF is, to some extent much easier to comprehend and process than indirect WCF, which requires less metacognitive effort. However, indirect WCF is, to some extent much more difficult to comprehend and process which requires more metacognitive effort.

Thus, for it to be successful, the students must have been exposed to indirect written CF. The second primary factor perceived as contributing to the success of WCF in this case study was identified as the nature of CF factors. This factor is supported by three subfactors, namely, (1) Explicitness of WCF, (2) WCF enables error awareness, and (3) WCF enables students to be attentive to their collocation competence gaps.

The factor of explicitness of WCF plays a significant role in determining the success of WCF types in this study. This factor was detected across Group 1 and Group 3. Note that, both groups are of different proficiency but exposed to the same WCF type – direct WCF. Furthermore, this factor was not perceived by Group 2 and Group 4 who wereprovided with indirect WCF. This seems to suggest that those who received direct WCF confirmed its benefit in facilitating their collocational competence more than those who didnot receive such WCF type. To illustrate, direct WCF in this study was explicit in such a way that it contains metalinguistic information of collocation whereas indirect WCF was only in a form of error indication. The concept of CF explicitness is defined by Nassaji (2016a) which refers to the degree to which CF provides learners with explicit information regarding the nature of their errors and how they should correct the erroneous structures. Considering the types of WCF in this study, the findings seem to suggest that direct WCF, which was more explicit than indirect WCF, was perceived as contributing more towards the effectiveness of WCF in facilitating the students' collocational competence, as it was perceived by the groups that were exposed to it. However, the type of WCF that does not provide sufficient information to assist learners in acquiring the correct forms was perceived as less contributing to improving the linguistic accuracy of targeted structures, asin the case of Group 2 and Group 4.

The second subfactor supporting the nature of feedback in contributing toward the effectiveness of WCF was identified as the role of WCF that prompts error awareness of the target structure. Interestingly, this factor was detected in all cases. All groups agreed that both types of WCF, in this case, study have made them "aware of errors" to the extent that they "can differentiate between erroneous and correct structures" because "WCFshows where the mistakes are" and "errors are pointed out" via the provision of both WCF types.

Theoretically, WCF was shown to enhance L2 learners' awareness of their linguisticerrors because it allows "pushed outputs" and enables them to externalise their language and test their hypothesis around the targeted linguistic structures. Thus, it creates the condition for the learners to notice their errors. The students in all groups perceived that both WCF types had made them aware of the collocation errors that they produced in Test 1. Therefore, the process of noticing and correcting their errors was shown to result in increased scores in the subsequent tests. This finding may suggest that, whether a WCF is explicit or implicit, its primary role seems to be prominent that the major purpose of CF regardless of its forms in oral or written context should draw students' attention to erroneous language forms in triggering conscious analysis of targeted linguistic structures.

The third subfactor listed under the main factor of the nature of CF was identified as the role of WCF that enabled the students to be attentive to their collocation competence gaps. This factor was detected across Group 3 and Group 4 only. Note that, these two groups are high-proficiency students. The term "collocation competence gaps" refers to thestudents' weakness or inability to form and identify correct collocation structures which resulted in collocation errors. The students from both groups perceived that WCF provisions in this study prompted them to notice the knowledge gaps. This seems to pointto the noticing function of WCF as illustrated in the theoretical framework that learners canrealise the linguistic gap in their interlanguage system with the help of this function. Therefore, once they noticed their knowledge gaps, they subsequently pushed themselves to fill the gaps by referring to metalinguistic information in direct WCF (e.g., Group 3) or internally processing indirect WCF and performing self-regulated learning in the case of Group 4. Furthermore, this factor was not perceived by the students in Group 1 and Group 2. Group 1 did not perceive this factor as the contributing success factor of direct WCF because such

WCF was considered explicit and had metalinguistic information. Note that, Group 2 did not perceive this factor as opposed to Group 4 (although both groups received indirect WCF) because of their proficiency disparities. As opposed to Group 4, Group 2 was less likely to internally process indirect WCF due to their proficiency background because they were not at the appropriate developmental readiness to perform self- correction. To this end, learners' factors and the nature of CF factors are the two main factors that were perceived by the students in this case study to contribute to the effectiveness of WCF in facilitating their collocation competence.

In highlighting the factors that can hinder WCF effectiveness, the cross-case analysis has also detected two common themes across all cases. These two main factors arethe nature of CF factors and contextual factors. The detected themes and subthemes acrossthe four groups are presented in Table 4.37.

Table 4.37: Themes and subthemes of factors that can hinder the effectiveness of WCF

Themes and subthemes	
Theme 3: Nature of CF factors	**Theme 4: contextual factor**
Subtheme 1. The delivery of WCF (Group 1 & Group 3) Subtheme 2. Implicit nature of indirect WCF (Group 2 and Group 4)	Subtheme 1: Illegible handwriting of CF provider (All Groups)

The theme of the nature of CF factors was perceived as one that can hinder the effectiveness of WCF in facilitating students' collocation competence. This factor is supported by two subfactors, namely, (1) the delivery of WCF and (2) the implicitness of indirect WCF.

The first subtheme of delivery of WCF refers to how direct WCF was provided on Test 1. Note that this subfactor was only notified by Group 1 and Group 3. As explained in Chapter 3, to illustrate how direct WCF was provided, the metalinguistic information was written near incorrect question items. However, due to space constraints, some information was written on available space. An arrow was drawn to indicate that a specific metalinguistic explanation belongs to a specific incorrect question item. This hurdle was described by several students in both groups who reported that the metalinguistic information was not arranged properly which could lead to confusion. This issue was not mentioned by those who received indirect WCF because providing indirect WCF in terms of error indication only does not require much space on the test paper.

Moving on to the next subfactor, Group 2 and Group 4 reported that the implicit nature of indirect WCF can hinder its effectiveness in improving their collocation competence. Bear in mind that this factor was mentioned by those who received indirect WCF only. The essence of Group 2 and Group 4 responses regarding the implicit nature of indirect WCF revolve around the fact that (1) indirect WCF lacks metalinguistic information of collocation; (2) indirect WCF did not point to specific errors but only error indications in a text margin. Insufficient linguistic information in indirect WCF had caused several drawbacks to Group 2 which reported that they were not able to gauge why some errors were made and how to rectify them.

As a result, they perceived that indirect WCF was not able to help them to understand the errors. Consequently, this WCF type was less beneficial for Group 2 considering their proficiency. In highlighting the responses by Group 4, it is surprising that despite their proficiency background, some students in Group 4 perceived that the implicit nature of indirect WCF can hinder its effectiveness. This finding goes beyond what the

literature has been suggesting, in which, due to developmental readiness, learners at higher proficiency can process and comprehend indirect WCF successfully.

The second primary factor that can hinder the effectiveness of WCF in this study is the contextual factor of the illegible handwriting of the feedback provider. This factor is very significant as it was detected across all cases. The issue of illegible feedback providers' handwriting has become a concern because the provision of WCF is mostly written by hand, in the actual classroom environment as well as in this study. Most studentsacross the cases, particularly Group 1 and Group 3 reported that due to the illegible handwriting of the feedback provider, it was difficult to comprehend the linguistic information in direct WCF. Furthermore, students in Group 2 and Group 4 reported that it was hard to differentiate between a "tick" that represents the correct answer and an "X" that indicates the wrong answer. Due to the illegible handwriting, the students indicated in certain instances that they failed to comprehend the feedback. As a result, the students showed negative reactions such as being unhappy with the feedback, their performance in the subsequent tests was affected, and to a certain extent, the purpose of WCF to facilitate their collocation competence was not accomplished. The literature pointed out that teachers' illegible handwriting is a very common problem that hinders students' understanding of feedback.

Not only that, but illegible handwriting may also cause the students to wrongly interpret the linguistic information which can affect their comprehension of the targeted structures.

4.4.3 The Effectiveness of WCF is Caused by Learner's and Nature of CF Factors whereas its Inefficiency is Due to Contextual and Nature of CF Factors

The findings on RQ4 have revealed several factors that may contribute to or hinder

the effectiveness of direct and indirect WCF in this study. Each factor was detected across at least two groups in this study.

First, it was perceived by the students that the effectiveness of WCF in this study was due to (1) learners' factors and (2) the nature of CFfactors. Listed under learners' factors, the effectiveness of WCF in this study was because both WCF practices had enabled the students to perform autonomous learning behaviour, which was perceived by Group 1, Group 2, and Group 4. Subsequently, the learners' prior exposure to indirect WCF was also perceived as the factor that contributed to its effectiveness – a theme detected across Group 2 and Group 4.

Then, the next factor that contributed to the effectiveness of WCF was perceived as the nature of CF factors. Listed under it are three subfactors of Explicitness of direct WCF as perceived by Group 1 and Group 3, the significant role of WCF that enables error awareness was detected across all cases, and WCF enabled students to be attentive to collocation knowledge gaps perceived by Group 3 and Group 4.

Second, cross-case analysis has also revealed two main factors that may hinder the effectiveness of WCF, namely, (1) the nature of CF factors and (2) contextual factors.

Listed under the main factor of the nature of CF are the delivery of WCF perceived by Group 1 and Group 3, and the implicit nature of indirect WCF detected in Group 2 and Group 4 can hinder WCF effectiveness. Subsequently, the contextual factor of illegible handwriting of CF providers is the most significant factor that can hinder WCF effectiveness because this factor was detected across all cases.

The value of the findings of RQ4 strengthens the propositions made in the theoretical framework of this case study. In retrospect, the theoretical framework proposed that several

factors can affect the effectiveness of WCF at the noticing stage. These factors are (1) learners' factors, (2) Contextual factors, and (3) the nature of CF factors. Considering the cross-case analysis, all these factors were detected in at least two cases, yet more convincingly some factors were detected across all cases. Thus, this embedded case study has met one of its purposes, to provide a stronger conclusion through theoreticalreplication across the case (e.g., the four groups). The discussion of the findings of all RQs follows in the subsequent chapter.

4.5 Chapter Summary

This chapter has presented the quantitative and qualitative findings of the case study. The findings were organised according to the research questions. The following chapter will discuss the findings concerning the body of knowledge.

CHAPTER 5

DISCUSSIONS

The preceding data analysis unpacked the findings of this embedded case study. Then, the findings are discussed concerning the literature in this current chapter. At the outset, this current study aimed to develop an understanding of the role of direct and indirect WCF in addressing ESL undergraduate students' collocation errors through an embedded case study approach. To meet the purpose of the study, three study objectives were outlined: (1) to determine the short-term and long-term effects of direct and indirect WCF on collocation competence; (2) to identify the type of WCF that has a greater effect on collocation competence; (3) to explore the factors perceived by the students that can contribute to or hinder the effectiveness of direct and indirect WCF in improving collocation competence. The researcher gathered quantitative and qualitative data througha series of collocation tests, an open-ended questionnaire, field notes, and a course information document. The discussion of findings is organised according to the research questions posed in chapter one. The research questions are:

i, What are the short-term effects of direct and indirect WCF on the collocation competence of the students in the study?

ii, What are the long-term effects of direct and indirect WCF on the collocation competence of the students after nine weeks?

iii, What WCF type has a greater effect on the students' collocation competence?

iv, What are the factors as perceived by the students that can contribute to or hinder the effectiveness of direct and indirect WCF in improving collocation competence?

5.1 Direct and Indirect WCF Positively Affects the Collocation Competence of the Students in Short-term

The first research question was derived to determine the short-term effect of direct and indirect WCF on the collocation competence of the participants in this study. The effect was measured by comparing the students' performance between Test 1 and Test 2. The findings indicate that all groups in this case study benefited from both WCF types. This is shown in the increased accuracy of collocational competence when measured in Test 2. In other words, direct and indirect WCF practices were able to facilitate the collocation competence of the students in the case study, as far as the results in Test 2 are concerned. Note that, the positive effects on their collocational competence are short-term.

These quantitative findings corroborate with Banaruee et al. (2018), Bitchener and Knoch (2010b), Eslami (2014), Jamalinesari, et al. (2015), Han and Hyland (2019), Suzuki et al. (2019), and Westmacott (2017). Such studies have shown positive significant short-term effects of direct and indirect WCF on students' linguistic accuracy as measured in subsequent tests. However, it should be noted that when comparing the findings with such studies, some differences should be considered. Specifically, several differences such as language settings (e.g., ESL or EFL), targeted structures (e.g., verbs, vocabulary, grammatical accuracy, article systems), and the provisions of WCF either focused (i.e., WCF used to address few errors) or unfocused (i.e., WCF used to address all errors) must be considered when comparing the findings with this case study.

As discussed in chapter two, most WCF studies conducted in Malaysia seem to suggest the effectiveness of direct and indirect WCF in addressing various grammatical errors (e.g., Hanif, 2018; Ishak, 2017; Rashtchi & Bakar, 2019; Sharina, 2019; Yunus et al.,

2020). However, none of these studies was conducted to provide empirical evidence on the effects of direct and indirect WCF on the collocation competence of undergraduate ESL learners. Also, outside of the Malaysian education context, the data on this issue seems lacking in the literature. Therefore, this study positions itself in the literature to extend the current knowledge in the literature, pointing to the short-term effects of WCF on the collocation competence of ESL learners, particularly ESL students at the tertiary level.

The clarification on why direct and indirect WCF is effective as a short-term approach, as in the case of this case study, is explained in the background of the "noticing" effect in the theoretical framework. Moreover, this finding challenges Krashen's (1985) propositions that downgrade the role of CF in L2 learning based on his "Monitor Hypothesis". Swain (1995) highlighted that language output needs to reach four cognitive functions (i.e., noticing, hypothesis testing, metalinguistic reflection, and reflection) The first one is the noticing function. This is where learners can notice the gap between the target language and their interlanguage. To illustrate, noticing the gap involves being conscious of inaccurate collocation structures and the correct ones, with the help of external feedback. Theoretically, this is the phase in which the error correction comes in, which in the case of this current study refers to the provisions of direct and indirect WCF. The concept of noticing is promoted by the Output Hypothesis in such a way that it provides opportunities for learners to produce the target language and become conscious ofthe gaps and limitations that occur in their linguistic knowledge. Specifically, the function of CF is to divert learners' attention to the gaps that appear in their written output. Therefore, as proposed in the Output Hypothesis, recognising the problems or gaps triggersthe learners to selectively focus on the important knowledge in the output, which eventually prompts their targeted linguistic growth.

In this case study, direct and indirect WCF prompted the "noticing function" as explained previously, that made the students aware of their collocation gaps. Subsequently, they were able to form accurate collocationswhich was reflected in improved accuracy in subsequent tests.

Another interesting explanation to consider is focusing on what happens inside the learners' minds when they are exposed to CF in this case study, which can help to explain why both types of WCF were able to facilitate their collocation competence. The cognitive processing of information supplied by CF focused on the effective function of attention in facilitating the acquisition process (Almasi & Tabrizi, 2016; Kim, 2012). The effective role of attention is grounded on Schmidt's (1990) noticing hypothesis which was revisited by many current CF studies (e.g., Han & Gao, 2021; Seiffedin & El-Sakka, 2017; Wang & Li, 2021). The hypothesis emphasises the important role of conscious attention to form in promoting the language learning process. In the context of this case study, the learners' awareness of knowledge gaps between their target language and their interlanguage is the necessary and sufficient condition for converting input to intake. Therefore, there must be some exclusive attention to language form for acquisition to take place. This "attention", which is mostly elicited by CF, is significant as it channels the students' focus to their knowledge gaps.

To this end, the positive short-term effects of direct and indirect WCF on the collocation competence of undergraduate ESL learners in this case study can be attributed to the "noticing" role of WCF in prompting "error awareness". Therefore, recognising the errors triggered the learners to focus on the language gaps which were then filled with metalinguistic information in direct WCF and error indication cues in indirect WCF. As a

result, the students demonstrated a significant short-term improvement in their collocation accuracy.

The finding of RQ1 is very significant at this point. As discussed in the literature, the effects of WCF on L2 learners' accuracy are rather mixed. Therefore, the finding can serve as a reference for L2 educators regarding the role of both WCF types in addressing L2 learners' collocation errors. Furthermore, considering the fact that the empirical evidence of WCF effects on the collocational competence of L2 students in the country is scarce, this finding offers a solution to L2 instructors in general and in the university specifically.

5.2 Direct WCF has a Positive Long-term Effect on Collocation Competence whereas Indirect WCF was Less Effective for Low-proficiency learners

The findings of RQ2 were rather mixed regarding the effectiveness of both WCF types in this case study. This study has found that direct WCF can retain learners' collocation accuracy regardless of their proficiency (e.g., low proficiency, high proficiency). The following will provide explanations on why direct WCF was effective in the long-term for all levels of proficiency whereas indirect WCF was not effective forlower proficiency learners.

Findings of RQ2 point to the fact that direct WCF can lead to collocation accuracy, which also refers to the acquisition of the targeted structure. This finding corroborates with many past studies in the literature that suggest the positive long-term effects of direct WCF. For instance, Bitchener and Knoch (2010), Hashemnezhad and Mohammadnejad (2012), Salimi and Ahmadpour (2015), Mitra Samiei (2016), Bonilla Lopez et al., (2018),

Cerezo et al. (2019), Benson and DeKeyser (2019), Zhang and Cheng (2021). It should be noted that the acquisition of targeted structure in previous studies (e.g., verbs, prepositions, article systems, vocabulary) was accomplished if the learners were able to demonstrate it in the long term. Even though the findings from those studies are promising regarding the benefits of WCF, they failed to highlight certain key areas. For example, the long-term effects of WCF on non-grammatical items such as collocation are relatively less known. Moreover, whether WCF is suitable to address collocation errors made by Malaysian university students, is unknown. This study may offer its findings that WCF, particularly direct WCF is effective in enhancing the collocation competence of ESL learners, regardless of their proficiency. Therefore, it offers empirical data that trigger and encourage L2 educators to use WCF to address grammatical errors (as indicated in past studies) and collocation errors (as confirmed by this study).

Interestingly, the findings refute Tan and Manochphinyo (2017) who found that direct CF did not affect students' accuracy in the use of several grammatical components (e.g., tenses, subject-verb agreement, articles, prepositions, adjectives, adverbs). They went on further to claim that the undergraduate students in their study were not aware of their errors highlighted via direct feedback which prompted them to repeat the same errors in a new writing piece. There is a possible explanation for the differences in findings between this case study with that of Tan and Manochphinyo's study. Firstly, the instrumentations used in their study were in the form of essay writing, in which the students were assigned to write argumentative essays within a treatment period, whereas this study employed a test instrument that required the test taker to identify accurate collocation items.

Thus, the different structures of testing instruments employed by both studies contributed to the different findings of the effect of direct WCF. Secondly, the provision of direct WCF was either focused or unfocused. To illustrate, the direct WCF in their study was used to address six types of errors, thus the WCF was "unfocused". However, in this case, study, direct WCF was used to address only two types of collocation errors, thus "focused". Therefore, the provisions of either focused or unfocused direct WCF may have affected its effectiveness in improving learners' accuracy in both studies. Thus, this may suggest that the various results of WCF effects as measured in many studies might be caused by a myriad of features such as the instrument used and the type of focused or unfocused WCF.

The findings of RQ2 support the role of WCF that can lead to the acquisition of targeted structure. This finding strengthens the theoretical framework of this study. As seen in the theoretical framework, Output 2 or acquisition is the final phase in the framework which resulted from the effect of "noticing" caused by WCF. The learner is considered to have acquired the targeted structure when he/she can retain the accurate use of collocation over time. The direct WCF provision in this case study seems to suggest that it can facilitate the collocational competence of students across various proficiencies in the long term.

Since the finding of RQ2 shows that direct WCF can lead to the acquisition of collocation competence, Truscott's (1996, 2007) and Truscott and Hsu's (2008)proposition for L2 teachers to abandon CF is challenged. In his study, Truscott (1996) asserted that CF is ineffective as it is beneficial to only the development of metalinguistic knowledge which is temporary and unlikely to affect learners' implicit and procedural knowledge that is long-term.

However, this study has found that WCF, particularly the direct type, can retain the collocation competence of the students over time – evidence of targeted structure acquisition. The effectiveness of this type of WCF depends much on two factors which are (1) its explicitness and (2) the fact that it requires less mental effortwhich can lessen cognitive misunderstandings. The explicit type of feedback such as directWCF provided students in Group 1 and Group 3 with metalinguistic information that required less mental effort to process the errors, subsequently enabling them to acquire the "new knowledge" reflected in the improvement of collocation competence. Moreover, Truscott's proposition to abandon CF in the L2 classroom is unfair because his suggestion may include all types of WCF even though several WCF are effective whereas others are not, as seen in this study. For instance, RQ2 points to the fact that direct WCF is indeed beneficial for low and high-proficiency learners, but indirect WCF is beneficial for only higher-proficiency learners but not low-proficiency learners.

This finding is relatively less reported in the literature that the implicit WCF (i.e., indirect WCF) only benefited the high-proficiency students (i.e., Group 4), but not the low-proficiency group (i.e., Group 2). Surprisingly, despite many studies in the literaturerevoking and refuting Truscott's proposition (see meta-analysis by Karim & Nassaji, 2019; Li & Vuono, 2019), this finding tends to lend support to Truscott's (1996) claim that WCF will be ineffective in cases where the teachers' CF does not fit students' developmental sequences. For instance, in the case of low-proficiency learners who did not benefit from indirect WCF. This seems to point out that higher proficiency learners are thought to have more attentional capacity thus enabling them to process the implicit WCF type (e.g., indirect WCF). Moreover, the implicit type of WCF is deemed more fit for advanced learners because they possess sufficient linguistic knowledge stored in their long-term memory that they can

revisit cognitively to understand the feedback they receive.

Considering the lower proficiency learners who did not benefit from indirect WCF in the long term, they were not in a proper developmental stage to acquire and process the feedback due to limited attentional capacity whilst lack of linguistic knowledge of the targeted structure. Most scholars in CF studies believed that indirect WCF is thought to be less helpful for lower proficiency L2 learners because they have insufficient linguistic knowledge in applying effective corrections (e.g., Bitchener & Knoch, 2010; Bitchener, 2012; Ferris, 2004, 2006, 2011; Eslami, 2014; Hyland & Hyland, 2006; Saragih et al., 2021; Tang & Liu, 2018; Wagner & Wulf, 2016; Zhang et al., 2021). Furthermore, low- proficiency L2 learners require explicit types of WCF that serve as explicit guidance to extend their linguistic repertoire (Ellis, 2009; Yu et al., 2020). The importance of existing linguistic knowledge for lower proficiency L2 learners is emphasised by Gass (1997) that the existing knowledge plays an important role in cognitive processing because it is used by learners to match the CF input against their existing knowledge. Therefore, this has led to expectations that higher proficiency level learners may be sufficiently equipped with linguistic competence than others in the lower proficiency bracket, which enabled them to benefit from indirect WCF.

The students in Group 2 (i.e., low proficiency) were not able to process thefeedback because they did not have prior linguistic knowledge of the targeted structure andwere unable to perform self-correction. Therefore, it affected their long-term memory of the targeted structure, which explained why their performance dropped over time. This shows that these learners need a more sustained type of CF to attend to and consciously process the feedback (such as direct feedback with metalinguistic information).

In the actual classroom context, the findings can be used to justify that a teacher's choice of CF type should consider the developmental readiness of the learners to acquire targeted linguistic structures. In this sense, novice or lower proficiency L2 learners, for instance, require CF that is intensive and explicit (e.g., direct WCF) to be able to progress towards a more target-like use of a particular structure or form.

To highlight the significant aspects of the findings of RQ2, particularly in the context of retaining L2 students' collocational competence, this case study confirmed that WCF can lead to the acquisition of accurate collocation as seen in the theoretical framework. It offers current knowledge at the background of past studies and informs L2 educators' practice. Also, it strengthens the positive role of WCF that can be used to address grammatical errors proposed by past studies and non-grammatical errors as proposed by this study. Furthermore, the findings of RQ2 challenge Truscott's proposition at one end (e.g., direct WCF is effective) but lend support towards his views on anotherend (e.g., indirect WCF is not for low proficiency learners).

5.3 Direct WCF is more Effective than Indirect WCF

The purpose of RQ3 was to identify the fittest WCF type that can be used to facilitate L2 learners' collocational competence. As far as the result in the previous section is concerned, it points to the empirical data that direct WCF is the most effective type of WCF to facilitate the collocational competence of students in this case study. Note that, the structure of direct WCF in this study was in terms of error notification and metalinguistic information. Based on the cross-case analysis of data, direct WCF was able to enhance the collocational competence of low-proficiency and high-proficiency groups of students (Group 1 and Group 3).

This is because their performance is better than those who receivedindirect WCF.

This finding confirms the dominance of direct WCF over indirect WCF as found by many past studies in the literature (e.g., Alharbi, 2020; Azni, 2019; Bitchener & Knoch, 2010b; Bonilla Lopez et al., 2018; Han, 2012; Hashemnezhad & Mohammadnejad, 2012; Karim, 2013; Mitra Samiei, 2016; Nemati et al., 2019; Suzuki et al., 2019; Van Beuningen et.al., 2012; Zarei & Mousavi, 2016). This finding does not disprove thepositive role of indirect WCF as shown in several studies (e.g., Bitchener & Ferris, 2012; Ferris, 2006; Supraba et al., 2021) because this case study has also shown the positive effects of indirect WCF illustrated in RQ1 and RQ2, particularly concerning the high- proficiency students. However, the empirical data in this case study point to the type of WCF that showed the greatest impact on learners' collocational competence– direct WCF. Moreover, the finding can be used to support L2 learners' perception in the literature who prefer direct WCF as opposed to indirect WCF as a means to facilitate their L2 learning in the Malaysian education context (see Ganapathy et al., 2020; Mahmud, 2018; Rashtchi & Bakar, 2019; Yunus, 2020). Comparing the findings of RQ3 of this study with previous studies must consider several differences such as (1) L2 learners' proficiency, (2) the natureof testing instruments, (3) test procedures, and (4) the provisions of either "focused" or "unfocused" WCF.

The effectiveness of direct WCF over indirect WCF in this case study is associated with the explicit nature of the WCF type. The differential effects of both WCF types indicate that direct WCF may produce better accuracy in the collocational competence of L2 learners in this study. Qi and Lapkin (2001) asserted that learners who exhibitedsubstantive noticing could produce written work with improved accuracy. This shows that the quality of "noticing" in the theoretical framework is important to improve the effectiveness of CF.

Therefore, the stage of reconstruction of the linguistic system can occur, providing that WCF is sufficiently salient and explicit. The explicitness of WCF corresponds to the

salient features mentioned previously where enough cue is given to make error correction sufficiently salient for learners tonotice and focus their attention on it. Also, several researchers (e.g., Qi & Lapkin, 2001; Storch & Wigglesworth, 2010) have also mentioned that the more extensive the engagement with WCF is, the greater the comprehension and retention of the targeted linguistic structures will be. However, the "engagement with WCF" relies on the "correct" amount of information given in WCF that influences the most appropriate condition for theprocess to effectively occur, which raises the question of how explicit the CF must be. Moreover, Swain (2008) claimed that the effectiveness in building metalinguistic knowledge and acquisition of the targeted language structures may be enhanced with enough cues to reflect on, such as the explicitness of the WCF type. The salient feature of CF that influences learners' engagement with WCF is supported by the findings of RQ3. The findings have shown that the explicit direct WCF (e.g., containing metalinguistic information) had a greater effect than implicit indirect WCF (e.g., only containing error indication) in this case study.

Bithcener (2012) believed that intuitively one might assume metalinguistic information to be the most effective type of CF if it gives explanations, explicit rules, and examples. This corresponds with the structure of direct WCF in this case study thatcontained metalinguistic information. Therefore, learners might be able to improve their comprehension and process more deeply the knowledge they have been provided with. Nevertheless, it may be dependent on a myriad of other variables such as the frequency with which they receive WCF; the nature of the information provided; and the ability of learners to relate it to other linguistic knowledge.

Other scholars such as Ferris et al. (2013) have also stated that more explicit WCF strategies that have labels, codes, or other metalinguistic information may be more beneficial

for some students, than the implicit WCF type that does not have labels, codes, or metalinguistic information. Moreover, this may apply to L2 learners who have received plenty of grammar instructions previously. The students may benefit from WCF that contains specific rule reminders or terms because the corrections, codes, or metalinguistic explanations may elicit their prior knowledge.

Based on the findings of RQ3, this study supports the provision of direct WCF that has metalinguistic information to improve L2 learners' accuracy, particularly in the English collocation subject, that should be employed by L2 educators in the university and other learning institutions as well. This is based on three arguments: (1) direct WCF brings more benefit to L2 learners because it assists them to reduce the confusion faced when they cannot remember or understand what the feedback conveys, and (2) direct WCF provides sufficient information to learners in resolving more complex linguistic errors due to its explicit nature, and (3) direct WCF provides students with immediate feedback on the hypothesis that they have made regarding the targeted structure.

5.4 Learners' Factors and the Nature of CF Factors Contribute to the Effectiveness of WCF whereas the Nature of CF and Contextual Factors Degrade WCF

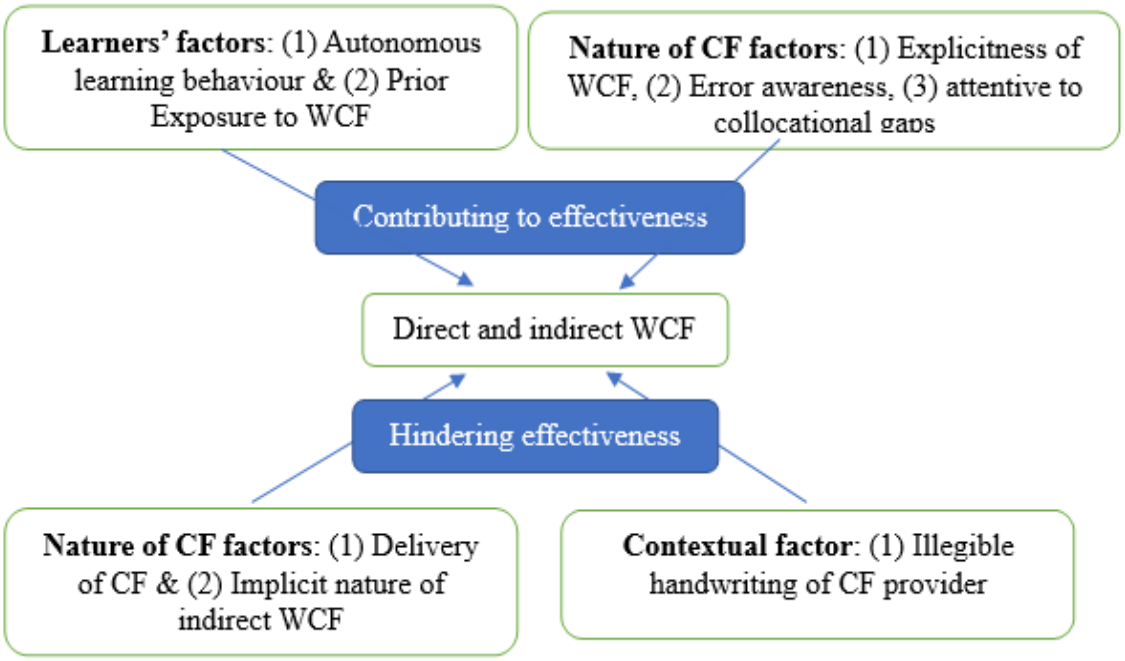


Figure 5.1: Perceived factors contributing to and hindering the effectiveness of WCF

The fourth research question was posed to explore the factors perceived by the students that can contribute to or degrade the effectiveness of WCF in this case study. A cross-case analysis was performed to answer RQ4. Note that, this analysis was performed to reach a more tangible conclusion via multiple replications across cases. The findings revealed that the effectiveness of WCF is enhanced by learners' factors and the nature of CF factors, whereas its effectiveness can be hindered by contextual factors and the natureof CF factors.

