Supervision of Undergraduate Research in a Malaysian University: How Supervisors and Students Understand and Experience Supervision and Feedback during the Final Year Project (FYP)

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ABSTRACT

Supervision in higher education can be perceived as a pedagogical relationship between an expert with a novice researcher who work together to achieve a goal. Feedback is embedded in and lies at the core of supervision – it can be argued that much of the communication between students and supervisors involves feedback. Indeed, feedback is impactful on students' learning. The impact of feedback lies in the focus and the way it is addressed. If students are to be successful in undertaking independent research projects, they must possess and/or acquire the necessary self-regulatory skills, attitudes and behaviours that will enable them to monitor and improve the quality of their work in an ongoing manner. To this end, it is argued that feedback, in particular, dialogic feedback is a critical aspect of the supervisory experience and a catalyst for developing independent, self-regulating learners.

Following an interpretive inquiry, specifically a case study design, the present study explored the understandings and experiences of students and supervisors with reference to supervision and feedback within the undergraduate final year project (FYP) supervisory process in a public university in Malaysia – Universiti Gemilang (UG) (pseudonym). Four student-supervisor pairs, each pair from a different programme (chemistry, mathematics, culinary arts and marketing) were involved in the study. Data were collected through semi-structured interviews, observations, field notes and the collecting of documents/artefacts. The findings highlighted supervision of the FYP at UG was perceived and practised as a traditional, supervisor-centric process. Local cultural expectations had a major impact on the perceptions of students and supervisors about their roles, responsibilities and expectations in the relationship. Such beliefs were also reflected in their understandings and experiences of feedback; that is, feedback understandings and practices in the FYP echoed practices associated with the traditional feedback paradigm. The present study revealed that strong hierarchical roles between students and supervisors as well as their limited feedback literacy

mediated their understandings and experiences of supervision and feedback. As such, the purpose of the FYP as a learning opportunity for students to develop critical and analytical thinking skills, independent learning and self-regulation did not appear to be realised.

DEDICATION

To abah and mama, this has always been for you and because of you.

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CHAPTER ONE: INTRODUCTION

This chapter establishes the context of the present study which was conducted in a public university in Malaysia. The chapter begins with a brief introduction to the Malaysian higher education system. In this section, the philosophy, acts and framework which serve as the backbone to the higher education system in Malaysia are presented. The second section provides a more detailed representation of the context of the present study. Here, a brief background to the university in which the present study was conducted is elucidated with a particular focus on the structure of bachelor's degree programmes offered as well as the final year bachelor's degree project course. The following sections address the focus and rationale of the present study. The need for the present study is justified by highlighting gaps in the existing body of related literature. Finally, the last section gives an overview of the structure and organisation of the thesis.

At a Glance: The Malaysian Higher Education Context

Education holds a prominent role in the growth and progression of any country. A fully functioning education system is able to contribute to the development of persons who are knowledgeable, skilful and competent in every aspect of life. As a developed country, Malaysia is well established in preparing its younger generation to face the challenges of the 21st century through its education system. As stated in its National Education Philosophy:

> Education in Malaysia is an on-going effort towards further developing the potential of individuals in a holistic and integrated manner, so as to produce individuals who are intellectually, spiritually, emotionally and physically balanced and harmonious, based on a firm belief in and devotion to God. Such effort is designed to produce Malaysian citizens who are knowledgeable and competent, who possess high moral standards, and who are responsible and capable of achieving high levels of personal well-being as

> well as being able to contribute to the harmony and betterment of the family, the society and the nation at large (Ministry of Education Malaysia, 2018).

In general, the Malaysian education system is governed by the Education Act of 1996. Specific to the higher education sector, laws such as the Universities and University Colleges Act of 1971 and the Universities and Private Higher Educational Act of 1996 (amended 2010) govern the public higher institutions and private higher institutions respectively. These legislative acts have served as points of reference for the establishment, registration and approval of all programmes of study offered by any higher education provider in Malaysia (Zakaria, 2000).

Further evidence of the Malaysian government's commitment to ensuring the standard of education is on par with other highly developed countries, is the Malaysian Qualifications Agency (MQA), which was established through the Malaysian Qualifications Agency Act of 2007. MQA was a result of the merging of two entities – the National Accreditation Board and the Quality Assurance Division of the Ministry of Higher Education Malaysian (Malaysian Qualifications Agency, 2013). The MQA is overseen by the Ministry of Education Malaysia. MQA serves as a body "to accredit higher educational programmes and qualifications, to supervise and regulate the quality and standard of higher education providers, to establish and maintain the Malaysian Qualifications Register and to provide for related matters" (Malaysian Qualifications Agency Act 2007, 2007, p. 11).

The formation of MQA resulted in the establishment of the Malaysian Qualifications Framework (MQF) in 2007. This framework serves as "an instrument that develops and classifies qualifications based on a set of criteria that is agreed nationally and benchmarked with international practices, and which clarifies the academic levels, learning outcomes and credit system based on student academic load" (Malaysian Qualifications Agency, 2007, p. 1). Specifically, each qualification in the MQF is categorised according to its purpose, overall MQF level, level of learning outcomes, number of credits, field or discipline, nature of the

programme, minimum entry requirements and typical duration for full-time or part-time students. These qualifications are arranged in eight levels and are categorised by type: certificates, diplomas or degrees which can be awarded by any authority accredited by the MQA. Table 1.1 depicts the levels in the MQF with certificates at the lowest level of the framework and doctoral degrees at the highest:

Table 1.1
Levels in the Malaysian Education Framework

MQF Level	Minimum Graduating Credit	Academic Sector
8	No credit rating	PhD by Research
	80	Doctoral Degree by Mixed Mode & Coursework
7	No credit rating	Master's by Research
	40	Master's by Mixed Mode & Coursework
	30	Postgraduate Diploma
	20	Postgraduate Certificate
6	120	Bachelor's degree
	66	Graduate Diploma
	36	Graduate Certificate
5	40	Advanced Diploma
4	90	Diploma
3	60	Certificate
2	30	Certificate
1	15	Certificate

A bachelor's degree is placed at Level 6 in the MQF and carries a minimum of 120 graduating credits. Bachelor's degree programmes in Malaysia are offered at both public and private higher education institutions accredited by the MQA. The minimum entry requirements into any bachelor's degree programme are determined by the Ministry of Higher Education. The general entry requirements for bachelor's degree programmes in Malaysian public universities are as follows:

- Pass in the Sijil Tinggi Pelajaran Malaysia (STPM)[1] with a minimum C grade in two subjects (CGPA 2.00); or
- Pass in the Sijil Tinggi Agama Malaysia (STAM)[2] with a minimum *Jayyid* (Good) class; or
- Pass in the Matriculation/ Foundation programmes offered by accredited public or private institutions with a minimum CGPA of 2.00; or
- Pass in the Diploma (MQF level 4)/Advanced Diploma (MQF level 5) with a minimum CGPA of 2.00; or
- Other recognised equivalent qualifications.

(Malaysian Qualifications Agency, 2018).

The duration of bachelor degree programmes in Malaysia is between three to four years of full-time study. However, the duration for programmes that require further professional accreditation by specific Malaysian professional statutory bodies such the Board of Engineering Malaysia or The Malaysian Medical Council means this timeframe is extended to between four to five years.

A bachelor's degree programme enables learners to cultivate comprehensive knowledge in a specialised field(s) of study and develop interpersonal communication skills, leadership and managerial skills that will prepare them to enter the workforce in specific careers or professional fields as well as progression to postgraduate education (Levels 7 and 8) (Malaysian Qualifications Agency, 2017). The outcomes of bachelor's degree programmes are demonstrated through a range of assessment tasks which may include the completion of a final capstone project, case studies, fieldwork, clinical training and/or project reports (Malaysian Qualifications Agency, 2017).

[1] An examination for a three-semester pre-university programme conducted at selected public and private secondary schools

[2] An alternative examination for students studying in Islamic religious schools

The Context of the Study: Universiti Gemilang

The present study was carried out at a higher learning institution in Malaysia, Universiti Gemilang (UG) (pseudonym). This public university offers a wide range of programmes ranging from pre-university to Level 8 programmes across three main clusters of disciplines: science and technology; social science and humanities; and business and management. What makes this university unique in Malaysia is that it is the only institution that is exclusively for Bumiputeras (Malay race and indigenous people of Malaysia), a majority of whom use Bahasa Melayu (Malay language) as their first language. However, in recent years, in conjunction with UG's aspiration to be a world-class university, it has started to open its doors to international students, offering them study opportunities for postgraduate (master and doctoral) degrees. A majority of staff including academic staff at the university are Bumiputeras who speak Bahasa Melayu as their first language. Despite this, English is the medium of instruction at this university. This intentional paradox is due to UG's founding father who believed that the mastery of English language is one of the passages for the Bumiputera people to achieve a better future in life (Shaari, 2011).

The general entry requirements into bachelor's degree programmes at UG is a pass in the Sijil Tinggi Pelajaran Malaysia (STPM) examination with at least a C grade in three subjects; or diploma in the relevant field of study with a CGPA of 2.0; or a pass in the Matriculation programme (a Malaysian pre-university programme) with a minimum CGPA of 2.0 (Universiti Gemilang, 2018). Like other local universities in Malaysia, UG requires its prospective bachelor's degree students to also secure at least Band 1 in the Malaysian University English Test (MUET) (Universiti Gemilang, 2011). Notwithstanding these requirements, each bachelor's degree programme at UG has specific requirements for the minimum grades prospective students need to achieve in their pre-university or diploma programmes as well as MUET prior to acceptance into a programme. Students who wish to

enrol in bachelor's degree programmes can choose to study either full-time or part-time. The duration for full-time study is six semesters for three-year programmes and eight semesters for four-year programmes, with those studying part-time are expected to complete their study in not more than sixteen semesters.

Throughout their bachelor's degree programme, students are required to pass all courses. These courses are categorised into three categories: university courses which are further divided into (i) general university courses (compulsory courses as required by the Ministry of Higher Education Malaysia), and (ii) university courses (compulsory courses as required by UG); faculty courses; and minor/elective courses (Universiti Gemilang, 2017). In addition, students are required to pass pre-requisite and co-requisite faculty courses if applicable to their programme of study. The university courses that are required to be sat and passed by all bachelor's degree students at UG are as depicted in Table 1.2:

Table 1.2
University Courses required for all Bachelor's Degree Students at UG

Course	Category	Credit Unit	Duration
Co-curriculum	General University Course	3	3 semesters
History of Malaysia	General University Course	2	1 semester
Islamic Civilisation and Asian Civilisation	General University Course	2	1 semester
Third Language	General University Course	6	3 semesters
Basics of Entrepreneurship	General University Course	3	1 semester
English Language	Compulsory University Course	4 (minimum)	2 semesters (minimum)

Upon completion of the bachelor's degree programme, students are awarded the degree through the approval of the Senate. The bachelor's degree award at UG is classified into four levels according to students' cumulative grade point average (CGPA) as illustrated in the following Table 1.3:

Table 1.3
Classification of Bachelor's Degree Award at UG based on CGPA

Class	CGPA
First class	3.50 – 4.00
Second class (Upper)	3.00 – 3.49
Second class (Lower)	2.20 – 2.99
Third	2.00 – 2.19

The Final Year Bachelor's Degree Project at University Gemilang

Consistent with the expected outcomes of bachelor's degree programmes as stated in the Malaysian Qualifications Framework, bachelor's degree students at UG are expected to undertake a form of independent research in their final year of study. A review of all approved courses through the official website of UG's Academic Affairs Division revealed that the final year project (FYP) is a required course for the majority of final year bachelor's degree students. However, further analysis of the FYP courses across programmes at UG revealed some key differences. Firstly, the name of the FYP course is not consistent across faculties, for instance, it is named independent study in the culinary arts programme; final year project in chemistry and mathematics programmes; and industrial project paper in the marketing programme. For the sake of clarity, the term final year project (FYP) will be used in this thesis to describe the project undertaken as part of the students' final year of study. Secondly, the duration of the FYP is not the same across programmes. With reference to the present study, students in the marketing and culinary arts programmes are required to complete the FYP in one semester, while those in the chemistry and mathematics programmes can complete the FYP across two semesters.

Prior to undertaking their FYP, all students are introduced to research methodology through a course taught in their penultimate semester of study. The third difference, depending on the discipline and programme, relates to how the supervisor is determined – in some instances the supervisor is chosen by the student, in other instances, the supervisor is assigned

by the faculty. Depending on the requirement of the programme of study, students are either required to gather their own empirical data through field or laboratory work or carry out an analysis of secondary data.

Regardless of these differences, the FYP across programmes requires students to carry out an independent, individual research project worth six credits, under the supervision of an academic from their respective faculty. Students and supervisors are required to meet face-to-face for supervision meetings during the term of the study with the minimum number of times determined by their respective faculty. The FYP gives students the opportunity to apply their understandings of concepts learned during the previous semesters. In addition, it serves to prepare students for postgraduate study through the incorporation of research and problem-solving skills as well as independent learning (Aziz, Kamaruzaman, & Hashim, 2018).

The Focus of the Present Study

The overarching area for the present study was supervision of final year research projects (FYP) at Universiti Gemilang with specific reference to feedback. Within this area, the present study was focused on:

1. How undergraduate students and their supervisors understand and experience supervision of the undergraduate final year project; and
2. How undergraduate students and their supervisors understand and experience feedback within the supervisory context.

The Significance of the Research Topic

Research supervision in higher education can be perceived as a pedagogical relationship between an expert and a novice researcher who work together to achieve a goal (Grant & Graham, 1999; Grant, 2008), which in the current case is the successful completion

of the FYP. Supervision is a multifaceted form of teaching and learning that involves more than the transmission of knowledge and research skills from supervisors to students. It is an interpersonal relationship where both parties are expected to maintain good rapport as well as developing trust and respect towards each other. Both pedagogical and emotional support from the supervisors are important for developing students' knowledge, confidence and independence in the research journey (Stefani, Tariq, Heylings, & Butcher, 1997; Wisker, 2012). However, factors such as differences in expectations can lead to an unsatisfactory or unfulfilling experience (Derounian, 2011; Roberts & Seaman, 2018a; Rowley & Slack, 2004).

This study stemmed first and foremost from a desire to address the scarcity of research, especially recent research that focuses on supervision at the undergraduate level. It is acknowledged in the literature that this topic is under-researched with most studies about supervision focused on the postgraduate level (Boud & Costley, 2007; Roberts & Seaman, 2018a; Rowley & Slack, 2004; Todd, Smith, & Bannister, 2006). A common theme in the literature is the demanding nature of the supervisory experience for both students and supervisors (Grant, 2005; Ho, 2003; McClure, 2005; Stefani et al., 1997; Todd, Bannister, & Clegg, 2004). This is however especially so for students at the undergraduate level where this is their first time undertaking independent research (S. Armstrong, 2004; Todd et al., 2004).

Another theme identified in the literature with reference to supervision at the undergraduate level is the focus on supervisors' rather than students' experiences and perceptions of supervision (Boud & Costley, 2007; Reguant, Martínez-Olmo, & Contreras-Higuera, 2018; Roberts & Seaman, 2018a; Todd et al., 2006; Wiggins, Gordon-Finlayson, Becker, & Sullivan, 2016). For instance, studies by Reguant et al., (2018), Todd et al., (2006), and Roberts and Seaman (2018a) have explored supervisors' perceptions about their roles and responsibilities in undergraduate supervision. Although there is some recent literature that has included students' perceptions and/or experiences when undertaking undergraduate research, most of these works have explored aspects such as students' perceptions of the advantages of

doing undergraduate research (Holmberg, 2006; Lopatto, 2003; Orsmond, Merry, & Reiling, 2004; Seymour, Hunter, Laursen, & DeAntoni, 2004), students' experiences about the quality of supervision received (S. Armstrong, 2004) as well as students' (and supervisors') coping strategies in terms of time management (Ho, 2003). Only a small number of studies, for example, Armstrong and Shanker (1983), Stefani et al. (1997) and Todd et al. (2004) have explored the responsibilities and expectations of students in the context of undergraduate research. Moreover, there has been only a small number of studies conducted in the Malaysian context regarding undergraduate final year research projects with the majority of these studies focusing on improving assessment within the final year project (e.g., Bakar, Jailani, Shukur, & Yatim, 2011; Halim, Buniyamin, Imazawa, Naoe, & Ito, 2014; Hashim & Hashim, 2010; Wook, Tengku Siti Meriam Tengku et al., 2012). Given these gaps in the literature, there is a need for the present study to explore and include the experiences and interpretations or 'lived experience' of students (Todd et al., 2004) and their supervisors about supervision and feedback within the undergraduate FYP supervisory context.