5.4.1 Learners' Factors Contributing to the Effectiveness of WCF

The first factor identified as the contributing factor to the effectiveness of WCF in this case study was perceived as learners' factors. Categorised under this are two subfactors,

namely, WCF elicits autonomous learning behaviour and learners' prior exposure to WCF.

Written CF elicits autonomous learning behaviour. Several students from Group 1 reported that they required additional metalinguistic information to enhance their collocational competence. Despite the nature of WCF provided to this group in terms of direct WCF attached to metalinguistic information, several students longed for additional information about collocation. Therefore, these students referred to other sources for that matter, which they deemed as not sufficiently provided by the lecturer. This showed that direct WCF had prompted autonomous learning behaviour among these students. Learners who manage their learning exhibit autonomous learning behaviour such as consulting their teachers, checking reference books, and returning to the material studied when they face difficulty processing WCF (Bitchener & Storch, 2016; Westmacott, 2017). It was reported in the previous section that these learners turned to other sources for information about collocation. However, the sources were not specified but only one student reported the source as the Internet. Studies in the literature emphasised that due to developmental readiness, higher proficiency ESL learners tend to be involved in autonomous learning (Bitchener, 2012; Eslami, 2014; Wagner & Wulf, 2016). However, several studies have also shown that beginner proficiency learners (e.g., Shirotha, 2016) and intermediate proficiency learners (e.g., AlShahrani, 2013) may also exhibit autonomy when exposed to indirect WCF. Additionally, Ferris (1999, 2011), Park et al. (2015), and Shirotha (2016) argued that direct WCF hinders students' autonomous learning and may not contribute to long- term learning because it does not allow L2 learners to edit their errors since the correct forms of erroneous structures are provided. However, the findings of this case studycontradict the notion that direct WCF may hinder autonomous learning. It can be seen fromseveral responses of the lower proficiency group that even though they were provided with direct WCF, some of

them still exhibited autonomous learning behaviour by searching for external metalinguistic information by themselves. This finding has expanded the literaturethat contradicts the claims made by other scholars (e.g., Ferris, 1999, 2011; Park et al., 2016; Shirotha, 2016) that direct WCF may hinder autonomous learning behaviour.

Autonomous learning behaviour was also noted by several students who were exposed to indirect WCF. Bitchener (2012) argued that indirect WCF is not likely to bring more benefit to lower proficiency learners because those at lower proficiency may not have such an extensive or deeply processed linguistic knowledge base to draw upon. Therefore, they often faced difficulty in processing indirect WCF. On the same note, Eslami (2014) and Wagner and Wulf (2016) argued that direct WCF is not desirable for low-proficiency L2 learners who are unable to perform self-correction of errors and do not know what the correct form might be. Furthermore, Sheen (2007) demonstrated that learners with better analytic ability benefit more from indirect WCF, and those with strong metalinguistic grammatical knowledge are more likely to gain benefit from such WCF type. Therefore, several studies in the literature have claimed that indirect WCF was more useful in promoting deeper cognitive processing which in turn may lead to autonomous learning behaviour (AlHarasi, 2019; Ferris, 2011; Lalande, 1982; Shirotha, 2016; Westmacott, 2017), providing that the learners are from higher proficiency background.

Interestingly, this study however indicates the opposite. The analysis of responses from low-proficiency learners has revealed that some students showed a tendency toperform autonomous learning behaviour. This behaviour was prompted by a lack of metalinguistic information in the indirect WCF type. Therefore, the students consulted other references to rectify their collocation errors. Specifically, the student consulted the lecturer to rectify his/her errors. This finding adds to the current knowledge that despite thelearner's linguistic

background, the implicit nature of indirect WCF can prompt learner autonomy in the search for supplementary linguistic information elsewhere. In essence, this finding offers a new perspective on the position of WCF in promoting learner autonomy among ESL learners. Most studies in the literature point to the fact that direct WCF can hinder autonomous learning due to its explicitness and indirect WCF disallows autonomous learning among lower proficiency ESL learners, the findings of this case studyhave shown the opposite.

Learners' prior experience with WCF contributes to its effectiveness. Another subfactor categorised under learners' factors is learners' exposure to WCF types that can contribute to its effectiveness. Several participant students from Group 2 perceived that their previous exposure to indirect WCF played a significant role in enabling them to comprehend indirect WCF in this case study. These students stated that they had been exposed to indirect WCF since prior education levels which enabled them to comprehendit. This finding contributes to expanding the current understanding of the role of indirect WCF. Specifically, this finding expands the general claim made by several researchers(e.g., Ellis, 2009; Guenette, 2007; Hyland & Hyland, 2006; Nguyen, 2019) that students' prior learning experiences with indirect WCF may determine its success in helping them to improve their targeted linguistic structures.

In the context of this study, students' prior learning experience and exposure to indirect WCF have contributed to successfully processing the indirect WCF to enable the students to gain benefit from it in improving their collocational competence.

5.4.2 Nature of CF Factors Contributing to the Effectiveness of WCF

The second factor identified as the contributing factor to the effectiveness of WCF in this case study was perceived as the nature of CF factors. Categorised under this are three

subfactors, namely, (1) explicitness of WCF, (2) error awareness, and (3) attention to collocational gaps.

The explicitness of WCF is the first subfactor. One of the key factors contributing to the effectiveness of WCF in previous studies was identified with the degree of explicitness of WCF provisions (e.g., Karim & Nassaji, 2020; Nassaji, 2009; Sheen, 2010; Suzuki et al., 2019; Zabihi & Erfanitabar, 2021). In such studies, the metalinguistic information in WCF provisions employed generated higher levels of awareness than other WCF types that did not contain such information. This indicates that the provision of direct WCF that contains metalinguistic information may benefit learners in their study, which also suggests the effectiveness of this type of WCF type. To some extent, the finding of explicitness of direct WCF as perceived by several students from Group 1 and Group 3 in this case study points to the belief that the explicit type of WCF can contribute to its effectiveness. Furthermore, Nassaji (2016a) also stated that the degree of explicitness of WCF is a key variable in affecting the effectiveness of the CF provision. The degree of CF explicitness can be defined in terms of the degree to which WCF provides learners with explicit linguistic information about the nature of errors, and how these errors must be corrected.

In this current study, it was perceived by several students that the perceived factor that contributed to the success of direct WCF in improving their collocation competence was the explicit nature of direct WCF. Moreover, the provision of direct WCF in this current study was provided in terms of accurate collocation structures and metalinguistic information that contains information related to the targeted structure. Thus, this type of WCF provision enabled the learners (in Group 1 and Group 3) to instantly internalise the correct form provided, as opposed to indirect WCF (in Group 2 and Group 4) in which learners do not know if their own hypothesised corrections are accurate. It

appears that, from this current study, the direct WCF type may offer the students in Group 1 and Group 3 the kind of explicit information that was needed for testing their hypothesis about the targeted structures, which in turn translated into improved accuracy in the subsequent tests.

Written CF enables error awareness as the second subfactor. The role of WCF in enabling error awareness is very significant as it was highlighted by all groups of students in this case study. Most student participants in this case study perceived that WCF provisions (e.g., direct, indirect) employed in this current study enabled them to be awareof erroneous collocation. Some students from Group 1 indicated that they were able to realise the collocation errors committed in Test 1 since such errors were highlighted by the direct WCF provision. Additionally, it was perceived that the CF helped them to differentiate between the correct and erroneous collocation structures which were beneficial for them to avoid committing similar errors in future writing tasks. This finding is in line with the benefits of direct WCF in emphasising L2 learners' linguistic gaps that have been reiterated in many past studies (e.g., Ghazi & Zamanian, 2016; Hosseiny, 2014; Li, 2017; Nassaji & Kartchava, 2017; Suzuki, 2004).

Theoretically, Swain (2008) asserted that WCF was shown to enhance L2 learners' awareness of their linguistic errors because it allows "pushed outputs" and enables them to externalise their language and test their hypothesis around the targeted linguistic structures. Thus, it creates the condition for the learners to notice their errors. Subsequently, the process of noticing the errors has been shown to result in a decreasing number of the same type of errors in subsequent drafts (Hosseiny, 2014; Ghazi & Zamanian, 2016; Kwon & Lee, 2011). In this case study, the low-proficiency students perceived that the direct WCF had made them aware of the collocation errors that they produced in the test. Therefore, the process of

noticing and correcting their errors was shown to result in increased scores in the subsequent tests. This role of WCF (e.g., prompting error awareness) increased their chances of producing the correct collocation structures in subsequent tests (e.g., Test 2, Test 3).

Moreover, others who were exposed to indirect WCF also perceived that this type of WCF was able to elicit their awareness of collocation errors which was noted in many past studies (e.g., AlJarrah, 2016; Brown, 2012; Hyland, 2003; Pawlak, 2014; Storch & Wiglesworth, 2010). Regardless of the WCF types, CF is still regarded as a "tool" to help raise L2 learners' awareness of some linguistic features. Many student participants in this study expressed that the WCF provisions promote awareness of collocation errors because they highlighted the erroneous structures. As a result of promoting error awareness, they perceived that it was beneficial for them to improve their collocational competence and avoid repeating errors in future collocation tasks. This finding suggests that it is the immediate goal of CF to make learners aware of the errors they have committed and that this awareness builds motivation for them to avoid the corrected structures in new writing drafts.

The third subfactor is identified as the position of WCF that enabled the students to be attentive to their collocation gaps. This perceived view seems to support the noticing hypothesis as a central component in the theoretical framework. The noticing hypothesis denotes L2 learners' awareness of targeted linguistic forms that take place in language production (Swain, 1996, 2000). Learners can realise the linguistic gap in their interlanguage system with the help of this function. Subsequently, noticing the gap pushes them to seek enough information to fill this gap. Several students from Group 3 and Group 4 perceived that it was possible to improve their collocational competence once they can identify the knowledge gap. The knowledge gap refers to their weakness in constructing or identifying the correct collocation structures which resulted in collocation errors. Several students

reported that direct WCF prompted their awareness of the erroneous collocation structures which in turn enabled them to be aware of their knowledge gap. With that in mind, they were motivated to rectify the errors by referring to the metalinguistic information attached to direct WCF. Furthermore, it was also reported that direct WCF wasperceived as beneficial in highlighting the areas that needed more focus or revision effort, as the effect of noticing. The student specifically referred to the noticing role of direct WCF that allowed him/her to put extra effort into collocation types that have the most errors. It should be noted that the current study focuses on two types of collocation – verb- noun type and verb-adverb type. Therefore, according to the student, it was possible to identify his/her knowledge gap in either one of the collocation types that required more study effort.

Written CF given as a form of negative evidence offers the information that is required by the learners regarding the features of the target language which are distinct from their interlanguage system. In other words, the function of CF is to divert learners' attention to the "gaps" that appear in their written outputs. The finding on this aspect, indirect WCF indicates one's accuracy in collocation types, reveals that indirect WCF benefited several students in Group 4 in such a way that they had some clues on how well or how bad they performed in either one of the collocation types (e.g., noun-verb type, verb-adverb type). Additionally, the WCF also indicated their competency in collocation because it was possible to gauge one's accuracy based on the number of collocation errors made in Test 1. It was also derived from their responses that the students regarded indirect WCF as a learning strategy that allowed them to lay their focus on the parts where a lot of collocation errors are committed. Therefore, it was possible to gauge their performance in each type of collocation, which is also possible for the students to have an additional revision on such collocation types. This finding reinforces the notion that CF may serve asa strategy to divert learners'

attention to the gaps that appear in their written output(Panova & Lyster, 2002; White, 2003) and confirms the noticing role of CF explained in the theoretical framework.

5.4.3 Nature of CF Factors Hindering the Effectiveness of WCF

The cross-case analysis has also revealed the first factor that can hinder the effectiveness of WCF in this case study. This factor is supported by two subfactors, namely, the delivery of CF and the implicit nature of indirect WCF.

The improper delivery of direct WCF can affect its effectiveness. This issue can be associated with (1) unclear instructions given during the intervention stage, and (2) improper organisation of metalinguistic information attached to direct WCF. Several students informed that it was difficult to interpret the instructions given regarding "what to do with direct WCF provided on their Test 1".

Moreover, several others also reported that they could not fully interpret the instruction on the role of direct WCF in Test 1. Zhan (2016) asserted that several potential sources of dissatisfaction towards WCF among L2 students may include a method of WCF delivery that can play a role in the successful application of WCF. In this study, the delivery of WCF during the intervention stage affected the successful application of the WCF type. Therefore, L2 educators should consider paying attention to properly delivering the instructions when providing WCF toL2 students.

Another difficulty associated with direct WCF delivery was identified as the improper organisation of metalinguistic information. The method of using arrows to organise the metalinguistic information had posed difficulty to some of the students from Group 1 and Group 3 (see Appendix 11 which illustrates how the metalinguistic information was organised using arrows). This may imply that delivering direct WCF through this method

could be avoided in the actual classroom context as it may be confusing to the students.

The second subfactor mentioned by the student participants in this study was the implicit nature of indirect WCF. This difficulty is regarded as the major issue faced by those who received indirect WCF in this case study. They regarded indirect WCF as lacking metalinguistic information on collocation, and it did not point to specific errors but only error indications in a text margin. Many of the students who associated the implicit nature of WCF as their main difficulty mentioned that indirect WCF contained insufficient linguistic information about the errors they made in Test 1. Insufficient linguistic information in indirect WCF had caused several drawbacks to some low-proficiency students (Group 2) who wrote that they were not able to gauge why they made such errors in their Test 1.

Moreover, several others from the same group perceived that indirect WCF was a type of CF that did not help them to understand the errors which were also importantfor learning collocation from error correction.

The students' perception that indirect WCF was implicit which offered less benefit showed that indirect WCF was less beneficial for the low-proficiency students in this current study. Considering Swain (2008) who argued that the effectiveness of building metalinguistic knowledge and acquisition of the targeted language structures may be enhanced with enough cues to reflect on, such as the explicitness of the WCF strategies.

However, in the context of low-proficiency learners, they perceived indirect WCF as implicit rather than explicit. This perceived view had resulted from a lack of metalinguistic information on collocation offered by the WCF type that could hinder them from learning via error correction.

Furthermore, the implicit nature of indirect WCF was also associated with the

provision of indirect WCF that did not point to specific errors in a sentence. As explained by Ellis (2009), an indirect WCF provision can be provided by placing a cross in themargin next to the line containing the erroneous structures. This CF type also involves the teacher deciding whether or not to show the exact location of the erroneous forms. Following Ellis (2009), the provision of indirect WCF was provided on the margin without showing exactly the location of the errors (e.g., particularly in the context of sentence construction of the test instruments). Therefore, the learners are left with identifying the errors themselves. This WCF type posed a challenge for students to specifically locate the errors.

The explicitness and implicitness of CF in helping L2 learners to improve targeted linguistic structures have been revisited in several current studies (Karim & Nassaji, 2019; Suzuki et al., 2019).

Moreover, Swain (2008) asserted the significance of WCF explicitnessin building metalinguistic knowledge, and the acquisition of the targeted structures can be enhanced with enough cues to reflect on. This finding reinforced the notion that explicit WCF type can provide more benefit to L2 learners regardless of their proficiency, not to mention its advantages to lower proficiency learners. This is because an explicit type of WCF can lessen cognitive processing of targeted structure thus preventing the learners from being loaded with newly acquired linguistic information. However, L2 educators must also acknowledge the benefit of the implicit type of WCF as informed by several paststudies (e.g., Bitchener & Ferris, 2012; Ferris, 2006; Kang & Han, 2015; Supraba et al., 2021). Nevertheless, the findings of this case study inclined to support the role of direct WCF in L2 classrooms, particularly concerning the collocation subject.

5.4.4 Contextual Factor of Illegible Handwriting of WCF Provider

The second factor that can hinder the effectiveness of WCF was perceived as the

contextual factor of illegible handwriting of the written CF provider. This factor was very significant as it was detected across all groups in this case study.

Several researchers have argued that teachers' illegible handwriting is one of the main factors that may contribute to the success of WCF. Moreover, this finding echoes others in the literature such as Chiang (2004), Mahfoodh and Pandian (2011), Jonsson (2014), and Dabboub (2019). These scholars asserted that teachers' illegible writing is a very common problem that hinders students' understanding of the WCF provided in their writing. Furthermore, Mahfoodh and Pandian (2011) and Liu and Lee (2014) found in their study that teachers' handwriting influenced students' understanding of the CF provided in their writing tasks.

Due to teachers' illegible handwriting, the students indicated in certain instances that they failed to comprehend their teachers' written CF which in turn caused them to show negative views such as being unhappy and rejecting the feedback.

This finding reflects that one of the conditions for effective WCF is that it should be clear, and students can comprehend the information provided in WCF. However, the findings derived from several students' responses revealed that some students faced difficulty related to the illegible handwriting of the CF provider. In the theoretical framework, this is categorised under the contextual factor of instructors' illegible handwriting. According to a student from Group 1, the student was not able to comprehend the direct WCF provided during the intervention due to the illegible handwriting of the CF provider. As a result, it hinders the student's ability to fully grasp the metalinguistic information supplied with direct WCF.

The issue had become a concern because the nature of WCF is mostly provided in a

written form as opposed to printed form. On a positive note, interesting details have emerged about this issue of "illegible handwriting". Unlike other groups of students who faced similar issues (e.g., Groups 1, 2, & 4), several students from Group 3 (e.g., high- proficiency students) expressed their initiative to overcome the issue. According to the students who found that direct WCF was unreadable, the students made the effort to seek clarification from either their classmates or the CF provider himself. Similarly, Westmacott(2017) has also found that L2 learners in her study were prone to consult their teachers as away of clarifying their difficulty processing WCF. This has shown that high-proficiency students tend to overcome the difficulty of illegible handwriting, as opposed to other students from a lower-proficiency bracket.

Therefore, it may suggest that autonomous learning behaviour has taken place, which refers to how individuals can manage their learning (Bitchener & Storch, 2016). As discussed in the previous sections, the type of WCF that mostly contributes to autonomous learning behaviour is indirect WCF, among higher proficiency L2 learners. However, this finding has shown that direct WCF can also contribute to autonomous learning behaviour in the following conditions: (1) the WCF is incomprehensible due to factors such as instructors' handwriting; (2) learners are from higher proficiency levels.

This finding is very significant as the issue with illegible handwriting of the CF provider can affect the effectiveness of WCF itself. What makes it more significant is that it was reported by all groups in this case study. Therefore, it is strongly recommended that L2 educators when providing WCF must ensure that their handwriting is readable, or they can rely on printing methods to deliver WCF.

To this end, the discussions of findings are based on the pattern-matching analysis proposed by Yin (2018) that compares empirically derived themes from this case study

with predicted ones in the theoretical framework. Therefore, the findings, as they were derived from the words of student participants in this case study can be used to support the propositions made in the theoretical framework. In the framework, it was proposed that the effectiveness of WCF on the "noticing stage" of the Output Hypothesis is mediated by (1) Learners' factors (2) The Nature of CF factors, and (3) Contextual factors. In retrospect, the proposed theoretical framework is supported by the findings of this case study which extends and supports the Output Hypothesis.

5.5 Chapter Summary

This chapter has discussed the findings concerning the literature. The findings were compared with previous studies which expand the current knowledge on the effects of written CF on ESL learners' collocation competence. In addition, the patterns of results were also described based on the theoretical foundations and literature knowledge. This allows the researcher to describe and justify "why" and "how" the results appeared to be asthey are. The discussions of findings were organised according to the research questions. Inthe next, final chapter of this thesis, the researcher offers the concluding chapter that draws uponthe key findings and the interpretive analysis presented in the previous sections.

CHAPTER 6

CONCLUSION

This final chapter concludes the thesis. It begins by summarising the key findings and these findings are organised according to the research questions. This study offers theoretical and practical contributions which are presented in the subsequent sections. In addition to discussing these contributions, the following section presents recommendations for future research. Finally, a concluding section concludes this case study.

6.1 Summary of Key Findings

This current study aimed to investigate the effects of WCF on collocation errors produced by low and high-proficiency ESL students in a Malaysian university through a case study approach. To meet the objectives of the study, an embedded case study design that utilised quantitative research methods supported by elements of qualitative techniques was employed. The design was selected based on the social constructivist framework which enables the researcher to be close with his subjects in a real-life context. The participants were 120 diploma-level students who were in their second academic year at a public university in Sarawak, Malaysia. Four groups of students were identified from two different faculties in the university. Specifically, two groups are known as low-proficiency ESL learners whereas the other two groups are known as high-proficiency ESL groups. To determine their proficiency groups, the previous semester's English test results were used as the indicator. A series of tests, namely, Test 1, Test 2, and Test 3 were used to collect the quantitative data whereas a set of questionnaires, field notes, and course information documents were utilised to gather quantitative data.

The tests were adapted from a collocation test designed by Gyllstad (2007), while the questionnaire items were modified from several published theses (e.g., Li, 2017; Mubarak, 2013). All instruments were pilot- tested prior to the actual data collection during the academic semester of September 2019- February 2020. Two types of WCF were investigated in this study, namely, direct WCF andindirect WCF. The effects were measured by comparing the students' performance betweenTest 1 and Test 2. Any significant changes in the performance are attributed to the short- term effects. In addition, a comparison of performance was also made between Test 1 and Test 3 to investigate the long-term effects. Finally, several cross-group comparisons were performed to determine which type of WCF was the fittest in the case study. The data wereanalysed with several quantitative analysis techniques, namely, the Shapiro-Wilk test of normality, Boxplot and Levene's test for equality of variances, and One-way ANOVA withBonferroni post hoc test. The qualitative domain of the study explores the factors that can contribute to or hinder the effectiveness of direct and indirect WCF on learners' collocationcompetence. The data were analysed with several qualitative analysis techniques, which are, thematic analysis, content analysis, and document analysis. The key findings aresummarised in the following paragraphs.

The first research question was outlined to determine the short-term effect of direct and indirect WCF on the collocational competence of the students in this case study. The findings point to the fact that both WCF types were able to facilitate their collocation competence. Even though the positive effect of WCF was short-term, the finding corroborates with many past studies. This finding offers empirical data to L2 educators in Malaysia since there was no such study conducted in the Malaysian education context. Moreover, the finding justifies the use of WCF as a strategy that can be used by L2

educators to facilitate and improve the collocation competence of undergraduate L2 learners in the university.

In addition, the researcher offers specific explanations as to why the student participants in this study were able to improve their collocation competence after being exposed to the direct and indirect WCF types. Such improvement in accuracy is attributed to the "noticing" effect caused by feedback in which the CF channelled learners' focus to notice their language gaps. As explained in the Output Hypothesis, a theoretical ground that supports the theoretical framework in this case study, recognising the problems or gaps triggers the learners to selectively focus on the important knowledge in the output, which eventually prompts their targeted linguistic growth. The most interesting aspect of RQ1's finding is that it challenges Krashen's (1982, 1985) views that downgrade the role of WCF in L2 learning.

The value of RQ1's finding is threefold: (1) it contributes to the extension of current knowledge in the CF literature; (2) it offers empirical data to support the use of written CF in addressing undergraduate L2 learners' erroneous collocation production; (3) it supports the theoretical framework proposed at the start and extends the current knowledge on Output Hypothesis.

The second RQ was posed to determine the long-term effect of both WCF types on the collocation competence of the students. The findings suggest that indirect WCF cannot help in the acquisition of collocation for low-proficiency students but direct WCF seems able to lead to acquisition. The findings corroborate with most past studies and refute several others in the literature.

The key features that led to refuting several past studieswere explained in terms of study design, targeted structure, and the provision of WCF used to address multiple errors.

Furthermore, it was highlighted and emphasised in the previous chapter about why low-proficiency ESL learners, such as those in Group 2, did not benefit from indirect WCF. This is because these students were not at a proper developmental stage to acquire new linguistic forms through self-correction. To overcome this, even though it was not done in the study, it is recommended that these learners need a more sustained type of CF to attend to and consciously process the feedback (such as direct feedback with metalinguistic information). In the actual classroom context, the findingscan be used to justify that a teacher's choice of CF type should consider the developmental readiness of the learners to acquire targeted linguistic structures. In this sense, novice or lower proficiency L2 learners, for instance, require CF that is intensive and explicit (e.g., direct WCF) to be able to progress towards a more target-like use of a particular structureor form.

However, in the context of students in Group 4 (i.e., high proficiency ESL learners), they were able to successfully process the implicit CF (e.g., indirect WCF) because they possess sufficient linguistic knowledge stored in their long-term memory that they can revisit cognitively for understanding the feedback they received. This finding points to the fact that in addressing collocation errors made by students from lowerproficiency brackets, it is best to employ direct WCF for having a long-term or retention effect on their linguistic accuracy.

Two interesting aspects offered by the finding of RQ2 are regarding its rebuttal against Truscott's (1996, 2007) proposition for L2 teachers to abandon CF. This study however emphasises the benefits of direct WCF that can lead to improved collocation accuracy. On another end, regarding the case of low proficiency learners who did not benefit from indirect WCF, it lends support towards Truscott's (1996) stand against CF.

The third RQ was posed to identify the type of WCF that has a greater impact on learners' collocation competence in this case study. The findings point to the fact that direct

WCF is the fittest WCF type in this case study. This finding confirms the dominance of direct feedback over other types of feedback in the literature. Many previous studies have indicated the advantages of direct feedback.

The researcher offers his explanation of why direct feedback in this case study is more successful than another type of CF employed. Factor such as its explicitness is the key to its effectiveness. The provision of direct feedback in this case study contains cues such as metalinguistic information that enhanced learners' engagement with the feedback whilst providing additional information on the targeted linguistic structures. In fact, it was mentioned by Swain (2008) in her Output Hypothesis that the effectiveness in building acquisition is enhanced by the explicitness of feedback that contains enough cues for the learners to reflect on. In view of the theoretical framework in this case study, the findings of RQ3 provide support for the framework that the salient feature of the CF influences its effectiveness, particularly at the "noticing" stage.

Therefore, without a doubt, with the empirical data and literature support, the L2 educators in the university and other learning institutions should consider employing direct WCF with metalinguistic information to teach the collocation topic. However, other studies disagree on the role of direct WCF towards L2 acquisition. It may cause a lack of cognitive processing on the learners' part which discourages the retention of targeted structure.

Therefore, it raises a question of how explicit direct WCF should be to enable the acquisition and how less explicit it should be to disallow acquisition. This opens a new research prospect.

The final RQ explores the factors that can contribute to or degrade the effectiveness of WCF as perceived by the student participants in this case study. From the analysis of qualitative data, the findings revealed (1) learners' factors and (2) the nature of CF factors as the main factors that contribute to the effectiveness of WCF. In addition, the findings also

point to (1) the nature of CF factors and (2) contextual factors as the main variables that can hinder WCF effectiveness.

In highlighting learners' factors, two sub-factors were identified, namely, (1) learners' background and (2) prior exposure to CF provisions. These factors are significant in contributing to the effectiveness of WCF. This finding highlights the fact that L2 educators must take into consideration learners' backgrounds and prior exposure to WCF when using any WCF type to address their linguistic errors. In the context of individual differences, writing instructors should take into consideration that some students benefit more from CF than others for a host of multiple reasons such as learning style, background knowledge, motivation, and prior exposure to CF provisions. Therefore, the notion of "one size fits all" regarding a particular WCF type in L2 classrooms is unlikely to be appropriate. Thus, L2 educators should be aware of their learners' differences in considering suitable WCF types in addressing learners' linguistic errors. This includes considering the student's prior experiences with the types of CF that they are accustomed to.

The second factor perceived as contributing to the success of feedback was identified as the nature of CF.

The nature of CF factors is associated with the explicitnessof WCF, CF's capacity to enable error awareness, and the fact that it allows learners to be attentive to their linguistic gaps. This finding points to the explicitness of feedback that plays a significant role in encouraging learners' perceptions of the positive value of the explicit type of feedback such as direct feedback. Therefore, L2 educators need to consider addressing erroneous collocation errors committed by their students using the explicit type of feedback as opposed to the implicit type.

Considering the factors that can degrade the effectiveness of WCF, the student participants perceived several factors, namely, the improper delivery of CF on learners

writing work, the implicit nature of indirect WCF, and the illegible handwriting of CF providers that can affect the effectiveness of feedback. Therefore, it is imperative that L2 educators consider these factors when using CF to address errors made by their students.

6.2 Theoretical contribution

The findings from this case study have generated new knowledge on the role of WCF grounded on the Output Hypothesis. This case study proposed two new spectrums of knowledge for the current understanding of the theory: (1) several factors can contribute to and hinder "noticing" in the Output Hypothesis, and (2) learners' proficiency can affect the long-term accuracy of the Output Hypothesis.

Of many theoretical frameworks used to support the role of WCF in L2 acquisition, the Output Hypothesis seems to receive little attention from WCF scholars. There is a lack of knowledge in the literature regarding the mediating variables that can contribute to or hinder the effectiveness of WCF in the background of the Output Hypothesis. The original Output hypothesis as proposed by Swain (1995) did not include any mention of variables or factors that can affect the effectiveness of "noticing". This is seen in Figure 6.1.

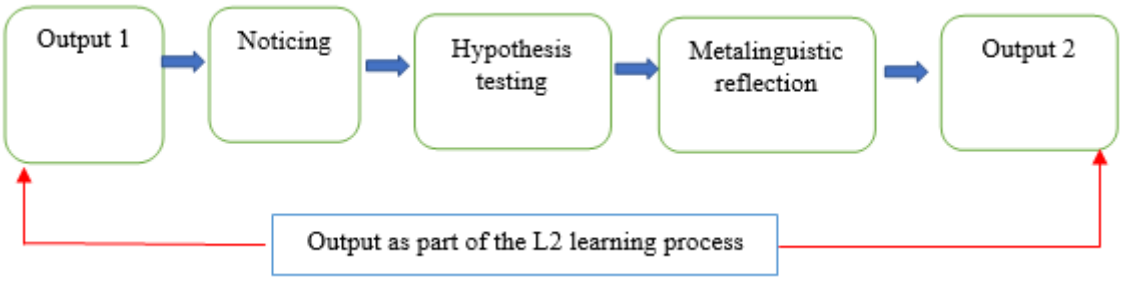


Figure 6.1: The original Output Hypothesis proposed by Swain (1995)

Therefore, at the start of this study, the researcher identified and derived several

mediating factors from the literature and integrated them into the theoretical framework employed in this study. The design of this study takes into account the effect that these mediating factors have on the effectiveness of WCF as seen from the Output Hypothesis lens. Revisiting the theoretical framework in Chapter 2, seen from the Output Hypothesis framework, the effectiveness of WCF at the "noticing" stage can be affected by several factors. To verify this "new" framework, data were collected from the qualitative perspective of the ESL learners in the case study. In analytical generalisation, the theory is compared with the empirical results, leading to the modification or extension of the theory (Ridder, 2017). The findings of this study indicate support towards the role of mediating variables (e.g., the factors affecting or hindering the effectiveness of WCF). With these findings, the Output Hypothesis that was first introduced by Swain (1995, 2000) is extended with the current version proposed by this case study and verified through its finding. This extension includes factors (e.g., learners' factors, nature of CF factors, contextual factors) that can contribute to and degrade the effectiveness of WCF towards ESL learners' collocational competence illustrated in the theoretical framework of this casestudy. Figure 6.2 visualised the newly proposed Output Hypothesis in this case study.