Independent research undertaken by students at the undergraduate level is a significant piece of work that gives them a sense of ownership. Although students at this level of study are not expected to produce an original, creative piece of work (as expected at higher levels of study), the task of undertaking the undergraduate research can be a tough and daunting experience, given that this is their first taste of scholarly independence (Rowley & Slack, 2004; Todd et al., 2006; Wisker, 2012). Compared to writing academic essays for shorter module-based courses, independent research requires students to further develop and refine a set of research skills such as analysis, critical thinking and critical writing, problem-solving and to apply existing knowledge and concepts to the research problem (Wisker, 2012). Given that this is the first research experience for most students, it is important it is an appropriately thought-provoking, rewarding and positive experience which gives students opportunities to acquire the necessary research skills and also a set of dispositions such as motivation,

perseverance and independence. As an expert, the supervisor plays a key role in making this experience gratifying for students. Without appropriate supervision, students' motivation might be affected and they might view the research experience as unrewarding, thus affecting any decision to engage in further study. Therefore, through the exploration of undergraduate research supervision from the points of view of the two main parties involved – students and their supervisors, the present study is able to contribute to the literature about undergraduate research, specifically on how students and supervisors experience the undergraduate research journey as well as the expectations and responsibilities they both hold in making this experience a positive one.

Feedback is embedded in and lies at the core of supervision – it can be argued that much of the communication between students and supervisors involves feedback aimed to support and further their learning. Indeed, feedback can have a powerful impact on students' learning and this impact can either be positive or negative (Hattie & Timperley, 2007). The present study set out to explore how students and supervisors understood and experienced feedback within the FYP supervisory process. Literature has shown that feedback may not always be a fulfilling experience for students and/or educators. For instance, insufficient information about where are they going, how they are going and where to next can limit the power of feedback in enhancing students' learning (Hattie & Timperley, 2007). In addition, there is a concern that students might misinterpret the meaning of feedback provided by educators and thus fail to use it effectively to improve their learning (Sutton, 2009). In a similar vein, studies (e.g., Carless, 2006; Weaver, 2006) have shown that although students appreciate feedback from others, it is not always acted upon. Most importantly, while there has been a considerable amount of literature on feedback, it is not until recently that the focus has been shifted from seeing feedback as a one-way transmission of information transferred from educator to student to a more interactive, dialogic process (Ajjawi & Boud, 2017; Ajjawi & Boud, 2018; Carless, 2013b; Sutton, 2009). Therefore, by exploring how students understand

and experience feedback alongside the perceptions of their supervisors, the present study is able to deepen current knowledge and understandings about feedback in higher education especially within the supervision of undergraduate bachelor's degree students. It also provides insights into the nature of the students' and supervisors' experiences specifically in relation to the responsibilities of those involved, their expectations, the purpose, nature and impact of feedback and factors that enhance and/or inhibit feedback within the FYP in the context of Malaysian higher education.

If students are to be successful in undertaking independent research projects, they must possess and/or acquire the necessary self-regulatory skills, attitudes and behaviours that will enable them to monitor and improve the quality of their work in an ongoing manner. To this end, it is argued that feedback in particular dialogic feedback is a critical aspect of the supervisory experience and a catalyst for the successful achievement of goals. By analysing real feedback events within the undergraduate supervisory context through the contemporary feedback lens, the present study expands understandings about the perceptions and feedback practice of students' and supervisors' and highlight the role and value of dialogic feedback in enhancing students' learning.

The Structure and Organisation of the Thesis

This thesis is organised into nine chapters. Chapter One outlines the context of the present study. It describes the Malaysian higher education context and the study site, Universiti Gemilang. Furthermore, given the gaps in the literature in relation to undergraduate supervision and feedback, the researcher argues the present study will contribute to current understandings in these particular areas.

Chapters Two and Three discuss the body of literature and research studies that informed the present study. In Chapter Two, the supervision experience of institutional-based

research projects is elucidated. Here, key aspects of supervision such as the roles and responsibilities of students and supervisors as well as the different supervision discourses are presented. It also highlights the challenges faced by both parties during the supervision journey. The chapter concludes with the related research question guiding the present study.

Chapter Three discusses feedback in the higher education context. It highlights the role of feedback in teaching and learning. In addition, two distinct paradigms of feedback – traditional and contemporary are explored in this chapter. This is followed by a discussion of the conceptual framework and model of feedback underpinning the present study. Furthermore, issues with feedback faced by educators and students as reported in cognate research studies are presented. The research question pertinent to feedback is outlined at the end of the chapter.

Chapter Four provides a detailed description of the research methodology and methods that informed the present study. A qualitative, instrumental case study was selected as the most appropriate research design to capture the understandings and experiences of students and their supervisors about supervision and feedback during the FYP. The chapter describes the processes and procedures undertaken by the researcher in order to present a robust picture of the case. Moreover, procedures of data analysis and the ethical considerations are outlined.

Chapter Five presents the first set of findings. It addresses the supervision process of final year projects at Universiti Gemilang as perceived by the students and supervisors. This is illustrated through two main themes: the establishment of a research-focused relationship and sustaining a research-focused relationship.

Chapter Six provides a detailed account of students' and supervisors' perceptions about feedback. Participants' understandings of feedback are presented in relation to the nature and purposes of feedback in the FYP.

Chapter Seven builds on the previous chapter. It explores lived feedback experiences of students and supervisors within the supervision experience. In this chapter, participants' experiences of feedback are presented with reference to the nature and purpose of written feedback followed by the nature and purpose of oral feedback.

Chapter Eight integrates and discusses the findings from Chapters Five, Six and Seven. In particular, it discusses the two main themes arising from the present study: the articulation and enactment of a traditional approach to supervision and the articulation and enactment of a traditional feedback discourse alongside relevant literature.

Finally, Chapter Nine concludes the thesis by discussing the conclusions and implications drawn from the present study. It also discusses the contributions of the present study and directions for future research.

CHAPTER TWO: THE SUPERVISION EXPERIENCE

This chapter outlines key aspects of and issues pertaining to supervision of students undertaking independent research. The first section provides a brief overview of supervision and its importance. The second section addresses the roles and responsibilities of supervisors and students in supervision. This is followed by the third section that highlights challenges in the supervisory relationship. The fourth section presents three common discourses of supervision drawn from the work of Grant (2005). These three discourses are addressed in terms of supervision style, characteristics of supervisors and students, and the nature of the supervisor-student relationship. The final section presents the central research question with reference to supervision of undergraduate final year research projects.

Supervision and Its Importance to Learning

Undertaking research is not just about learning new knowledge; it also entails the application of theories and subject knowledge as well as research skills to solve research problems (Wisker, 2012). In addition, research draws on and enhances transferable skills such as planning and organisation, time management, information searching, problem-solving, presentation and communication skills (Stefani et al., 1997). Supervision is intrinsic to institutional-based research projects as it acts as a catalyst for the successful execution and completion of said projects (Grant & Graham, 1999). Supervision embodies and emulates the characteristics of good teaching which requires supervisors to be caring towards students, to be concerned with students' progress and to provide feedback about progress and achievement to students (James & Baldwin, 2006; Phillips & Pugh, 2010). Through supervision, students obtain a unique opportunity to be engaged in a personal and extended "learning conversation" (Wisker, 2012, p. 21) with a knowledgeable-expert – their supervisor. Notably, the interaction

between supervisors and students is crucial in scaffolding students' competency and independence in research and learning (Reguant et al., 2018; Roberts & Seaman, 2018a).

Compared to learning in modular courses, supervision demands a commitment from both students and supervisors to work together over an extended period. As a result, the supervisor-student relationship is relatively complex (Holmberg, 2006; Mackinnon, 2004). This relationship is personal in both a pedagogical and a professional sense (Grant & Graham, 1999; Wisker, 2012). Ideally, students and supervisors are expected to embrace the supervisory relationship with "professionalism, respect, collegiality, and open-mindedness" (Ismail, Norhasni, & Aminuddin, 2011, p. 79). Indeed, good supervision contributes to students' success and facilitates students' academic and interpersonal development, yet its relational nature means it holds challenges and can be precarious for one or both parties (Derounian, 2011; Grant, 2005).

Roles and Responsibilities of Supervisors and Students

Supervisors and students are bound by roles and responsibilities set by the institution. Generally expressed in the form of guidelines, the latter are promulgated so that both parties are aware of their roles and responsibilities in the supervisory process. The understanding and implementation of these guidelines, however, are dependent on the expectations and interpretations of supervisors and students (MacKeogh, 2006). In most higher education institutions, the roles and responsibilities of a supervisor encompass two complementary aspects – academic and pastoral matters. For instance, supervisory guidelines taken from The University of Auckland and Otago University in New Zealand and from Universiti Gemilang in Malaysia showed that the academic role of the supervisor includes providing advice and guidance on students' projects. Within this role, supervisors are responsible for maintaining contact or arranging meetings to check students' progress, responding to students' work,

making sure that students are making progress within the appropriate time frame and advising students on the standard written work they need to achieve. An example of the pastoral role of the supervisor is the establishment and maintenance of a supportive relationship with students. Within this role, supervisors are expected to be accessible to students at times when they need advice, encouraging honest and open discussion between the two parties, and to be sensitive to the cultural, religious and gender issues related to the student.

On the other hand, students are expected to play the role of an active participant in supervision. Within this role, they are expected to enter supervision with a research topic, having basic knowledge about their research topic, following a work schedule as agreed with supervisors, taking responsibility for their work, meeting supervisors regularly to discuss progress and being independent in monitoring and carrying out their work. In terms of their pastoral responsibilities, students are expected to maintain honest and open communication with supervisors.

Roles and Responsibilities of Supervisors

A number of studies have indicated a consensus, both from the point of view of students or academics, that supervisors are the academic experts who support students in their research journey (Brewer, Dewhurst, & Doran, 2012). Both students and supervisors consider it crucial for the latter to possess knowledge in students' areas of research and research methods (Derounian, 2011; McMichael, 1992; Spear, 2000). Both parties identify that supervisors need to guide students in structuring and accomplishing a feasible research project (Pyhältö, Vekkaila, & Keskinen, 2015; Todd et al., 2004; Todd et al., 2006). As described by students and supervisors, this task entails guiding students in deciding on the focus of the research (Anderson, Day, & McLaughlin, 2006; Brydon & Flynn, 2014; Reguant et al., 2018), advising students on the feasibility of their research methodology (Pyhältö et al., 2015; Todd et al., 2004; Todd et al., 2006) and introducing students to related literature (M. Armstrong &

Shanker, 1983; Reguant et al., 2018). In addition, some supervisors have mentioned that they provide assistance to students with administrative aspects of their research such as structuring a research timeline (Anderson et al., 2006; Reguant et al., 2018; Roberts & Seaman, 2018a). To supervisors, students especially those who are undertaking independent research for the first time might not have an adequate understanding of the nature of a dissertation (Todd et al., 2006). Due to this, supervisors consider it crucial to develop students' understanding of the technical aspects of research especially through one-to-one meetings at the early stage of supervision (Todd et al., 2006). Students and supervisors, therefore, expect the latter to play a more directive role at the beginning of supervision (Roberts & Seaman, 2018b; Stefani et al., 1997; Todd et al., 2006). Interestingly, some supervisors regard themselves as a "dictator" (Stefani et al., 1997, p. 277) when describing their role at this early stage of a research project.

From the perspectives of students and supervisors, the role of a supervisor also includes being the source of knowledge and/or information (M. Armstrong & Shanker, 1983; Pyhältö et al., 2015; Russell, 1999). As observed in the literature, supervisors impart and explain research concepts (Roberts & Seaman, 2018a), assist students in applying knowledge and skills in research (M. Armstrong & Shanker, 1983) and provide feedback on the content and technical aspects of the work (Todd et al., 2006). A number of studies (e.g., Brydon & Flynn, 2014; Derounian, 2011; Pyhältö et al., 2015; Todd et al., 2006; Woolhouse, 2002) have shown that students and supervisors see "truthful actionable feedback" (Derounian, 2011, p. 97) as an important element to ensure the smooth progress of students' research and dissertation writing. Students expect supervisors to provide constructive feedback about their work and progress, in particular with reference to drafts of their dissertation (Howitt, Wilson, Wilson, & Roberts, 2010; Todd et al., 2004). Similarly, supervisors recognise that it is their duty to provide feedback to students on aspects of their progress, the direction of work, topic selection, methodology and clarity of ideas (Russell, 1999). Simply put, supervisors see themselves as "critical reader(s) and commentator(s)" of students' work (Anderson et al.,

2006, p. 160). Supervisors have reported that in some instances, it is necessary to provide students with examples of paragraphs to illustrate what a good piece of writing looks like (Anderson et al., 2006).

In addition, both parties consider supervisors important figures in developing students' independence (M. Armstrong & Shanker, 1983; Brydon & Flynn, 2014; Reguant et al., 2018). Todd et al. (2004) have argued that students' independence in research does not come naturally – it needs to be developed and supported by supervisors. To supervisors, the nature of supervision usually requires students and supervisors to engage in one-to-one meetings, giving them a good platform to cultivate generic skills and competencies as well as critical thinking in students through discussions (Reguant et al., 2018). As suggested in the literature, supervisors can scaffold students' independence by allowing students to "make mistakes and learn from them" (Stefani et al., 1997, p. 277), but at the same time being vigilant that students do not fall off-track (Stefani et al., 1997; Todd et al., 2006). For these reasons, students and supervisors believe it is important for supervisors to adopt a facilitative rather than a directive role (Drew, Subramaniam, & Clowes-Doolan, 2002; Roberts & Seaman, 2018a).

Finally, as attested in the literature, supervision requires supervisors to support emotional and motivational needs of students in the research journey (Lopatto, 2003). The lack of closeness between supervisors and students may cause students to feel isolated thus resulting in them thinking that their supervisors are not interested in their progress (McClure, 2005; Pole, Sprokkereef, Burgess, & Lakin, 1997). A supervisory relationship that is built on trust has been perceived as important to supervisors. Supervisors believe that when students have trust in them, students will be more open to sharing issues they are facing, be it academic-related issues or personal ones (Roberts & Seaman, 2018a). Likewise, students believe that supervisors need to be approachable, available and be supportive of their emotional needs (Roberts & Seaman, 2018b). Interestingly, studies have also revealed that students perceive supervisors' concerns about their progress as an indication of support and as

a source of motivation. Students associate their positive supervision experience with supervisors' responsiveness and availability in providing feedback on their work and progress (Brydon & Flynn, 2014). Correspondingly, it has been noted that students see the tasks and deadlines set by their supervisors as a positive pressure to motivate them to progress (Todd et al., 2004).

What can be drawn from the literature is that supervising research students requires supervisors to adopt different roles to suit the demands of students, the nature of the research work and the timing or stage of the research process. The numerous roles of supervisors can range from directive to facilitative, including "dictator/authority figure/ 'God', manager, guide, mentor, facilitator, collaborator, friend, counsellor, mother/father" (Wisker, Robinson, Trafford, Warnes, & Creighton, 2003, p. 388). Along with these roles are a set of responsibilities and expectations to be fulfilled, be it from the supervisors themselves or from students.

Roles and Responsibilities of Students

Compared to the roles and responsibilities of supervisors, little has been reported in the literature about the roles and responsibilities of students in supervision. However, studies that are available demonstrate that in the main students are expected to be committed (McGinty, Koo, & Saeidi, 2010; McMichael, 1992; Todd et al., 2006) and to be independent in carrying out their work (Anderson et al., 2006; McMichael, 1992; Roberts & Seaman, 2018a).

Supervisors have noted that ideally, students enter the research journey with an interest in the research topic or theme that they wish to explore (Todd et al., 2006). From the students' and supervisors' views, the responsibilities of students include suggesting a topic of interest to supervisors and the need to carry out readings in the related literature before the initial supervision meeting (McMichael, 1992). Further, students and supervisors are in agreement

that although supervision involves collaboration between students and supervisors, the onus to execute the work lies with the students (Anderson et al., 2006; Todd et al., 2006). Supervisors have expressed that students need to carry out the tasks set at the early stage of supervision proactively and responsibly (Anderson et al., 2006). In addition, supervisors also note that students need to prepare tangible materials to be discussed in supervision meetings such as ideas or drafts of works-in-progress (Todd et al., 2006). Along similar lines, students consider that if they are to complete the research project on time, they need to carry out the research work responsibly and work consistently (Stefani et al., 1997).

In parallel with the goal of supervision as promoting students' agency and independence (Webster, Pepper, & Jenkins, 2000), students and supervisors alike acknowledge that students need to play an active role in decision-making and managing the research project (Anderson et al., 2006; Stefani et al., 1997). Evidence from previous studies has suggested that to students and supervisors, independence means students should carry out project-related tasks on their own without being overly dependent on supervisors to direct them or do the work for them (Stefani et al., 1997; Todd et al., 2006).

Supervision Style

Supervisors' interpretations of their roles and responsibilities shape their supervisory style (Gatfield & Gatfield, 2005; Holmberg, 2006). These interpretations influence the type and amount of support provided to students. For example, some supervisors assume a more directive role, while others give more power to their students to decide the course of their work and progress (Holmberg, 2006). Grant (2005) has proposed three common discourses of supervision: traditional-academic (trad-supervision), the techno-scientific (techno-supervision) and the psychological (psy-supervision). Table 2.1 illustrates the three supervision styles, characteristics of the supervisor and student and the nature of their respective supervisor-student relationship.

Table 2.1

Supervision Styles and Relationships

Supervision style	Characteristics of the supervisor	Characteristics of the student	Relationship
Traditional-academic (trad-supervision) Supervision that is based on academic elitism; Academic role to the fore.	Is an expert in the student's research area; Is admired and looked up to; Is mainly concerned with passing valuable knowledge to the student; Sets boundaries so that the supervisor is not too involved in non-task issues; Is directive.	Is submissive towards the supervisor; Admires the supervisor's intellect; Is proud to be an apprentice to the supervisor; Aspires to be an academic in the future.	One way; Directive; Apprenticeship/master model; Student as a passive recipient; Supervisor as the dominant figure.
Techno-scientific (techno-supervision) Supervision that emphasises the processes in research, rather than the product; Academic role to the fore.	Is the expert scientist; Is mainly concerned about the student's cognitive processes; Assists the student with the technical aspects of research such as conducting experiments, managing scientific equipment, data analysis; Works closely with the student; Conducts frequent meetings with students especially in the laboratory; Is directive.	Is a novice researcher; Works closely with the supervisor; Tries to fulfil requirements set by the supervisor; Spends a large amount of time in the laboratory.	One-way; Directive; Apprenticeship/master model; Supervisor as the dominant figure; Student as passive recipient.
Psychological (psy-supervision) Supervision that is based on trust and respect; Academic and pastoral roles.	Is not necessarily the expert in the student's research area; Is concerned about the student as a person; Provides motivation and support to student; Is a mentor to the student in professional academic matters.	Lacks research experience; Initially needs support and guidance from the supervisor (less so over time); Is honest with the supervisor about the academic and emotional challenges in the research journey.	Two-way; Dialogic; Supportive; Facilitative; Shared.

Traditional-academic (trad-supervision). Trad-supervision upholds the idea of academic elitism, which puts academic achievement and competency at the centre of the supervision. The relationship between students and supervisors working within the style is formal and revolves around the academic aspects of supervision and learning. The power relationship between the two parties is asymmetrical, with trad-supervisors being the knowledgeable-experts who direct the course of trad-students' research/learning. Consequently, trad-students are characterised as eager disciples who look up to their supervisors as role models and the most valuable source of knowledge. A key feature of trad-students that separates them from those in the other two supervision styles is their willingness to play the role of loyal and submissive subjects to their supervisors. This is due to their belief that trad-supervisors possess the intellectual capabilities to lead them to the successful and timely completion of the research project. In turn, the form of communication between trad-students and trad-supervisors is unidirectional, with the students being passive recipients of knowledge and skills from supervisors (Mackinnon, 2004). While trad-supervision may be an efficient style to support students' successful completion of their research, this style may not work for every student. It should be noted that the success of trad-supervision is dependent on trad-students' capability to absorb and apply the knowledge and skills provided by trad-supervisors (Grant, 2005). In reality, not every student has this kind of aptitude and attitude especially for those undertaking independent research for the first time.

Techno-scientific (techno-supervision). Similar to trad-supervision, techno-supervision focuses on the academic aspects of research. However, in techno-supervision, the emphasis is given to developing students' skills and competencies in research. This supervision style is prevalent in disciplines or areas of study that are consistent with the sciences and the positivist research paradigm. The power relationship in techno-supervision is asymmetrical where techno-supervisors play the role of expert scientists who use supervision

as a platform to pass on their technical knowledge and skills of research (Holmberg, 2006). Techno-students are seen as novices who are in need of explicit instructions and training by techno-supervisors. The supervision approach is supervisor-centric where techno-supervisors guide techno-students through the steps of the research process. This supervisor-centric approach often results in the development of students' dependency on their supervisors, thus working against the promotion of students' independence in research and learning (Mackinnon, 2004).

Psychological (psy-supervision). Psy-supervision is a style that recognises the academic and pastoral aspects of learning. The power relationship between psy-students and psy-supervisors is almost equally distributed. Psy-supervisors hold the role of "resource[s], not oracle[s]" (Mackinnon, 2004, p. 398) who scaffold students' research journey. Meanwhile, psy-students are seen as research novices who have the potential to be developed into independent researchers, over time (Grant, 2005). Central to psy-supervision is the interaction and communication between the two parties, which is dialogical. This form of interaction facilitates the building of rapport and trust. Because of that, both parties are able to discuss expectations and challenges, ranging from academic issues to socio-emotional issues.

It is argued that of these three styles, psy-supervision is more likely to develop students' independence and self-regulation. The dialogic interaction which is built on trust, respect and a sharing of power allows both parties to play active yet complementary roles in supervision (Mackinnon, 2004). Most importantly, a dialogic interaction enables students and supervisors to be more engaged with each other. As a result, both parties are able to listen, ask questions, negotiate meanings and respond effectively to each other's queries or suggestions especially with reference to issues pertaining to students' work or progress (Derounian, 2011; Wisker et al., 2003). In addition, compared to the other two supervision styles, psy-supervision is the only style that addresses both academic and pastoral matters. Although academic matters

are important, attention needs also to be given to pastoral matters so students are able to maintain motivation, confidence and perseverance until the end of the research journey (Roberts & Seaman, 2018b).

It is important to note that the style of supervision adopted by any supervisor is not necessarily fixed; rather it is fluid (Grant, 2005). Styles can change during the duration of the research to accommodate the needs of the students, supervisors and the demands of the research project (Gatfield & Gatfield, 2005; Todd et al., 2004). For instance, some supervisors might adopt a trad-supervision style at the early stages of supervision but as students progress, supervisors slowly withdraw to allow students the space to use their agency and make decisions (Roberts & Seaman, 2018b; Todd et al., 2006). Furthermore, a style that a supervisor adopts may be influenced by his or her disciplinary culture (M. Armstrong & Shanker, 1983). Supervisors in science-related disciplines for instance typically adopt a style that emphasises constant interaction (Spear, 2000). Students carrying out research in such disciplines are closely monitored by their supervisors especially in matters related to the work in the laboratory such as using technical equipment, planning experiments and interpreting data. Therefore, supervision in science-related disciplines is most likely to adopt the techno-scientific supervision style where supervisors take the main lead to decide the direction of students' work and progress. Conversely, some supervisors may view supervision as an opportunity to support students' research/academic skills and practical skills, not only for the sake of the research but also for their future career (Mackinnon, 2004). Under such circumstances, a psy-supervision style is more likely to be adopted where supervisors and students work together in a facilitative, two-way supervisory relationship.

Challenges in the Supervisory Relationship

Previous studies, for example, Anderson et al. (2006), Russell (1999), Todd et al. (2006) and Woolhouse (2002) have shown that supervisors and students enter into the

supervisory relationship with expectations about themselves and the other party. One of the issues that has emerged is that when expectations do not coincide, both parties are exposed to a situation that leads to dissatisfaction and a breakdown in communication and progress (Del Río, Díaz-Vázquez, & Maside Sanfiz, 2018; Howitt et al., 2010; Roberts & Seaman, 2018a; Stefani et al., 1997). For instance, a lack of clarity around what is expected has resulted in problems for students such as uncertainty about the tasks that they should work on or a lack of understanding about how to progress further (Howitt et al., 2010; MacKeogh, 2006). As a result, students have experienced an unpleasant supervisory journey. Also, it has been noted that there are contrasting views concerning the degree of support supervisors should provide for students. Supervisors are more likely to believe they have provided sufficient support to students whereas students report having received insufficient support (Russell, 1999).

Another crucial issue highlighted in a number of studies relates to feedback. Dissatisfaction with the feedback process usually stems from ineffective communication of information between the two parties. For instance, supervisors have perceived themselves as a "sounding board of ideas" (Russell, 1999, p. 13) and have claimed they convey feedback to students through discussions. Unfortunately, only a small percentage of students have agreed with their supervisors on this matter (Russell, 1999). In addition, the literature has demonstrated that students usually complain about a lack of clarity and specificity in supervisors' feedback (Drew et al., 2002; Roberts & Seaman, 2018b) and the quality of the feedback received has been labelled as unhelpful; destructive; or they have received no feedback (Roberts & Seaman, 2018a; Spear, 2000). Meanwhile, for supervisors, the issue with feedback is often about students' uptake of information and ideas (Carter & Kumar, 2017). Supervisors have faced difficulties in conveying their feedback to students especially when students ignore suggestions to improve the quality of the written work (Anderson et al., 2006; Carter & Kumar, 2017). Furthermore, in instances such as these, supervisors have reported having to repeat the same feedback to students (Carter & Kumar, 2017).

Research Question

As mentioned earlier, in contrast to literature concerning postgraduate levels such as master and doctoral degrees, studies have largely ignored supervision within the undergraduate research project context. This has resulted in a gap in the literature. Moreover, the majority of the available literature on undergraduate supervision is dated (Todd et al., 2004) with most having been published prior to 2010. In addition, the focus of any literature dealing with supervision in undergraduate programmes discusses in the main issues associated with students' organisational skills, timekeeping, and writing skills (Derounian, 2011) As a result, the roles of academics supervising undergraduate research and the student experience are largely underexplored areas (Boud & Costley, 2007). Furthermore, supervision involves a complex relationship between students and supervisors and the lack of effective communication between the two parties about what is expected can result in an unsatisfactory relationship. As a response to these issues, the present study aimed to explore supervision in the context of undergraduate students' final year research projects in a Malaysian university. Therefore, the overarching research question guiding this part of the study was:

> How do undergraduate students and their supervisors understand and experience supervision of the undergraduate final year project?

Specifically, this question was examined in relation to the (a) roles and responsibilities of students and supervisors; (b) expectations of students and supervisors; and (c) actions taken by students and supervisors.

Summary of the Chapter

Supervision can be considered as a 'pedagogically intimate' learning opportunity between an expert and a novice researcher. Over time, supervision should be able to produce students who possess critical and analytical thinking skills and who can regulate their learning.

Supervision guidelines from the literature, as well as those stated in institutional documents, have outlined the roles and responsibilities of students and supervisors. However, how these are interpreted depends on the parties involved. In addition, while in the main there are three supervision styles that can be adopted by supervisors, some of these styles are seen as more conducive to learning than the others. The next chapter draws attention to the literature and research studies on a central aspect of teaching and learning – feedback.

CHAPTER THREE: FEEDBACK

The current chapter presents the body of literature and previous research pertaining to feedback that framed the present study. It starts with a brief overview of feedback and its significance to learning. The second section presents the key ideas regarding the traditional and contemporary paradigms of feedback. This is followed by a discussion of the conceptual framework and model of feedback underpinning the study. The fourth section reviews feedback studies carried out in the context of higher education. Attention is given to the perceptions, understandings and experiences of students and lecturers about feedback. Finally, the research question with reference to feedback is presented at the end of the chapter.

Central to this review is the argument that when feedback is a process that involves telling students what needs correcting and how to do this, it results in students being little more than passive recipients of information. This approach contradicts a key goal of education, which is to produce students who take ownership over and responsibility for their learning. To do this, students need to be engaged in and with the feedback process – they need to know where they are going, what quality work looks like, and how to bring their performance or work closer to the required or desired standard. Feedback therefore should facilitate students' engagement and involvement by providing an avenue for the exchange of information, ideas and expectations. With support and over time, the aim is for students to generate feedback for themselves and to take responsibility for improving their work and learning.

Feedback and Its Importance to Learning

In general, feedback encompasses two modes – written and oral (Sadler, 1998). The presentation of these two modes can take various forms such as written comments on students' drafts or finalised work, oral feedback in individual or group sessions and information through technological-supported mediums such as computers and audio recordings (Hattie & Wollenschläger, 2014; Knight & Yorke, 2003; Yang & Carless, 2013). Feedback can be delivered instantaneously and/or in a planned manner (Knight & Yorke, 2003). Furthermore, feedback can be provided during the production of a work or performance, or after the work or performance is completed (Sadler, 1989). Regardless of the mode, it is generally agreed that effective feedback is related to instruction (Hattie & Timperley, 2007; Kulhavy, 1977); addresses some kind of target level i.e. goals, criteria or standard (Hattie & Timperley, 2007; Molloy & Boud, 2014; Nicol & Macfarlane- Dick, 2006); is timely (Evans, 2013; Shute, 2008); is clear, useful, and focused i.e. identifies students' weaknesses and strengths in learning as well as directions for improvement (Evans, 2013; Higgins, Hartley, & Skelton, 2002); and is ongoing i.e. provides students with the opportunity to use information for production of current work and the next task (Boud & Molloy, 2013b; Evans, 2013; Juwah et al., 2004).

Feedback thus plays a central role in learning (Boud & Molloy, 2013b; Hattie & Timperley, 2007; Sadler, 2013). A synthesis of 800 meta-analyses on the influences of achievement by Hattie (2008) revealed that feedback was ranked tenth of 138 influences related to students' achievement. Moreover, it has been contended that feedback has the capacity to develop self-regulated learning in students (Butler & Winne, 1995; Carless, 2015; Molloy & Boud, 2014; Nicol & Macfarlane- Dick, 2006). Feedback is an intervening mechanism during students' self-monitoring that can "confirm, overwrite, add to, tune, or restructure extant knowledge and beliefs" (Butler & Winne, 1995, p. 275) be it students'

domain knowledge, metacognitive or cognitive strategies, or beliefs about the self. Without feedback, students might not know their strengths, weaknesses or the state of progress they are making towards specific goals and as a consequence, will not be able to use such information to make necessary adjustments to their work. As Sadler (1989) has noted:

> Students use it [feedback] to monitor the strengths and weaknesses of their performances so that aspects associated with success or high quality can be recognised and reinforced, and unsatisfactory aspects modified or improved (pp. 120 – 121).

Despite being one of the areas in higher education that is constantly researched, there is still more that needs to be explored and understood about feedback (Evans, 2013; Hattie & Timperley, 2007). For instance, a commonly reported issue is the dissatisfaction of students and lecturers with both the feedback process and its products (Boud & Molloy, 2013b; Carless, Salter, Yang, & Lam, 2011; Evans, 2013; Higgins, Hartley, & Skelton, 2001). This issue suggests both parties have different perceptions and expectations about feedback. Students' feedback beliefs and experience may be shaped by their perceptions and expectations of the purpose of feedback and of the roles of lecturers and themselves in learning (Beaumont, O'Doherty, & Shannon, 2011; MacLellan, 2001; Winstone, Nash, Rowntree, & Parker, 2017). Meanwhile, on the lecturers' part, the beliefs, values and understanding they hold about learning and assessment influence their feedback practice (Li & Barnard, 2011; Weaver, 2006). Some lecturers and/or students view feedback as directive information from lecturers to students (Evans, 2013; Li & Barnard, 2011), while others perceive it as a process that facilitates students' self-assessment and monitoring (Li & Barnard, 2011; MacLellan, 2001). Having said that, the next section discusses two paradigms of feedback in relation to their respective notions of learning, the roles of educators and students and how these influence the feedback process.

The Feedback Paradigms

A paradigm is conceptualised as a set of concepts, beliefs and practices that define an area of study or discipline at a particular point of time (Kuhn, 2012). Paradigms, however, are not necessarily stable. A paradigm shift occurs when inconsistencies are discovered and/or dissatisfaction expressed with current explanations and as a consequence, there is an emergence of new explanations or theories which have the capacity to encompass and/or replace previous conceptualisations (Hairston, 1982; Kuhn, 2012). In essence, a new paradigm is espoused when advocates discover different ways to solve problems not answerable by a previous paradigm (Hairston, 1982).