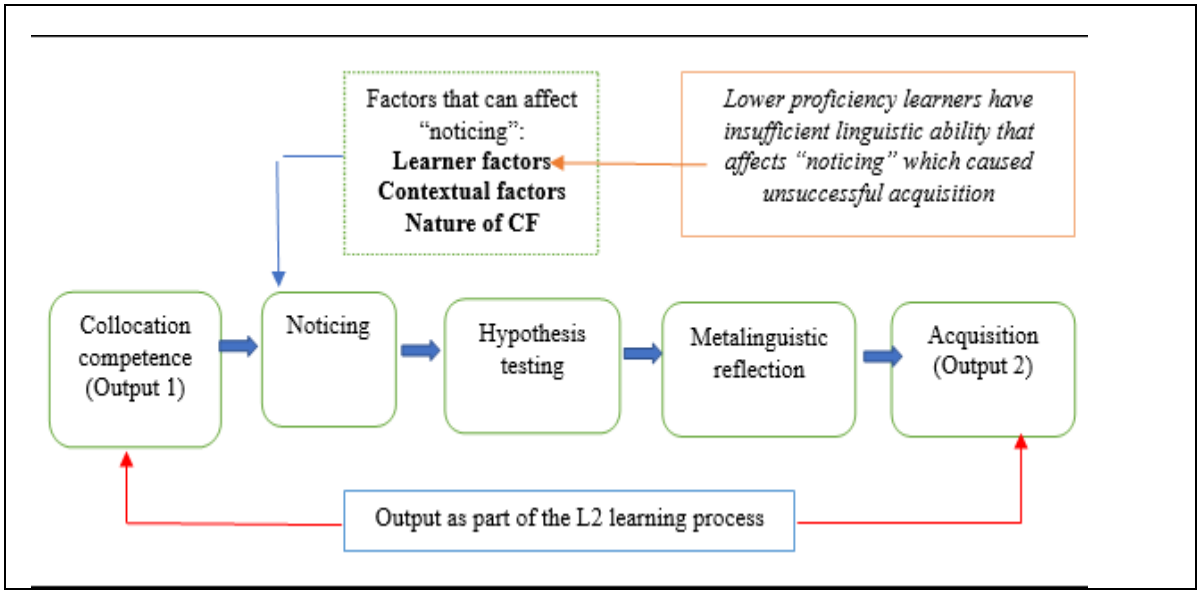


Figure 6.2: Current view of Output Hypothesis highlighting several factors affecting "noticing"

The quantitative findings of RQ1, RQ2, and RQ3 are grounded on the theoretical framework of the Output Hypothesis in which learners can notice, test the hypothesis, and internalise metalinguistic knowledge into their interlanguage system from the WCF provided. The finding on the aspect, that low proficiency learners (Group 2) failed to benefit from indirect WCF in the long term, was not thoroughly explained by Swain (1995,2000, 2005) in the Output Hypothesis. This has suggested a weak link between learners with lower proficiency and the long-term effectiveness of indirect WCF as viewed from theOutput Hypothesis. Nevertheless, a possible explanation can be derived from other WCF studies (e.g., Bitchener & Knoch, 2010; Ellis, 2009; Ferris & Roberts, 2001; Ferris, 2004, 2006, 2011; Hyland & Hyland, 2006) that lower proficiency L2 learners have insufficient linguistic ability and competency to enable them successfully processing indirect WCF, which is confirmed by the findings in this current study (e.g., the long-term effect of indirect WCF was not observed among students in Group 2). Therefore, this findingcontributes to a better understanding of the Output Hypothesis that learners' proficiency can affect the long-

term effectiveness of indirect WCF viewed from the Output Hypothesistheoretical lens. Figure 6.2 illustrates the "missing link" among "output 1", "output 2", and"learners with lower proficiency".

6.3 A Guideline for L2 Educators to Use Written CF with ESL Learners

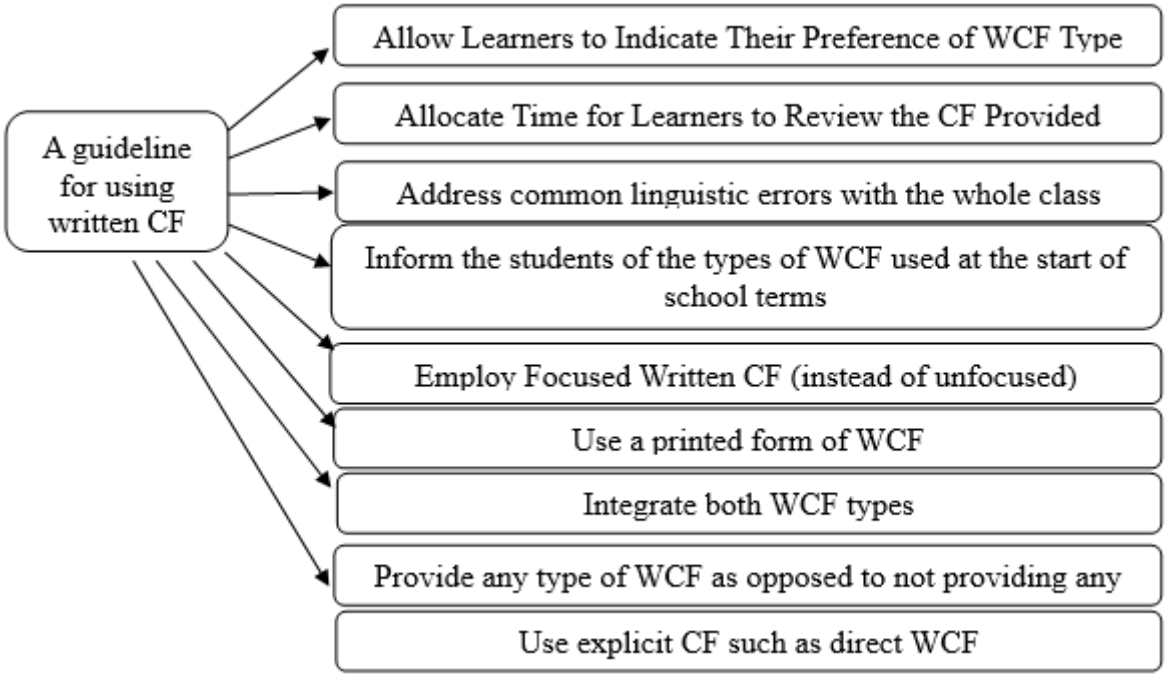


Figure 6.3: A guideline for using written CF

This study offers pedagogical implications in terms of a guideline for using written CF. To deliver effective CF that benefits both parties in the L2 classroom (i.e., learners, and teachers), the guideline provides a tool of reference for L2 teachers' strategies when using CF. This guide is not exclusively for L2 educators in the university but it also can be utilised by other L2 educators at schools or any learning institutions. In a broader context, educators teaching other subjects than English can also benefit from it.

The guideline was constructed based on the qualitative findings of this embedded case study which made it relevant and reliable, and to a certain extent, it followed a rigorous

evidence-based process. Its development is in line with Downe et al. (2019) that guideline processes are evidence-based and transparent and that the resulting recommendations are applicable, and relevant to suit the context it was intended for. In addition, to highlight the significance of this guideline, the focus of most CF studies in the literature is mainly on providing empirical evidence of the effects of CF, overshadowingthe importance of a framework or a guideline that can inform teachers' practice on using written CF.

It is also important to note that the guideline has its limitations. First, L2 educators must assume that a single type of CF may not suit all students in a class. This is because a group of students may have different proficiencies. As the literature suggests, concerning learners' proficiency, an individual student requires a different type of feedback. Thus, even though the teacher has determined what type of CF to be used at the start of the semester (as mentioned in point number four in the guideline), the teacher must change itto suit learners' needs throughout the semester. Second, teachers must be aware that providing explicit CF (e.g., direct WCF with metalinguistic information) consumes a lot of time. Findings from this study showed that direct WCF is better than indirect which also corresponds to learners' preferences in the literature. Therefore, it is most likely that referring to point number one in the guideline, most students may state their preference for direct CF.

As a consequence, should the teacher provide all explicit feedback to his students, there will be less time remaining for learning the language. In essence, the guideline should be used with caution, considering its few limitations.

6.3.1 Allow Learners to Indicate Their Preference of WCF Type

The findings of this study suggest that both WCF types have significant effects on

facilitating learners' collocational competence, even though direct WCF outshined indirect WCF. However, providing direct WCF on all errors, in every piece of students' written work seems time-consuming and labour-intensive for L2 teachers. The literature has suggested that indirect WCF can positively affect L2 learners' linguistic accuracy. Therefore, L2 educators should negotiate with the students on their preference of WCFtype for correcting their errors. Some studies explore students' preferences toward WCF types which suggests that L2 learners have their preferences on what type of WCF suits them the most. As a result, the selection reduces the time spent by the teacher delivering CF while the students benefit in terms of the fittest WCF type for their L2 learning.

6.3.2 Allocate Time for Learners to Review the CF Provided

To ensure that the students read the teacher's feedback, it is best to allow for some time in the class for the students to go through the CF provided. Teachers may never know that when returning students written tasks, they may directly be placed in their bagswithout them going through the feedback at home. Therefore, upon returning the students' written tasks, it is a safe practice to allow some time in the class for them to read through the CF. Additionally, this approach may allow for negotiation between the teacher and students to discuss any ambiguous CF on their written piece.

It was indicated in the findings of this case study that some students approached the lecturer to enquire aboutsome ambiguous written CF.

6.3.3 Address Common Linguistic Errors with the Whole Class

Although errors made in writing are specific to individual students, some errors may be committed by many students in the class. Addressing these common errors allows the teacher to plan for a future lesson to deal with such errors. It is possible that the errors may

be caused by previous teaching strategies or other unknown factors. Thus, in the upcoming semesters or school terms, the teacher can lay his focus on dealing with the prominent errors committed by past students. To go about this suggestion, the teacher can ask his students, by showing the percentage of those who committed the error, “80% ofyou got question 5 wrong – can anyone explain why? Can you suggest any ways to fix it?”.

6.3.4 Inform the students of the types of WCF used at the start of school terms

At the beginning of the school term or semester, it is best to inform the students of the methods of providing feedback that will be used throughout the semester. This is to ensure that the students are mentally ready for any type of CF that they may not be familiar with (e.g., recast, indirect WCF with codes). It was shown in the findings of this case study that learners’ experience with some CF types allows them to comprehend the CF type successfully. Considering that indirect WCF can be made slightly explicit with error codes (e.g., V indicates verb errors, and N indicates noun errors), the teacher must explain the meaning of such codes at the start of the semester.

6.3.5 Employ Focused Written CF (instead of unfocused)

Second language educators must ensure that WCF is targeted and specific to address certain errors at one time. It means that WCF is “focused” and provided to address not more than three errors at a time. The “unfocused” CF may present a cognitive load to the students as well as demotivate them from seeing too many red notifications. Considering “focused” CF, the teacher must refer to the objectives of each lesson. For instance, in a class session, the objective is to acquire a subject-verb agreement topic. Therefore, the written CF provided must be focusing on addressing errors made regarding the subject-verb agreement topic.

6.3.6 Use a Printed Form of Written CF

This study has revealed one of the common difficulties faced by students when interpreting teachers' feedback. Since most CF is written on students' work, it is subjected to illegible handwriting. The provision of CF which is not clearly written can make it difficult for the students to comprehend the "corrected" information. To counter this issue, it is strongly suggested that teachers consider using a printed form of feedback. One technique is to make use of scanning technology to create a soft copy of students' work. Then, teachers can use the tools in Microsoft Word or Adobe Document Reader to apply corrections to students' work.

6.3.7 Integrate both Types of Written CF

Indirect and direct WCF have their advantages and disadvantages. For instance, the indirect type is suitable for higher proficiency whereas the direct type is fit for lower proficiency. Integrating both types of WCF may override the disadvantages of one type of WCF only. However, teachers must consider that using direct WCF may consume a lot of class time which reduces the learning time. Therefore, while using one type of WCF, the teacher may switch to another type when the need arises.

In this regard, providing indirect WCF on collocation errors produced by lower proficiency students should be minimised (considering the amount of effort to provide direct WCF, and indirect WCF still offers benefits in short-term accuracy). In the contextof higher proficiency L2 students, they gained benefits from indirect WCF due to their advanced linguistic ability and capability to perform self-editing on the collocation errors. However, the differential effect persists between the two WCF strategies which favour direct WCF. Therefore, L2 educators should consider minimising indirect WCF and emphasising more on giving direct WCF.

6.3.8 Provide any type of WCF as opposed to not providing any

The next guideline is drawn from the quantitative findings and it is associated with the short-term effects of direct and indirect WCF on learners' collocational competence. Notably, the findings on the short-term effect of both WCF types indicate the positive effects in all cases. This suggests that the provisions of both WCF are beneficial in the L2 classroom, in the context of learning English collocation. As the findings demonstrate, providing WCF on L2 learners' collocation errors may benefit their short-term accuracy, which may be better than not providing any feedback. This applies to both proficiency levels of L2 learners – low and high-proficiency ESL students. Therefore, L2 educators must consider providing any kind of WCF as opposed to not providing WCF at all.

6.3.9 Use explicit CF such as direct WCF

This strategy is related to the differential effect of direct and indirect WCF. This case study found that direct WCF can be more advantageous than indirect WCF. The findings have shown that differential effects were prevalent in short-term and long-term accuracy of collocation which favoured direct WCF. Moreover, this positive finding was also seen in both low and high-proficiency ESL students. Therefore, L2 educators are encouraged to apply direct WCF on collocation errors of all proficiency levels of ESL learners. However, considering the positive findings on the short-term effect of indirect WCF, L2 educators can make indirect WCF more explicit by using error codes.

6.4 Directions for Future Research

Several recommendations are set forth for the direction of future studies. These recommendations are modelled based on the methodological approach and findings of this case study.

Firstly, schools and other pedagogical settings should be the context of future WCF studies. The study investigating the effects of WCF is very limited in the Malaysian education context. As discussed in Chapter 2, the dearth of findings of WCF-collocation-oriented studies is prevalent which led to the conduct of this study. Since learners' maturity and motivation are different between school pupils and university students, the effects of several WCF types may not be similar to the findings of this study. Thus, it is strongly recommended that future researchers embark in this direction. Moreover, written CF is not only used in English classes but also in other pedagogical settings. Thus, future researchers may also investigate the effect of WCF in other pedagogical settings at the school and university levels.

Future studies can investigate to what extent direct WCF contributes to or disallows L2 acquisition. The findings have revealed that direct WCF can lead to acquisition but other studies did not. This variation of findings was due to the explicitness of direct WCF which also suggests that too much or too little direct WCF explicitness may or may notlead to its effectiveness. Thus, future studies can embark to seek answers to the following questions: (1) Does more explicit direct WCF lead to or impede acquisition?; (2) Does less explicit direct WCF lead to or hinder acquisition?

The focus of future studies is shifted to investigate the effects of WCF on other non-grammatical items. Current literature on the effects of WCF on the L2 competency of Malaysian undergraduate students is scarce at the time of this writing. Many other areas such as its effect on vocabulary knowledge, explicit L2 knowledge, L2 procedural and declarative knowledge, and other non-grammatical aspects are lacking empirical data.Therefore, future studies can explore and investigate the effects of WCF on these subjects.

The effects of unfocused WCF on collocation competence warrant more studies. This

case study employed focused WCF provisions that were used to address two kinds of collocation errors only (i.e., verb-noun, verb-adverb). There is another kind of provision known as unfocused WCF which is used to facilitate more than three or all kinds of errors in students' writing. There are no studies that have investigated the effect of WCF on all types of collocation in one writing piece. Therefore, future studies can investigate the effects of unfocused WCF on all types of collocation errors (e.g., as discussed in Chapter Two, there are six types of collocations). The findings of these future studies can be compared with this current case study to see whether or not there are differential effects between "focused" and "unfocused" WCF on L2 learners' collocation competence.

6.5 Conclusions

This study enriches the line of research on WCF by employing an embedded case study design to examine the effects of direct and indirect WCF on the collocation competence of undergraduate ESL learners in a Malaysian public university.

It was revealed that direct and indirect WCF can enhance the collocational competence of ESL undergraduates. However, the effects are only short-term. Most importantly, this study found that the retention effects are long-term when learners are exposed to direct WCF instead of indirect WCF. This type of WCF, particularly direct WCF, was identified as the fittest type that can improve learners' collocation competence regardless of their proficiency. The reasons behind the success of both WCF types are attributed to several factors, namely, learners' factors and the nature of CF factors. Moreover, several factors such as contextual factors and the nature of CF factors were identified as the main variables that could potentially affect WCF effectiveness.

Since the current study is among the very few WCF-collocation-oriented studies in Malaysia, it is challenging to make any direct pedagogical implication based on a single

study. However, the findings suggest that L2 educators use direct WCF when addressing learners' collocation errors and minimise the use of indirect WCF. That said, this study offers a guideline that can be used to maximise the potential benefits of using WCF in L2 classrooms. The guideline offers a clear picture of the best methods when providing written CF on L2 learners' errors, and some ways to possibly avoid degrading WCF effects. The guideline was constructed based on the findings of this study, which make it reliable and empirically proven. Therefore, it is highly recommended for the concerned parties, such as L2 teachers at schools or L2 lecturers in a university to make the guideline as a reference.

Understandably, this study is not without limitations. Firstly, the students' performance in post-tests employed in the study is subjected to the practice effect. It concerns the condition where the participants perform better in a subsequent task due to prior exposure to it (Shaughnessy et al., 2015). However, this effect was counterbalanced with several strategies. Next, the researcher's position as an ESL educator can influence the interpretation of data. This is caused by the researcher's deep involvement in the issue being investigated. To overrule this issue, a continuous reflection of subjectivity audit was practised. The third limitation concerns the case study design which lacks generalisability of its results. However, Yin (2014) advocates analytical generalisation, in which the researcher compares or "generalises" case study findings to existing theory–a method employed by this current study. That said, the context of this case study is limited to one local university only. Thus, it is unrealistic to generalise the context to suit other universities in the country. Considering the positive findings that this study has to offer, caution needs to be taken when interpreting the findings nonetheless.

This case study has offered conclusive answers to the research questions posed at the start. In addition, it has provided significant new knowledge in the literature whilst opening

"new" areas worthy of further pursuit. It is hoped that the knowledge built upon this study can give a comprehensive picture of empirical data, theoretical perspective, and pedagogical guidelines on how written CF can lead to improved collocation competence and possibly contribute to L2 development.

6.6 Chapter Summary

This chapter began with an introduction that describes the content of this chapter. Then, the subsequent sections were organised by summarising the key findings. Thechapter went on further to highlight the theoretical contributions which are followed by the pedagogical implications benefiting L2 educators. The chapter ends with a recommendationfor future research and a concluding section.

REFERENCES

Abdullah, A., Ghani, R. A., & See, S. Y. (2015). The knowledge of lexical collocation among university students and its relation to their speaking proficiency. *International Letters of Social and Humanistic Sciences, 61,* 7-16.

Abdullah, N. N., & Aziz, A. A. (2019). Between preaching and practicing-The incongruities of teachers' written feedback beliefs and practices: A case study. *Journal of Educational Research and Indigeneous Studies, 2*(1), 1-19.

Abdullah, S., & Noor, N. M. (2013). Contrastive analysis of the use of lexical verbs and verb-noun collocations in two learner corpora: WECMEL vs LOCNESS. In S. Ishikawa (ed.). *Learner corpus studies in Asia and the world* (pp. 139-160). Routledge.

Aitchison, J. (2003). *Words in the Mind: An introduction to the mental lexicon*. Blackwell Publications.

Albudaiwi, D. (2017). Survey: Open-ended questions. In M. Allen (ed.), *The SAGE encyclopaedia of communication research methods* (pp. 1716-1717). SAGE Publications Inc.

Alharbi, S. H. (2020). Efficacy of different types of written corrective feedback on EFL university students' writing quality. *International Journal of English Linguistics, 10*(4), 19-35.

AlHarrasi, S. N. M. (2019). *The effectiveness of direct and indirect written corrective feedback in improving the grammatical accuracy of Omani EFL learners* (Doctoral dissertation, University of Sterling). STORRE. http://hdl.handle.net/1893/29846

AlJaafreh, A., & Lantolf, J. P. (1994). Negative feedback as regulation and second language learning in the zone of proximal development. *The Modern Language Journal, 78*(4),

465-483.

AlJarrah, R. S. (2016). A suggested model of corrective feedback provision. *Ampersand*, *3*, 98-107.

AlKhawajah, F. I. (2016). *The effect of direct and indirect written corrective feedback on the acquisition of rule-based and item-based linguistic features* (Doctoral dissertation, York University). York Space. http://hdl.handle.net/10315/33418

Almanasreh, E., Moles, R., & Chen, T. F. (2020). The medication discrepancy taxonomy (MedTax): The development and validation of a classification system for medication discrepancies identified through medication reconciliation. *Researchin Social and Administrative Pharmacy, 16*(2), 142-148.

Almutairi, A. F., Gardner, G. E., & McCarthy, A. (2014). Practical guidance for the use of a pattern-matching technique in case-study research: A case presentation. *Nursing & Health Sciences*, *16*(2), 239-244.

AlShahrani, A., & Storch, N. (2014). Investigating teachers' written corrective feedback practices in a Saudi EFL context: How do they align with their beliefs, institutional guidelines, and students' preferences? *Australian Review of Applied Linguistics*, *37*(2), 101-122.

Almasi, E., & Tabrizi, A. (2016). The effects of direct vs. indirect corrective feedback on Iranian EFL learners' writing accuracy. *Journal of Applied Linguistics and Language Research, 3*(1), 74-85.

Alroe, M. J. (2011). Error correction of L2 students' texts–theory, evidence, and pedagogy. *Asian EFL Journal*, *50*, 35-73.

Allwright, R. L. (1975). Problems in the study of language teacher's treatment of error. In M. Burt & H. Dulay (Eds.), *New directions in second-language learning, teaching and bilingual education* (pp. 96 – 109). Teachers of English to Speakers of Other

Languages.

Amrhein, H. R., & Nassaji, H. (2010). Written corrective feedback: What do students and teachers think is right and why? *Canadian Journal of Applied Linguistics*, *13*(2), 95-127.

Anderson, C. (2010). Presenting and evaluating qualitative research. *American Journal of Pharmaceutical Education, 74*(8), 1-7.

Anderson, J. R. (1987). Skill acquisition: Compilation of weak-method problemsituations. *Psychological Review, 94*(2), 192-205.

Anderson, J. R. (1992). Automaticity and the ACT theory. *The American Journal of Psychology, 105*(2), 165-180.

Ashwell, T. (2000). Patterns of teacher response to student writing in a multi-draft composition classroom: is content feedback followed by form feedback the best method? *Journal of Second Language Writing, 9*(3), 227-257.

Bahns, I., & Eldaw, M. (1993). Should we teach EFL students' collocations? *System, 21*(1), 101–114.

Banaruee, H., Khatin-Zadeh, O., & Ruegg, R. (2018). Recasts vs. direct corrective feedback on writing performance of high school EFL learners. *Cogent Education, 5*(1), 1-23.

Benson, P. (2001). *Teaching and researching autonomy in language learning*. Pearson Education Ltd.

Benson, S., & DeKeyser, R. (2019). Effects of written corrective feedback and language aptitude on verb tense accuracy. *Language Teaching Research, 23*(6), 702-726.

Benson, E., Benson, M., & Ilson, R. (2009). *The BBI combinatory dictionary of English: A guide to word combination*. John Benjamins Publishing Company.

Bitchener, J. (2008). Evidence in support of written corrective feedback. *Journal of Second Language Writing, 17*, 102–118.

Bitchener, J. (2009). Measuring the effectiveness of written corrective feedback: A response to overgeneralization from a narrow focus: A response to Bitchener (2008). *Journal of Second Language Writing*, *4*(18), 276-279.

Bitchener, J. (2012). A reflection on "the language learning potential" of written CF. *Journal of Second Language Writing*, *21*(4), 348-363.

Bitchener, J., & Ferris, D. (2012). *Written corrective feedback in second language acquisition and writing*. Routledge.

Bitchener, J., & Knoch, U. (2008). The value of written corrective feedback for migrant and international students. *Language Teaching Research*, *12*(3), 409-431.

Bitchener, J., & Knoch, U. (2009). The relative effectiveness of different types of direct written corrective feedback. *System*, *37*(2), 322-329.

Bitchener, J., & Knoch, U. (2010a). The contribution of written corrective feedback to language development: A ten-month investigation. *Applied Linguistics*, *31*(2), 193-214.

Bitchener, J., & Knoch, U. (2010b). Raising the linguistic accuracy level of advanced L2 writers with written corrective feedback. *Journal of Second Language Writing*, *19*(4), 207-217.

Bitchener, J., Young, S., & Cameron, D. (2005). The effect of different types of corrective feedback on ESL student writing. *Journal of Second Language Writing*, *14*(3), 191-205.

Bitchener, J., & Storch, N. (2016). *Written corrective feedback for L2 development*. Multilingual Matters.

Bitchener, J., Storch, N., Wette, R. (2017). *Teaching writing for academic purposes to multilingual students*. Routledge.

Bradbury-Jones, C. (2007). Enhancing rigour in qualitative health research: Exploring

subjectivity through Peshkin's I's. *Journal of Advanced Nursing*, *59*(3), 290-298.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101.

Brown, D. (2012). The written corrective feedback debate: Next steps for classroom teachers and practitioners. *TESOL Quarterly*, *46*(4), 861-867.

Bruton, A. (2000). What exactly are positive and negative evidence in SLA? *RELC Journal*, *31*(2), 120–133.

Bui, T. L. (2021). The role of collocations in the English teaching and learning. *International Journal of TESOL & Education*, *1*(2), 99-109.

Bogdan, R., & Biklen, S. (1997) *Qualitative research for education: An introduction to theory and methods*. Allyn and Bacon.

Bonilla López, M., Van Steendam, E., Speelman, D., & Buyse, K. (2018). The differential effects of comprehensive feedback forms in the second language writingclass. *Language Learning*, *68*(3), 813-850.

Carlson, J. E., & von Davier, M. (2017). Item response theory. In R.E. Bennett & M. von Davier (Eds.), *Advancing human assessment: The methodological, psychological and policy contributions of ETS* (pp. 133-178). Springer.

Carroll, J. M., & Swatman, P. A. (2000). Structured-case: a methodological framework for building theory in information systems research. *European Journal of Information Systems, 9*(4), 235-242.

Cao, D., & Badger, R. (2021). Cross-linguistic influence on the use of L2 collocations: the case of Vietnamese learners. *Applied Linguistics Review*, 1-26.

Cao, Z. (2021). Improving young learners' L2 writing accuracy with written corrective feedback: A case study. *English Teaching & Learning*, *45*(4), 375-396.

Cedervall, Y., & Aberg, A. C. (2010). Physical activity and implications on well-being in

mild Alzheimer's disease: A qualitative case study on two men with dementia and their spouses. *Physiotherapy Theory and Practice*, *26*(4), 226-239.

Cerezo, L., Manchon, R. M., & Nicolas–Conesa, F. (2019). What do learners notice while processing written corrective feedback? A look at depth of processing via written languaging. In R. P. Leow (Ed.), *The Routledge handbook of second language research in classroom learning* (pp. 173–187). Routledge.

Carolyn, A. A. (2017). *The effect of focused corrective feedback on the use of articles in essays by ESL learners/Carolyn Ann Angus* (Masters dissertation, University of Malaya). Students' Repository. http://studentsrepo.um.edu.my/8550/

Chandler, J. (2003). The efficacy of various kinds of error feedback for improvement in the accuracy and fluency of L2 student writing. *Journal of Second Language Writing, 12,* 267–96.

Charmaz, K. (2014). *Constructing grounded theory*. SAGE Publications Inc.

Chaudron, C. (1977). A descriptive model of discourse in the corrective treatment of learners' errors. *Language Learning*, *27*(1), 29-46.

Chen, S., Nassaji, H., & Liu, Q. (2016). EFL learners' perceptions and preferences of written corrective feedback: A study of university students from mainland China. *Asian-Pacific Journal of Second and Foreign Language Education*, *1*(1), 1- 17.

Chen, S. L., & Renandya, W. A. (2020). Efficacy of written corrective feedback in writing instruction: A meta-analysis. *TESL-EJ*, *24*(3), 1-26.

Chiang, K. (2004). An investigation into students' preferences for and responses to teacher feedback and its implications for writing teachers. *Hong Kong Teachers' Centre Journal, 3,* 98-115.

Chin, C. S., Pillai, S., & Zainuddin, S. Z. (2019). The role of noticing in the acquisition of the past tense form in English through oral corrective feedback. *English Teacher*,

48(2), 222-247.

Clarke, V., Braun, V., & Hayfield, N. (2015). Thematic analysis. In J. A Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (pp. 222- 248). SAGE Publications.

Cohen, A.D., & Cavalcanti, M.C. (1990). Feedback on compositions: Teacher and student verbal reports. In B. Kroll (Ed.), *Second language writing* (pp. 155-177). Cambridge University Press.

Cole. J. (2006). *Toxic feedback: Helping writers survive and thrive.* University Press of New England.

Curran-Everett, D. (2017). Explorations in statistics: the assumption of normality. *Advances in Physiology Education*, *41*(3), 449-453.

Creswell, J. W. (2009) *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE Publications.

Creswell, J. W. (2014). *Research design: qualitative, quantitative, and mixed methods approaches*. SAGE publications.

Creswell, J. W., & Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory into Practice*, *39*(3), 124-130.

Creswell, J. W., & Plano Clark, V. L. (2017). *Designing and conducting mixed methods research*. Thousand Oaks, CA: SAGE Publications.

Crowe, S., Creswell, K., Robertson, A., Huby, G., Avery, A., & Sheikh, A. (2011). The case study approach. *BMC Medical Research Methodology*, *11*(1), 100-121.

Dabboub, A. E. (2019). *The effectiveness of comprehensive corrective feedback-direct and indirect-on EFL learners' language accuracy, structural complexity and lexical diversity* (Doctoral dissertation, Nottingham Trent University). IRep. http://irep.ntu.ac.uk/id/eprint/38102/.

Darmi, R., & Albion, P. (2013). English language in the Malaysian education system: Its existence and implications. In M. M Noor, M.M Rahman, & J. Ismail (Eds.), *Proceedings of the 3rd Malaysian Postgraduate Conference 2013* (pp. 175- 183).

David, A. R., Thang, S. M., & Azman, H. (2015). Accommodating low proficiency ESL students' language learning needs through an online writing support system. *e-BANGI, 10*(1), 118-127.

DeKeyser, R.M. (1998). Implicit and explicit learning of second language grammar: A pilot study. *TESOL Quarterly, 28*(1), 188-194.

DeKeyser, R. M. (1997). Beyond explicit rule learning: Automatising second language morphosyntax. *Studies in Second Language Acquisition, 19*(2), 195–221.

DeKeyser, R.M. (2003). Implicit and explicit learning. In C. J. Doughty & M. H. Long (Eds.), *Handbook of second language acquisition* (pp. 313–348). Blackwell.

DeKeyser, R. (2012). Interactions between individual differences, treatments, and structures in SLA. *Language Learning*, *62*, 189-200.

DeKeyser, R. (2020). Skill acquisition theory. In B. Vanpatten, G., D. Keating & S. Wulff (Eds.), *Theories in second language acquisition: An introduction* (pp. 175-199). Routledge.

Delacre, M., Leys, C., Mora, Y. L., & Lakens, D. (2019). Taking parametric assumptions seriously: Arguments for the Use of Welch's *F*-test instead of the Classical *F*-test in one-way ANOVA. *International Review of Social Psychology*, *32*(1), 1-12.