Carless (2015) has identified two overarching paradigms of feedback – a traditional and a contemporary paradigm. The following subsections discuss the two paradigms by presenting the notions of learning underpinning each paradigm and how these influence the way in which feedback is conceptualised and practised.

The Traditional Feedback Paradigm

Notions of learning. Conceptualisations of feedback in the traditional paradigm can be traced back to behaviourist notions of learning (Hattie & Gan, 2011; Hounsell, 2003; Price, Handley, Millar, & O'Donovan, 2010; Sadler, 2010). Traditionally, learning is seen as a process of knowledge transmission to students in the form of facts and concepts from educators who are regarded as knowledgeable experts (Askew & Lodge, 2000). Students, on the other hand, are seen as passive recipients of information (Boghossian, 2006; Thurlings, Vermeulen, Bastiaens, & Stijnen, 2013). The conditioning of behaviour is emphasised through the interaction between stimuli and responses (Skinner, 1950) where stimuli that are reinforcing (positive feedback) are seen to increase the likelihood of a desired behaviour occurring in the future, while stimuli that are punishing (negative feedback) will lead to the

reduction of undesired behaviour (Schunk, 2012). Learning is very much teacher-centred as it is guided by educators in small steps, accompanied by reinforcement to help students progress from simple to complex tasks (Hattie & Gan, 2011; Schunk, 2012; Thurlings et al., 2013). A student's correct response to a learning task indicates successful conditioning through reinforcing incentives such as praise or good grades (Boghossian, 2006; Hattie & Gan, 2011).

Notions of feedback. Behaviourist notions are echoed in one of the earliest definitions of feedback from Kulhavy (1977) who described it as "any of the numerous procedures that are used to tell a learner if an instructional response is right or wrong" (p. 211). Other terms that are aligned with feedback include "Knowledge of Response (KCR), Knowledge of the Correct Response (KCR), and Correctional Review (CR)" (Kulhavy, 1977, p. 212). In this light, corrective feedback is considered a type of reinforcement given on students' correct responses to increase the probability of these responses occurring again (Kulhavy & Stock, 1989; Sadler, 1998). Thus, feedback plays a corrective role in students' learning – it provides information that indicates the correctness of responses in relation to the instructional or learning activity (Kulhavy, 1977; Price et al., 2010). Furthermore, within the traditional paradigm, feedback is seen as "knowledge of results" (Sadler, 2013, p. 55) – information which is made available to students after a learning task is completed, rather than during or throughout the course of the learning activity (Butler & Winne, 1995).

Traditional feedback approaches. Consistent with traditional notions of learning, educators are seen as the main source of feedback (Askew & Lodge, 2000; Hattie & Gan, 2011). They are considered directors of feedback (Molloy & Boud, 2013) and their role involves telling students what needs correcting and in some cases, how to go about making such corrections (Molloy & Boud, 2014; Nicol & Macfarlane- Dick, 2006). Students, on the other hand, are seen as passive recipients of information (Askew & Lodge, 2000; Evans, 2013; Molloy & Boud, 2014). Students' achievement is believed to improve if they utilise corrective

information provided by educators (Molloy & Boud, 2014; Nicol & Macfarlane- Dick, 2006). An assumption underpinning the traditional paradigm is that quality or effective feedback is solely dependent on educators as they are the only ones who have the capacity to assess students' work and/or understanding, notice gaps in students' learning and provide information that will enable students to effect improvement (Molloy & Boud, 2014; Sadler, 2013). In other words, the traditional feedback paradigm emphasises the one-way transfer of information from an external source, typically educators, to students with the aim of identifying errors and providing corrective information (Hattie & Gan, 2011).

Paradigm Shift

Key issues with the traditional conceptualisations of feedback stem from the notion of feedback as unilateral, corrective pieces of information transferred from educators to students. This view places educators in an authoritative position in the learning and feedback processes (Jonsson, 2012). One of the concerns related to this matter is that it can lead educators to believe that providing students with "dollops of feedback" (Hattie, 1999, p. 9) is an effective practice. Furthermore, traditional approaches to feedback that regard educators as the sole source of information only enhance their role as assessors of students' learning. Meanwhile, the agentic role of students in interacting with external information is not acknowledged (Sadler, 2013). A further issue is that feedback is assumed to be sufficiently clear and adequate for students to understand and enact (Nicol & Macfarlane- Dick, 2006; Price et al., 2010). It is however challenging for students to take action on feedback when it "is too often based on what the teacher wants to say rather than on what the student is interested in hearing" (Carless, 2013a, p. 120).

Thus, the traditional paradigm has failed to consider feedback as a process that involves students (Carless, 2015; Sadler, 2013). If feedback only indicates the correctness of the work or students do not understand what is being conveyed in the feedback, it will not

produce students who are able to actively monitor and improve their learning (Boud & Molloy, 2013a; Carless, 2015). Correspondingly, if feedback continues to be seen as a process whereby students are expected to act on what is told to them by educators, it is unlikely it will develop students who can regulate their performance (Nicol & Macfarlane- Dick, 2006).

The Contemporary Feedback Paradigm

Notions of learning. In recent years, mass higher education has experienced a shift from teacher-centred to student-centred learning (Rushton, 2005). This shift has been influenced by the tenets of socio-constructivist approaches to learning. A key feature of such approaches is that learning is situated and the construction of understanding is a social phenomenon that involves collaboration between students and others (Adams, 2006; Evans, 2013; Hattie & Gan, 2011; Palincsar, 1998). The relationship between educators and students in this view is less hierarchical than in the traditional paradigm (Askew & Lodge, 2000). Educators are seen as facilitators who scaffold students' learning. Correspondingly, students are seen as active participants who are engaged in the process of learning (Askew & Lodge, 2000; Rushton, 2005). Students are expected to interact with educators, peers and learning tools (e.g., textbooks, journal articles, exemplars, assessment criteria) through experimentation and interaction. Through these processes, understandings are constantly tested, formed and restructured (Adams, 2006; Hattie & Gan, 2011).

Notions of feedback. The more recent conceptions of learning have resulted in a corresponding shift in how feedback is conceptualised with students now positioned at the centre of the feedback process (Molloy & Boud, 2014). This reflects Sadler's (1989) postulation that teaching and learning should facilitate a transition from teacher-led feedback to student self-monitoring. Sadler (1989) regards feedback as information that is provided by an external source; however, if the information is generated by students, it is considered as

part of self-monitoring. The latter is a process inherent to self-regulation (Butler & Winne, 1995; Nicol & Macfarlane- Dick, 2006). It is described as a "cognitive process that assesses states of progress relative to the goals and generates feedback that can guide further action" (Butler & Winne, 1995, p. 259).

One of the earliest definitions of feedback that reflects a more contemporary view of learning is from Hattie and Timperley (2007) who stated feedback is "information provided by an agent (e.g., teacher, peer, book, parents, self, experience) regarding aspects of one's performance or understanding" (p. 81). Around the same period, Nicol and Macfarlane-Dick (2006) posited that feedback is information about the current state of students' performance or understanding in relation to some kind of goal or standard. An important feature of feedback as conceptualised by these writers is that it provides information about the gap between students' current state of performance and/or understanding and the desired performance and/or understanding i.e. goal and standard.

Pivotal to contemporary notions of feedback is the agentic role of students in the feedback process and their engagement with various sources of feedback to improve their learning (Carless, 2015). For students to take on an agentic role, they must be active seekers and generators of information rather than mere recipients of information provided by others. Students need to interact with the sources around them including themselves to identify the reference point i.e. standard they need or desire to achieve. They also need to possess the capacity to evaluate the strengths and weaknesses of their learning in relation to this reference point and take action to close any gaps in learning (Molloy & Boud, 2014).

Feedback as a dialogic process. In recent years, there have been calls for a dialogic approach to feedback. Although the concept of feedback as dialogue is relatively new, the concept of dialogue itself is not. The term 'dialogue' is derived from the Greek words, dia, meaning 'two' and logos which means 'speech' (Steen-Utheim & Wittek, 2017). In the work

of Linell (1998), dialogue is defined as "any interaction through language (or other symbolic means) between two or several individuals who are mutually co-present" (p. 3). Dialogue may occur in face-to-face interactions and through non-face-to-face interactions such as phone calls and electronic means of communication (Linell, 1998). In addition, Linell (19987) has asserted that dialogue functions through the complementary roles of the parties involved as they work together to achieve a shared or common understanding. An individual's learning and performance are supported by dialogue with others as well as through interactions with tools or artefacts. These notions about the nature of dialogue contribute to our understanding of the dialogic approach to feedback.

Dialogic feedback involves a two-way information exchange between students and educators where both parties build on the topic of the exchange to bridge the gap between students' current and expected performance or understanding. It occurs when an exchange stimulates students' engagement (McArthur & Huxham, 2013). Feedback engagement can be conceptualised as a measure that reflects the quantity and quality of students' participation in the feedback process. It occurs simultaneously on the cognitive, emotional and behavioural levels. Students who are engaged in feedback are active, eager to contribute, willing to expend their effort, motivated and inspired in feedback as well as in the teaching and learning processes. Engagement between students and educators should lead to a reconsideration of the piece of work or learning. If there is limited or no engagement and reconsideration from students, then the exchange cannot be considered dialogic (McArthur & Huxham, 2013).

Dialogic approaches to feedback. While definitions of feedback in the contemporary paradigm are still evolving, the characterisation that is gaining traction in the literature is that of Carless (2015) who has described feedback as a "dialogic process in which learners make sense of information from varied sources and use it to enhance the quality of their work and learning strategies" (p. 192). Dialogic feedback addresses issues associated

with the one-way, teacher-led transfer of information espoused in the traditional paradigm. Feedback is no longer considered a one-off, unilateral transmission of information; rather it is a recursive process with a focus on students and their interactions with information (Carless, 2015; Molloy & Boud, 2014). Educators are no longer seen as the knowledgeable-experts who dictate students' learning and the correction of work. In dialogic feedback, educators work in tandem with students as partners (Askew & Lodge, 2000). To this end, a key role of educators is to provide opportunities that encourage dialogue around learning (Carless, 2015; Nicol & Macfarlane- Dick, 2006). Dialogic feedback situates students as active constructors of information about their learning (Nicol, 2010); that is, students are seen as generators as well as contributors to feedback through their interaction with multiple sources including their educators (Molloy & Boud, 2014; Nicol, 2010).

Arguably, dialogic feedback has the potential to enhance students' feedback uptake (Sutton, 2009). One of the reasons why students' feedback uptake is impeded is their lack of understanding of the information conveyed by educators (Carless, 2015). Students have reported they do not understand educators' feedback as it lacks clarity (Nicol, 2010). Having said that, engagement between students and educators through dialogue opens opportunities for students to seek clarification and discuss misunderstandings or difficulties they face in carrying out tasks and in interpreting educators' feedback (Nicol & Macfarlane- Dick, 2006; Nicol, 2010). In turn, educators are able to coordinate the input needed to facilitate students to move forward such as clarifying the goal of the tasks and developing students' understanding of the feedback (Molloy & Boud, 2014; Nicol & Macfarlane- Dick, 2006).

Moreover, positioning students as co-constructors of feedback cultivates students' self-regulated learning (Carless, 2013a). On the one hand, opportunities for students to request specific information gives them some kind of control over their learning. In such instances, students need to firstly reflect on their work and/or understanding prior to engaging in dialogue with educators and others (Nicol, 2010). On the other hand, question prompts from

educators during dialogic interactions scaffold students' reflection and evaluation of progress, work and/or understanding (Ajjawi & Boud, 2018; Carless et al., 2011). As such, prompts that stimulate dialogue place students as interpreters and generators of feedback rather passive recipients of educators' input (Carless et al., 2011). What can be deduced from this is that dialogic approaches to feedback facilitate the development of students' self-regulation as there are opportunities for them to play an active role in appreciating and considering the similarities and differences in their current work and/or understanding with the expected standard or quality (Boud & Molloy, 2013b; Carless, 2016; Sutton, 2009). Moreover, feedback that positions educators as the main source of information does not support student agency and ownership of their learning. Feedback as telling only increases students' reliance on educators for information. If students are to be able to take responsibility for their learning and generate feedback for themselves, they need to take an active role in the feedback process. To this end, it is argued that dialogic feedback which encourages interactions between students and educators can support the development of students' self-regulation.

The Conceptual Framework and Model of Feedback Underpinning the Present Study

A conceptual framework can be defined as "the system of concepts, assumptions, expectations, beliefs, and theories that supports and informs…research" (Maxwell, 2013a, p. 223). It functions as a "tentative theory" (Maxwell, 2013b, p. 39) that informs researchers' thinking and understanding of a phenomenon as well as the relationships that exist within the phenomenon under investigation (Maxwell, 2012). Conceptual frameworks are useful in informing and strengthening the core aspects of a qualitative inquiry (Maxwell, 2013a; Punch, 2005). In particular, such frameworks facilitate the formulation of a clear and relevant research question(s); expound what researchers presume to know or already know about the phenomenon; and assist in the interpretation and presentation of findings in a convincing

manner (Maxwell, 2013a; Punch, 2005). From an educational perspective, a conceptual framework helps researchers build on understanding to inform and deconstruct practice (Bordage, 2009). Maxwell (2012) has identified four possible sources that can be adopted by researchers when constructing a conceptual framework: prior theory and research; experiential knowledge; pilot studies; and thought experiments i.e. speculations about how things might function in a particular phenomenon. It is however almost impossible for a conceptual framework or theory to explain or represent every single aspect of a phenomenon under study – it can only "reveal[s] some aspect of that reality [phenomenon under study], and distorts or conceals other aspects [of the phenomenon]" (Maxwell, 2012, p. 86).

Hattie and Timperley's (2007) conceptual framework outlines "a conceptual analysis of feedback and reviews the evidence related to its impact on learning and achievement" (p. 81). It identifies feedback as part of the instructional process; that is feedback occurs as a consequence of students' response to instruction. It can be provided by external agents such as educators, peers, and books and/or sought by students. Feedback per se does not however automatically enhance students' learning. Hattie and Timperley (2007) have argued that students may accept, modify or reject feedback. Moreover, the effectiveness of feedback is contingent on the level it addresses. As part of their framework, Hattie and Timperley present a model of feedback (see Figure 3.1) to demonstrate the properties and circumstances that influence its effectiveness.

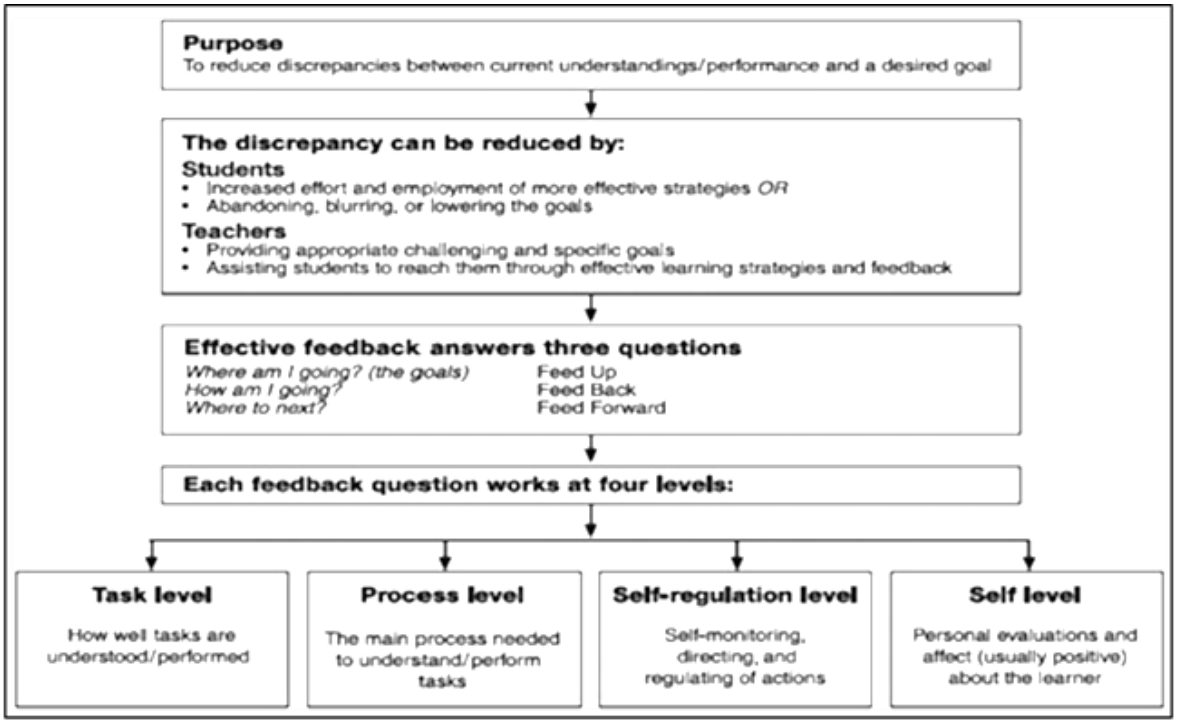


Figure 3.1 Hattie and Timperley's (2007) model of feedback

As indicated in Figure 3.1, Hattie and Timperley consider the overarching aim of feedback is to reduce or bridge the gap between students' current understanding or performance and the desired level of understanding or performance (the goal). In contrast to feedback in the traditional paradigm where the focus is on what educators do in the feedback process, the model recognises the actions that students and educators may take together to reduce or bridge the gap. Generally, there are two paths that students may take in response to feedback – one that is likely to be effective to reduce the gap and a less effective one. Strategies that are likely to be effective include increasing effort, undertaking alternative strategies, seeking supplementary information from other sources, and/or developing the capacity to give feedback to oneself (self-feedback). Students are more likely to undertake such strategies when they understand and have a good appreciation of the goals they aspire to achieve. On the other hand, students may choose less effective strategies such as lowering the difficulty level of goals, ignoring some goals or accepting a performance that is substandard. Meanwhile, the role of the educator is to provide opportunities for students to reach their goals. Educators may support students in doing so by assigning goals that are specific and

appropriately challenging, scaffolding students to develop effective learning strategies and by providing opportunities that encourage students' self-evaluation of work and performance in relation to the goals.

Hattie and Timperley (2007) proposed that effective feedback should contain sufficient information for students and educators to answer three feedback questions: Where am I/are you going? (What are the goals that I/you desire to achieve); How am I/are you going? (What progress am I/are you making towards the goals); and Where to next? (What activities do I/you need to undertake to make better progress). The first question highlights the importance of having clear goals when undertaking a learning task. Students and educators need to have a clear understanding of the standard of performance that is required. The relationship between goals and feedback is reciprocal – feedback is more effective when it is closely linked to goals.

If students are unaware of the goals they desire to achieve, feedback may not be effective in fulfilling its potential to close the gap between current performance or understanding and the desired goals. A lack of understanding of the goals may cause students to misunderstand feedback, misinterpret it, or in some cases, ignore the feedback. The question 'How are you/am I going' addresses students' on-going progress with reference to task achievement. Feedback that addresses this question may entail information about students' strengths and weaknesses in working towards specific goals and information about how they may rectify issues identified. Feedback is powerful when it encourages students to take further action – to move from their current state of performance or understanding to the desired level (the goal and standard). The answer to the last question 'Where to next' may require students to engage further in the current task or move on to a subsequent task with more goals to be achieved.

Feedback can lead to learning gains when it stimulates students to approach different ways of thinking, use alternative strategies, and perform self-regulatory skills and behaviour to

achieve goals that are more challenging. While the three feedback questions work together, they do not necessarily occur in a linear and sequential manner. These three questions are central to the process of providing and interpreting information at each of four levels.

As outlined in the model, feedback can engage students at four different levels. These four levels can be placed on a continuum from the least powerful in terms of enhancing learning to the most powerful. In order of effectiveness [least to most], these four levels of feedback are feedback about the self (FS), feedback about the task (FT), feedback about cognitive processing (FP) and feedback about self-regulation (FR).

Feedback about the self (FS). Feedback about the self (FS) is one of the common types used in classrooms. FS can be given in the form of positive or negative information that is directed at students' personal attributes. FS is exemplified by educators' praise or affirmation in the form of platitudes such as 'good job', 'you are improving' and 'great'. Often, FS is provided without being linked to the task, students' understanding of the task or self-regulation. Because of this, FS does not contain sufficient information to answer the three questions and it rarely leads to further engagement with the task. In cases where FS is combined with other levels of feedback, the information can dilute the effectiveness of the feedback. In other words, FS diverts students' attention away from deeper levels of thinking and processing. Given these reasons, Hattie and Timperley argue that FS is the least effective in terms of enhancing students' understanding or performance.

Feedback about the task (FT). Another common focus of feedback in educational settings is information about the task (FT). FT can be described as information about how well a task is understood or carried out. FT may assist students to identify the: 1) correctness of the task; 2) mistakes in the task and 3) information needed to correct mistakes (Hattie & Timperley, 2007). Because of this, FT is synonymous with corrective feedback or knowledge of results. FT is powerful when it addresses students' misunderstanding rather than

their lack of understanding. While FT can have a positive influence in developing students' surface knowledge and self-efficacy, too much FT can lead students to perform low-level strategies such as trial-and-error rather than engaging in deeper strategies and processes to attain goals.

Feedback about cognitive processing (FP). The third level, feedback about cognitive processing and understanding (FP) is characterised as information that addresses students' cognition i.e. comprehension, analysis, synthesis and critical reflection on task-related matters. In general, the focus of FP is to develop students' understanding beyond surface ideas and help them draw links between ideas and concepts underlying the task (Hattie & Yates, 2014; Jolly & Boud, 2013). FP can act as a cueing mechanism to initiate students to perform further information searches or undertake alternative strategies to reach task-related goals. FP can be made more effective when it is used to trigger students' self-correction strategies especially when they are encouraged to reflect, reassess and justify their understanding of a task and reasons for choosing a particular strategy.

Feedback about self-regulation (FR). Hattie and Timperley (2007) have argued that FR is the most powerful type of feedback. FR is powerful because it facilitates the development of students' autonomy in monitoring, directing and regulating actions to reach learning goals. This fits with the contemporary paradigm of feedback which highlights the need for students to take an agentic role in the feedback process. The effectiveness of FR is however mediated by six elements namely students' capacity to create internal feedback and to self-assess; their willingness to invest effort to seek and deal with feedback; the degree of confidence students have in relation to the correctness of work; students' attributions for success and/or failure and their level of proficiency in seeking help (Hattie & Timperley, 2007). For instance, students who have low self-regulation strategies tend to rely on educators to provide them with information, rather than generating it for themselves. Educators may

assist students to generate feedback by scaffolding them with prompts such, 'What did you learn from the activity?' or asking them about the type of feedback they would like to receive on a task (Ajjawi & Boud, 2017). Such strategies allow students to develop self-judgment about the quality of their work or performance rather than depending on educators for information.

To conclude, the model presented by Hattie and Timperley (2007) posits that the main purpose of feedback is "to reduce discrepancies between current understandings and performance and a goal" (Hattie & Timperley, 2007, p. 86). The feedback process requires educators and students to play complementary roles in the giving and receiving of information. One of the keys to effective feedback is that it should allow educators and students to interpret information with reference to the three feedback questions. Understanding the three questions increases students' engagement with goals, develops their appreciation of the discrepancy between current performance and goals and stimulates actions to reduce the discrepancy. Feedback can be directed to students as a person (FS), the task (FT), the cognitive processing related to the task (FP), and students' self-regulatory skills and behaviour (FR). These four levels of feedback however are not equally effective. Among these four, FR is the most powerful as it enhances students' understanding and processes beyond a particular learning task. FR allows students to understand how their understanding or performance compares to the goal and standard required, to utilise more effective strategies and processes to bring their task or performance closer to the goals and to develop competency in seeking, receiving and assessing feedback. Hattie and Timperley (2007) iterate that feedback is only effective when it builds on instruction. Without an instructional context, the effect of feedback in enhancing learning is limited.

Feedback in Higher Education

Students and educators in higher education are cognizant of the significance of feedback for learning (Dawson et al., 2018; Tang & Harrison, 2011). Studies have shown that educators and students may not however share the same experiences and/or perceptions concerning feedback (Carless, 2006; Mulliner & Tucker, 2017; Orsmond & Merry, 2011). This section draws attention to the understandings, perceptions, and experiences of students and educators in relation to feedback by addressing five themes apparent in the research literature: the purpose of feedback; understanding of feedback; feedback uptake; modes of feedback and emotional responses to feedback.

Purpose of Feedback

Research suggests students and educators are in agreement that the main purpose of feedback is improvement (Dawson et al., 2018; Mulliner & Tucker, 2017; Robinson, Pope, & Holyoak, 2013). Concerning this, both parties describe feedback as a means of highlighting mistakes, misunderstandings and strengths in students' work with reference for example to the technical aspects of writing as well as accuracy and clarity of information (Ferguson, 2011; Orsmond & Merry, 2011; Winstone et al., 2017). Students in the main recognise the formative function of feedback and consider that ideally feedback should be given on working drafts of work (Carless, 2006; Pokorny & Pickford, 2010). Further, students have claimed they act on feedback by revising and improving current work and applying information from previous assignments to similar new assignments (Carless, 2006; Higgins et al., 2002). In addition, they have reported feedback helps to improve their study and learning strategies especially when it includes details on how they may improve the work (Dawson et al., 2018; Lizzio & Wilson, 2008).

Nevertheless, evidence suggests there is an issue concerning the formative use of feedback, that is, the information may not be sufficient for improvement. Orrell (2006) for instance has suggested that although educators see feedback as a means to facilitate students' improvement of learning, self-evaluative capacity and engagement of ideas, the actual feedback may not function as intended. In relation to the latter, educators' actual feedback has been found to be defensive and summative in nature rather than facilitative for the purpose of improvement. The same outcome has been reported by Price et al. (2010) who stated that educators' feedback tends to be more focused on justifying marks awarded, thus limiting its use for the purpose of improvement. Another issue related to the improvement purpose of feedback has been reported by Dawson et al. (2018) who found that while both educators and students see feedback as a means of improving work and skills, they do not necessarily see it as a catalyst to promote self-monitoring and/or self-regulation.

Understanding of Feedback

A number of authors (e.g., Beaumont et al., 2011; Orsmond & Merry, 2011; Weaver, 2006) have highlighted how students struggle to understand educators' feedback. Price et al. (2010) have reported that even when educators have attempted to write detailed feedback, students have still had difficulties in identifying the message. Correspondingly, other studies have reported students have failed to identify the main issues highlighted in educators' written feedback and have chosen instead to focus on more pedantic and readily rectified issues (Orsmond & Merry, 2011). Meanwhile, Glover and Brown (2006) revealed while educators perceive their feedback as intelligible for students, the same perception is not necessarily shared by students – students perceive educators' written feedback as ambiguous. A review of the literature suggests students' lack of understanding of feedback is mediated by factors such as the legibility of educators' written feedback (Ferguson, 2011), the use of unfamiliar academic jargon (Bailey & Garner, 2010; Winstone et al., 2017), students' lack of familiarity

with university assessment systems (Beaumont et al., 2011) and students' lack of feedback literacy (Beaumont et al., 2011; Winstone et al., 2017). Of the aforementioned factors, the issue of feedback literacy is paramount considering the current learning and feedback landscape which promotes students as active agents of learning. Feedback literacy refers to students' "understanding of what feedback is and how it can be managed effectively; capacities and dispositions to make productive use of feedback; and appreciation of the roles of teachers and themselves in these processes" (Carless & Boud, 2018, p. 1316). Students with poorly developed feedback literacy lack knowledge about the purpose of feedback in learning as well as the roles of educators and their role in the feedback process. As a result, such students are more likely to be dependent on educators to give them specific guidance about where and how to make corrections (Beaumont et al., 2011; Winstone et al., 2017).

Feedback Uptake

A common theme in the literature is that educators are more likely to have positive beliefs about their feedback practice compared to students' perceptions of their experiences of such practice (Carless, 2006; Mulliner & Tucker, 2017). For example, educators feel the feedback conveyed to students is sufficiently detailed and comprehensible for the latter to take necessary actions (Carless, 2006; Mulliner & Tucker, 2017). They also have claimed to provide a great amount of feedback to students (Carless, 2006; Orrell, 2006). While educators are optimistic about their feedback delivery, it is noted in the literature that students face issues in utilising educators' feedback (Price et al., 2010; Robinson et al., 2013). As mentioned in the previous section, issues such as the clarity of educators' written comments (Ferguson, 2011), students' unfamiliarity with the assessment system in higher education (Beaumont et al., 2011) and students' poor feedback literacy (Beaumont et al., 2011; Winstone et al., 2017) have an impact on students' uptake of feedback.

A deeper look at the literature suggests students' inability to act on feedback is engendered by their lack of understanding about the main purpose of feedback (MacLellan, 2001; Price et al., 2010). MacLellan (2001) has highlighted how students' experiences and perceptions of feedback are not always positive. They have thought the information is not necessarily always helpful for learning and they do not see it as a catalyst to promote discussions around learning. Other evidence has indicated students feel disappointed when educators' feedback is not as directive as what they have been used to receiving in schools. From students' perspectives, the lack of direct educator guidance implies educators' lack of care towards them (Price et al., 2010). Drawing on this evidence, it can be deduced that students in higher education want educators to provide direct guidance. While it true students require direct guidance to some extent, too much guidance may well result in students to becoming dependent on educators for information (Evans, 2013) – this works against the contemporary notion that feedback should promote and facilitate students' self-monitoring. However, on a positive note, Evans (2013) has noted that students' desire for explicit guidance could indicate their interest to understand 'the rules of the game' of higher education learning – the first step to taking on an active role in their learning.

Contrary to educators' beliefs that students pay more attention to marks and grades, students have reported they read and value the feedback provided regardless of the marks and grades received (Robinson et al., 2013). Although students acknowledge the latter are important, they want to engage and utilise educators' feedback for future improvement (Carless, 2006). In fact, research evidence suggests that students see feedback that is limited to justifications of marks as not particularly valuable as it does not contain sufficient information about the strengths and/or weaknesses of their work, therefore limiting its usefulness for improvement (Ferguson, 2011; Price et al., 2010). Students' uptake is exacerbated when educators assume that students possess the knowledge and skills to act on feedback (Orsmond & Merry, 2011). Evidence from studies has indicated otherwise – students report receiving

limited or no guidance on how to utilise feedback for their learning and/or the improvement of their work (Burke, 2009; Weaver, 2006; Winstone et al., 2017).

It is interesting to note that the content of the feedback itself also influences students' uptake (Winstone et al., 2017). Students often complain the feedback they receive lacks detail regarding the issue(s) identified (Price et al., 2010; Robinson et al., 2013; Weaver, 2006). Most of the time feedback does not contain, from a student perspective, sufficient advice or suggestions about how to make improvements (Burke, 2009; Carless, 2006; Price et al., 2010). Frustration has been reported when educators put more focus on surface issues such as writing conventions and technical matters rather than concerns about content, ideas and knowledge related to the work (Carless, 2006; Dowden, Pittaway, Yost, & McCarthy, 2013; Ferguson, 2011). Glover and Brown (2006), in a three-year study involving staff and students at two UK universities found a great deal of feedback from educators was focused on correcting students' grammatical errors. While educators considered their feedback helpful for students, the latter expressed that corrective feedback was unhelpful because it only indicated the location of mistakes rather than information about how they might effect improvement. Furthermore, vagueness in educators' written feedback has further limited students' utilisation of the information they receive (Higgins et al., 2002; Winstone et al., 2017).

Finally, the literature indicates that students' uptake relates to the timeliness of feedback. Students desire feedback to be on-going; that it is given before and leading up to the submission of their final draft of assignments (Ferguson, 2011; Pokorny & Pickford, 2010; Poulos & Mahony, 2008). To some students, feedback that arrives late or after submission is no longer useful to help them improve as they have already moved on to the next task (Ferguson, 2011; Pokorny & Pickford, 2010). In addition, although students prefer feedback to be returned early, for instance two weeks after submission, they do not mind if the feedback is delayed as long as it provides them with information they can use to improve their work and/or learning (Ferguson, 2011; Poulos & Mahony, 2008).