Denzin, N., & Lincoln, Y. (2011). Introduction: The discipline and practice of qualitative research. In D, Norman., & L, Yvonne. (Eds.), *The SAGE handbook of qualitative research*, (pp. 1-19). SAGE Publications.

Doughty, C. J. (2003). Instructed SLA: Constraints, compensation, and enhancement. In C. J. Doughty & M. H. Long (Eds.), *Handbook of second language acquisition* (pp.

256-310). Blackwell.

Doughty, C., & Williams, J. (2017). *Focus on form in classroom second language acquisition*. Lightning Source UK.

Downe, S., Finlayson, K. W., Lawrie, T. A., Lewin, S. A., Glenton, C., Rosenbaum, S., Barriex, M., & Tuncalp, O. (2019). Qualitative Evidence Synthesis (QES) for Guidelines: Paper 1–Using qualitative evidence synthesis to inform guideline scope and develop qualitative findings statements. *Health Research Policy and Systems, 17*(1), 1-12.

Drost, E. A. (2011). Validity and reliability in social science research. *Education Research and Perspectives, 38*(1), 105-123.

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal, 50*(1), 25-32.

El-Dakhs, D. A. S. (2015). Collocational competence in English language teaching: An overview. *Arab World English Journal, 1*(6), 68-82.

Ellis, R. (1996). *The study of second language acquisition*. Oxford University Press.

Ellis, R. (2004). The definition and measurement of L2 explicit knowledge. *Language Learning, 54*, 227-275.

Ellis, R. (2005). Principles of instructed language learning. *System, 33*(2), 209-224.

Ellis, R. (2009). A typology of written corrective feedback types. *ELT Journal, 63*(2), 97-107.

Ellis, R. (2010). A framework for investigating oral and written corrective feedback. *Studies in Second Language Acquisition, 32*(2), 335-349.

Ellis, R. (2016). Focus on form: A critical review. *Language Teaching Research, 20*(3), 405–428.

Ellis, R., Basturkmen, H., & Loewen, S. (2002). Doing focus-on-form. *System, 30*(4), 419-

432.

Ellis, R., Loewen, S., & Erlam, R. (2006). Implicit and explicit corrective feedback and the acquisition of L2 grammar. *Studies in Second Language Acquisition, 28*(2), 339- 368.

Ellis, R., Sheen, Y., Murakami, M., & Takashima, H. (2008). The effects of focused and unfocused written corrective feedback in an English as a foreign language context. *System, 36*(3), 353-371.

Ellis, R., Loewen, S., Elder, C., Erlam, R., Philip, J., & Reinders, H. (2009). *Implicit and explicit knowledge in second language learning, testing, and teaching*. Multilingual Matters.

Erickson, P. I., & Kaplan, C. P. (2000). Maximising qualitative responses about smoking in structured interviews. *Qualitative Health Research, 10,* 829-840.

Eslami, E. (2014). The effects of direct and indirect corrective feedback techniques on EFL students' writing. *Procedia-Social and Behavioral Sciences, 98*(6), 445-452.

Fan, N., & Ma, Y. (2018). The role of written corrective feedback in second language writing practice. *Theory and Practice in Language Studies, 8*(12), 1629-1635.

Fatimah, S., Elzamzami, A. B., & Slamet, J. (2020). Item analysis of final test for the 9th grade students of SMPN 44 surabaya. *Journal of English Education and Literature, 2*(1), 34-46.

Farrokhi, F., & Sattarpour, S. (2012). The effects of direct written corrective feedback on improvement of grammatical accuracy of high-proficient L2 learners. *World Journal of Education, 2*(2), 49-57.

Ferris, D. R. (1999). The case for grammar correction in L2 writing classes. A response to Truscott (1996). *Journal of Second Language Writing, 8*, 1–11.

Ferris, D. (2002). *Treatment of error in second language writing classes*. University of Michigan Press.

Ferris, D. R. (2004). The ‘‘Grammar Correction’’ debate in L2 writing: Where are we, and where do we go from here? (and what do we do in the meantime?). *Journal of Second Language Writing*, *13*, 49–62.

Ferris, D. (2006). Does error feedback help student writers? New evidence on the short- and long-term effects of written error correction. In K. Hyland & F. Hyland (Eds.), *Perspectives on response* (pp. 81-104). Cambridge University Press.

Ferris, D. (2010). Second language writing research and written corrective feedback in SLA: Intersections and practical applications. *Studies in Second Language Acquisition*, *32*, 191–201.

Ferris, D. (2011). *Treatment of error in second language student writing*. The University of Michigan Press.

Ferris, D. (2012). Written corrective feedback in second language acquisition and writing studies. *Language Teaching*, *45*, 446–459.

Ferris, D., & Hedgcock, J. (2005). *Teaching ESL composition: Purpose, process, and practice*. Lawrence Erlbaum.

Ferris, D. R., & Hedgcock, J. S. (2012). *Teaching ESL composition: Purpose, process, and practice*. Routledge.

Ferris, D., & Roberts, B. (2001). Error feedback in L2 writing classes: How explicit does it need to be? *Journal of Second Language Writing*, *10*(3), 161-184.

Ferris, D. R., Chaney, S. J., Komura, K., Roberts, B. J., & McKee, S. (2000). *Perspectives, problems, and practices in treating written error*. Paper presented at International TESOL Convention, Vancouver, BC.

Ferris, D. R., Liu, H., Sinha, A., & Senna, M. (2013). Written corrective feedback for individual L2 writers. *Journal of Second Language Writing*, *22*(3), 307-329.

Feng, G. C. (2014). Intercoder reliability indices: disuse, misuse, and abuse. *Quality &*

Quantity, 48, 1803-1815.

Firth, J. R. (1951). *Modes of Meaning Essays and Studies*. Bobbs-Merrill.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Sage Publications.

Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education*. Mc Graw-hill.

Galdas, P. (2017). Revisiting bias in qualitative research: Reflections on its relationship with funding and impact. *International Journal of Qualitative Methods*, *16*(1), 1-3.

Ganapathy, M., Tan, D. A. L., & Phan, J. (2020). Students' perceptions of teachers' written corrective feedback in the Malaysian ESL classroom. *Malaysian Journal of Learning and Instruction, 17*(2), 103-136.

Gass, S. M. (1997). *Input, interaction, and the second language learner*. Erlbaum

Gass, S. (2003) Input and interaction. In C. Doughty and M. Long (Eds), *The handbook of second language acquisition* (pp. 567-586). Blackwell Publishing Ltd.

Gass, S., Mackey, A., & Pica, T. (1998). The role of input and interaction in second language acquisition: Introduction to the special issue. *The Modern LanguageJournal*, *82*, 299-305.

Ghabool, N., Mariadass, M. E., & Kashef, S. H. (2012). Investigating Malaysian ESL students' writing problems on conventions, punctuation, and language use at secondary school level. *Journal of Studies in Education*, *2*(3), 130-143.

Ghandi, M., & Maghsoudi, M. (2014). The effect of direct and indirect corrective feedback on Iranian EFL learners' spelling errors. *English Language Teaching, 7*(8), 53-61.

Ghasemi, A., & Zahediasl, S. (2012). Normality tests for statistical analysis: a guide for non-statisticians. *International Journal of Endocrinology and Metabolism*, *10*(2), 486-489.

Ghazi, S., & Zamanian, M. (2016). The effect of asynchronous versus computer-mediated

corrective feedback on the correct use of English articles in an EFL context. *Journal of Studies in Learning and Teaching English, 2*(5), 169-181.

Gringo, M. J. (2017). *Effects of focused direct and metalinguistic corrective feedback on L2 learners' writing* (Masters dissertation, University of Malaya,). Students' Repository. http://studentsrepo. um. edu

Glaser, B. G., & Strauss, A. L. (2017). *The discovery of grounded theory: Strategies for qualitative research*. Routledge.

Goldstein, L. (2004). Questions and answers about student written commentary and student revision: Teachers and students working together. *Journal of Second Language Writing, 13*, 63-80.

Goldstein, L. (2006). Feedback and revision in second language writing: Contextual, teacher, and student variables. In K. Hyland & F. Hyland (Eds.), *Feedback in second language writing: Contexts and issues* (pp. 185–205). CambridgeUniversity Press.

Grauer, K. (2012). A Case for Case Study Research in Education. In S.R. Klein, (Ed.) *Action Research Methods* (pp. 69-79). Palgrave Macmillan.

Groothuijsen, S. E. A., Bronkhorst, L. H., Prins, G. T., & Kuiper, W. (2020). Teacher-researchers' quality concerns for practice-oriented educational research. *Research Papers in Education, 35*(6), 766-787.

Guenette, D. (2007). Is feedback pedagogically correct? Research design issues in studies of feedback on writing. *Journal of Second Language Writing, 16*(1), 40-53.

Guest, G., Namey, E., & Mitchell, M. (2013). *Collecting qualitative data: A field manual of applied research*. Sage Publication Inc.

Gyllstad, H. (2007). *Testing English collocations: Developing receptive tests for use with advanced Swedish learners* (Doctoral dissertation, Lund University). Research Portal. https://lup.lub.lu.se/search/publication/599011.

Gyllstad, H. (2009). Designing and evaluating tests of receptive collocation knowledge: COLLEX and COLLMATCH. In A. Barfield, & G. Henrik (eds.), *Researching collocations in another language* (pp. 153-170). Palgrave Macmillan.

Hairston, M. (1986). On not being a composition slave. In C. W. Bridges (Ed.), *Training the new teacher of college composition* (pp. 117–124). National Council of Teachers of English.

Hamouda, A. (2011). A study of students and teachers' preferences and attitudes towards correction of classroom written Errors in Saudi EFL context. *English Language Teaching, 4*(3), 128-141.

Hanif, A. H. (2018). *The effects of corrective feedback on the written grammatical accuracy of ESL learners* (Masters dissertation, University of Malaya). http://studentsrepo.um.edu.my

Han, Z. H. (2002). Rethinking the role of corrective feedback in communicative language teaching. *RELC Journal, 33*(1), 1-34.

Han, Y. (2012). The intra-and inter-task effectiveness of direct and indirect written corrective feedback. *Journal of Asia TEFL, 9*(2), 71-96.

Han, Y. (2017). Mediating and being mediated: Learner beliefs and learner engagement with written corrective feedback. *System, 69*, 133-142.

Han, Y., & Hyland, F. (2019). Academic emotions in written corrective feedback situations. *Journal of English for Academic Purposes, 38,* 1-13.

Han, Y., & Gao, X. (2021). Research on learner engagement with written (corrective) feedback: insights and issues. In P. Hiver (Ed.), *Student engagement in the Language classroom* (pp. 56-74). Multilingual Matters.

Harwell, M. R., Rubinstein, E. N., Hayes, W. S., & Olds, C. C. (1992). Summarizing Monte Carlo results in methodological research: The one-and two-factor fixed effects

ANOVA cases. *Journal of Educational Statistics, 17*(4), 315-339.

Harrison, H., Birks, M., Franklin, R., & Mills, J. (2017). Case study research: Foundations and methodological orientations. *Forum: Qualitative social research 18*(1), 1-17.

Hartshorn, K., Evans, N., Merrill, P., Sudweeks, R., Strong-Krause, D., & Anderson, N. (2010). Effects of dynamic corrective feedback on ESL writing accuracy. *TESOL Quarterly, 44*, 84–109.

Hashemnezhad, H., & Mohammadnejad, S. (2012). A case for direct and indirect feedback: The other side of coin. *English Language Teaching, 5*(3), 230-239.

Hashemifardnia, A., Namaziandost, E., & Sepehri, M. (2019). The effectiveness of giving grade, corrective feedback, and corrective feedback-plus-giving grade on grammatical accuracy. *International Journal of Research Studies in Language Learning, 8*(1), 15-27.

Hawkins, R. (2001). The theoretical significance of Universal Grammar in second language acquisition. *Second Language Research, 17*(4), 345-367.

Hill, C. E. (2012). *Consensual qualitative research: A practical resource for investigating social science phenomena*. American Psychological Association.

Hill, C. E., Knox, S., Thompson, B. J., Williams, E. N., Hess, S. A., & Ladany, N. (2005). Consensual qualitative research: An update. *Journal of Counselling Psychology, 52*(2), 196-205.

Hulstijn, J. H., & Schmidt, R. (1994). Guest editors' introduction (to special issue on consciousness in second language learning). *AILA Review, 11*, 5-10.

Hunston, S., & Francis, G. (2000). *Pattern grammar: A corpus-driven approach to the lexical grammar of English*. John Benjamins Pub. Co.

Ho, R. (2014). *Handbook of univariate and multivariate data analysis with IBM SPSS*. CRC Press.

Hong, A. L., Rahim, H. A., Hua, T. K., & Salehuddin, K. (2011). Collocations in Malaysian English learners' writing: A corpus-based error analysis. *3L: Language, Linguistics, Literature, 17*, 31-44.

Hosseiny, M. (2014). The role of direct and indirect written corrective feedback in improving Iranian EFL students' writing skill. *Procedia -Social and Behavioral Sciences, 98*, 668–674.

Hoey, M. (2005). *Lexical priming: A new theory of words and language*. Routledge.

Howitt, D., & Cramer, D. (2017). *Understanding statistics in psychology with SPSS*. Pearson.

Hsu, L., & Chuen, M. S. (2008). A study of low English proficiency students' attitude toward online learning. *Electronic Journal of Foreign Language Teaching, 5*(2), 240-264.

Hsu, H., & Lachenbruch, P. A. (2005). *Paired t test-Encyclopedia of Biostatistics*. Wiley.

Hyland, K. (2003). Genre-based pedagogies: A social response to process. *Journal of Second Language Writing, 12*(1), 17-29.

Hyland, K., & Hyland, F. (2006a). Contexts and issues in feedback on L2 writing: An introduction. In H. Ken & H. Fiona (Eds.), *Feedback in second language writing: Contexts and issues* (pp. 1-20). Cambridge University Press.

Hyland, K., & Hyland, F. (2006b). Feedback on second language students' writing. *Language Teaching, 39*, 83–101.

Ishak, S. N. A. (2017). *The effects of direct and indirect written corrective feedback on ESL students' use of past tenses* (Master's Dissertation, University of Malaya). studentsrepo.um.edu.my/8550/1/

Jafarpour, A. A., & Sharifi, A. (2012). The effect of error correction feedback on the collocation competence of Iranian EFL learners. *Teaching English with Technology, 12*(3), 3-17.

Jain, Y., & Sidhu, G. K. (2013). Relationship between anxiety, attitude, and motivation of tertiary students in learning English as a second language. *Procedia-Social and Behavioral Sciences, 90*, 114-123.

Jamalinesari, A., Rahimi, F., Gowhary, H., & Azizifar, A. (2015). The effects of teacher-written direct vs. indirect feedback on students' writing. *Procedia-Social and Behavioral Sciences, 192*(1), 166-123.

Jang, S. S. (2020). The efficacy of different types of metalinguistic information in L2 written corrective feedback. *English Teaching, 75*(4), 33-56.

Janesick, V. J. (2015). *" Stretching" exercises for qualitative researchers*. SAGE Publications.

Jocius, R. K. (2015). *Collaborative composing in the digital dimension: An investigation of young adolescents' multimodal processes and products* (Doctoral dissertation, Vanderbilt University) Institutional Repository. https://etd.library.vanderbilt.edu/etd- 05072015-143541

Jonsson, A. (2014). Rubrics as a way of providing transparency in assessment. *Assessment & Evaluation in Higher Education, 39*(7), *840–852.*

Johnson, K. 1996. *Language teaching and skill learning*. Blackwell.

Kang, E., & Han, Z. (2015). The efficacy of written corrective feedback in improving L2 written accuracy: A meta-analysis. *The Modern Language Journal, 99*(1), 1-18.

Kamarudin, R., Abdullah, S., & Aziz, R. A. (2020). Examining ESL learners' knowledge of collocations. *International Journal of Applied Linguistics and English Literature, 9*(1), 1-6.

Karim, K. M. R. (2013). *The effects of direct and indirect written corrective feedback (CF) on English-as-a-second-language (ESL) students' revision accuracy and writing skills* (Doctoral dissertation, University of Victoria) UVicSpace.

https://dspace.library.uvic.ca/handle/1828/5157.

Karim, K., & Nassaji, H. (2018). The revision and transfer effects of direct and indirect comprehensive corrective feedback on ESL students' writing. *Language Teaching Research, 2*(5), 1-21.

Karim, K., & Nassaji, H. (2019). The effects of written corrective feedback: a critical synthesis of past and present research. *Instructed Second Language Acquisition*, *3*(1), 28-52.

Karim, K., & Nassaji, H. (2020). The revision and transfer effects of direct and indirect comprehensive corrective feedback on ESL students' writing. *Language Teaching Research*, *24*(4), 519-539.

Kassim, A. (2014). Differential effects of corrective feedback on the ESL learners' accuracy of linguistic forms (Doctoral dissertation, University of Malaya). Students' Repository. http://studentsrepo.um.edu.my/4691/.

Kazemzadeh, M., & Afghari, A. (2013). The Effect of Second Language Proficiency Level on the Output-Input Processing Sequence. *International Journal of Linguistics*, *5*(5), 253-264.

Kepner, C. G. (1991). An experiment in the relationship of types of written feedback to the development of second-language writing skills. *The Modern Language Journal*, *75*(3), 305-313.

Kim, S. (2012). Measuring linguistic accuracy in an EFL writing class: An electronic communication channel. *Linguistic Research, 29*(3), 665-688.

Kivunja, C. (2018). Distinguishing between theory, theoretical framework, and conceptual framework: A systematic review of lessons from the field. *International Journal of Higher Education*, *7*(6), 44-53.

Krashen, S. D. (1981). *Second language acquisition and second language learning.*

Pergamon Press.

Krashen, S. D. (1982). *Principles and practice in second language acquisition*. Pergamon Press.

Krashen, S. D. (1985). *The input hypothesis: Issues and implications*. Longman.

Krashen, S. D. (1995). *Principles and practice in second language acquisition*. Prentice Hall.

Koch, T. (1994). Establishing rigour in qualitative research: The decision trail. *Journal of Advanced Nursing, 19,* 976–986.

Lalande, J.F. (1982). Reducing composition errors: an experiment. *Modern Language Journal, 66,* 140–149.

Lantolf, J. P. (2000). *Sociocultural theory and second language learning*. Oxford University Press.

Lee, I. (2012). Research into practice: Written corrective feedback. *Language Teaching, 46*(1), 108–119.

Lee, I. (2019). Teacher written corrective feedback: Less is more. *Language Teaching*, *52*(4), 524-536.

Lee, I., Yu, S., & Liu, Y. (2018). Hong Kong secondary students' motivation in EFL writing: A survey study. *TESOL Quarterly, 52*(1), 176–187.

Leech, N. L., Barrett, K. C., & Morgan, G. A. (2005). *SPSS for intermediate statistics: Use and interpretation*. Lawrence Erlbaum Associates.

Leeman, J. (2003). Recasts and second language development: Beyond negative evidence. *Studies in Second Language Acquisition*, *25*(1), 37-63.

Leeser, M. J. (2004). Learner proficiency and focus on form during collaborative dialogue. *Language Teaching Research*, *8*(1), 55-81.

Leong, L. M., & Ahmadi, S. M. (2017). An analysis of factors influencing learners' English-

speaking skills. *International Journal of Research in English Education, 2*(1), 34-41.

Lewis, M. (2000). *Teaching collocation: Further developments in the lexical approach*. Language Teaching Publications.

Li, S. (2010). The effectiveness of corrective feedback in SLA: A meta-analysis. *Language Learning*, *60*(2), 309-365.

Li, Y. (2017). *Individual differences and written corrective feedback: exploring the effects of direct and coded feedback on Chinese EFL learners' writing accuracy* (Doctoral dissertation, University of Hong Kong). The HKU Scholars Hub. http://hub.hku.hk/handle/10722/250752.

Li, S., & Vuono, A. (2019). Twenty-five years of research on oral and written corrective feedback in System. *System*, *84*, 93-109.

Lim, S. C., & Renandya, W. A. (2020). Efficacy of written corrective Feedback in writing instruction: A meta-analysis. *TESL-EJ, 24*(3), 1-19.

Lincoln, Y. S., & Guba, E.G. (1985). *Naturalistic inquiry*. Sage Publications.

Linh, D. M. (2018). The effectiveness of indirect written corrective feedback as perceived by teachers and students of a public university in Vietnam. *International Journal of Education and Literacy Studies*, *6*(4), 152-162.

Liontas, J. I. (2019). Teaching idioms and idiomatic expressions across the second language curriculum. In E. Hinkel (Ed.), *Teaching essential units of language: Beyond single-word vocabulary* (pp. 55–105). Routledge.

Liontas, J. I., Li, S., & Bangun, I. (2019). Collocational competence and electronic corpora: implications for English language teaching. In J. I Liontas (Ed.) *The TESOL Encyclopedia of English Language Teaching*. Wiley Online Library.

Liu, Q., & Brown, D. (2015). Methodological synthesis of research on the effectiveness of corrective feedback in L2 writing. *Journal of Second Language Writing*, *30*, 66-81.

Liu, X., & Lee, J. W. (2014). EFL college students' reactions to their writing teachers' corrective feedback. *English Teaching, 69*(3), 81-103.

Long, M. H. (1981). Input, interaction, and second- language acquisition. *Annals of the New York Academy of Sciences, 379*(1), 259-278.

Long, M. H. (2000). Focus on form in task-based language teaching. In R. D. Lambert & E. Shohamy (Eds.), *Language policy and pedagogy* (pp. 179– 192). JohnBenjamins.

Long, M. H. (2015). Second language acquisition and task-based language teaching. Wiley-Blackwell.

Long, M. (1996) The role of the linguistic environment in second language acquisition. In W. Ritchie and T. Bhatia (Eds.), *Handbook of language acquisition, volume II: Second language acquisition* (pp. 413–68). Academic Press.

Lynch, D., & Sell, K. (2014). *Teachers as Researchers: Case studies in educationalresearch*. Oxford Global Press.

Lyster, R. 2007. *Learning and teaching languages through content: a counterbalanced approach.* John Benjamins Publishing Company.

Lyster, R., & Ranta, L. (1997). Corrective feedback and learner uptake: Negotiation of form in communicative classrooms. *Studies in Second Language Acquisition, 20,* 37- 66.

Lyster, R., & Saito, K. (2013). Oral feedback in classroom SLA: A meta-analysis. *Studies in Second Language Acquisition, 32*, 265-302.

Mackey, A., & S. Gass. (2005). *Second language research*. Lawrence Erlbaum Associates.

Madden, J. (2012). School improvement: Innovation for the future. In R. Smith and D. Lynch (Eds.) *Case studies in education: Leadership and innovation* (pp.147-174). Primrose Hall Publishing Group.

Mahfoodh, O. H. A., & Pandian, A. (2011). A qualitative case study of EFL students' affective reactions to and perceptions of their teachers' written feedback. *English*

Language Teaching, *4*(3), 14-25.

Mahmud, N. (2018). Investigating the practice of providing written corrective feedback types by ESL teachers at the upper secondary level in high performance schools. *MOJES: Malaysian Online Journal of Educational Sciences, 4*(4), 48-60.

Maleki, A., & Eslami, E. (2013). The effects of written corrective feedback techniques on EFL students' control over grammatical construction of their written English. *Theory and Practice in Language Studies, 3*(7), 1250-1257.

Manchon, R. M., & Williams, J. (2016). Writing and SLA studies. In R. M. Manchon & P. K. Matsuda (Eds.), *The handbook of second and foreign language writing* (pp. 567-586). Multilingual Matters.

Mastan, M. E. B., Maarof, N., & Embi, M. A. (2017). The effect of writing strategy instruction on ESL intermediate proficiency learners' writing performance. *Journal of Educational Research and Review, 5*(5), 71-78.

Mao, Z., & Lee, I. (2020). Feedback scope in written corrective feedback: Analysis of empirical research in L2 contexts. *Assessing Writing*, *45*, 100-129.

Mehat, S. Z., & Ismail, L. (2021). Malaysian Tertiary ESL Students' Writing Errors and Their Implications on English Language Teaching. *Asian Journal of University Education*, *17*(3), 235-242.

Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Jossey-Bass.

Mendes, M., & Pala, A. (2003). Type one error rate and power of three normality tests. *Pakistan Journal of Information and Technology*, *2*(2), 135-139.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage Publications.

Min, H. T. (2018). Trained peer written feedback and teacher written feedback: Similar

or different? *English Teaching & Learning*, *42*(2), 131-153.

Miskam, N. N., & Saidalvi, A. (2019). Investigating English language speaking anxiety among Malaysian undergraduate learners. *Asian Social Science*, *15*(1), 1-7.

Mitra Samiei, S. (2016). *The effect of explicit written corrective feedback on implicit and explicit knowledge* (Doctoral dissertation, University of Malaya). UM Student's Repository. http://studentsrepo.um.edu.my/6337/.

Moses, T. (2017). A review of developments and applications in item analysis. In R. E. Bennett & M. von Davier (Eds.), *Advancing human assessment: Methodology of educational measurement and assessment* (pp. 19-46). Springer.

Mubarak, M. (2013). *Corrective feedback in L2 writing: A study of practices and effectiveness in the Bahrain context* (Doctoral dissertation, University of Sheffield). White Rose eTheses. Onlinehttp://etheses.whiterose.ac.uk/4129/?

Mukundan, J., Mahvelati, E. H., Din, M. A., & Nimehchisalem, V. (2013). Malaysian secondary school students' ESL writing performance in an intensive English program. *World Applied Sciences Journal*, *22*(12), 1677-1684.

Nagano, T., & Kitao, K. (2008). The necessity of negative feedback for learning L2 collocations. *Journal of Culture and Information Science*, *3*(1), 1-13.

Naghdipour, B. (2017). Incorporating formative assessment in Iranian EFL writing: A case study. *The Curriculum Journal*, *28*(2), 283-299.

Najafi, M., & Talebinezhad, M. R. (2018). The impact of teaching EFL medical vocabulary through collocations on vocabulary retention of EFL medical students. *Advances in Language and Literary Studies, 9*(5), 24-27.

Namvar, F. (2012). The relationship between language proficiency and use of collocation by Iranian EFL students. *3L, Language, Linguistics, Literature*, *18*(3), 19-34.

Nassaji, H. (2009). Effects of recasts and elicitations in dyadic interaction and the role of

feedback explicitness. *Language Learning*, *59*(2), 411-452.

Nassaji, H. (2016a). *The interactional feedback dimension in instructed second language learning: Linking theory, research, and practice*. Bloomsbury Academic.

Nassaji, H. (2016b). Anniversary article interactional feedback in second language teaching and learning: A synthesis and analysis of current research. *Language Teaching Research, 20*(4), *535–562.*

Nassaji, H. (2017). Diversity of research methods and strategies in language teaching research. *Language Teaching Research, 21*, 140–143.

Nassaji, H. (2020). Assessing the effectiveness of interactional feedback for L2 acquisition: Issues and challenges. *Language Teaching*, *53*(1), 3-28.

Nassaji, H., & Kartchava, E. (2017) The role of corrective feedback: Theoretical and pedagogical perspectives. In H. Nassaji and E. Kartchava (Eds.), *Corrective feedback in second language teaching and learning: research, theory, applications, implications* (pp. 9–15). Routledge.

Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge University Press.

Nemati, M., Alavi, S. M., & Mohebbi, H. (2019). Assessing the effect of focused direct and focused indirect written corrective feedback on explicit and implicit knowledge of language learners. *Language Testing in Asia*, *9*(1), 1-18.

Nesselhauf, N. (2003). The use of collocations by advanced learners of English and some implications for teaching. *Applied Linguistics*, *24*(2), 223-242.

Nesselhauf, N. (2005). *Collocations in a learner corpus*. John Benjamins.

Ng, L. L., & Ishak, S. N. A. (2018). Instructor's direct and indirect feedback: How do they impact learners' written performance? *3L: Language, Linguistics, Literature*, *24*(3), 95-110.

Nguyen, T. H. (2019). *Oral corrective feedback in a blended learning environment: Challenges and contradictions faced by teachers in a Vietnamese university* (Doctoral dissertation, The University of Waikato). Research Commons. https://hdl.handle.net/10289/13110

Nicol, D. (2010). From monologue to dialogue: Improving written feedback processes in mass higher education. *Assessment & Evaluation in Higher Education*, *35*(5), 501–517.

Nusrat, A., Ashraf, F., & Narcy-Combes, M. F. (2019). Effect of direct and indirect teacher feedback on accuracy of English writing: A quasi-experimental study among Pakistani undergraduate students. *3L: Language, Linguistics, Literature*, *25*(4), 84-98.

Norris, J. M., & Ortega, L. (2000). Effectiveness of L2 instruction: A research synthesis and quantitative meta-analysis. *Language Learning*, *50*(3), 417-528.

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, *16*(1), 1-13.

Osanloo, A., & Grant, C. (2016). Understanding, selecting, and integrating a theoretical framework in dissertation research: Creating the blueprint for your "house". *Administrative Issues Journal: Connecting Education, Practice, and Research*, *4*(2), 7-21.

Ozaki, S. (2011). Teaching collocations effectively with the aid of LI. *The Language Teacher*, *35*(3), 37-40.

Oztuna, D., Elhan, A. H., & Tüccar, E. (2006). Investigation of four different normality tests in terms of type 1 error rate and power under different distributions. *Turkish Journal of Medical Sciences*, *36*(3), 171-176.

O'Connor, C., & Joffe, H. (2020). Intercoder reliability in qualitative research: debates and practical guidelines. *International Journal of Qualitative Methods, 19*, 1-13.

O'Leary, Z. (2014). *The essential guide to doing your research project*. SAGE Publications.

Panova, I., & Lyster, R. (2002). Patterns of corrective feedback and uptake in an adult ESL classroom. *TESOL Quarterly, 36*(4), 573-595.

Park, E. S., Song, S., & Shin, Y. K. (2016). To what extent do learners benefit from indirect written corrective feedback? A study targeting learners of different proficiency and heritage language status. *Language Teaching Research, 20*(6), 678-699.

Pawlak, M. (2014). *Error correction in the foreign language classroom: Reconsidering the issues*. Springer.

Pawlak, M. (2021). Corrective Feedback, Developmental Readiness, and Language Proficiency. In H. Nassaji (Ed.). *The Cambridge Handbook of Corrective Feedback in Second Learning and Teaching* (pp. 733-753). Cambridge University Press.

Pienemann, M. (1989). Is language teachable? Psycholinguistic experiments and hypotheses. *Applied Linguistics, 10*, 52-79.

Phillippi, J., & Lauderdale, J. (2018). A Guide to Field Notes for Qualitative Research: Context and Conversation. *Qualitative Health Research, 28*(3), 381–388.

Polio, C. (2012). The relevance of second language acquisition theory to the written error correction debate. *Journal of Second Language Writing, 21*(4), 375-389.

Polit, D. F., & Beck, C. T. (2014). *Essentials of nursing research: Appraising evidence for nursing practice*. Lippincott Williams & Wilkins.

Purnawarman, P. (2011). *Impacts of different types of teacher corrective feedback in reducing grammatical errors on ESL/EFL students' writing* (Doctoral dissertation, Virginia Polytechnic Institute and State University). Vtech Works. http://hdl.handle.net/10919/30067

Qi, D. S., & Lapkin, S. (2001). Exploring the role of noticing in a three-stage second language writing task. *Journal of Second Language Writing, 10*(4), 277-303.