Modes of Feedback

Research suggests feedback in higher education is commonly provided to students through written comments on work (Jonsson, 2012; Nicol, 2010). However, as argued by Jonsson (2012), written comments by themselves are not sufficient to support students' learning and therefore need to be supplemented by assessment criteria and/or dialogic interchanges between the educator and student(s). The issue of written feedback not conveying information about progress and achievement adequately has been expressed by students (Lizzio & Wilson, 2008). Correspondingly, educators have made reference to a lack of clarity in written feedback as a reason for students not taking action (Bailey & Garner, 2010). Students have asked that written feedback is supported with oral feedback (Lizzio & Wilson, 2008; Pokorny & Pickford, 2010; Poulos & Mahony, 2008). They are of the view that oral feedback provides them with opportunities to seek clarification and ask questions of educators. They are able to get further comments about their performance in learning through oral feedback (Pokorny & Pickford, 2010).

Nevertheless, as observed in the research literature, there is a problem when it comes to opportunities for student-educator engagement in oral feedback. Although students prefer to be provided with oral feedback alongside written feedback, in reality, students profess they do not approach educators for oral feedback even when educators encourage them to do so (Price et al., 2010; Winstone et al., 2017). Some only meet with their educator when they have problems in understanding written feedback (Burke, 2009), while others report being turned down by educators when they request a face-to-face consultation (Price et al., 2010). The relationship between students and educators also influences students' willingness to seek oral feedback. Students have indicated they feel comfortable in approaching educators if the latter are warm and approachable and they avoid doing so if educators appear unfriendly and rigid (Dowden et al., 2013; Pokorny & Pickford, 2010).

Emotional Responses to Feedback

As outlined in the literature, feedback has an influence on students' emotions (Carless, 2006; Dawson et al., 2018; Ferguson, 2011). Students have revealed that positive feedback increases motivation and confidence to pursue learning (Poulos & Mahony, 2008; Weaver, 2006). At the other end of the continuum, there have been instances where students have reported feeling discouraged when they receive negative feedback and some have indicated that critical feedback feels like a judgment about them as a person rather than their work (Dawson et al., 2018; Ferguson, 2011; Weaver, 2006). As a consequence, students have suggested educators need to be more considerate in the tone they adopt when giving constructive or critical feedback (Lizzio & Wilson, 2008) and they need to provide a balance between positive and critical feedback (Ferguson, 2011; Pitts, 2005). While educators have reportedly incorporated praise in their feedback (Orsmond & Merry, 2011), it is not always received positively by students. The literature indicates unless students know why they are praised, it is of little use (Glover & Brown, 2006; Walker, 2013). Students also find it confusing when they receive mixed messages such as positive written comments alongside a poor grade (Mulliner & Tucker, 2017). Along similar lines, an analysis of artefacts with educators' feedback has revealed the way educators convey positive feedback is often ambiguous (Weaver, 2006).

The Research Question

It seems that educators spend a lot of time and effort providing feedback to students with the aim of improving their learning. Unfortunately, as demonstrated through a review of current research findings, feedback has not always been effective in supporting students' learning. It is often perceived as ambiguous, lacking in detail to facilitate improvement of work and encourage progress, and it tends to focus on the more superficial aspects of students'

work rather than deeper issues of learning (Dowden et al., 2013; Glover & Brown, 2006). Arguably, the impact of feedback on students' learning lies in the way it is utilised, and not so much on how much feedback is given and the way it is provided (Boud & Molloy, 2013a; Hattie & Gan, 2011). Boud and Molloy (2013b) have suggested that a great deal of literature in higher and professional education places emphasis on improving educators' 'telling' techniques of feedback while studies that take into account how feedback is received, responded and acted upon are to date, scarce (Ajjawi & Boud, 2017; Steen-Utheim & Wittek, 2017).

With reference to the educational landscape in Malaysia, studies focusing on feedback within the higher education are limited. In the main, Malaysian researchers such as Maarof, Yamat, and Li (2011), Othman and Mohamad (2009), Razali and Jupri (2014), and Soh and Hong-Fa (2014) have investigated how educators' and peer feedback can be used to improve university students' English writing skills. In addition, a study by Perera, Lee, Win, Perera, and Wijesuriya (2008) explored the expectations of staff and students about formative feedback used in medical education. Correspondingly, Perera et al. (2008) have highlighted a need for Malaysian university educators to have formal training sessions to improve their feedback literacy. As indicated in Chapter One, feedback has not been a major theme in research studies carried out within the context of undergraduate research projects in Malaysia. Thus, the present study aimed to explore students' and supervisors' understandings and experiences about feedback in the context of students' final year research projects in one Malaysian university. The central research question underpinning the current study was:

> How do undergraduate students and their supervisors understand and experience feedback within the context of supervision?

This question was investigated in relation to the (a) roles and responsibilities of students and supervisors; (b) sources of feedback; (c) modes of feedback; and (d) the purpose of feedback.

Summary of the Chapter

The overarching purpose of feedback is to enhance students' understanding, improve the quality of work and to facilitate self-regulatory skills, attitudes and behaviour. The contemporary notion of feedback positions it as a dialogic process whereby students co-construct understanding and learning with others. This departs from the more traditional, teacher-centric approach to feedback that is often associated with students' passive role in feedback and learning. In order to have a positive impact in learning, both students and educators should play active, complementary roles in constructing and interpreting feedback in relation to where the student is going, how the student is going and where to next. The following chapter describes the research methodology and data analysis procedures employed in the present study.

CHAPTER FOUR: METHODOLOGY AND METHODS

This chapter presents the research process and procedures that were undertaken in the present study. These are organised under six major sections: the research methodology; sampling and selection; ethical considerations; data collection methods; data analysis; and trustworthiness of the study. The chapter opens with an in-depth explanation and justification of the research methodology that underpins this study. In the first section, the research questions that motivated the study are outlined, followed by a rationale for and the description of the paradigm and study design. The second section explains the processes carried out for the selection of the site and participants. This is followed by a discussion of the ethical issues involved in this study and how these were addressed. Next, the data collection methods section outlines each of the methods employed and explains how they were executed. Subsequently, specific details regarding the analysis of data are outlined. The chapter closes with details about how the trustworthiness of the study was established.

The Research Methodology

Framework for Inquiry

In general, research seeks to provide answers to a problem or to investigate a particular phenomenon with the aim of improving our understanding about the problem or phenomenon. In order to do this, established procedures need to be carried out in a systematic manner. Thus, research can be defined as "a systematic process of gathering, interpreting, and reporting information" (McMillan, 2008, p. 4). In the field of education, empirical research is conducted to serve one of three purposes: adding new knowledge to the existing body of knowledge and literature; improving educational practice; and informing policymakers about current debates (Creswell, 2012). In this regard, educational research should be aimed at providing information to those who are directly involved in the educational context such as educational

practitioners and policymakers so that appropriate actions and decisions can be made to improve the quality of education (Bassey, 1999).

Central to research is choosing an appropriate research methodology. The methodology of a study can be conceptualised as the justifications about how the researcher carries out the research methods (Johnson & Christensen, 2008). Selection of an appropriate methodology should be based on the nature of the research question(s) and the practicality of the methodology in relation to the research setting (McMillan, 2008). From another point of view, Hatch (2002) posited that an understanding of different research paradigms should be the starting point of research. Such understanding helps researchers produce a piece of research that is consistent and coherent and helps them select a methodology that is relevant to the study. Taking both schools of thought into consideration, the ontological and epistemological beliefs together with the research methodology were used to guide the research process in the present study.

Research Questions

The present study explored supervision and feedback within the context of independent research projects (FYP) in a public university in Malaysia. In exploring this, two major areas were addressed: students' and supervisors' understanding and experiences of the supervision process and their understanding and experiences with feedback within supervision. More specifically, this study addressed the following overarching questions:

1. How do undergraduate students and their supervisors understand and experience supervision of the undergraduate final year project?
2. How do undergraduate students and their supervisors understand and experience feedback within the supervisory context?

Research Paradigms

A research paradigm is defined as "a network of coherent ideas about the nature of the world and the functions of researchers which, adhered to by a group of researcher, conditions the patterns of their thinking and underpins their research actions" (Bassey, 1999, p. 42). Positivism, critical theory and interpretivism are generally recognised as the three main paradigms within which research is carried out (Merriam, 1998). Each paradigm has different views about the nature of reality (ontology), how knowledge is constructed and the position of the researcher (epistemology). Table 4.1 summarises the three research paradigms adapted from the work of Glesne (2011) with reference to their ontological and epistemological underpinnings:

Table 4.1
Research Paradigms

Paradigm	Ontology (nature of reality)	Epistemology (how knowledge is constructed; the position of the researcher in relation to the research)
Positivism	Reality consists of stable components that can be studied using theories and quantitative scientific methods.	Knowledge is constant, objective, and quantifiable thus making the generalisability of findings attainable; The researcher is presumed to be independent of the research and is likely to be unbiased.
Critical Theory	Reality is constructed through social and political elements and therefore it is imbalanced; This imbalance results in some groups of people being oppressed.	Knowledge is subjective and influenced by social and political climates; The researcher is closely involved in the research context and participants, and eventually becomes 'the voice' for participants.
Interpretivism	Reality is subjective, multiple, and is constructed by the people who experience it; Reality is unique to certain groups of people.	Knowledge is subjective and thus research findings are not necessarily generalizable to other contexts; The researcher works alongside participants to construct understandings and meanings.

Adapted from Glesne (2011)

Positivism views reality as a matter that is fixed, logical, objective and independent of the researcher. Positivists perceive that knowledge can be discovered through fixed theories and quantifiable scientific methods (Hatch, 2002; McMillan, 2008; Merriam, 1998), thus data are generally collected through quantitative methods such as experiments and surveys. Positivist researchers separate themselves from their participants and the phenomenon they are studying. To them, data are quantifiable and unchangeable. This makes interpretations of data in the positivist paradigm supposedly free from the researcher's bias because data are strictly limited to what has been observed or measured (Krauss, 2005).

The critical research paradigm views reality as a structure that is imbalanced in terms of politics and social structure. Researchers within this paradigm seek empowerment for groups marginalised by race, gender or social class through critique with a view to reveal ways how certain groups are dominant or oppressed than the other (Hatch, 2002; Merriam, 1998). The methods of data collection used by critical researchers are shared by interpretive researchers. Researchers within the interpretive paradigm view reality as subjective and open to different interpretations. As such, interpretive researchers use qualitative methods such as interviews and observations to gain rich, thick, descriptive data (Bassey, 1999; Usher, 1996). Interpretive researchers are often immersed in the research setting and have direct engagement with participants. Consequently, it is acknowledged that research findings are influenced by the subjective interpretations of those involved (Bassey, 1999).

An interpretive paradigm was deemed the most suitable for this present study. First and foremost, an interpretive inquiry allowed the researcher to understand and discover the meaning behind participants' actions or behaviours (Carr & Kemmis, 2004). As noted by Usher (1996), the intentions of human actions can be interpreted according to context, beliefs, practices and cultural backgrounds. For instance, the experiences and interpretations of supervisors and students in the present study might be influenced by their individual practices and beliefs, disciplinary areas, first language and cultural background. Thus, the notion that

human actions can be explained through factual and one-size-fits-all statements as proposed by the positivist paradigm was rejected.

Secondly, through the exploration of supervisors' and students' points of view regarding supervision and the use of feedback in supervision, the researcher was able to have a clearer picture about how the supervisory process and feedback were experienced and interpreted by supervisors and their students. Through this, the experiences and understandings regarding the context that was studied were presented through different voices (Stavraki, 2014) and different lenses – the participants' and the researcher's. This is in line with the interpretive paradigm which postulates that the researcher works alongside the participants to construct understandings and meanings regarding a phenomenon under study (Hatch, 2002).

Qualitative Research

There are two major paths that can be taken when conducting research – quantitative or qualitative. These two paths however are not considered polar opposites as a single study might take both paths with one being more prominent than the other (Creswell, 2012). It is quite tricky to provide a fixed definition for qualitative research as looking into Denzin and Lincoln's (2008) illustration of the history of qualitative research reveals that it is divided into at least eight historical periods. Qualitative research in the traditional period i.e. the earliest period was closely aligned to the positivist paradigm. Today, qualitative research is synonymous with interpretive forms of inquiry (Creswell, 2007; Denzin & Lincoln, 2008). As a consequence, qualitative research can be conceptualised as an inquiry which takes place in natural settings that involves the researcher and participants co-constructing meanings (Denzin & Lincoln, 2008; Patton, 2014). To achieve this, qualitative methods such as interviews, observations and artefacts are used to gain rich, thick, descriptive data (Bassey, 1999; Usher, 1996).

The present study used an interpretive qualitative methodology which enabled the researcher to access rich, descriptive data from participants to form meanings and understandings about supervision and feedback within the supervision experience. This form of inquiry was deemed as most suitable as the experiences and interpretations of participants in the present study would not be able to be captured in a deep way using quantitative methods (Soltis, 1984). Personal and close interaction with participants through qualitative methods such as semi-structured interviews and observations that were carried out in situ were more appropriate than the use of a questionnaire or survey as they allowed the researcher to get alongside participants and have a better understanding of their actions and thoughts (Krauss, 2005).

Qualitative research approaches used within the interpretive paradigm in education include ethnography, phenomenology, grounded theory and case study. The present study was carried out using a case study design. Case study involves an in-depth investigation of a bounded system that can be in the form of a programme, an event or a group of individuals studied over a period of time (McMillan & Schumacher, 2010). Case study is distinct from other qualitative approaches as it is limited to a particular instance which is unique in terms of its setting, time and/or participants.

The Case Study

Bassey (1999) has defined case study as a "study of singularity conducted in depth in natural settings" (p. 47). A study of singularity means that a case study is conducted in relation to a specific setting, group of people, event or phenomena. It provides a rich and comprehensive view because it probes into the 'how' and 'why' behind people's activities (Bassey, 1999). A distinct feature of case study research is its uniqueness and specificity within a bounded system (Merriam & Tisdell, 2009; Stake, 2000). The case of relevance to the present study was the phenomena of supervision and feedback within institutional-based

research. It was bounded by the focus of the study (students' and supervisors' understandings and experiences about supervision and feedback in the FYP); by time (March – December 2016); by place (a public university in Malaysia) and by the level of students (undergraduate bachelor's degree). Stake (2000) has identified three typologies of case study – intrinsic, instrumental and collective. Intrinsic case studies are carried out to satisfy the inherent interest of the researcher towards a particular phenomenon rather than achieving generalisation of findings or extending theories; instrumental case studies are carried out to provide detailed exploration into a research problem; and collective case studies involve a large number of individual cases that are studied together to provide a better understanding of a phenomenon or for generating theory. The present study is categorised as an instrumental case study (Stake, 2000) as it provided insights into the complexities of supervision and feedback.

The use of a case study enabled the researcher to gather a rich amount of qualitative data that took into account the perspectives of students and supervisors through a range of methods such as interviews, observations and gathering of artefacts. By exploring the case through the lenses of students and supervisors, the researcher was able to capture the multiples realities of those involved. Furthermore, thick descriptions that arose from data gathering, analysis and interpretation allowed the researcher to provide a holistic account of the phenomenon. Such descriptions provided rich, robust descriptive accounts of participants, their experiences, actions, feelings and understandings in their own words (Denzin, 1970; Patton, 2014). In addition, a case study research was chosen because of its heuristic value (Patton, 2014). In this instance, the case study provided insights into the nature of the supervisory experience through the lived experiences of students and supervisors especially regarding the use of feedback to develop students' independence and improve students' work during production. The case study was also particularistic as it focused on how supervisors and students understood and experienced supervision and feedback during the FYP.

As mentioned earlier, detailed human experiences cannot be simply extracted and interpreted using quantitative experiments (Flyvbjerg, 2006; Stake, 1978). As a corollary, a qualitative case study involves a specific and detailed exploration which captures the lived experiences of the participants, in this instance, the supervisory and feedback experiences (Cohen, Manion, & Morrison, 2011; Flyvbjerg, 2006; Stake, 1978). The proximity of the researcher to participants, together with rich descriptions and illustrations of the case enabled the researcher to present the case in the most natural way. To present real-life events and experiences of the participants or the situation is an important aspect of case study research (Cohen et al., 2011). The resulting interpretation and description in this thesis will give readers a sense of 'being there' and help with their understanding of the case.

Despite its ability to provide thick and robust descriptions of a case or phenomenon, case study research has been subjected to some criticisms. A common issue is the lack of generalisability of findings (McMillan, 2008; Stake, 1978). Because a case study is focused on specific individuals or situations, concerns have been raised about whether findings can be applied to other similar contexts or settings. Rejecting such concerns, Stake (1978) has argued that the specificity and detailed understandings gained from a case study are a form of generalisation. This kind of knowledge, referred to as naturalistic generalisation helps people form expectations about other contexts or settings. As a result, the onus is on the researcher to provide thick and rich information about the context, research process, the evidence and inferences about the case so readers can generalise them to their own or similar settings (Merriam & Tisdell, 2009). To this end, rich descriptions of the context of the present case such as the context of the site, the participants and also their teaching-learning practices that are relevant to the key issues of the study were provided in this thesis to provide readers with "vicarious experiences" (Stake, 1995, p. 63).

A further concern about interpretive case study research is its tendency to reflect the subjective biases of the researcher (Flyvbjerg, 2006). This is because the interpretation of data

is heavily influenced by the researcher's conscious or unconscious 'biases'. However, it can be argued that all research and data are value-laden. Hammersley and Atkinson (1983) have contended that it is very unlikely for any research to be free from the researcher's judgement and influence, as aptly explained by Denzin (1970):

> The scientist, like all humans, is forever conversing with himself, checking out plans of action, experimenting with new formulations, combining contradictory events, and judging future against what has succeeded and failed in the past. It is in this arena of private conversations with the self that new ideas appear, propositions are constructed, and predictions take place (p. 61).

Concern has also been raised about the proximity of the researcher to the participants – a position that might influence the behaviour of participants and 'contaminate' data (Merriam & Tisdell, 2009). However, this claim is rejected by Flyvbjerg (2006) who has argued that direct involvement of the researcher with the context being studied will provide a more comprehensive understanding of the phenomenon. In fact, this should not be an issue as it has been acknowledged that a qualitative researcher is the research instrument (Hammersley & Atkinson, 1983; Merriam, 1998). With reference to the present study, the researcher took into consideration the reflexive analysis and interpretation of data. For this reason, the researcher was mindful that "data are not taken at face value, but treated as a field of inferences in which hypothetical patterns can be identified and their validity tested out" (Hammersley & Atkinson, 1983, p. 18).

Sampling and Selection

Unlike quantitative research which usually aims for large numbers of participants with the aim of generalising findings to other populations, qualitative researchers are more interested in information-rich cases that give in-depth details and meanings about specific

phenomena. Thus, careful consideration of specific criteria that the participants should possess as well as the boundaries of the case need to be addressed when deciding a suitable sampling method (Johnson & Christensen, 2008). In order to meet the purpose of the present study, a purposeful sampling strategy was deemed the most suitable. Purposeful sampling is defined as "strategically selecting information-rich cases to study, cases that by their nature and substance will illuminate the inquiry question being investigated" (Patton, 2014, p. 265). This means the study site, disciplines and participants for this study were chosen intentionally with a view to providing a wealth of data and a comprehensive exploration of the case (Creswell, 2012; Patton, 2014) – supervision and feedback within institutional-based research projects. Apart from that, costs and constraints such as the accessibility of the participants and the location of the sites were also carefully considered as part of the selection process.

Selection of Site

The university that was chosen for the study was a public university in Malaysia, Universiti Gemilang (pseudonym). Following a purposeful sampling strategy, this site was chosen because it addressed the purpose of this study with reference to three criteria: first, as one of the largest institutions of higher learning in Malaysia in terms of its size and population, it offered a sufficient pool of possible participants; second, bachelor's degree students were the largest group at this university and students who were enrolled in bachelor's degree programmes were required to complete an independent final year project under supervision and third, this university offered a wide range of programmes across a number of disciplines thus enabled the researcher to access participants from different programmes.

Universiti Gemilang has twelve branch campuses, scattered throughout Malaysia. It was decided to select only two campuses for the present study so that the researcher could easily move between the two locations and therefore have better access to the participants. In order to select the two campuses, the researcher identified six of the twelve campuses that

offered a wide range of bachelor's degree programmes and were easily accessible in terms of their geographical locations. Although only two campuses were selected in the present study, the researcher listed the six campuses as a backup in case there were problems in getting in touch with those campuses and/or participants. The researcher wrote the names of the six campuses on a piece of paper and randomly drew out the names and listed them in the order of their selection i.e. Campus 1, Campus 2, Campus 3, Campus 4, Campus 5 and Campus 6. The Deputy Vice-Chancellor of Academic Affairs of UG was approached to request for permission to conduct the study at the university. To that end, the researcher provided an Information Letter and Consent Form (see Appendix A) to the Deputy Vice-Chancellor of Academic Affairs so he/she could be fully conversant with the study and provide informed consent for the researcher to access the different sites (campuses) and approach the programme coordinators, supervisors and students. After informed consent was received from the Deputy Vice-Chancellor of Academic Affairs, the researcher then approached the first two campuses to see if they were interested in providing access for the study. The researcher only managed to get a response from Campus 1, not Campus 2. Therefore, the researcher moved onto contacting Campus 3, gaining access and the assistance needed. The academic departments of Campus 1 and Campus 3 provided contact information for the programme coordinators of the bachelor's degree programmes and names of other personnel who could be of potential assistance.

Selection of Programmes

The programmes involved in the study were selected using a purposeful random sampling method. First, the researcher listed the bachelor's degree programmes offered in the two campuses according to the four clusters of disciplines: hard-pure, hard-applied, soft-pure and soft-applied (Becher, 1994; Biglan, 1973). Secondly, a number was assigned to each programme under the four disciplinary clusters. Then, the researcher put the numbers in a hat

and drew out three programmes from each disciplinary cluster. The researcher decided to have three programmes in each cluster in case difficulties were encountered in recruiting volunteers from the first discipline listed. The rationale for using this purposeful random sampling technique was to reduce bias in the selection of programmes and to enhance the trustworthiness in the selection process (Patton, 2014). Table 4.2 shows the list of programmes that were drawn out using the purposeful random sampling technique with reference to the disciplinary cluster and site.

Table 4.2
List of Programmes

Disciplinary cluster	Programme	Campus
Hard-pure	**Chemistry**	**Campus 1**
	Physics	Campus 3
	Biology	Campus 1
Hard-applied	Agrotechnology	Campus 1
	Electrical Engineering	Campus 3
	Mathematics	**Campus 1**
Soft-pure	Language	Campus 1
	Culinary Arts	**Campus 3**
	Arts	Campus 3
Soft-applied	**Marketing**	**Campus 1**
	Management	Campus 1
	Human Resource	Campus 1

The order of the programmes in each disciplinary cluster listed in Table 4.2 was based on the sequence of their appearance during the drawing process. After preparing the list, the researcher contacted the coordinators of the first programmes listed in each disciplinary cluster and provided an Information Letter and Consent Form (see Appendix B) to seek their permission and informed consent to access students and supervisors in the respective programmes. When a response was not forthcoming from a coordinator or access was denied, the researcher moved on to contact the coordinator of the next programme in the list until one programme for each disciplinary cluster was secured. At the end of this process, the researcher managed to secure consent to access participants from the coordinators in the chemistry, mathematics and marketing programmes at Campus 1 and the culinary arts programme at

Campus 3 respectively. The programmes that are highlighted in bold in Table 4.2 are those that were involved in the present study. The fact that the present study was only focused on one programme from each cluster of discipline was recognised as a possible limitation of the present study. The findings of this study were therefore of particular relevance to the beliefs, practices, understandings and experiences of students and supervisors in the four programmes involved.

Selection of Participants

One volunteer student-supervisor pair from each of the chosen programmes was involved in this study. This means the number of participants involved altogether was four undergraduate students who were undertaking their final year project and their four supervisors. After being granted consent to access students and supervisors by the coordinators of the programmes involved, the researcher requested the coordinators to assist with the recruitment of the student volunteers through an advertisement (see Appendix C). However, due to the fact that students in some programmes doing their practical training off-campus, the researcher was not able to get student volunteers using the advertisement.

The researcher then asked the coordinators to provide the names and contact of lecturers supervising final year project students for the current semester (March 2016) so they could be contacted to ask if they were interested in participating in the study. At this point, the researcher also provided the Participant Information Sheet and Consent Form (see Appendix D) to the supervisors. These documents provided detailed information about the purpose of the study and what was involved for those who volunteered to participate. Out of 16 supervisors contacted, seven indicated a willingness to participate. After meeting each of the supervisors, all agreed to participate in the study – two from chemistry, two from mathematics, one from culinary arts, and two from marketing. The researcher asked each supervisor to provide the names and contact of students they would be supervising in the March 2016 semester so that

the researcher could invite them to participate. The supervisors were informed that they would only be selected to participate if one of their students also volunteered to participate. The researcher then contacted via email and telephone the 19 students under the supervision of the seven supervisors. The rationale for getting agreement to participate from student participants before the supervisors was because it was acknowledged that supervision is a power-imbalanced relationship where the supervisor is usually the more powerful figure (Grant & Graham, 1999) thus there was a concern that if the researcher sought agreement to participate from the supervisors first, it would lead to two problems: firstly, the supervisor as the more powerful figure might coerce students into participating in this study, and secondly, the supervisor might select students based on their academic performance. Therefore, by asking the student volunteers first, these problems could be minimised.

Out of the 19 students contacted, eight responded. The researcher then met each student personally and asked them whether they were interested in participating in the study. At this point, the researcher was fully cognisant that the students might feel obliged to participate as the FYP was an important course for them to complete for their bachelor's degrees. To help students address this dilemma, the researcher explained and discussed the Participant Information Sheet and Consent Form (see Appendix E) with each person in their mother tongue. Each student was informed that they should not feel obliged to participate and that their participation or non-participation would not have any effect on the grades for their FYP. In addition, to make the students feel more secure about sharing their thoughts and experiences about supervision and feedback, the researcher explained to each student that his/her insights and experiences would be valuable to help other people understand and learn about feedback and supervision. It was really crucial to make the potential participants feel respected and important – an instance referred to as the "reciprocity model of gaining entry" (Patton, 2014, p. 396) because this would affect how they would behave towards the researcher, not just in the entry stage but also throughout the data collection period.

Out of the eight students, six agreed to participate in the study. In order to have a more balanced representation of participants across the disciplines, only four, one for each discipline was selected. The selection was made on each student's availability and his/her location to the study sites and their willingness to maintain contact with the researcher throughout the data collection period as some were doing a practicum off-campus. After resolving the student participant issue, the researcher then contacted the respective supervisors again, met them, and explained to each about his/her involvement in the study. Those supervisors and students who were not selected were contacted and thanked for their interest. Supervisors and students who willed to involve in the study provided formal consent to participate through the signing of the consent form. Table 4.3 provides information about the selected participants with reference to the disciplinary cluster, academic programmes, role, pseudonym and site:

Table 4.3
Information about the Participants

Disciplinary Cluster	Programme	Role	Pseudonym (gender)	Study site
Hard-pure	Chemistry	Supervisor (Sup) Student (Stu)	Irfan-Sup (male) Lutfi-Stu (male)	Campus 1
Hard-applied	Mathematics	Supervisor (Sup) Student (Stu)	Wardah-Sup (female) Afiza-Stu (female)	Campus 1
Soft-pure	Culinary Arts	Supervisor (Sup) Student (Stu)	Natrah-Sup (female) Nuha-Stu (female)	Campus 3
Soft-applied	Marketing	Supervisor (Sup) Student (Stu)	Sasha-Sup (female) Haikal-Stu (male)	Campus 1

It is argued that the quality of a qualitative study is not directly influenced by the number of participants. In a qualitative study, an appropriate number of participants simply means "one that adequately answers the research questions" (Marshall, 1996, p. 523). It is imperative to understand that the essence of a good qualitative study lies in the ability of the researcher to present the context in a rich and deep way so that readers can make judgments to generalise or apply the findings to their own or similar settings (Hatch, 2002; Merriam & Tisdell, 2009). In a similar vein, Myers (2000) has postulated that the sample size as well as the generalisability play little importance in qualitative research as a small qualitative study is

powerful as it can elic it in-depth information of a specific phenomenon, which tells personal accounts of the participants through their own voice, thus making the findings engaging to the relevant audience or readers. In the present study, the small sample size enabled the researcher to have better control of the data collection process, closer engagement with the participants and a more nuanced and in-depth understanding of their perceptions and experiences regarding feedback and supervision. Also, unlike quantitative research which positions the researcher as a separate, objective entity, a qualitative researcher is an important part of the research (Marshall, 1996) and is, as mentioned earlier, a research tool (Hammersley & Atkinson, 1983). With reference to the present study, the researcher realised that the responsibility for making the case appealing (despite the small number of participants) to the readers and trustworthy lied on her. At the same time, the researcher was cognizant that although thick and rich descriptions of the contexts and participants are integral parts of qualitative research especially case study, too much description that has little relevance to the research aim and questions can be futile (Hamilton & Corbett-Whittier, 2013). In the present study, part of the description and interpretation of the case was guided by the research questions as well as concepts and themes from the literature pertinent to supervision and feedback. This was to avoid the reporting of irrelevant information that could detract readers from the main research issue.

Ethical Considerations

Prior to conducting the fieldwork, ethics approval to conduct the research was sought from The University of Auckland's Human Participants Ethics Committee (reference number: 016216). Further, to ensure the study followed ethical standards, the Guiding Principles and Guidelines for Conduction Research with Human Participants established by The University of Auckland's Human Participants Ethics Committee were adhered to. The following principles were important considerations: protection of participants' privacy and confidentiality and the minimisation of harm and risk (Flick, 2009).

Anonymity and Confidentiality

Anonymity. The participants were assured that pseudonyms would be used for the university, study sites, supervisors and students in all publications. The participants were also assured that access to the data collected such as interview recordings, audio recordings of observations and other personal documents would be restricted to the researcher and the researcher's supervisors.

Confidentiality. This involved the researcher giving an assurance that the names of participants would not be divulged to anyone. However, because student-supervisor pairs were involved in this study, each knew the other was participating and it was possible that within the degree programmes or course, supervisors and students might disclose their participation to others. While supervisors and students were warned about this possibility, they were asked to keep confidential the names of those participating in the study.

The Minimisation of Harm and Risk

Busher (2002) has noted that participating in research can be a source of psychological stress and anxiety to participants. This study was carried out throughout each student's final year research project, thus it was anticipated that for some participants this might cause stress and anxiety. To minimise harm and risk for students, an assurance was sought from supervisors to the effect that any student's decision to participate (or not) would not affect their grades. Although excerpts from students' project paper with feedback were published in this study, this did not affect grades as by the time of publication, the students had their final grade assigned and had graduated. After the drafts of the findings were completed, the researcher contacted the participants to give them an opportunity to check whether or not they and their programmes were readily identifiable and to validate the researcher's interpretations. The latter can enhance the credibility of findings (Patton, 2014). In addition, students and

supervisors were informed that this study would not be used to judge their competency and English language proficiency.

Data Collection Methods

Creswell (2012) identified four types of data typical of qualitative methods: interviews and questionnaire, observations, documents and audiovisual materials. Data for the present study were collected using: 1) individual, audio-taped, semi-structured interviews, 2) observations and field notes and 3) collection of documents/artefacts. These methods were chosen because of their suitability in addressing the research questions and the context. The following subsections explain the rationale for choosing these methods of data collection and procedural information about how each was carried out.

Individual, Audio-taped, Semi-structured Interviews

Interviews are discussions or conversations that are grounded within a context. They are an active process between the interviewer/researcher and respondent(s) who work together to construct meanings and stories with reference to the phenomenon under investigation (Schwandt, 2001). There are three types of qualitative interviews: structured, semi-structured and unstructured. These three types can be considered as points along a continuum from highly structured interview questions with standardised questionnaires to unstructured interviews with open-ended questions (Merriam & Tisdell, 2009). The key point of difference between these three lies in the nature of their questions and the structure of the interviews including the degree of control of the interviewer has over the direction of the interview and the order of the questions.

Researchers conducting structured interviews enter the field with a prescribed list of questions that are asked in the same way and the same order for all respondents – very much

like an oral questionnaire. There is very little flexibility during structured interviews where all the planned questions are asked systematically of all respondents. Having all respondents answer the same questions means that their responses can be compared (Hatch, 2002). Although structured interviews may elicit systematic responses, one of the drawbacks is that this approach may not capture the experiences and feelings of the respondents in an in-depth manner (Fontana & Frey, 1994) which makes this type of interview unsuitable for use in the present study.