Qian, D. D., & Lin, L. H. (2019). The relationship between vocabulary knowledge and language proficiency. In S. Webb (Ed.). *The Routledge handbook of vocabulary studies* (pp. 66-80). Routledge.

Rahimi, M. (2015). The Role of individual differences in L2 learners' retention of written corrective feedback. *Journal of Response to Writing, 1*(1), 3-17.

Raimes, A. (1985). What unskilled ESL students do as they write: A classroom study of composing. *TESOL Quarterly, 19*(2), 229-258.

Ramirez, M. R., & Vacacela, D. L. A. (2020). Self-awareness strategy using podcasting to improve tense and lax vowel pronunciation sounds in beginner EFL-adult learners. *Journal of Foreign Language Teaching and Learning, 5*(1), 19-32.

Rashtchi, M., & Bakar, Z. A. (2019). Written corrective feedback: what do Malaysian learners prefer and why. *International Journal of Engineering and Advanced Technology, 8*(5), 1221-1225.

Razali, N. M., & Wah, Y. B. (2011). Power comparisons of shapiro-wilk, kolmogorov-smirnov, lilliefors and anderson-darling tests. *Journal of Statistical Modeling and Analytics, 2*(1), 21-33.

Reichelt, M. (2001). A critical review of foreign language writing research on pedagogical approaches. *The Modern Language Journal, 85*(4), 578-598.

Reppen, R. (2010). *Using corpora in the language classroom*. Cambridge University Press.

Reynolds, B. L., & Teng, M. F. (2021). Innovating teacher feedback with writing activities aimed at raising secondary school students' awareness of collocation errors. *Studies in Second Language Learning and Teaching, 11*(3), 423-444.

Richards, J. C. (2002). *Theories of teaching in language teaching*. Cambridge University

Press.

Ridder, H. G. (2017). The theory contribution of case study research designs. *Business Research, 10*, 281-305.

Ritter, G., & Gallegos, M. T. (1997). Outliers in statistical pattern recognition and an application to automatic chromosome classification. *Pattern Recognition Letters, 18*(6), *525–539.*

Rosenbaum, P. R. (2006). Differential effects and generic biases in observational studies. *Biometrika, 93*(3), 573-586.

Rowe, W. (2014). Positionality. In D. Coghlan, & M. Brydon-Miller, (Eds.). *The SAGE encyclopedia of action research* (pp. 137-149). SAGE Publications.

Ruegg, R. (2015). Student uptake of teacher written feedback on writing. *Asian EFL Journal, 17*(1), 36-56.

Rusli, R., Md Yunus, M., & Hashim, H. (2018). Low speaking proficiency among the Malaysian undergraduates: Why and how? *Persidangan Antarabangsa Sains Sosial dan Kemanusiaan* (pp. 678–689). Bangi: Kolej Universiti Islam Antarabangsa Selangor.

Russell, J., & Spada, N. (2006). The effectiveness of corrective feedback for the acquisition of L2 grammar. *Synthesising Research on Language Learning and Teaching, 13,* 133- 164.

Rutherford, A. (2000). *Introducing ANOVA and ANCOVA: A GLM approach*. SAGE Publications.

Saidon, M. A., Said, M., Soh, T., & Husnin, H. (2018). ESL Students' perception of teacher's written feedback practice in Malaysian classrooms. *Creative Education, 9*(14), 23-35.

Salimi, A., & Ahmadpour, M. (2015). The Effect of direct vs. indirect written corrective

feedback on L2 learners written accuracy in EFL context. *International Journal of English Language and Literature Studies*, *4*(1), 10-19.

Sato, M., & Loewen, S. (2018). Metacognitive instruction enhances the effectiveness of corrective feedback: Variable effects of feedback types and linguistic targets. *Language Learning*, *68*(2), 507-545.

Saragih, N. A., Madya, S., Siregar, R. A., & Saragih, W. (2021). Written corrective feedback: Students' perception and preferences. *International Online Journal of Education and Teaching*, *8*(2), 676-690.

Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics*, *11*, 129-158.

Schmidt, R. (1994). Deconstructing consciousness in search of useful definitions for applied linguistics. *AILA Review*, *11*, 11–26.

Schmidt, R. (2001). Attention. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 3–32). Cambridge University Press.

Schmitt, N. (2000). *Vocabulary in language teaching*. Cambridge University Press.

Schwartz, B. D. (1993). On explicit and negative data effecting and affecting competence and linguistic behavior. *Studies in Second Language Acquisition*, *15*, 147–163.

Scholz, R. W., & Tietje, O. (2002). *Embedded case study methods: Integrating quantitative and qualitative knowledge*. Sage.

Seiffedin, A. H., & El-Sakka, S. M. F. (2017). The impact of direct-indirect corrective e-feedback on EFL students' writing accuracy. *Theory and Practice in Language Studies*, *7*(3), 166-179.

Sener, N., & Tas, E. (2017). Developing Achievement Test: A Research for Assessment of 5th Grade Biology Subject. *Journal of Education and Learning*, *6*(2), 67-79.

Septiana, A. R., Sulistyo, G. H., & Kadarisman, A. E. (2016). Corrective feedback and

writing accuracy of students across different levels of grammatical sensitivity. *Indonesian Journal of Applied Linguistics, 6*(1), 1-11.

Sim, C. H. (2019). *Indirect focused written corrective feedback on elementary ESL learners' writing* (Masters dissertation, University of Malaya). Students' Repository http://studentsrepo.um.edu.my/10714/2/

Shahrani, A. A. (2013). *Investigation of written corrective feedback in an EFL context: beliefs of teachers, their real practices and students' preferences* (Master dissertation, The University of Melbourne). University Library. http://hdl.handle.net/11343/38637

Sharina, A. A. (2019). The efficacy of direct and indirect written corrective feedback in ESL learners' writing (Masters dissertation, University of Malaya). Students' Repository. http://studentsrepo.um.edu.my/10714/2/

Shao, X. (2015). On written corrective feedback in L2 writing. *English Language Teaching, 8*(3), 155-168.

Shaughnessy, J. J., Zechmeister, E. B., & Zechmeister, J. S. (2015). *Research methods in psychology*. McGraw-Hill Education.

Sheen, Y. (2007). The effect of focused written corrective feedback and language aptitude on ESL learners' acquisition of articles. *TESOL Quarterly, 41*(2), 255-283.

Sheen, Y. (2010). Introduction: The role of oral and written corrective feedback in SLA. *Studies in Second Language Acquisition, 32*(2), 169-179.

Sheen, Y., Wright, D., & Moldawa, A. (2009). Differential effects of focused and unfocused written correction on the accurate use of grammatical forms by adult ESL learners. *System, 37*(4), 556–569.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information, 22*(2), 63-75.

Sheppard, K. (1992). Two feedback types: Do they make a difference? *RELC Journal, 23*(1), 103-110.

Singh, C. K. S., Singh, A. K. J., Razak, N. Q. A., & Ravinthar, T. (2017). Grammar Errors Made by ESL Tertiary Students in Writing. *English Language Teaching*, *10*(5), 16-27.

Shintani, N., & Ellis, R. (2013). The comparative effect of direct written corrective feedback and metalinguistic explanation on learners' explicit and implicit knowledge of the English indefinite article. *Journal of Second Language Writing, 22*(3), 286-306.

Shirotha, F. B. (2016). The effect of indirect written corrective feedback on students' writing accuracy. *Journal on English as a Foreign Language, 6*(2), 101-118.

Skehan, P., & Foster, P. (1999). The influence of task structure and processing conditions on narrative retellings. *Language Learning, 49*(1), 93-120.

Skehan, P., & Foster, P. (2001). Cognition and tasks. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 183-205). Cambridge University Press.

Skidmore, S. T., & Thompson, B. (2013). Bias and precision of some classical ANOVA effect sizes when assumptions are violated. *Behavior Research Methods, 45*(2), 536-546.

Stahl, N. A., & King, J. R. (2020). Expanding approaches for research: Understanding and using trustworthiness in qualitative research. *Journal of Developmental Education, 44*(1), 26-28.

Stefanou, C., & Revesz, A. (2015). Direct written corrective feedback, learner differences, and the acquisition of second language article use for generic and specific plural reference. *The Modern Language Journal, 99*(2), 263-282.

Storch, N. (2010). Critical feedback on written corrective feedback research. *International Journal of English Studies, 10*(2), 29-46.

Storch, N., & Wigglesworth, G. (2010). Learners' processing, uptake, and retention of corrective feedback on writing: A case study. *Studies in Second Language Acquisition, 32*(2), 303-334.

Supraba, A., Musfirah, M., Sjachrun, R. A., & Wahyono, E. (2021). The students' response toward indirect corrective feedback used by the lecturer in teaching writing. *Jurnal Pendidikan Bahasa dan Sastra, 1*(2), 148-158.

Suzuki, M. (2004). Corrective feedback and learner uptake in adult ESL classrooms. *Working Papers in TESOL & Applied Linguistics, 4*(2), 1-21.

Suzuki, W., Nassaji, H., & Sato, K. (2019). The effects of feedback explicitness and type of target structure on accuracy in revision and new pieces of writing. *System, 81*, 135-145.

Svalberg, A. M. L. (2012). Language awareness in language learning and teaching: A research agenda. *Language Teaching*, *45*(3), 376-388.

Swain, M. (1995). Three functions of output in second language learning. In G. Cook & B. Seidlhofer (Eds.), *Principle and practice in applied linguistics: Studies in honor of H.G. Widdowson* (pp. 125-144). Oxford University Press.

Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. *Sociocultural Theory and Second Language Learning*, *97*(1), 97-114.

Swain, M. (2008). The output hypothesis: Its history and its future. *Foreign Language Teaching and Research*, *40*(1), 45-50.

Swanborn, P. (2010). *Case study research: What, why and how?* SAGE Publications.

Tabach, M. (2011). The dual role of researcher and teacher: A case study. *For the Learning of Mathematics*, *31*(2), 32-34.

Tan, K. E., & Manochphinyo, A. (2017). Improving grammatical accuracy in Thai learners'

writing: Comparing direct and indirect written corrective feedback. *Journal of Asia TEFL, 14*(3), 430-442.

Tang, C., & Liu, Y. T. (2018). Effects of indirect coded corrective feedback with and without short affective teacher comments on L2 writing performance, learner uptake and motivation. *Assessing Writing, 35*, 26-40.

Ting, S. H., Marzuki, E., Chuah, K. M., Misieng, J., & Jerome, C. (2017). Employers' views on the importance of English proficiency and communication skill for employability. *Indonesian Journal of Applied Linguistics, 7*(2), 315-327.

Tracy, S. J. (2010). Qualitative Quality: Eight "Big-Tent" criteria for excellent qualitative research. *Qualitative Inquiry, 16*(10), 837–851.

Trochim, W. M. (2001). *Research methods knowledge base*. Atomic Dog Publishing.

Truscott, J. (1996). The case against grammar correction in L2 writing classes. *Language Learning, 46*(2), 327-369.

Truscott, J. (1999). The case for "the case against grammar correction in L2 writing classes": A response to Ferris. *Journal of Second Language Writing, 8*(2), 111-122.

Truscott, J. (2004). Evidence and conjecture on the effects of correction: A response to Chandler. *Journal of Second Language Writing, 13*, 337-343.

Truscott, J. (2007). The effect of error correction on learners' ability to write accurately. *Journal of Second Language Writing, 16*(4), 255-272.

Truscott, J., & Hsu A. Y. (2008). Error correction, revision, and learning. *Journal of Second Language Writing, 17*, 292-305.

Turpin, K. M. (2019). Training foreign language learners to be peer responders: A multiliteracies approach. *L2 Journal, 11*(1), 19-32.

Van Beuningen, C. G., De Jong, N. H., & Kuiken, F. (2008). The effect of direct and indirect corrective feedback on L2 learners' written accuracy. *ITL-InternationalJournal of*

Applied Linguistics, *156*(1), 279-296.

Van Beuningen, C. (2010). Corrective feedback in L2 writing: Theoretical perspectives, empirical insights, and future directions. *International Journal of English Studies*, *10*(2), 1-27.

Van Beuningen, C. G., De Jong, N. H., & Kuiken, F. (2012). Evidence on the effectiveness of comprehensive error correction in second language writing. *Language Learning*, *62*(1), 1-41.

Van Beuningen, C. (2021). Focused versus unfocused corrective feedback: From part IV-feedback provider, feedback intensity, and feedback timing. In H. Nassaji & E. Kartchava (Eds.), *The Cambridge Handbook of Corrective Feedback in Second Language Learning and Teaching* (pp. 300-321). Cambridge University Press.

Wagner, J. P., & Wulf, D. J. (2016). Understanding written corrective feedback in second-language grammar acquisition. *Journal of Education and Learning*, *5*(4), 259-277.

Wang, X. (2017). The effects of corrective feedback on Chinese learners' writing accuracy: A quantitative analysis in an EFL context. *World Journal of Education, 7*(2), 74-88.

Wang, T., & Jiang, L. (2015). Studies on written corrective feedback: Theoretical perspectives, empirical evidence, and future directions. *English Language Teaching*, *8*(1), 110-120.

Wang, W., & Li, S. (2021). Corrective feedback and learner uptake in American ESL and Chinese EFL classrooms: a comparative study. *Language, Culture and Curriculum*, *34*(1), 35-50.

Westmacott, A. (2017). Direct vs. indirect written corrective feedback: Student perceptions. *Íkala, Revista de Lenguaje y Cultura*, *22*(1), 17-32.

White, L. (2003). *Second language acquisition and universal grammar*. Cambridge University Press.

White, L. (2009). Linguistic theory, universal grammar, and second language acquisition. In B. VanPatten & J. Williams (Eds.), *Theories in second language acquisition: An introduction* (pp. 34-52). Routledge.

Wilcox, R. A. (2015). *Undergraduate psychology students' experiences with creative drama: A multi-case study* (Doctoral dissertation, Oklahoma State University). SHAREOK. https://hdl.handle.net/11244/45385

Wong, W. W. T. (2017). *The use of written corrective feedback to improve L2 writing in a selected secondary school* (Doctoral dissertation, Universiti Sains Malaysia). Repository @ USM. www. ethesis.usm.my.

Wray, A. (2005). *Formulaic language and the lexicon*. Cambridge University Press.

Xu, D., Akhter, S., & Qureshi, A. H. (2020). Towards the importance of English collocations for L2 Learners, A Corpus-Based study. *Revista Argentina de Clínica Psicológica, 29*(3), 185-100.

Yan, Z., & Brown, G. T. L. (2016). A cyclical self-assessment process: towards a model of how students engage in self-assessment. *Assessment & Evaluation in Higher Education, 42*(8), 1247–1262.

Yin, R. K. (1994). *Case study research design and methods: Applied social research and methods series*. SAGE Publications.

Yin, R. K. (2003). Designing case studies. *Qualitative Research Methods, 5*(14), 359-386.

Yin, R. K. (2009). *Case study research: Design and methods*. SAGE Publications.

Yin, R. K. (2014). *Case study research: Design and methods.* SAGE Publications.

Yin, R. K. (2018). *Case study research and applications: Design and methods*. SAGE Publications.

Yu, S., Zhang, Y., Zheng, Y., & Lin, Z. (2020). Written corrective feedback strategies in English-Chinese translation classrooms. *The Asia-Pacific Education Researcher*,

29(2), 101-111.

Yunus, W. N. M. W. M. (2020). Written corrective feedback in English compositions: Teachers' practices and students' expectations. *English Language Teaching Educational Journal, 3*(2), 95-107.

Zabihi, R., & Erfanitabar, D. (2021). The revision effects of varying degrees of written corrective feedback explicitness on L2 learners' writings. *RELC Journal, 54*(2), 1-13.

Zarifi, A., & Mukundan, J. (2014). Creativity and unnaturalness in the use of phrasal verbs in ESL learner language. *3L: Language, Linguistics, Literature, 20*(3), 51-62.

Zarei, A. A., & Mousavi, M. (2016). The effects of feedback types on learners' recognition of lexical collocations. *International Journal of Applied Linguistics and English Literature, 5*(2), 150-158.

Zhan, L. (2016). Written teacher feedback: student perceptions, teacher perceptions, and actual teacher performance. *English Language Teaching, 9*(8), 73-84.

Zhang, T., Chen, X., Hu, J., & Ketwan, P. (2021). EFL students' preferences for written corrective feedback: Do error types, language proficiency, and foreign language enjoyment matter? *Frontiers in Psychology, 12*, 1-12.

Zhang, L. J., & Cheng, X. (2021). Examining the effects of comprehensive written corrective feedback on L2 EAP students' linguistic performance: A mixed-methods study. *Journal of English for Academic Purposes, 54,* 101-123.

Zhang, Z. V., & Hyland, K. (2018). Student engagement with teacher and automated feedback on L2 writing. *Assessing Writing, 36,* 90-102.

Zheng, Y., & Yu, S. (2018). Student engagement with teacher written corrective feedback: A case study of Chinese lower-proficiency students. *Assessing Writing, 37,* 13–24.

APPENDICES

Appendix 1

Course information document of ELC151

COURSE
INFORMATION

Course Code	:	ELC 151 F2F/ODL	
Course Name	:	INTEGRATED LANGUAGE SKILLS II	
Level	:	DIPLOMA	
Total SLT	:	Equivalent to 3 credits Face-to-Face (F2F): 44 hours Non Face-to-Face : 34 hours Guided and 42 hours Non-Guided	Open Distance Learning (ODL): 120 hours
Contact Hours	:	4	
Part	:	2	
Course Status (Core/Non Core)	:	CORE	
Prerequisite	:	ELC 121	

1.0 COURSE LEARNING OUTCOMES

Upon completion of this course, students should be able to:

1.1 demonstrate the ability to read and write coherently based on various reading materials at higher intermediate level. (A3)

1.2 demonstrate the ability to verbally express and justify opinions while interacting during social communication at higher intermediate level. (A3)

1.3 demonstrate the ability to listen and respond to various discourse at higher intermediate level. (A3)

2.0 COURSE DESCRIPTION

This course is designed to help students become confident and independent readers. Specifically, students will be exposed to intensive reading skills which include skimming and scanning, recognising structures and mechanics used in texts, summarising and evaluating texts. By exposing them to a variety of reading materials and short stories, extensive reading strategies are introduced to create enjoyable reading experiences outside the classroom and to enrich and strengthen their knowledge of words. In addition, speaking and listening skills are integrated into the course to help students perform effectively and competently in the social and academic interaction. This course aims to raise their proficiency to high intermediate level by exploiting a variety ofmaterials in varied situations.

3.0 COURSE SYLLABUS

Grammar items are taught incidentally in reading, speaking and listening: review of parts of speech, basic tenses, perfect tenses, passive forms, and transitional words & phrases.

4.0 TEACHING METHODOLOGY

Students should be encouraged to use the language in various situations through stimulating activities. In addition, they are to source relevant materials for activities which foster independent learning whenever possible. Emphasis should be placed on student-centered activities which may include:

4.1. Interactive Lecture

4.2. Collaborative Learning

4.3. Group Discussions

4.4. Grammar development exercises

4.5. Vocabulary expansion activities

4.6. Use of Authentic reading texts

4.7. Use of Audio and video recordings

4.8. E-learning activities

5.0 ASSESSMENT

Week	Assessment	Duration	Weightage
6 & 9	**Personal Reading Log 1 & 2** ● Produce a written response based on a selected short story Length – 200-250 words	1 hour	**20%** **(10% x 2)**
11-12	**Speaking (Discussion &Observation)** Group Discussion (to engage in a discussion based on the stimulus given)	13 minutes	**20%**
7-11	**CBLT** Part A: 5 News ItemsPart B: A Talk Part C: A Dialogue Total of 20 items.	30 minutes	**20%**
14	**Reading Test** Number oftext: 3 Number ofitems: ● Part A: Passage 1 (500 – 600words): Two Questions (6-8items) ● Part B: Non-Linear Text: OneQuestion (5 items) Part C: Passage 2 (650 – 800 words):Two Questions (8-12 items)	2 hours	**40%**
	TOTAL:		**100%**

Appendix 2

Test 1

Dear Student,

My name is Abang Fhaeizdhyall and I am a Ph. D student from the Faculty of Language and Communication, Universiti Malaysia Sarawak (UNIMAS). I would like to thank you for your generosity in participating in this research. This research is conducted to investigate the effectiveness of Written Corrective Feedback (WCF) provided by your teacher/lecturer in a test that will be assigned to you.

Administering this test and few others which include a set of Open-Ended Questionnaires are the means for collecting data in this study. Your responses to all the tests, questions, and feedback will be of great importance for the research. I assure you that your responses will remain confidential and anonymous and they are used only for research purposes. Your grades in the course will not be affected.

Responding to this test will not be more than 40 minutes. Feel free to ask me if you find any of the questions or sections unclear or confusing.

If you agree to participate in this study, please indicate your response in the CONSENT SECTION below.

Thank you for your cooperation.

Abang Fhaeizdhyall
September 2019

Consent Section	
I agree * / disagree* to participate in this study that my participation will be used for the study purposes. ** Please circle one*	
Name:	Signature

TEST 1

Section A: Noun + Verb (20MARKS)

INSTRUCTION:

In this section, you will find 7 tables. In each table, you will find 2 words (VERB) on the left, written below each other, and 5 words (NOUN) above the table, lined up next to each other.
Your task is to decide, based on each of the words (Verb) to the left of the table, whether the word can be combined with any of the 5 words (Noun) up above the table. If you consider that a combination exists in the English language, i.e. used by native speakers, you put a mark in the cell where the words meet. The numbers in bracket (1) or (2) indicate the number of possible combinations. Refer to the example below.
Example:

	suicide	*a problem*	*a help*	*a murder*	*someone a favour*
Solve (2)		*X*		*X*	
Commit (2)	*X*			*X*	
Do (1)					*X*

1

	a leg	a promise	one's breath	a position	a secret
A) Break *(2)*					
B) Hold *(2)*					

2

	a prayer	a joke	a story	a sentence	a sound
A) Say *(1)*					
B) Tell *(2)*					

3

	a diary	a language	a story	a promise	a truth
A) Speak *(1)*					
B) Keep *(2)*					

4

	a play	a blow	a divorce	a miracle	a goal
A) Strike *(1)*					
B) Perform *(2)*					

5

	conclusions	a glance	a breath	assumptions	a vote
A) Cast *(1)*					
B) Draw *(2)*					

6.

	steps	actions	a decision	precautions	a mistake
A) Take *(2)*					
B) Make *(2)*					

7.

	access	amount	attention	control	trust
A) Gain *(2)*					
B) Pay *(1)*					

Construct a sentence for every collocation below

8. Take a risk

_____

_____

9. Land a deal

_____

_____

10. Save time

_____

_____

11. Take a chance

_____

_____

12. Keep your balance

_____

_____

13. Make a living

_____

_____

Section B: Verb + Adverb (20 MARKS)

INSTRUCTION:

In this section, you will find 8 tables. In each table, you will find three words (verb) on the left, written below each other, and 6 words (adverb) above the table, lined up next to each other.

Your task is to decide, based on each of the words (Verb) to the left of the table, whether the word can be combined with any of the 6 words (adverb) up above the table. If you consider that a combination exists in the English language, i.e. used by native speakers, you put a mark in the cell where the words meet.

The **numbers in the bracket** next to the verb indicate **the number of targeted combinations**. For instance, *fit (2) shows only 2 possible combinations that are "fit perfectly" and "fit easily"*

Example:

	perfectly	*clearly*	*really*	*easily*	*equally*	*directly*
See (1)		*X*				
fit (2)	*X*			*X*		
apply (2)					*X*	*X*

1.

	slowly	efficiently	closely	carefully	in detail
A) Examine *(2)*					
B) Follow *(2)*					

2.

	firmly	a lot	quickly	securely	steadily
A) Learn *(2)*					
B) Attach *(2)*					

3.

	clearly	earlier	previously	effectively	equally
A) Cited (2)					
B) Communicate (2)					

4.

	directly	generously	closely	kindly	equally
A) Interact (2)					
B) Contribute (2)					

5.

	further	immediately	clearly	accurately	gradually
A) Define (2)					
B) Emerge (2)					

6.

	accurately	wisely	directly	simply	correctly
A) Identify (2)					
B) Invest (2)					

7.

spontaneously	aggressively	quickly	carefully	regularly

A) Monitor (2)						
B) React (2)						

8.

	slightly	immediately	carefully	quickly	rationally
A) Respond (2)					
B) Think (2)					

Construct a sentence for every collocation below

9. badly damaged

_____

_____

10. firmly believe

_____

_____

11. thoroughly inspect

_____

_____

12. fully recover

_____

_____

THE END

Appendix 3

Test 2

TEST 2

Section A: Noun + Verb (20MARKS)

INSTRUCTION:

In this section, you will find 7 tables. In each table, you will find 2 words (VERB) on the left, written below each other, and 5 words (NOUN) above the table, lined up next to each other. Your task is to decide, based on each of the words (Verb) to the left of the table, whether the word can be combined with any of the 5 words (Noun) up above the table. If you consider that a combination exists in the English language, i.e. used by native speakers, you put a mark in the cell where the words meet. The numbers in bracket (1) or (2) indicate the number of possible combinations. Refer to the example below.

Example:

	suicide	*a problem*	*a help*	*a murder*	*someone a favour*
Solve (2)		*X*		*X*	
Commit (2)	*X*			*X*	
Do (1)					*X*

1

	a leg	a promise	one's breath	a position	a secret
A) Break *(2)*					
B) Hold *(2)*					

2

	a prayer	a joke	a story	a sentence	a sound
A) Say *(1)*					
B) Tell *(2)*					

3

	a diary	a language	a story	a promise	a truth
A) Speak *(1)*					
B) Keep *(2)*					

4

	a play	a blow	a divorce	a miracle	a goal
A) Strike *(1)*					
B) Perform *(2)*					

5

	conclusions	a glance	a breath	assumptions	a vote
A) Cast *(1)*					
B) Draw *(2)*					

6.

	steps	actions	a decision	precautions	a mistake
A) Take *(2)*					
B) Make *(2)*					

7.

	access	amount	attention	control	trust
A) Gain *(2)*					
B) Pay *(1)*					

Construct a sentence for every collocation below

8. Take a risk

_____

9. Land a deal

_____

10. Save time

_____

11. Take a chance

_____

12. Keep your balance

_____

13. Make a living

_____

Section B: Verb + Adverb (20 MARKS)

INSTRUCTION:

In this section, you will find 7 tables. In each table, you will find three words (verb) on the left, written below each other, and 6 words (adverb) above the table, lined up next to each other. Your task is to decide, based on each of the words (Verb) to the left of the table, whether the word can be combined with any of the 6 words (adverb) up above the table. If you consider that a combination exists in the English language, i.e. used by native speakers, you put a mark in the cell where the words meet.

The **numbers in the bracket** next to the verb indicate **the number of targeted combinations**. For instance, *fit (2) shows only 2 possible combinations that are "fit perfectly" and "fit easily"*

Example:

	perfectly	*clearly*	*really*	*easily*	*equally*	*directly*
See (1)		*X*				
fit (2)	*X*			*X*		
apply (2)					*X*	*X*

1.

	slowly	efficiently	closely	carefully	in detail
A) Examine *(2)*					
B) Follow *(2)*					

2.

	firmly	a lot	quickly	securely	steadily
A) Learn *(2)*					
B) Attach *(2)*					

3.

	clearly	earlier	previously	effectively	equally
A) Cited (2)					
B) Communicate (2)					

4.

	directly	generously	closely	kindly	equally
A) Interact (2)					
B) Contribute (2)					

5.

	further	immediately	clearly	accurately	gradually
A) Define (2)					
B) Emerge (2)					

6.

	accurately	wisely	directly	simply	correctly
A) Identify (2)					
B) Invest (2)					

7.

	spontaneously	aggressively	quickly	carefully	regularly
A) Monitor (2)					
B) React (2)					

8.

	slightly	immediately	carefully	quickly	rationally
A) Respond (2)					
B) Think (2)					

Construct a sentence for every collocation below

9. badly damaged

_____

10. firmly believe

_____

11. thoroughly inspect

_____

12. fully recover

_____

THE END

Appendix 4

Test 3

TEST 3

Section A: Noun + Verb (20MARKS)

INSTRUCTION:

In this section, you will find 7 tables. In each table, you will find 2 words (VERB) on the left, written below each other, and 5 words (NOUN) above the table, lined up next to each other. Your task is to decide, based on each of the words (Verb) to the left of the table, whether the word can be combined with any of the 5 words (Noun) up above the table. If you consider that a combination exists in the English language, i.e. used by native speakers, you put a mark in the cell where the words meet. The numbers in bracket (1) or (2) indicate the number of possible combinations. Refer to the example below.

Example:

	suicide	*a problem*	*a help*	*a murder*	*someone a favour*
Solve (2)		*X*		*X*	
Commit (2)	*X*			*X*	
Do (1)					*X*

1

	a position	one's breath	a secret	a leg	a promise
A) Hold *(2)*					
B) Break *(2)*					

2

	a story	a sound	a joke	a sentence	a prayer
A) Tell *(2)*					
B) Say *(1)*					

3

	a promise	a truth	a diary	a story	a language
A) Keep *(2)*					
B) Speak *(1)*					

4

	a miracle	a goal	a play	a divorce	a blow
A) Perform *(2)*					
B) Strike *(1)*					

5

	assumptions	a breath	a vote	conclusions	a glance
A) Draw (2*)*					
B) Cast *(1)*					

6.

	precautions	steps	a mistake	actions	a decision
A) Make *(2)*					
B) Take *(2)*					

7.

	control	attention	trust	access	amount
A) Pay *(1)*					
B) Gain *(2)*					

Construct a sentence for every collocation below

8. Save time

_____

9. Keep your balance

_____

10. Make a living

_____

11. Take a chance

_____

12. Land a deal

_____

13. Take a risk

_____

Section B: Verb + Adverb (20 MARKS)

INSTRUCTION:

In this section, you will find 7 tables. In each table, you will find three words (verb) on the left, written below each other, and 6 words (adverb) above the table, lined up next to each other. Your task is to decide, based on each of the words (Verb) to the left of the table, whether the word can be combined with any of the 6 words (adverb) up above the table. If you consider that a combination exists in the English language, i.e. used by native speakers, you put a mark in the cell where the words meet.

The **numbers in the bracket** next to the verb indicate **the number of targeted combinations**. For instance, *fit (2) shows only 2 possible combinations that are "fit perfectly" and "fit easily"*

Example:

	perfectly	*clearly*	*really*	*easily*	*equally*	*directly*
See (1)		*X*				
fit (2)	*X*			*X*		
apply (2)					*X*	*X*

1.

	closely	in detail	efficiently	carefully	slowly
A) Follow *(2)*					
B) Examine *(2)*					

2.

	steadily	securely	firmly	a lot	quickly
A) Attach *(2)*					
B) Learn *(2)*					

3.

	previously	equally	clearly	earlier	effectively
A) Communicate (2)					
B) Cited (2)					

4.

	equally	closely	kindly	generously	directly
A) Contribute (2)					
B Interact) (2)					

5.

	gradually	accurately	further	immediately	clearly
A) Emerge (2)					
B) Define (2)					

6.

	directly	correctly	simply	accurately	wisely
A) Invest (2)					
B) Identify (2)					

7.

	quickly	carefully	regularly	aggressively	spontaneously
A) React (2)					
B) Monitor (2)					

8.

	carefully	quickly	slightly	rationally	immediately
A) Think (2)					
B) Respond (2)					

Construct a sentence for every collocation below

9. thoroughly inspect

_____

10. fully recover

_____

11. badly damaged

_____

12. firmly believe

_____

THE END

Appendix 5

Open-ended questionnaire instrument

Dear all,

This is not a test but a QUALITATIVE survey questionnaire to investigate your perceptionof the factors that might have contributed to the success of WCF provided in the Test 1.
Also, this instrument explores your difficulties processing the WCF. Thus, please betruthful and honest when answering the questions.

To give you an idea of what Written Corrective Feedback (WCF) is, recall the corrections that I wrote on your collocation tests. The WCF was written in the following forms:

1. Correct collocation structures, and sentences that contain the correct structures (for LDSand HDS group only).

2. Correct or incorrect was indicated with “ ” or “X” (for LIS and HIS group only).

Name: _____
Class group (please circle one): GROUP 1 / GROUP 2 / GROUP 3 / GROUP 4

1. Do you understand your lecturer’s written corrective feedback? Please explain.

2. Would you like to receive more written corrective feedback on the test instrument andother written work? Please explain why, or why not.

3. What kind of difficulties do you find in revising the written corrective feedback given byyour lecturer in the Test 1?

4. Do you benefit from WCF provided by your lecturer in the testing instruments (Test 1)?If yes, how? If no, why not?

5. Is WCF from your lecturer enough to help you learn from your errors/misuse ofcollocation? Why or why not?

Appendix 6-Continued

1. Do you understand your lecturer's written corrective feedback? Please explain.

Yes, I can clearly read and understand the written corrective feedback in my activity. It is why easier to understand the assignment after a brief explanation written.

2. Would you like to receive more written corrective feedback on the test instrument and other written work? Please explain why, or why not.

Yes, because I can learn from WCF and try again without making the same mistake.

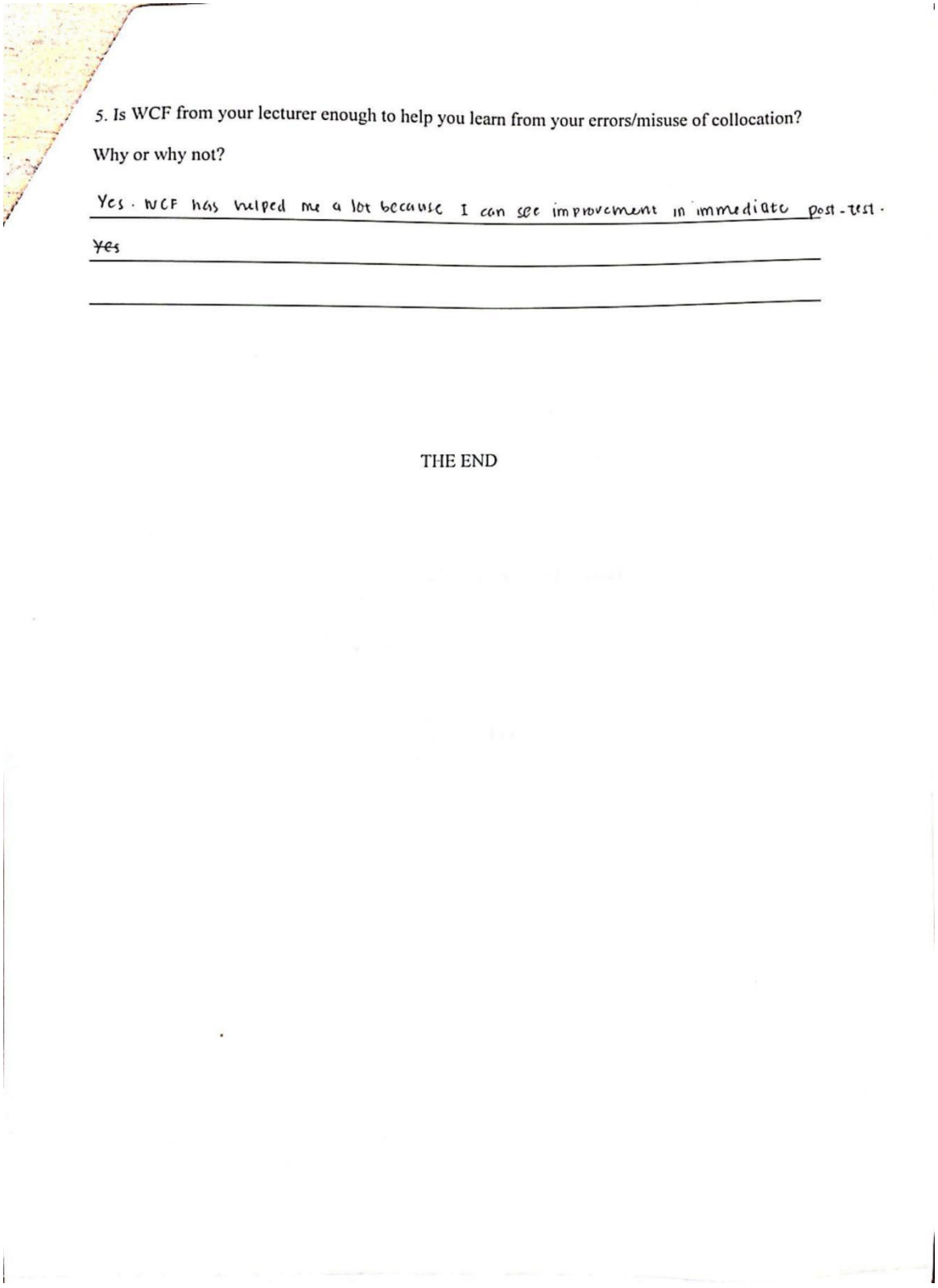
3. What kind of difficulties do you find in revising the written corrective feedback given by your lecturer in the pre-test?

I faced no problem.

4. Do you benefit from WCF provided by your lecturer in the testing instruments (pre-test)? If yes, how? If no, why not?

Yes. with WCF I can realise my error so that I will not be doing the same errors in next tasks.

Appendix 6-Continued



5. Is WCF from your lecturer enough to help you learn from your errors/misuse of collocation? Why or why not?

Yes. WCF has helped me a lot because I can see improvement in immediate post-test.

~~Yes~~

THE END

Appendix 7

FIELD NOTES

Phase: Doing Test 1

- The students were given instructions on how to complete the test
- Students were asked should there be any questions. No question asked
- No issue arises.

Phase: Revising errors made in Test 1

- Two students from indirect WCF group approached me to ask for clarification on the WCF provided. They asked for more clues on how to form correct collocation on item number 13, 14, 15.
- Several students from the Group 1 and Group 3 group were seen talking to each other when others were revising the test 1. These students were approached and asked. They informed me that they wanted to clarify on the WCF provided because the way WCF was written on the paper was confusing (e.g., arrows pointing to metalinguistic information)
- 1 student from Group 4 approached me to ask for metalinguistic information regarding item no. 25 & 30. She was provided with metalinguistic information in terms of fill-in-the-blank sentences.
- 1 student in Group 4 was seen referring to his phone during revision. He was approached. The student admitted that he looked for metalinguistic information of collocations that he made errors on. He was told not to do that again.
- Similar instance with 1 student in Group 4 in which there was another student from Group 1 referring to the internet source.
- Common instances across Group 1 and Group 3: students asked for clarification on written CF (e.g., some words written on the metalinguistic information were not clear and difficult to comprehend). Vague handwriting by the CF provider is the issue here.

Phase: Doing test 2

- The students were given instructions to complete phase 2. They were informed that the second test is to test the effects of WCF on their collocation competence, how far they have improved after revising the errors, and to what extent the WCF has facilitated their knowledge on collocation.
- Students were asked should there be any questions. No question asked
- No issue arises. Phase: Doing test 3
- After 10 weeks, the students did test 3 to determine the long-term effect of WCF.
- The students were told the purpose of this test.
- The researcher ensured that no students attempted to cheat when doing test 3 (e.g., searching answers from the internet, referring to previous tests for answers).
- No issues arises.

Appendix 8

Lesson plan used before the start of the study

WEEK 1 and WEEK 2
Lesson Objective:

1. To introduce the students with English collocation
2. To allow the students realise the importance of learning English collocation
3. To learn about the types of collocation especially verb-noun and verb-adverb Lesson outcome:

1. Students able to use English collocation
2. Students realise the importance of learning English collocation
3. Students are able to differentiate several types of English collocation Lesson planning

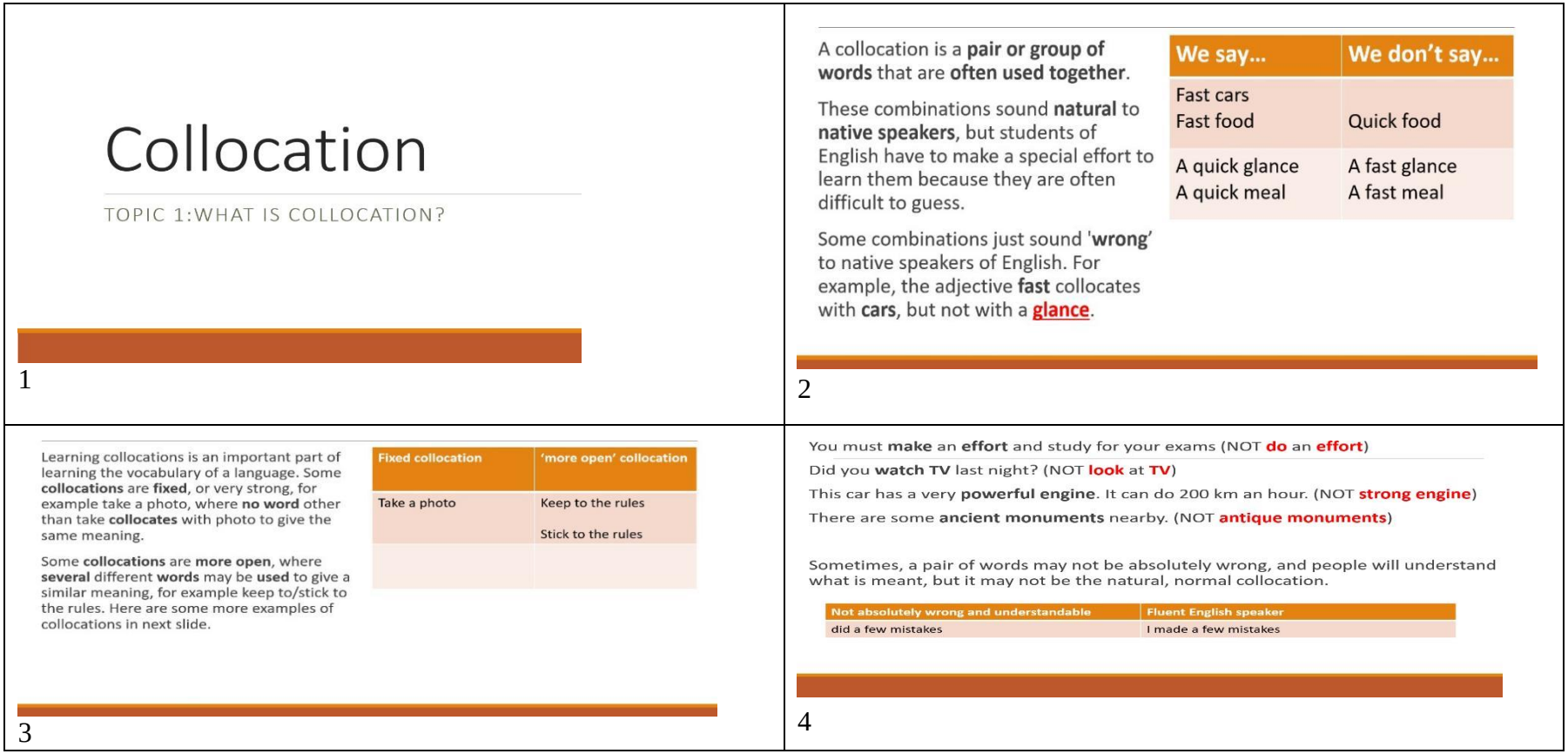
WEEK 1			
No.	Topic	Activity	Duration
1.	What is a collocation?	1. The lecturer gives lecture on the topic. 2. PowerPoint Presentations are used. 3. Students are randomly called to answer questions/construct sentences regarding each topic. 4. Examples of collocation are shown on the slides with explanations. Impromptu examples written on white board. 5. Students are assigned Task 1, Task 2, & task 3. 6. Randoms students are called to share their answers. 7. The class watch Youtube videos on English collocation topic. 8. Reflection activity ends the topic.	1 hour
2	Why we learn collocation?	. The lecturer gives lecture on the topic (content as seen in Slides WEEK 1_COLLOCATION 2). . PowerPoint Presentations are used. . Students are randomly called to answer questions/construct sentences. . Task 1 is assigned and students answers are discussed in the class.	1 hour
WEEK 2			
3	Types of collocation: Verb-noun	.The lecturer begins by giving example of six types of collocation. .In this lesson, the focus is on verb-noun collocation. .The lecturer explains and drills students on verb-noun collocation. .Random students are asked to provide collocation examples using the verbs MAKE, TAKE, & CATCH.	1 hour

Appendix 8 – Continued

4	Types of collocation: Verb-adverb	1. In this lesson, the focus is on verb-nouncollocation. 2. The lecturer explains and drills students onverb-noun collocation. 3. Random students are asked to provide collocation examples using the verbs MAKE, TAKE, & CATCH. 4. Whole class participates in Activity 1 &Activity 2. 5. Students are called to produce a sentence usingverb-adverb collocations. 5. Students do Exercise 1. The lecturer shares the answer at the end of session.	1 hour
References: Michael, M., & Felicity, O. (2017). *English Collocations in Use: How Words Work Together for Fluent and Natural English* (2nd ed.). Cambridge University Press.			

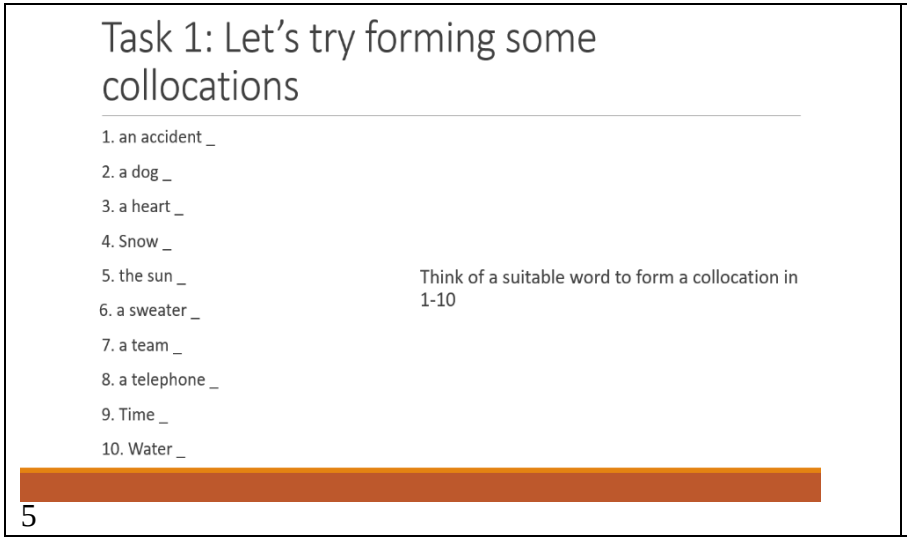
Appendix 9

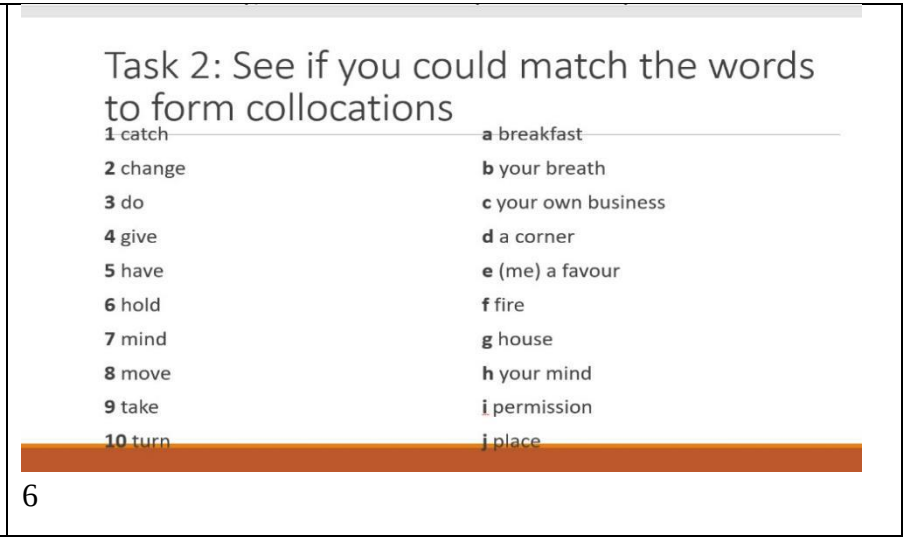
Teaching materials for Week 1-Topic 1 (Pg.1-4)



Appendix 9-Continued

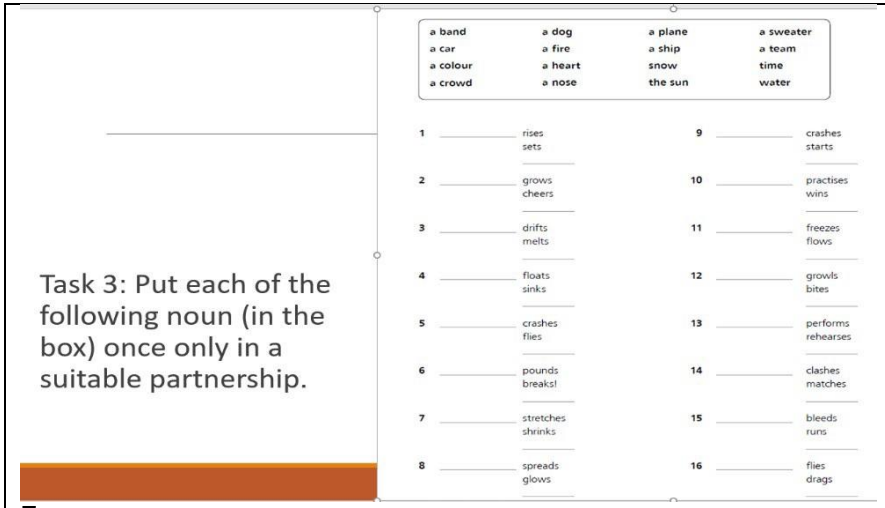
Teaching materials for Week 1-Topic 1 (Pg. 5-6)





Appendix 9-Continued

Teaching materials for Week 1-Topic 1 (Pg.7-9)



7

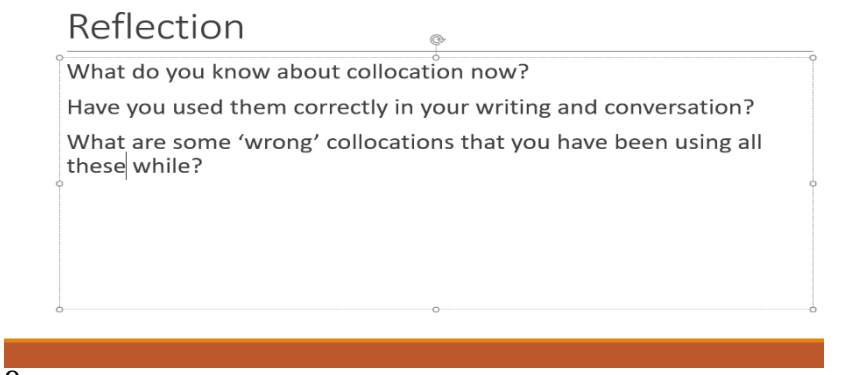
Let's watch this Youtube video to have more insight on English collocation

https://www.youtube.com/watch?v=CqRloBkyqQs

Contents:

1. The Most Common Collocations in English
2. How to Find and Learn Collocations
3. How to Remember and Use Collocations
4. How to Boost Your Vocabulary With Collocation Study

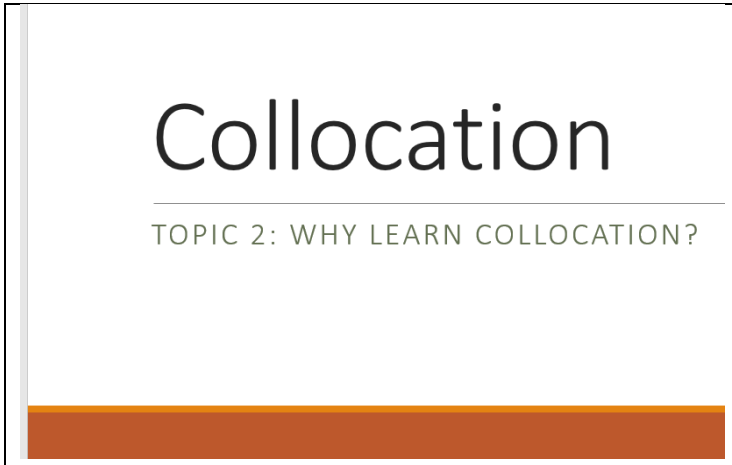
8



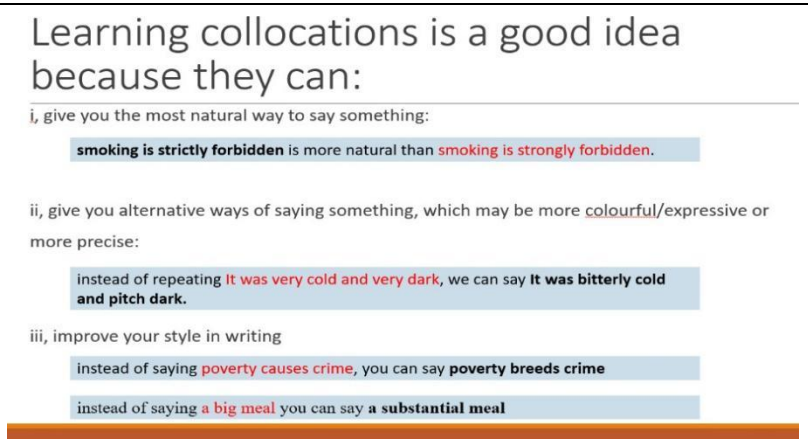
9

Appendix 9-Continued

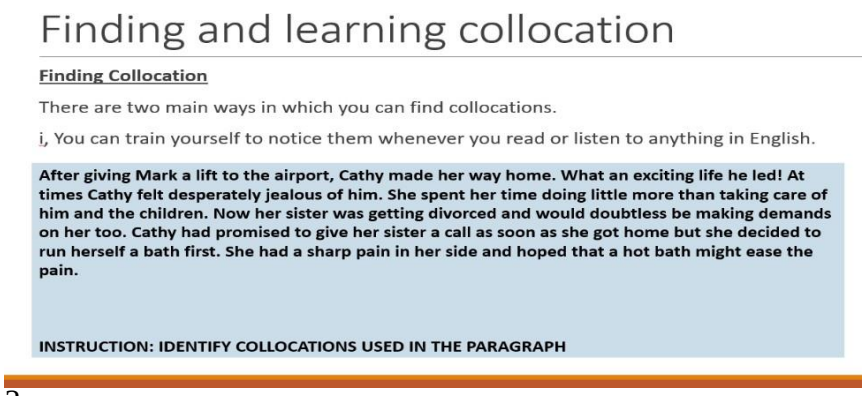
Teaching materials for Week 1-Topic 2 (Pg.1-4)



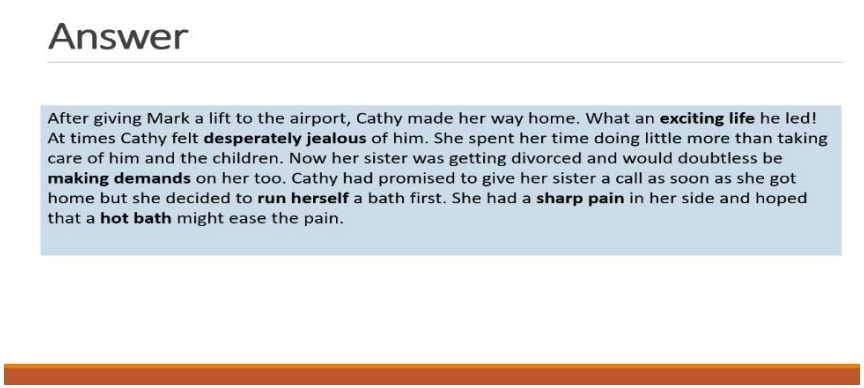
1



2



3



4

Appendix 9-Continued

Teaching materials for Week 1-Topic 2 (Pg.5-7)

ii, You can find them in any good learner's dictionary.

For example, if you look up the word sharp you will find some of these collocations:

a sharp pain

a sharp bend/turn

a sharp contrast/difference/distinction

a sharp rise/increase/drop

5

SOME TIPS TO HELP YOU LEARN COLLOCATIONS

Learning Collocation

Learning collocations is not so different from learning any vocabulary item. The key things are to:

- regularly revise what you want to learn
- practice using what you want to learn in contexts that are meaningful for you personally
- learn collocations in groups to help you fix them in your memory. You might group together collocations relating to the same topic.

Or you might group collocations based on the same word, for example:

I must **find a way** to help him.

Can you **find your way** back to my house?

I **learnt the hard way** that Jack can't be trusted.

Please tell me if I'm **getting in your way**.

You must **give way** to traffic from the left.

I've tried every possible way to get him to **change his mind.**

6

Task 1: Make ten collocations from the words in the box (10 minutes)

an effort ancient bitterly make breakfast cold dark

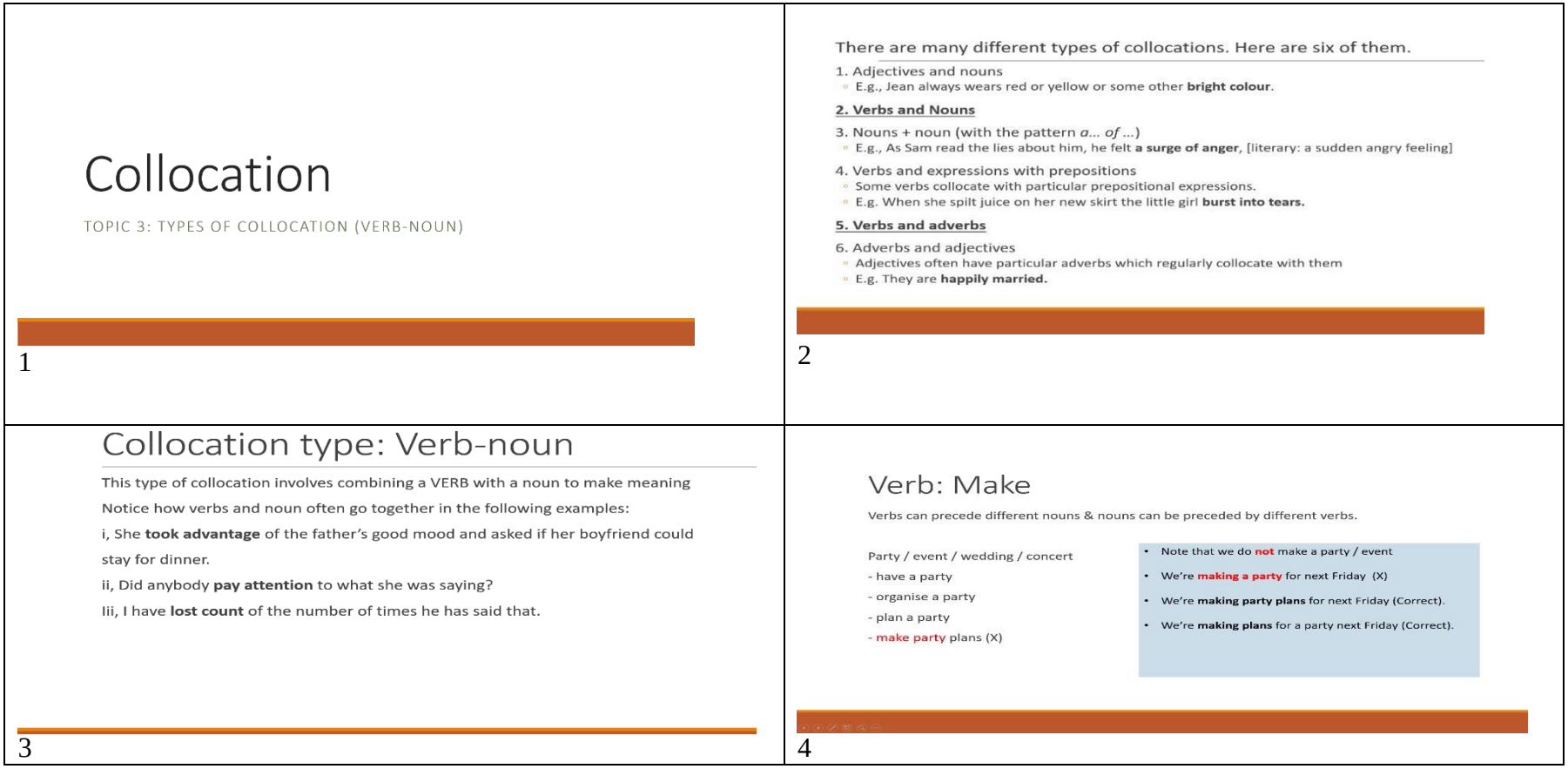
engine forbidden mistakes have make meal monument

pitch powerful strictly substantial TV watch

7

Appendix 10

Teaching materials for Week 2-Topic 1 (Pg.1-4)



Appendix 10-Continued

Teaching materials for Week 2-Topic 1 (Pg.5-9)

Verb: Take

A : I need to **take a break** after all that studying!
B: You're always **taking breaks**! We've only been studying for 20 minutes.

She is **taking a nap / Taking naps** can be good for you.

When are you **taking (your) vacation**?

5

Verb: ?



6

Verb: Lose

1. Mike **will lose his temper** when he finds out about that.
2. Have you **lost your mind**? Put the hammer down!
3. I **lost my cell phone**. Has anyone seen it?
4. He **lost a bet**, so he has to let his friends shave his head.
5. People **lose money** at the casino all the time.
6 Be good to your friends otherwise **you'll lose them**.

7

Activity 1: Brainstorm with a partner

What other nouns go with the verb MAKE?



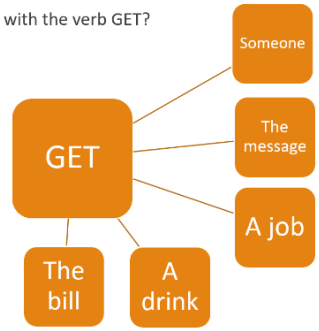
8

Appendix 10-Continued

Teaching materials for Week 2-Topic 1 (Pg.10-13)

Activity 2: Brainstorm with a partner

What other nouns go with the verb GET?



10

These are the common verbs

1. Have
2. Break
3. Pay
4. Make
5. Save
6. Do
7. Take
8 Catch
9. Come
10. Go
11. Get
12. Keep

* Can you make a sentence for each of them? Ensure that each verb is preceded by a noun/noun phrase.

11

Exercise 1: Match each verb on the left with a noun on the right. Some verbs can be followed by more than one noun but you must use each word once only. Write your answers in the boxes provided.

Exercise 1

1	catch	a	breakfast	1
2	change	b	your breath	2
3	do	c	your own business	3
4	give	d	a corner	4
5	have	e	(me) a favour	5
6	hold	f	fire	6
7	mind	g	house	7
8	move	h	your mind	8
9	take	i	permission	9
10	turn	j	place	10

12

Exercise 2: See instruction in ex.1

Exercise 2 **Now do the same with these words.**

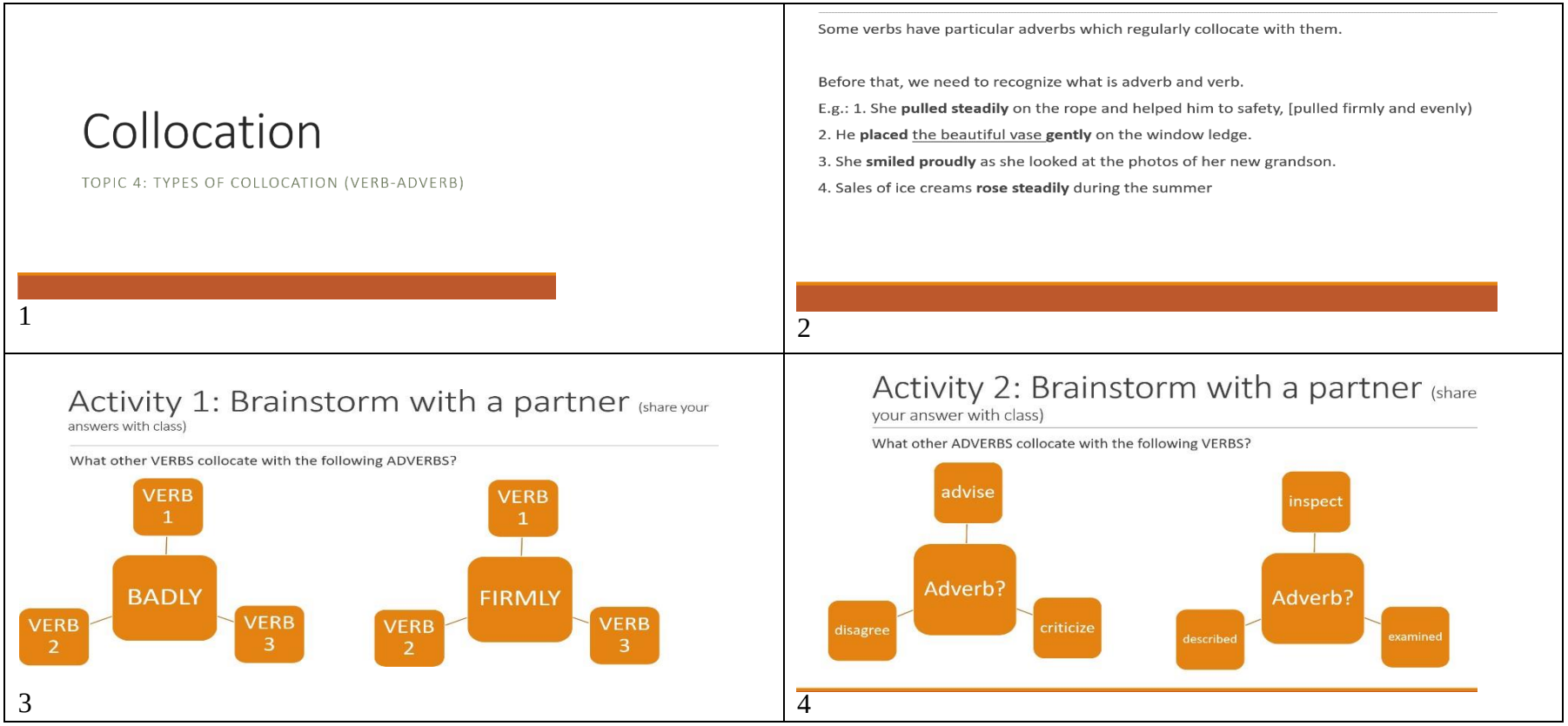
1	do	a	evidence	1
2	give	b	an example	2
3	have	c	fun	3
4	keep	d	home	4
5	lead	e	a mistake	5
6	leave	f	a seat	6
7	make	g	the truth	7
8	set	h	the washing-up	8
9	take	i	watch	9
10	tell	j	the way	10

Now write sentences using the partnerships you have made.

13

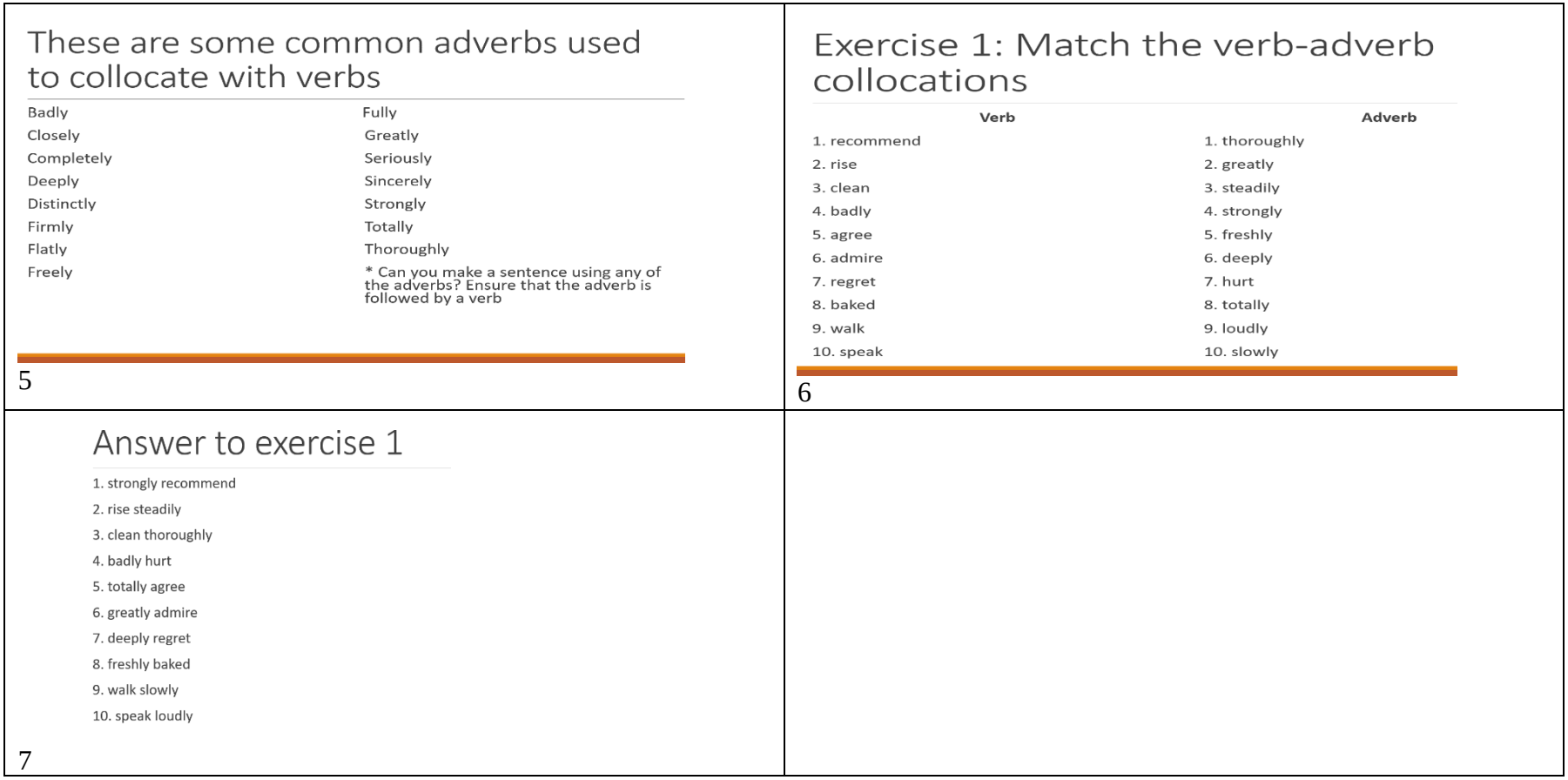
Appendix 10-Continued

Teaching materials for Week 2-Topic 2 (Pg.1-4)



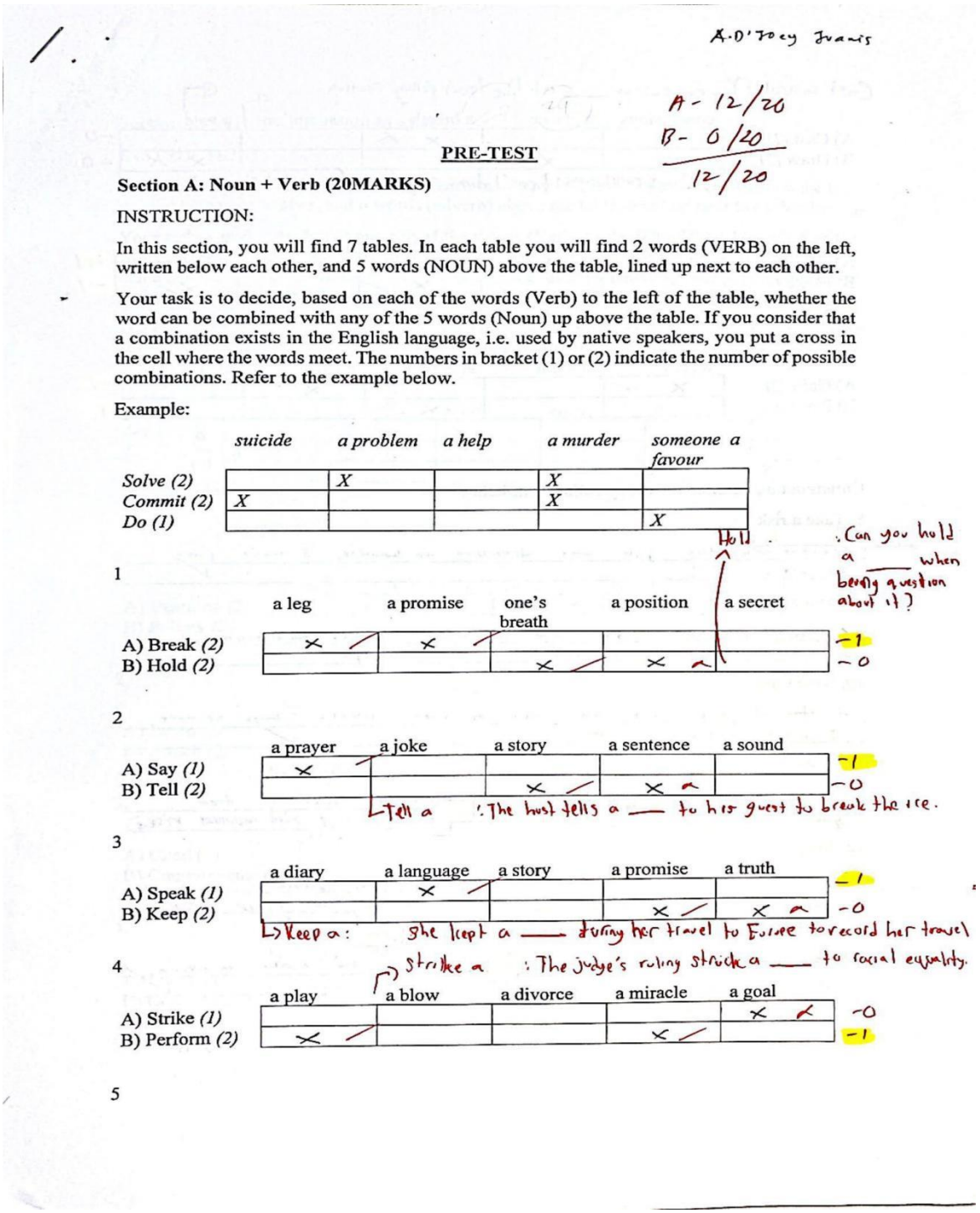
Appendix 10-Continued

Teaching materials for Week 2-Topic 2 (Pg.5-7)



Appendix 11

Sample of used Test 1 (Group 1)



A-D'Jacy Juanis

A - 12/20
B - 0/20
12/20

PRE-TEST

Section A: Noun + Verb (20MARKS)

INSTRUCTION:

In this section, you will find 7 tables. In each table you will find 2 words (VERB) on the left, written below each other, and 5 words (NOUN) above the table, lined up next to each other.

Your task is to decide, based on each of the words (Verb) to the left of the table, whether the word can be combined with any of the 5 words (Noun) up above the table. If you consider that a combination exists in the English language, i.e. used by native speakers, you put a cross in the cell where the words meet. The numbers in bracket (1) or (2) indicate the number of possible combinations. Refer to the example below.

Example:

	suicide	*a problem*	*a help*	*a murder*	*someone a favour*
Solve (2)		X		X	
Commit (2)	X			X	
Do (1)					X

1

	a leg	a promise	one's breath	a position	a secret
A) Break *(2)*	X	X			
B) Hold *(2)*			X	X	

Hold

: Can you hold a ___ when being question about it?

-1
-0

2

	a prayer	a joke	a story	a sentence	a sound
A) Say *(1)*	X				
B) Tell *(2)*			X	X	

-1
-0

Tell a : The host tells a ___ to his guest to break the ice.

3

	a diary	a language	a story	a promise	a truth
A) Speak *(1)*		X			
B) Keep *(2)*				X	X

-1
-0

Keep a : She kept a ___ during her travel to Europe to record her travel

4

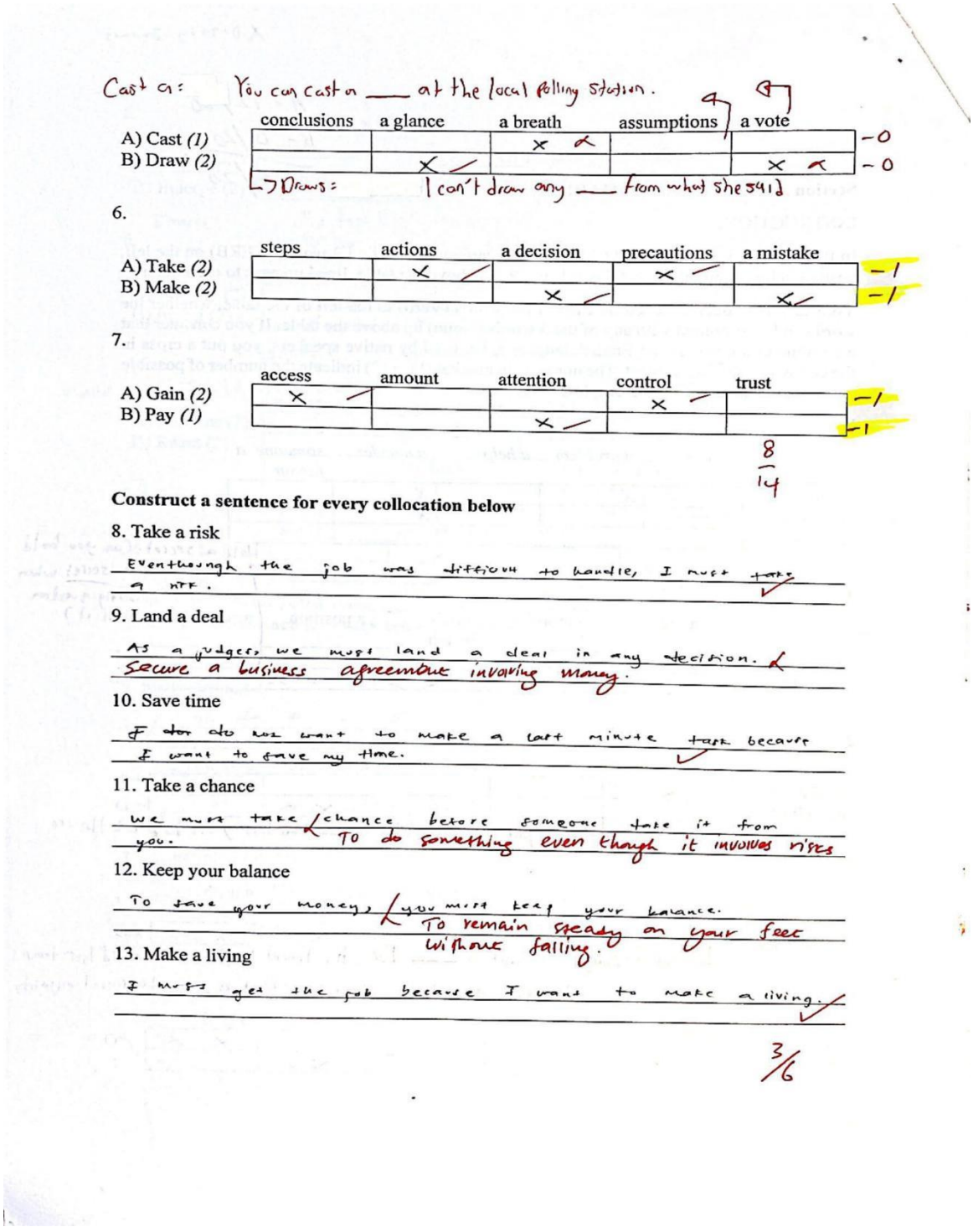
Strike a : The judge's ruling struck a ___ to racial equality.

	a play	a blow	a divorce	a miracle	a goal
A) Strike *(1)*					X
B) Perform *(2)*	X			X	

-0
-1

5

Appendix 11-Continued



Cast a: You can cast a ___ at the local polling station.

	conclusions	a glance	a breath	assumptions	a vote	
A) Cast *(1)*			✗ ✓			-0
B) Draw *(2)*		✗ ✓			✗ ✓	-0

Draws: I can't draw any ___ from what she said

6.

	steps	actions	a decision	precautions	a mistake	
A) Take *(2)*		✗ ✓		✗ ✓		-1
B) Make *(2)*			✗ ✓		✗ ✓	-1

7.

	access	amount	attention	control	trust	
A) Gain *(2)*	✗ ✓			✗ ✓		-1
B) Pay *(1)*			✗ ✓			-1

8/14

Construct a sentence for every collocation below

8. Take a risk

Eventhough the job was difficult to handle, I must take a risk. ✓

9. Land a deal

As a judges, we must land a deal in any decision. ✓
Secure a business agreement involving money.

10. Save time

~~I~~ ~~don't~~ do not want to make a last minute task because I want to save my time. ✓

11. Take a chance

We must take ✓ chance before someone take it from you.
To do something even though it involves risks

12. Keep your balance

To save your money, ✓ you must keep your balance.
To remain steady on your feet without falling.

13. Make a living

I must get the job because I want to make a living. ✓

3/6

Appendix 11-Continued

Section B: Verb + Adverb (20 MARKS)

INSTRUCTION:

In this section, you will find 7 tables. In each table you will find three words (verb) on the left, written below each other, and 6 words (adverb) above the table, lined up next to each other.

Your task is to decide, based on each of the words (Verb) to the left of the table, whether the word can be combined with any of the 6 words (adverb) up above the table. If you consider that a combination exists in the English language, i.e. used by native speakers, you put a cross in the cell where the words meet.

The **numbers in the bracket** next to the verb indicate **the number of targeted combinations**. For instance, *fit (2) shows only 2 possible combination that are "fit perfectly" and "fit easily"*

Example:

	perfectly	*clearly*	*really*	*easily*	*equally*	*directly*
See (1)		X				
fit (2)	X			X		
apply (2)					X	X

Examine: The Police examines the evidence ___. Examines: We shall now proceed to examine these two problems ___.

1.

	slowly	efficiently	closely	carefully	in detail	
A) Examine *(2)*	✗ ✓		✗ ✓			-0
B) Follow *(2)*		✗ ✓			✗ ✓	-0

2.

Learn: In the future, children will learn very ___.

	firmly	a lot	quickly	securely	steadily	
A) Learn *(2)*		✗ ✓		✗ ✓		-0
B) Attach *(2)*	✗ ✓		✗ ✓			-0

Attach: He attached the rope ___ to the tree.

3.

Cited: This is comparable to the numbers cited ___ in the report

	clearly	earlier	previously	effectively	equally	
A) Cited (2)	✗ ✓	✗ ✓				-0
B) Communicate (2)				✗ ✓	✗ ✓	-0

Communicate: At the age of 5, most children has begun to communicate ___.

4.

Interact: Cells may interact ___ with each other

	directly	generously	closely	kindly	equally	
A) Interact (2)		✗ ✓		✗ ✓		-0
B) Contribute (2)	✗ ✓				✗ ✓	-0

Contribute: The rich men contribute ___ to the charity.

Interact: Hormones interacts ___ with other hormones in the body.

Appendix 11-Continued

Cast a: You can cast a ___ at the local polling station.

	conclusions	a glance	a breath	assumptions	a vote	
A) Cast *(1)*			× ✓			-0
B) Draw *(2)*		× ✓			× ✓	-0

Draws: I can't draw any ___ from what she said

6.

	steps	actions	a decision	precautions	a mistake	
A) Take *(2)*		× ✓		× ✓		-1
B) Make *(2)*			× ✓		× ✓	-1

7.

	access	amount	attention	control	trust	
A) Gain *(2)*	× ✓			× ✓		-1
B) Pay *(1)*			× ✓			-1

8
14

Construct a sentence for every collocation below

8. Take a risk

Eventhough the job was difficult to handle, I must take a risk. ✓

9. Land a deal

As a judges, we must land a deal in any decision. ✓
Secure a business agreement involving money.

10. Save time

~~I~~ ~~do~~ do not want to make a last minute task because I want to save my time. ✓

11. Take a chance

We must take ✓ chance before someone take it from you.
To do something even though it involves risks

12. Keep your balance

To save your money, ✓ you must keep your balance.
To remain steady on your feet without falling.

13. Make a living

I must get the job because I want to make a living. ✓

3/6

Appendix 12

Sample of used Test 1 (Group 4)

B- 16/20

25/40

PRE-TEST

Section A: Noun + Verb (20MARKS)

INSTRUCTION:

In this section, you will find 7 tables. In each table you will find 2 words (VERB) on the left, written below each other, and 5 words (NOUN) above the table, lined up next to each other.

Your task is to decide, based on each of the words (Verb) to the left of the table, whether the word can be combined with any of the 5 words (Noun) up above the table. If you consider that a combination exists in the English language, i.e. used by native speakers, you put a cross in the cell where the words meet. The numbers in bracket (1) or (2) indicate the number of possible combinations. Refer to the example below.

Example:

	suicide	*a problem*	*a help*	*a murder*	*someone a favour*
Solve (2)		X		X	
Commit (2)	X			X	
Do (1)					X

1

	a leg	a promise	one's breath	a position	a secret	
A) Break *(2)*	X	X				-1
B) Hold *(2)*			X		X	-1

2

	a prayer	a joke	a story	a sentence	a sound	
A) Say *(1)*				X		-0
B) Tell *(2)*		X	X			-1

3

	a diary	a language	a story	a promise	a truth	
A) Speak *(1)*	X					-0
B) Keep *(2)*				X	X	-0

4

	a play	a blow	a divorce	a miracle	a goal	
A) Strike *(1)*					X	-0
B) Perform *(2)*	X			X		-1

5

Appendix 12-Continued

	conclusions	a glance	a breath	assumptions	a vote	
A) Cast *(1)*				× ✓		-0
B) Draw *(2)*	× ✓				× ✓	-0

6.

	steps	actions	a decision	precautions	a mistake	
A) Take *(2)*	× ✓	× ✓				-0
B) Make *(2)*			× ✓		× ✓	-1

7.

	access	amount	attention	control	trust	
A) Gain *(2)*			× ✓		× ✓	-0
B) Pay *(1)*			× ✓			-1

6/14

Construct a sentence for every collocation below

8. Take a risk

Amin take a risk to change his job to gain a experience. ✓

9. Land a deal

I have land a deal with my parents to study hard for the examination. ✓

10. Save time

Multi tasking can save time. ✓

11. Take a chance

As a student we need to take a chance to ask lecturer during the lecture if we do not understand the subject. ✓

12. Keep your balance

If you are work as part time workers, you need to keep your balance with your study and work ✓

13. Make a living

Farah do two jobs in one day to make a living. ✓

3/6

Appendix 12-Continued

Section B: Verb + Adverb (20 MARKS)

INSTRUCTION:

In this section, you will find 7 tables. In each table you will find three words (verb) on the left, written below each other, and 6 words (adverb) above the table, lined up next to each other.

Your task is to decide, based on each of the words (Verb) to the left of the table, whether the word can be combined with any of the 6 words (adverb) up above the table. If you consider that a combination exists in the English language, i.e. used by native speakers, you put a cross in the cell where the words meet.

The **numbers in the bracket** next to the verb indicate **the number of targeted combinations.** For instance, *fit (2) shows only 2 possible combination that are "fit perfectly" and "fit easily"*

Example:

	perfectly	*clearly*	*really*	*easily*	*equally*	*directly*
See (1)		X				
fit (2)	X			X		
apply (2)					X	X

1.

	slowly	efficiently	closely	carefully	in detail	
A) Examine *(2)*		X			X	-0
B) Follow *(2)*			X	X		-1

2.

	firmly	a lot	quickly	securely	steadily	
A) Learn *(2)*		X	X			-1
B) Attach *(2)*	X			X		-1

3.

	clearly	earlier	previously	effectively	equally	
A) Cited (2)		X			X	-0
B) Communicate (2)	X			X		-1

4.

	directly	generously	closely	kindly	equally	
A) Interact (2)	X		X			-1
B) Contribute (2)		X			X	-1

Appendix 12-Continued

5.

	further	immediately	clearly	accurately	gradually	
A) Define (2)	×		× ✓			-0
B) Emerge (2)		× ✓		× ✓		-0

6.

	accurately	wisely	directly	simply	correctly	
A) Identify (2)	× ✓				× ✓	-1
B) Invest (2)		× ✓	× ✓			-1

7.

	spontaneously	aggressively	quickly	carefully	regularly	
A) Monitor (2)				× ✓	× ✓	-1
B) React (2)	× ✓	× ✓				-1

8.

	slightly	immediately	carefully	quickly	rationally	
A) Respond (2)		× ✓		× ✓		-1
B) Think (2)			× ✓		× ✓	-1

Construct a sentence for every collocation below 12/16

9. badly damaged

The houses at the vilage are badly damaged after the storm. ✓

10. firmly believe

I ~~am~~ firmly believe that many students have financial problems in university life. ✓

11. thoroughly inspect

The lecturer thoroughly inspect the student's examination paper. ✓

12. fully recover

My father is fully recover after the treatment ✓

4/4

THE END

Appendix 13

Table for ICR analysis 1

No.	Students' replies	Condensed Students' replies	Code by Coder1	Code by Coder2	Agreement level
1	Yes I can understand WCF from my lecturer. Ihave improved myskills.	Improved understanding	Increased comprehension	Improved skills	0
2	Yes.	Yes	-	-	-
3	Yes, because theWCF can be understood.	Understood the WCF given	-	Salient WCF	0
4	Yes, because the explanation of collocation is written as well.	Clearly written explanation	UnderstandWCF	WCF is understood	1
5	Yes, because he explains one byone.	Detailed explanation	Explicitness of feedback	WCF is explicit	1
6	Yes, there is alsothe explanation written.	Explanation written	Explicitness of feedback	WCF is explicit	1
7	Yes, because he writes it with phrases that I canonly understand	Write phrasesthat can be understood	Explicitness of feedback	WCF is explicit	1
8	Yes, I strongly can understand the corrective feedback. It is because my lecturer writes the specific details and explanation	Specific details and explanation written	Explicitness of feedback	WCF is explicit	
9	Yes, I can clearly read and understand the written corrective feedback in my activity. It is why easier to understand the assignment after a brief explanation written.	Clearly read and understandWCF	Understood phrases	Feedback contains the explanation of errors.	0

Appendix 13 – continued

10	I can understand my lecturer's writing without any problem at allas long as my lecturer explains the errors of the witting.	Able to understand based on explanation	Explicitness of feedback	WCF is explicit	1
11	I can understand perfectly because Ican know what my mistake and learn from it.	Perfectly understandWCF thus realise own errors	Explicitness of feedback	WCF is explicit	1
12	Yes, so that I can know my mistake.	Realise own mistake	Realise own mistake	Aware of errors	1
13	Yes.	Yes	-	-	-
14	I understand.	Yes	-	student understands feedback	0
15	Yes, because it is our lecturer who gives us the example of other correct sentences so we can form the correct ones innext test.	Lecturer show correct examples of errors	Awareness of errors	Student is awareof errors	1
16	Yes.	Yes	-	-	-
17	Yes, because I can know my mistake by looking at the corrective feedback given bymy lecturer.	Realise own mistakes basedon WCF	Awareness of errors	Student is awareof errors	1
18	Yes, I understand written corrective feedback given bymy lecturer. It is very useful, and ithelps me a lot to minimize my error.	Useful to minimise errors	-	WCF helps minimise errors	1
19	Yes, I can understand because I can differentiate which	Differentiate correct and wrong answers	-	Student is awareof errors	1

Appendix 13 – continued

	one are the correct answer.				
20	Yes, because the lecturer did explain the mistake.	Errors are explained	Corrected errors	Feedback contains information of errors	1
21	Yes, I understand because I pay attention during my lecturer's explain the detail.	Understand	-	WCF is understood	1
22	Yes, I can see the mistake from the corrective feedback written.	Aware of own errors	Yes	Student is awareof errors	1
23	Yes, I understandit. My lecturer's written correctivefeedback is very detailed, and I understand aboutit.	Understand well from detailed WCF	Explicitness of feedback	Feedback is comprehensive	1
24	Yes, because my lecturer wrote the explanation clearly and wordsthat I understand.	Clearly written explanation	Explicitness of feedback	WCF contains explanation	1
25	Yes, I can understand moreabout collocation after corrective feedback was given.	Understand more of collocation dueto WCF	Awareness of errors	WCF helps enhance understanding	0
26	Yes, because the (WCF) given by my lecturer make me understand my mistake and know the correct answer.	WCF allows more understandingon correct answer	Awareness of errors	WCF enhance collocation knowledge	1
27	Yes, the correct collocations are being explained indetail.	Correct answers are explained well	Awareness of errors	Feedback contains the explanation of errors.	1

Appendix 13 – continued

28	Yes, because my lecturer use wordthat I can understand.	Clear explanation	Explicitness of feedback	WCF is understood	0
29	Yes, I can understand when my lecturer knowswhat my fault andgive the correct answer to me.	Aware of errors	Explicitness of feedback	Error awarenessdue to explicit WCF	1
30	Yes	-	-		

Appendix 14

Table for ICR analysis 2

No.	Students' replies	Condensed Students' replies	Code by Coder 1	Code by Coder 2	Agreementlevel
1	No. Prefer explanation	No. student quires error explanation	No. Error explanation is preferred	Implicit CF is less preferred	1
2	yes to identify the errors	Yes. WCF highlight errors	Yes. WCF highlight errors	Yes. WCF enable error awareness	1
3	Yes because its the only way to know the answer correct or not	Yes. WCF highlights errors	Yes. WCF highlights errors	Yes. WCF can helps error awareness	1
4	No, those are ok but notenough info	No. WCF contains lack information	No. WCF contains lack information	No. Feedback is not explicit	1
5	Yes, easy to detect theerror or a mistake.	Yes. WCF highlights errors	Yes. WCF highlights errors	Yes. Error awareness	1
6	Yes. I like with underlinedon error because I can identify where is my erroreasily especially when I write sentences	Yes. Integrate other indirect WCF types	Yes. Integrate other indirect WCF types	Feedback can be more explicit	1
7	no. because sometimes weneed explanation about types of errors	No. WCF contains lack information thus lecturer needs to give explanation on error	No. WCF lacks info thus lecturer needs to providethem	Indirect WCF is not preferred - implicit	1
8	No because I think giving the correct answer for theerror is better.	No. student prefers answers given directly	No. student prefers direct WCF	Direct WCF is desired	1
9	no I don't want	No.	No.	No.	1

Appendix 14 - continued

10	Yes because I find WCFvery useful highlightingthe mistake to ensure where we are wrong	Yes. WCF highlight errors	Yes. WCF highlight errors	Feedback enables error awareness.	1
11	Yes to make me understand more about English collocation topic	Yes. WCF helps understand collocation	Yes. WCF helps understand collocation	Feedback enhances understanding	1
12	Yes. We know the part wedid wrong	WCF enables error awareness	WCF enables error awareness	WCF helps error awareness	1
13	Yes, i can know what themistakes that have been done in my work	WCF enables error awareness	WCF enables error awareness	WCF helps error awareness	1
14	No because we need theanswer as well	No. student prefers answers given directly	No. student prefers direct WCF	Indirect WCF is not preferred	1
15	Yes to know my mistake	Yes. WCF enables error awareness	WCF enables error awareness	Error awareness	1
16	No at least with explanatio n	No. Indirect WCF must come with explanation	No. Indirect WCFmust come with explanation	Student prefers direct WCF	0
17	no, because i cannot understand why I make themistake so i cannot determine what to do next.	No. lack of info in WCF prevent student from planning his/next move in learning the subject	No. Lack of info prevents learning	WCF is implicit	1
18	No, because sometimes notall the X and underlined error we understand.	No. WCF contains lack information	No. WCF contains lack informati on	WCF is implicit	1

Appendix 14 - continued

19	Yes. WCF Highlighting the mistakes in all assignmentsand exercise I made so that I know Im doing the right thing in my course	Yes. WCF highlight errors	Yes. WCF highlight errors	WCF shows errors beneficial for subject improvement.	0
20	Yes because it is going tohelp me to improve my knowledge about collocation and also othersubjects.	Yes. WCF helps improving collocation competence	Yes. WCF helps improving collocation competence	WCF aids learning	1
21	Yes, easier to find out theerror.	Yes. WCF highlight errors	Yes. WCF highlight errors	Error awareness	1
22	No because students may not clearly understand whythey make the mistakes in the test and also other works. So, student need more information	No. WCF contains lack information	No. WCF contains lack informati on	WCF is implicit	1
23	yes, because it easier to understand and it helps meto fix my mistake	Yes. WCF highlights errors	Yes. WCF highlights errors	WCF helps address errors	1
24	Yes because it is easier forme to understand that I did wrong collocation in the test.	Yes. WCF enables error awareness	Yes. WCF enableserror awareness	Error awareness	1
25	yes because for me its easyto look at the error	Yes. WCF highlight errors	Yes. WCF highlight errors	Error awareness	1
26	Yes. Because its easier to know that mistakes weremade in my works	Yes. WCF highlight errors	Yes. WCF highlight errors	Error awareness	1
27	No because we don't knowwhy we did the error. So we need more explanation about that from our lecturer	No. Lack of info in WCF regarding errors thus require lecturer to explain them	No. WCF lacks info thus lecturer needs to providethem	Student prefers direct WCF	1

Appendix 15

Table for ICR analysis 3

1	I did not find any difficulties in revising the written corrective feedback given by my lecturer in the first test.	No difficulties	No difficulties	No issue encountered	1
2	I do not understand some of the corrective feedback.	Do not understand some CF	The difficulty could be categorised into any of the identified ones	Student failed to understand WCF	0
3	None actually. Once I have identified my mistakes, I know my weak areas thus am able to improve my understanding immediately. There weren't any difficulties faced.	No difficulties	No difficulties	No issue encountered	1
4	I didn't find any difficulties.	No difficulties	No difficulties	No issue	1
5	The only difficulties I find is understanding some words in the feedback that I do not know the meaning of it.	Could not comprehend some words used in CF	comprehension is restricted by limited vocabulary	Students' restricted vocabulary	1
6	I do not remember facing any difficulties with the feedback given as I was able to gain more marks in the second test.	No difficulties	No difficulties	No issue	1
7	It was quite difficult because I can't truly understand the instruction given by my lecturer when he returned the first test.	Could not fully interpret the instruction given by the lecturer during intervention	Instruction during intervention	Unclear task instruction	1
8	When I find the word that I might not understand in the feedback.	Could not comprehend some words used in CF	comprehension is restricted by limited vocabulary	Students' restricted vocabulary	1

Appendix 15 - continued

9	It is quite difficult as I don't fully understand the instructions given when we were asked to study the feedback.	Could not fully interpret the instruction given by the lecturer during intervention	Instruction during intervention	Unclear task instruction	1
10	I did not find any difficulties in revising the written corrective feedback given.	No difficulties	No difficulties	No issue	1
11	Very difficult because at first test I do not really understand some of the words used in explanation.	Could not comprehend some words used in CF	comprehension is restricted by limited vocabulary	Students' restricted vocabulary	1
12	Some of the correction by the lecturer still confusing me.	Confused by the CF	The difficulty could be categorised into any of the identified ones	WCF is confusing	0
13	I don't understand about the number beside the question.	Could not comprehend the numbers used to illustrate errors	Symbols used to illustrate errors	Failed to comprehend task instruction	1
14	The difficulty is when the correction is not arranged in order and can make me confuse.	Metalinguistic explanation was not arranged properly	Organisation of WCF	Student is confused by organisation of information	1
15	To understand how to use the sentences in the feedback.	Confused by the CF	The difficulty could be categorised into any of the identified ones	Failed to understand task instruction	0
16	I did not face any difficulties when reading the corrective feedback	No difficulties	No difficulties	No issue	1
17	No difficulties at all	No difficulties	No difficulties	No issue	1
18	I'm not sure which words to use in the test.	The reply does not focus on CF on pre-test	Irrelevant	Failed to understand task instruction	0
19	Some of it still confused me.	Confused by the CF	The difficulty could be categorised into any of the identified ones	Confused by task instruction	0

Appendix 15 - continued

20	Some of the words used in the explanation were not known to me and make it hard for me to put it in one sentence to write correct collocation.	Could not comprehend some words used in CF	comprehension is restricted by limited vocabulary	Some words are cannot be understood	1
21	I cannot find any difficulties because the explanation in WCF helped me a lot.	No difficulties	No difficulties	No issue	1
22	For me, I find it a little difficult to understand his handwriting, but it is not a big deal as I can ask him or my course-mates if I cannot read or understand his handwriting.	Difficulty lies trying to respond to the handwriting	Illegible handwriting of CF provider	Lecturer handwriting is bad	1
23	I don't think I get difficulties in revising the written corrective feedback by my lecturer in the first test.	No difficulties	No difficulties	No issue	1
24	The correction that given by lecturer.	Confused by the CF	The difficulty could be categorised into any of the identified ones	Confused by task instruction	0
25	Sometimes it is confusing because my lecturer explained everything too fast.	Could not fully interpret the instruction given by the lecturer during intervention	Instruction during intervention	Confused by task instruction	1
26	I didn't find any difficulties.	No difficulties	No difficulties	No issue	1
27	Thinking for the best solution and the right answer for the second test.	The reply does not focus on CF on pre-test	Irrelevant	Facing upcoming tests	0

Appendix 16

A sample of Table of analysis by Group 1 (Prompt 1)

No.	Students' replies	Condensed Students' replies	Code	Heading / Theme
1	Yes I can understand WCF from my lecturer. I have improved my skills.	Improved understanding	Increased comprehension	Nature of CF factor
2	Yes.	Yes		
3	Yes, because the WCF can be understood.	Understood the WCF given	-	-
4	Yes, because the explanation of collocation is written as well.	Clearly written explanation	Understand WCF	Nature of CF factor
5	Yes, because he explains one by one.	Detailed explanation	Explicitness of feedback	Nature of CF factor
6	Yes, there is also the explanation written.	Explanation written	Explicitness of feedback	Nature of CF factor
7	Yes, because he writes it with phrases that I can only understand	Write phrases that can be understood	Explicitness of feedback	Nature of CF factor
8	Yes, I strongly can understand the corrective feedback. It is because my lecturer writes the specific details and explanation	Specific details and explanation written	Explicitness of feedback	Nature of CF factor
9	Yes, I can clearly read and understand the written corrective feedback in my activity. It is why easier to understand the assignment after a brief explanation written.	Clearly read and understand WCF	Understood phrases	Nature of CF factor
10	I can understand my lecturer's writing without any problem at all as long as my lecturer explains the errors of the witting.	Able to understand based on explanation	Explicitness of feedback	Nature of CF factor
11	I can understand perfectly because I can know what my mistake and learn from it.	Perfectly understand WCF thus realise own errors	Explicitness of feedback	Nature of CF factor
12	Yes, so that I can know my mistake.	Realise own mistake		
13	Yes.	Yes	Explicitness of feedback	Nature of CF factor
14	I understand.	Yes		
15	Yes, because it is our lecturer who gives us the example of other correct sentences so we can form the correct ones in next test.	Lecturer show correct examples of errors	Awareness of errors	Nature of CF factor
16	Yes.	Yes		
17	Yes, because I can know my mistake by looking at the corrective feedback given by my lecturer.	Realise own mistakes based on WCF	Awareness of errors	Nature of CF factor
18	Yes, I understand written corrective feedback given by my lecturer. It is very useful, and it helps me a lot to minimize my error.	Useful to minimise errors	-	-

Appendix 16 - continued

19	Yes, I can understand because I can differentiate which one are the correct answer.	Differentiate correct and wrong answers	-	-
20	Yes, because the lecturer did explain the mistake.	Errors are explained	Corrected errors	Nature of CF factor
21	Yes, I understand because I pay attention during my lecturer's explain the detail.	Understand	-	-
22	Yes, I can see the mistake from the corrective feedback written.	Aware of own errors	Yes	-
23	Yes, I understand it. My lecturer's written corrective feedback is very detailed, and I understand about it.	Understand well from detailed WCF	Explicitness of feedback	Nature of CF factor
24	Yes, because my lecturer wrote the explanation clearly and words that I understand.	Clearly written explanation	Explicitness of feedback	Nature of CF factor
25	Yes, I can understand more about collocation after corrective feedback was given.	Understand more of collocation due to WCF	Awareness of errors	Nature of CF factor
26	Yes, because the (WCF) given by my lecturer make me understand my mistake and know the correct answer.	WCF allows more understanding on correct answer	Awareness of errors	Nature of CF factor
27	Yes, the correct collocations are being explained in detail.	Correct answers are explained well	Awareness of errors	Nature of CF factor
28	Yes, because my lecturer use word that I can understand.	Clear explanation	Explicitness of feedback	Nature of CF factor
29	Yes, I can understand when my lecturer knows what my fault and give the correct answer to me.	Aware of errors	Explicitness of feedback	Nature of CF factor
30	Yes	-	-	-

Appendix 17

A sample of Table of analysis by Group 2 (Prompt 2)

No.	Students' replies	Condensed Students' replies	Code	Heading / Theme
1	No. Prefer explanation	No. student quires error explanation	No. Error explanation is preferred	No. Error explanati on is preferred
2	yes to identify the errors	Yes. WCF highlight errors	Yes. WCF highlight errors	Nature of CF factor
3	Yes because its the only way to know the answer correct or not	Yes. WCF highlights errors	Yes. WCF highlights errors	Yes. Nature of CFfactor
4	No, those are ok but not enough info	No. WCF contains lack information	No. WCF contains lack information	No. WCF containslack information
5	Yes, easy to detect the error or a mistake.	Yes. WCF highlights errors	Yes. WCF highlights errors	Yes. Nature of CFfactor
6	Yes. I like with underlined on error because I can identify where is my error easily especially when I write sentences	Yes. Integrate other indirect WCF types	Yes. Integrate other indirect WCF types	Yes. Integrate otherindirect WCF types
7	no. because sometimes we need explanation about types of errors	No. WCF contains lack information thus lecturer needs to give explanation on error	No. WCF lacks info thus lecturer needs to provide them	No. WCF lacks info
8	No because I think giving the correct answer for the error is better.	No. student prefers answers given directly	No. student prefers indirect WCF	No. student prefersindirect WCF
9	no I don't want	No.	No.	No.
10	Yes because I find WCF very useful highlighting the mistake to ensure where we are wrong	Yes. WCF highlight errors	Yes. WCF highlight errors	Yes. Nature of CFfactor
11	Yes to make me understand more about English collocation topic	Yes. WCF helps understand collocation	Yes. WCF helps understand collocation	Yes. Nature of CFfactor
12	Yes. We know the part we did wrong	WCF enables error awareness	WCF enables error awareness	Nature of CF factor
13	Yes, i can know what the mistakes that have been done in my work	WCF enables error awareness	WCF enables error awareness	Nature of CF factor
14	No because we need the answer as well	No. student prefers answers given directly	No. student prefers indirect WCF	No. student prefersindirect WCF
15	Yes to know my mistake	Yes. WCF enables error awareness	WCF enables error awareness	Nature of CF factor
16	No at least with explanation	No. Indirect WCF must come with explanation	No. Indirect WCF must come with explanation	No. Indirect WCF must come with explanation

Appendix 17 - continued

17	no, because i cannot understand why I make the mistake so i cannot determine what to do next.	No. lack of info in WCF prevent student from planning his/next move in learning the subject	No. Lack of info prevents learning	No. Lack of info prevents learning
18	No, because sometimes not all the X and underlined error we understand.	No. WCF contains lack information	No. WCF contains lack information	No. WCF containslack information
19	Yes. WCF Highlighting the mistakes in all assignments and exercise I made so that I know Im doing the right thing in my course	Yes. WCF highlight errors	Yes. WCF highlight errors	Yes. Nature of CFfactor
20	Yes because it is going to help me to improve my knowledge about collocation and also other subjects.	Yes. WCF helps improving collocation competence	Yes. WCF helps improving collocation competence	Yes. Nature of CFfactor
21	Yes, easier to find out the error.	Yes. WCF highlight errors	Yes. WCF highlight errors	Yes. Nature of CFfactor
22	No because students may not clearly understand why they make the mistakes in the test and also other works. So, student need more information	No. WCF contains lack information	No. WCF contains lack information	No. WCF containslack information
23	yes, because it easier to understand and it helps me to fix my mistake	Yes. WCF highlights errors	Yes. WCF highlights errors	Yes. Nature of CFfactor
24	Yes because it is easier for me to understand that I did wrong collocation in the test.	Yes. WCF enables error awareness	Yes. WCF enables error awareness	Yes. Nature of CFfactor
25	yes because for me its easy to look at the error	Yes. WCF highlight errors	Yes. WCF highlight errors	Yes. Nature of CFfactor
26	Yes. Because its easier to know that mistakes were made in my works	Yes. WCF highlight errors	Yes. WCF highlight errors	Yes. Nature of CFfactor
27	No because we don't know why we did the error. So we need more explanation about that from our lecturer	No. Lack of info in WCF regarding errors thus require lecturer to explain them	No. WCF lacks info thus lecturer needs to provide them	No. WCF lacks infothus lecturer needs to provide them

Appendix 18

A sample of Table of analysis by Group 3 (Prompt 3)

No.	Students' replies	Condensed students' replies	Code	Heading / Theme
1	I did not find any difficulties in revising the written corrective feedback given by my lecturer in the first test.	No difficulties	No difficulties	No difficulties
2	I do not understand some of the corrective feedback.	Do not understand some CF	The difficulty could be categorised into any of the identified ones	General difficulties
3	None actually. Once I have identified my mistakes, I know my weak areas thus am able to improve my understanding immediately. There weren't any difficulties faced.	No difficulties	No difficulties	No difficulties
4	I didn't find any difficulties.	No difficulties	No difficulties	No difficulties
5	The only difficulties I find is understanding some words in the feedback that I do not know the meaning of it.	Could not comprehend some words used in CF	comprehension isrestricted by limited vocabulary	Linguistic factor
6	I do not remember facing any difficulties with the feedback given as I was able to gain more marks in the second test.	No difficulties	No difficulties	No difficulties
7	It was quite difficult because I can't truly understand the instruction given by my lecturer when he returned the first test.	Could not fully interpret the instruction given by the lecturer during intervention	Instruction during intervention	Contextual factor
8	When I find the word that I might not understand in the feedback.	Could not comprehend some words used in CF	comprehension isrestricted by limited vocabulary	Linguistic factor
9	It is quite difficult as I don't fully understand the instructions given when we were asked to study the feedback.	Could not fully interpret the instruction given by the lecturer during intervention	Instruction during intervention	Contextual factor
10	I did not find any difficulties in revising the written corrective feedback given.	No difficulties	No difficulties	No difficulties
11	Very difficult because at first test I do not really understand some of the words used in explanation.	Could not comprehend some words used in CF	comprehension isrestricted by limited vocabulary	Linguistic factor
12	Some of the correction by the lecturer still confusing me.	Confused by the CF	The difficulty could be categorised intoany of the identified ones	Linguistic factor

Appendix 18 - continued

13	I don't understand about the number beside the question.	Could not comprehend the numbers used to illustrate errors	Symbols used toillustrate errors	Contextual factor
14	The difficulty is when the correction is not arranged in order and can make me confuse.	Metalinguistic explanation was not arranged properly	Organisation ofWCF	Contextual factor
15	To understand how to use the sentences in the feedback.	Confused by the CF	The difficulty could be categorised intoany of the identified ones	General difficulties
16	I did not face any difficulties when reading the corrective feedback	No difficulties	No difficulties	No difficulties
17	No difficulties at all	No difficulties	No difficulties	No difficulties
18	I'm not sure which words to use in the test.	The reply does not focus on CF on pre-test	Irrelevant	Irrelevant
19	Some of it still confused me.	Confused by the CF	The difficulty could be categorised into any of the identified themes	General difficulties
20	Some of the words used in the explanation were not known to me and make it hard for me to put it in one sentence to write correct collocation.	Could not comprehend some words used in CF	comprehension isrestricted by limited vocabulary	Linguistic factor
21	I cannot find any difficulties because the explanation in WCF helped me a lot.	No difficulties	No difficulties	No difficulties
22	For me, I find it a little difficult to understand his handwriting, but it is not a big deal as I can ask him or my course-mates if I cannot read or understand his handwriting.	Difficulty lies trying to respond to the handwriting	Illegible handwriting of CFprovider	Contextual factor
23	I don't think I get difficulties in revising the written corrective feedback by my lecturer in the first test.	No difficulties	No difficulties	No difficulties
24	The correction that given by lecturer.	Confused by the CF	The difficulty could be categorised intoany of the identified ones	General difficulties

Appendix 19

A sample of Table of analysis by Group 4 (Prompt 4)

No.	Students' replies	Condensed Students' replies	Code	Heading /Theme
1	Yes because it makes me aware of my mistakes	IWCF make student aware of errors	IWCF initiates Error awareness	Nature of CFfactor
2	Yes. Because I know which part that I misunderstand	IWCF make student aware of errors	IWCF initiates Error awareness	Nature of CFfactor
3	Yes. What the lecturer wrote in the error will help me to understand it more as I made a mistake which show that I may not understand that particular topic	IWCF shows student's ability in the subject being studied	IWCF indicates students' accuracy in the targeted structures	Nature of CFfactor
4	Not really. Because I still don't know why my answer is wrong.	No. IWCF does not provide student with linguistic information	No. IWCF is not explicit	Did not benefitfrom IWCF
5	No, because I'll ended up searching what I've made wrongly	No. IWCF does not provide student with linguistic information	No. IWCF is not explicit thus student refers to other sources	Learner factor-autonomous learning behaviour
6	when we know why it's wrong then we can understand..but if we don't understand the question then suddenly got "X" for our answer here is where we are facing difficulties.	No. IWCF does not provide student with linguistic information thus it limits their understanding of targeted structures	IWCF that is less explicit has deterred their understanding of targeted structures	Did not benefitfrom IWCF
7	Yes. Because the error correction shows that I need to find the correct n accurate answer, and that is through studying or recap back the topics	Yes. IWCF has highlighted the errors but with little information, student took an effort to self-study the targeted structures	IWCF motivates student to self-study the errors	Learner factor-autonomous learning behaviour
8	Yes. I learn from my mistake	IWCF promotes learning form errors	IWCF promotes learning form errors	Nature of CFfactor
9	yes, so i can improve and learn from my mistakes	IWCF promotes learning form errors	IWCF promotes learning form errors	Nature of CFfactor
10	Yes, because WCF shows my error and I will ask again about the certain errors till I understand so that I can lessen the errors in the following task given to me	IWCF highlights errors for the purpose of avoiding it in future tasks. This is done through autonomous learning	IWCF highlights errors, promotes autonomous learning to avoid repeating errors in future	Nature of CFfactor
11	yes, once I know the error, I will do a revision and make more exercises about the topic/chapter	Student does revision on errors and more drills on the target structures	IWCF promotes autonomous learning	Learner factor-autonomous learning behaviour

Appendix 19 – continued

12	Yes because I can do a lot of work to understand the errors and make the topic easier to	Student is motivated to do a lot of work on errors due to	IWCF promotes autonomous learning	Learner factor-autonomou slearning
	understand for me. Even though very little information in WCF, I can refer to books or my lecturer.	insufficient info in IWCF		behaviour
13	Yes. I will recheck what is the error about collocation chapter in reference books.	Student refers to textbook	IWCF promotes autonomous learning	Learner factor-autonomous learning behaviour
14	yes. From the WCF, I can see the mistakes I made so I will try not to do the same mistakes on collocation test.	IWCF makes student aware of errors to avoid them in future tasks	IWCF initiates error awareness to avoid erroneous structures in future	Nature of CFfactor
15	yes because we can find the right answer for the question because the wrong answer has been shown by the lecturer. Sort of a clue to actual answer in collocation test	IWCF enables student to differentiate between the correct and wrong answer	IWCF enables student to differentiate correct form from erroneous structure	Nature of CFfactor
16	Yes. There is a room for improvement every time I made a mistake in the pre-test	IWCF promotes learning form errors	IWCF promotes learning form errors	Nature of CFfactor
17	Yes, it clearly shows that as a student, I need to improve about collocation subject because I have so many errors on the test	Student is aware about his/her proficiency in the subject	IWCF indicates students' accuracy in the targeted structures	Nature of CFfactor
18	I can learn about collocation from my mistakes in the pre-test	IWCF promotes learning form errors	IWCF promotes learning form errors	Nature of CFfactor
19	Yes because it can show whether I truly understands the topic or not.	Student is aware about his/her proficiency in the subject	IWCF indicates students' accuracy in the targeted structures	Nature of CFfactor
20	Yes, it make you realize your own mistake.	IWCF make student aware of errors	IWCF initiates Error awareness	Nature of CFfactor
21	Yes . WCF has shown my errors. So from it, I refer to my textbook or searching in youtube for information about collocation	Student refers to textbook and the internet as a source to understand errors	IWCF promotes autonomous learning	Learner factor-autonomous learning behaviour
22	yes. From the WCF, I will want to learn more and find out more on why I did such mistakes. along the way, I will gain more information	Student is motivated to search for linguistic info	IWCF promotes autonomous learning driven by motivation	Learner factor-autonomous learning behaviour

Appendix 19 - continued

23	Yes, because i know that i still not fully understand about the topic and urge me to learn it more but sometimes it quite tricky if i really dont understand the questions	Student is aware about his/her proficiency in the subject	IWCF indicates students' accuracy in the targeted structures	Nature of CFfactor

Appendix 20

Group 1 Students' performance in previous English course (i.e., ELC151)

HEA/RA/PP-2000-4

EXAMINATION RESULT

CAMPUS : Q5-UiTM Kampus Samarahan
FACULTY : IM-FACULTY OF INFORMATION MANAGEMENT
SEMESTER : SESSION 1 2019/2020

COURSE: ELC151
CREDIT HOUR: 3
GROUP: IM1102C
EXAM: 30/12/2019

NO	STUDENT NO	PART	STUDENT NAME	MARKS	GRADE	POINTS
1	7272	2	AINA	63	B-	2.67
2	5668	2	AMEEN	64	B-	2.67
3	8994	2	AMIRAH	70	B+	3.33
4	5502	2	AMMAR	53	C	2.00
5	5664	2	AWANG	50	C	2.00
6	3874	2	FATIN	54	C	2.00
7	0102	2	HAFIY	65	B	3.00
8	3946	2	HAFIZAT	72	B+	3.33
9	9902	2	HAIZA	54	C	2.00
10	0792	2	HASYA	50	C	2.00
11	8802	2	HAZIQ	58	C+	2.33
12	3066	2	KHAIRUL	70	B+	3.33
13	9204	2	M. ABBAS	57	C+	2.33
14	1856	2	M. HARIS	50	C	2.00
15	3182	2	M. IKMAL	67	B	3.00
16	2514	2	M. RIDHA	62	B-	2.67
17	1146	2	M. ZAINUL	57	C+	2.33
18	9396	2	NUR AFIE	50	C	2.00
19	8366	2	NUR AIN	54	C	2.00
20	5034	2	NUR AISYAH	54	C	2.00
21	5278	2	NUR AWATIF	75	A-	3.67
22	1452	2	NUR FATIN	65	B	3.00
23	3722	2	NUR IZZAH	54	C	2.00
24	4434	2	NUR IZZAH	63	B-	2.67
25	0292	2	NUR SOFEA	50	C	2.00
26	1358	2	NURUL ANI	50	C	2.00
27	7688	2	SITI AIDA	53	C	2.00
28	6108	2	SITI ALAWI	62	B-	2.67
29	4746	2	WIDAD	73	B+	3.33
30	9368	2	ZUN	58	C+	2.33

Appendix 21

Group 2 Students' performance in previous English course (i.e., ELC151)

HEA/RA/PP-2000-4

EXAMINATION RESULT

CAMPUS : Q5-UiTM Kampus Samarahan
FACULTY : IM-FACULTY OF INFORMATION MANAGEMENT

COURSE: ELC151
CREDIT HOUR: 3
GROUP: IM1102B
EXAM: 30/12/2019

SEMESTER : SESSION 1 2019/2020

NO	STUDENT NO	PART	STUDENT NAME	MARKS	GRADE	POINTS
1	6618	2	A'D	60	B-	2.67
2	9688	2	ADROIT	67	B	3.00
3	1404	2	AIZA	70	B+	3.33
4	2072	2	ANGEL	56	C+	2.33
5	3948	2	CLARA	63	B-	2.67
6	9394	2	DAYANG	50	C	2.00
7	2788	2	DELLORINNA	55	C+	2.33
8	5366	2	DEZERINNA	57	C+	2.33
9	7886	2	EMYLEA	67	B	3.00
10	1882	2	FARAH	53	C	2.00
11	5642	2	FAZIRA	52	C	2.00
12	7226	2	HASFIZ	54	C	2.00
13	2978	2	ISABELL	71	B+	3.33
14	7796	2	JESLYNN	70	B+	3.33
15	9516	2	MAIZATUL	58	C+	2.33
17	5958	2	MOHAMAD	75	A-	3.67
18	4498	2	MUHAMMAD	81	A	4.00
19	6142	2	MUHAMMAD	62	B-	2.67
20	7592	2	NOVIAN	54	C	2.00
21	7912	2	NUR AEL	53	C	2.00
22	7682	2	NUR AIDA	53	C	2.00
23	0322	2	NUR ALIA	65	B	3.00
24	0354	2	NUR ALIAH	66	B	3.00
25	6658	2	NUR DINIE	77	A-	3.67
26	5834	2	PUTRI	66	B	3.00
27	5438	2	RAFIZAH	55	C+	2.33
28	1702	2	SHARINA	58	C+	2.33
29	5118	2	SITI AISHAH	53	C	2.00
30	7612	2	SITI NURUL	67	B	3.00

Appendix 22

Group 3 Students' performance in previous English course (i.e., ELC151)

HEA/RA/PP-2000-4

EXAMINATION RESULT

CAMPUS : Q5-UiTM Kampus Samarahan 2
FACULTY : AS-FACULTY OF APPLIED SCIENCES
SEMESTER : SESSION 1 2019/2020

COURSE: ELC151
CREDIT HOUR: 3
GROUP: AS1102B
EXAM: 30/12/2019

NO	STUDENT NO	PART	STUDENT NAME	MARKS	GRADE	POINTS
1	8147	2	KHALID	74	B+	3.33
2	5654	2	AINUL	73	B+	3.33
3	9728	2	ALEX	76	A-	3.67
4	9504	2	ALSEY	78	A-	3.67
5	1506	2	AMZAR	72	B+	3.33
6	4176	2	AZZYATY	75	A-	3.67
7	4478	2	DAYANG	72	B+	3.33
8	7168	2	DAYANG	81	A	4.00
9	0694	2	DAYANG	66	B	3.00
10	9758	2	DORITA	68	B	3.00
11	1446	2	EFELDIA	75	A-	3.67
12	1036	2	EMMELANIE	78	A-	3.67
13	1002	2	EZATUL	77	A-	3.67
14	0434	2	FARAH	62	B-	2.67
15	2002	2	IZRIE	63	B-	2.67
16	4596	2	JEFFERSON	78	A-	3.67
17	5362	2	JEWENTYE	73	B+	3.33
18	1202	2	LOUHART	75	A-	3.67
19	9654	2	MARNISHA	69	B	3.00
20	2196	2	MAVERICK	66	B	3.00
21	3874	2	MOHAMAD	78	A-	3.67
22	0474	2	MOHAMAD	83	A	4.00
23	0574	2	MOHAMAD	78	A-	3.67
24	3196	2	NUR ALY	59	C+	2.33
25	5712	2	NUR ARIF	70	B+	3.33
26	2373	2	NUR ATIQ	72	B+	3.33
27	0032	2	NUR AZI	83	A	4.00
28	2646	2	NUR QAS	76	A-	3.67

Appendix 22 – continued

29	7668	2	RAVEENA	67	B	3.00
30	9368	2	SECIALIA	58	C+	2.33
31	8324	2	UMI AYU	79	A-	3.67
32	5132	2	WILLY	75	A-	3.67
33	1486	2	ZURAIDY	75	A-	3.67

Appendix 23 Group 4 students' performance in previous English course (ELC151)

HEA/RA/PP-2000-4

EXAMINATION RESULT

CAMPUS : Q5-UiTM Kampus Samarahan 2
FACULTY : AS-FACULTY OF APPLIED SCIENCES

COURSE: ELC151
CREDIT HOUR: 3
GROUP: AS1102F
EXAM: 30/12/2019

SEMESTER : SESSION 1 2019/2020

NO	STUDENT NO	PART	STUDENT NAME	MARKS	GRADE	POINTS
1	3244	2	ABDULL	76	A-	3.67
2	0072	2	ABIGAIL	74	B+	3.33
3	0058	2	DAYANG	81	A	4.00
4	1276	2	DUNSTAN	72	B+	3.33
5	5322	2	ESTHER	67	B	3.00
6	8046	2	FARAH	75	A-	3.67
7	3316	2	FLORENCE	77	A-	3.67
8	3922	2	GILBERT	68	B	3.00
9	8252	2	GRACE	73	B+	3.33
10	3928	2	KENITE	70	B+	3.33
11	8256	2	KHAIRUNN	68	B	3.00
12	8942	2	LOUVENN	75	A-	3.67
13	2854	2	MARCALYN	77	A-	3.67
14	7124	2	MATHILDA	76	A-	3.67
15	1952	2	MOHAMAD	72	B+	3.33
16	2638	2	MOHAMAD	74	B+	3.33
17	2058	2	MUHAMAD	78	A-	3.67
18	2262	2	MUHAMMAD	75	A-	3.67
19	4322	2	MUHAMMAD	75	A-	3.67
20	0328	2	NUR A	73	B+	3.33
21	7724	2	QHAIRUN	67	B	3.00
22	6736	2	RAFZI	64	B-	2.67
23	4172	2	SENORITA	76	A-	3.67
24	2108	2	SITI NUR	80	A	4.00
25	6996	2	SUPINA	76	A-	3.67