Unstructured interviews are where the interviewer encourages the respondents to tell about their thoughts and experiences in their own way and in their own order. Researchers employing unstructured interviews enter the field with some ideas about the themes that they wish to cover, but they do not have any predetermined list of questions so participants are free to tell their stories without being bounded by predetermined and/or leading questions (Denzin, 1970; Denzin & Lincoln, 2008). This type of interview is usually used to supplement information gained from observations (Hatch, 2002; Merriam & Tisdell, 2009). In order to obtain understandings from the respondents' experiences and interpretations, the researcher uses non-directive questions that act as prompts to elicit responses (Hammersley & Atkinson, 1983). Although unstructured interviews are able to provide rich understandings from the participants' perspectives, they were not suitable for the present study due to their unfocused nature – the researcher might get responses that were not relevant to answer the key areas and questions underpinning this study (Merriam & Tisdell, 2009).

Semi-structured interviews require the interviewer to identify beforehand broad areas of interest, some key questions, and prompts. There is flexibility in the interview to cover these when and where appropriate and the interviewer has opportunities to prompt and probe responses. Hence, a semi-structured interview can be described as a discussion where guiding areas and/or questions are planned for coverage during the interview but there is flexibility in the sense that the researcher can manipulate the questions and their order according to how the

interview unfolds (Hatch, 2002; Merriam & Tisdell, 2009). The present study used semi-structured interviews to elicit participants' perceptions about supervision and feedback within the FYP. This also allowed the researcher to elicit in-depth and detailed information from the respondents and there were opportunities to follow up ideas developed by the researcher or/and respondents during the interview (McMillan & Schumacher, 2010). To this end, the role of the researcher and respondents in the interview process "requires not simply attending to what was said by each party in the interview but also to how the joint meaning-making process unfolds" (Schwandt, 2001, p. 162). Through semi-structured interviews, the researcher was able to access the experiences, feelings, and perspectives of the participants. Additionally, they allowed the researcher to obtain information that cannot be observed (Patton, 1990).

While the effect of the interviewer on the respondents and the nature of their responses was recognised as a possible limitation, it was not regarded as contamination or a source of bias because the researcher was unavoidably a part of the conversation event (Schwandt, 2001). Two sets of interview protocols (see Appendices F and G for the complete interview protocols) that contained key ideas and questions were developed for student and supervisor participants respectively prior to entering the field. This schedule served as a guide so the researcher was able to engage with the participants and not be derailed from obtaining perspectives and understandings that were relevant to the study. At the same time, the semi-structured nature of the interviews provided opportunities and space for both researcher and participants to build meanings of the case in a more natural, everyday interaction (Brinkmann & Kvale, 2015).

In the main, the key ideas of the interview revolved around supervision and feedback during supervision in relation to each student's final year project. The key ideas addressed during each interview phase for the student and supervisor participants are summarised as in Table 4.4:

Table 4.4
Summary of Key Ideas of the Interviews

Interview phase	Student interview	Supervisor interview
Phase 1 (beginning of supervision) 45 – 60 minutes	Demographic information; Project (e.g., the title of the project, opinion why it is part of the university's requirement, feelings about the project etc.); Expectations, roles and responsibilities of the supervisor; Expectations, roles and responsibilities of self.	Demographic information; Experience of supervising of final year projects; Expectations, roles and responsibilities of self; Expectations, roles and responsibilities of the student.
Phase 2 (two times during supervision) 30 – 45 minutes	Current development of the project (adjustments were made based on the project's timeline); Supervision (e.g., how often were the meetings, preparation undertaken before meetings etc.); Feedback in relation to student's project (e.g., feedback that they value the most, the format of feedback, feelings when receiving feedback, strategies to complete project etc.).	Supervision (e.g., how supervisor supports student with the project, preparation undertaken before meetings etc.); Feedback in relation to student's project (e.g., how supervisor lets student know about their progress, opinion on the type of feedback that student value at this stage of the project etc.).
Phase 3 (end of supervision) 45 – 60 minutes	Project (e.g., feelings about the project after completion); Supervision (e.g., important characteristics of a supervisor and student based on own experience); Feedback (e.g., changes in the feedback process, opinion on feedback, roles of self and supervisor in the feedback process etc.).	Project (e.g., challenges in the project, highlights of student's project); Supervision (e.g., important characteristics of a supervisor and student based on own experience); Feedback (e.g., changes in the nature or content of feedback, opinion on feedback, roles of self and student in the feedback process etc.).

Each student and supervisor was interviewed individually on four occasions during each student's research project: once at the beginning of supervision (45 – 60 minutes), twice during the period of supervision (30 – 45 minutes) and once at the end of supervision (45 – 60 minutes). The first phase addressed participants' demographic information such as their names, programme of study (for students), expertise and area(s) of interest (for supervisors), research topic (for students) and educational background. It also elicited participants'

expectations and perceptions about themselves and the other party with reference to supervision of the FYP. The same sets of indicative questions were used for the second and third phases. Here, matters such as students' current development in the FYP as well as those pertaining to supervision and feedback were addressed. Emphasis was given on participants' perceptions of the nature of supervision and feedback as experienced during the FYP. The final phase captured participants' feelings about the FYP experience such as challenges faced during the FYP, opinions about the important characteristics of supervisor and student as well as their experience with feedback.

Conducting the interviews. Prior to the interviews, the researcher conducted a pilot interview with a pair of student and supervisor volunteers who were not involved in the present study. Feedback from the volunteers showed there were some questions that needed to be reworded so they could be more easily understood. They also gave feedback that some participants may prefer to do the interview in Malay rather than English, particularly where English was not the mother tongue of the participants. In such cases, the use of English might make the respondents anxious and limit the expression of their thoughts. This point made perfect sense to the researcher especially when the researcher reflected her own teaching experience in Malaysia. Some students and even lecturers often feel that the use of English is one of the barriers for them to express themselves clearly and this sometimes results in them feeling frustrated or anxious. Bearing this in mind, the researcher asked participants before each interview session whether they would like to have the interview in English or in Malay.

The pilot also revealed that the researcher needed to establish a reasonable degree of rapport with each participant before the first interview. Taking this into consideration, the researcher met each participant before their first interview session for a brief ice-breaking session. Table 4.5 shows the overview of each session with reference to the research phase, pseudonym, place where the interviews took place and the language used in the interviews:

Table 4.5
Overview of the Interview Sessions

Research phase	Pseudonym	Place	Language of interview
Phase 1 (Beginning of Supervision) 45 – 60 minutes	Irfan-Sup	Own office	English
	Lutfi-Stu	Library discussion room	English
	Wardah-Sup	Own office	English
	Afiza-Stu	Library discussion room	English
	Natrah-Sup	Own office	English
	Nuha-Stu	Via telephone	Malay
	Sasha-Sup	Own office	English
	Haikal-Stu	Library discussion room	English
Phase 2a (During Supervision) 30 – 45 minutes	Irfan-Sup	Own office	English
	Lutfi-Stu	Library discussion room	English
	Wardah-Stu	Own office	Malay
	Afiza-Stu	Library discussion room	Malay
	Natrah-Sup	Own office	English
	Nuha-Stu	Via telephone	Malay
	Sasha-Sup	Own office	Malay
	Haikal-Stu	Library discussion room	Malay and English
Phase 2b (During Supervision) 30 – 45 minutes	Irfan-Sup	Own office	English and Malay
	Lutfi-Stu	Laboratory	English
	Wardah-Sup	Own office	Malay
	Afiza-Stu	Garden gazebo nearby supervisor's office	Malay
	Natrah-Sup	Own office	English
	Nuha-Stu	Faculty's lobby	Malay
	Sasha-Sup	Own office	Malay
	Haikal-Stu	Supervisor's office	Malay
Phase 3 (End of Supervision) 45 – 60 minutes	Irfan-Sup	Own office	Malay
	Lutfi-Stu	Laboratory	English
	Wardah-Sup	Own office	Malay
	Afiza-Stu	Garden gazebo nearby supervisor's office	Malay
	Natrah-Sup	Via telephone	English
	Nuha-Stu	Via telephone	Malay
	Sasha-Sup	Own office	Malay
	Haikal-Stu	Library discussion room	Malay

With permission from the participants, all interviews were audio-recorded for retrieval, transcription and analysis purposes. To ensure that the participants were comfortable at all times during the interview sessions, each participant chose the place and time (relevant to the phase) for each session. This meant all interviews for the students and supervisors, with the exception of the culinary arts programme were conducted on the study site. Three interviews

with Nuha-Stu and one interview with Natrah-Sup were conducted via telephone due to the student's unavailability on site. As mentioned previously, the researcher gave participants the option to be interviewed in English or in their mother tongue.

The researcher took into consideration how she positioned herself in the interview sessions. Brinkmann and Kvale (2015) have identified three positions of an interviewer: "the pollster, the prober, and the participants" (p. 109). The interviewer as a pollster, as the name suggests, uses the interview purely to collect data about respondents' opinions and attitudes. The pollster distances himself/herself from contaminating data during the interview sessions as well as during analysis. Because of that, the interview data collected by the pollster are usually presented in the form of reports. On the other hand, the interviewer as a participant or as described by Brinkmann and Kvale (2015), "the interviewer-traveller" (p. 58), sees himself/herself as a traveller who discovers understandings and meanings of a phenomenon by total immersion in the field, customs and cultures of the participants. As one of the participants, the interviewer has close engagement with the participants as he/she participates actively in the research setting. Interview data obtained by the interviewer-traveller are often reported in narratives. The researcher as a prober stays in a position that complements human talk both as a report and narration (Brinkmann & Kvale, 2015). This position reflects the metaphor of the "interviewer as a miner" (Brinkmann & Kvale, 2015, p. 48). As a prober/miner, the interviewer delves into the experiences and understandings of participants to unearth valuable, information-rich knowledge. The interviewer sometimes plays the part of a friend to the participants, with regard to the data or understandings 'mined' from the participants. These are either extracted verbatim and/or interpreted and assigned meanings (Brinkmann & Kvale, 2015; Stake, 1995). With reference to the present study, the researcher played the part of a prober as it facilitated the unearthing of complexities associated with supervision and feedback, reflecting participants' points of view and experiences.

Observations and Field Notes

Observations are useful as they enable the researcher to obtain detailed and vivid descriptions of the settings, activities and behaviours of the participants (Hatch, 2002; McMillan & Schumacher, 2010). One of the strengths of observation is that it gives the researcher the opportunity to have first-hand experience regarding the ways participants behave in the setting as events occur (Merriam & Tisdell, 2009; Stake, 1995). Despite being one of the most common methods used in case study, observations have been criticised as highly subjective and unreliable due to the fact that individuals have different ways of viewing and narrating a particular phenomenon (Merriam & Tisdell, 2009). Patton (2014) has however rebutted this claim by stating that as researchers enter the field, they are prepared and ready for systematic and focused observation – in some instances, researchers have an observation protocol or schedule and are prepared to record field notes during observations. Such strategies separate them from a layman observer (e.g., a witness of an incident). Observation was chosen as one of the methods for data collection in the present study as it enabled the researcher to observe the participants in their natural settings during the supervisory discussion or meeting (Merriam & Tisdell, 2009). In addition to providing a source of triangulation, the purpose of observations in the present study was to witness and experience first-hand, the non- verbal aspects of communication (e.g., seating arrangement, body language and the interaction between student and supervisor) and the authentic, real-life verbal exchanges between students and supervisors that occurred during supervision meetings. Such interactions cannot be captured during individual interviews. First-hand observation during supervisory meetings helped shed light on the nature of the relationship between student and supervisor and if and how oral feedback was generated during the meetings.

Conducting the observations. The role of the researcher during the observations was an important consideration. In the present study, the researcher played the part of a

nonparticipant observer. This means the researcher was not directly involved in the activities or discussions that took place during the observations – the researcher was there mainly to observe and record notes and audios from the meetings (Creswell, 2012). However, there were some occasions where the participants interacted with the researcher during their supervision meetings such as inviting the researcher to have a look at the student's project and telling the researcher about the student's achievements to date in the project. There was also an occasion where the participants invited the researcher to join them for lunch after one of the observations. These events showed that although the researcher entered the observations as a nonparticipant, after building rapport with participants, the role of the researcher shifted to being a participant-observer. However, this was not an issue as the shifting of observational roles enabled the researcher to be part of the context while at the same time remaining cognizant of her position as an outsider (Creswell, 2012; Patton, 2014). Table 4.6 provides an overview of the observations that were undertaken in the present study with reference to the pseudonym, date, time, place and the people involved in the meetings.

As evident in Table 4.6, all observations were undertaken on campus. Initially, the researcher planned to observe all student-supervisor pairs for the same number of observations or meetings (four to six). This was communicated and agreed with the pairs (with the exception of Nuha-Natrah) pair in the meeting before data collection began. However, once data collection started, it proved difficult to coordinate and set dates for observations as each of the student and supervisor pair had other commitments in addition to those concerned with the students' final year project.

Table 4.6
Overview of the Observation Sessions

Pseudonym	Date	Time	Place	Attendees at the meeting
Irfan-Sup Lutfi-Stu	04/08/2016	1.00 – 1.30 pm	Laboratory	Student, supervisor, two other students sharing the laboratory;
	07/10/2016	10.30 – 10.40 am	Laboratory	Student, supervisor, a lecturer from another university who the supervisor regarded as an expert, a junior student; Supervisor and student.
	18/11/2016	10.15 – 11.30 am	Supervisor's office	Supervisor and student;
Wardah-Sup Afiza-Stu	19/05/2016	4.00 – 4.10 pm	Supervisor's office	Supervisor and student;
	07/10/2016	2.00 – 2. 15 pm	Supervisor's office	Supervisor and student;
	23/11/2016	9.00 – 9.10 Am	Supervisor's office	Supervisor and student.
Natrah-Sup Nuha-Stu	22/11/2016	10.00 – 11.00 am	Supervisor's office	Supervisor and student.
Sasha-Sup Haikal-Stu	11/04/2016	3.30 – 3.40 pm	Supervisor's office	Supervisor and student;
	25/05/2016	4.30 – 4.50 pm	Supervisor's office	Supervisor and student;
	15/06/2016	10.00 – 10.30 am	Supervisor's office	Supervisor and student;
	17/06/2016	9.50 – 10.35 am	Classroom (presentation of the project)	Student, supervisor, another lecturer from the same faculty (both were examiners of the session; seven other students who were presenting on that day.

The researcher did not want to be too demanding and was aware of her position as an outsider and the student-supervisor relationship. In addition, the researcher was aware that if she was too demanding, it could lead to withdrawal from the study. With permission from the participants, all observations were audio-recorded for retrieval, transcription and analysis purposes. In addition, the audio recordings enabled the researcher to capture and preserve student-supervisor verbal interchanges that occurred during the meetings.

Field notes. Field notes are important as they provide detailed records of events that are useful for the analysis of data and reporting of findings (Creswell, 2012). During the observations, the researcher recorded field notes that contained organisational and structural details such as the setting of the supervision meetings (time, date and place), the seating layout, the activities that occurred in the meetings and the nature of the interaction (individual or group). In addition, details such as the interactions between participants, body language and issues related to feedback such as the areas addressed and the nature of feedback (e.g., directive, facilitative, one-way, two-way etc.) were also noted (see Appendix H for an example of an observation note).

Collection of Documents/Artefacts

Artefacts are useful as they provide information about aspects of the phenomenon under study that are not available through other ways (Glesne, 2011). All documents in the present study were collected in an on-going manner. The researcher sought to access official institutional and faculty protocols such as supervision guidelines, course outline/descriptions and final year project module/guidelines from the participants and the faculties involved. The researcher also collected drafts of students' projects that contained supervisors' feedback. These drafts were important so types of written feedback used by supervisors could be identified and analysed. In addition to these documents, the researcher also requested permission from the supervisors and students to access any asynchronous communication conducted via email and/or the WhatsApp application. While doing the fieldwork, the researcher found out during interviews that some supervisor-student pairs used the WhatsApp application to communicate with each other. This kind of communication helped to supplicate understandings about the relationship between each student-supervisor pair and their interactions outside the supervision meetings.

Analysis of Data

Qualitative data analysis can be explained as a process of "organising and interrogating data in ways that allow researchers to see patterns, identify themes, discover relationships, develop explanations, make interpretations, mount critiques, or generate theories" (Hatch, 2002, p. 148). In the main it relies on the researcher's creativity, intellect and reflexivity to make sense of data (Hatch, 2002; Patton, 1990). However, this does not mean the data analysis process is arbitrary - it involves a rigorous and systematic approach to give meaning to the experiences, interpretations and actions of research participants. Indeed, qualitative analysis is a combination of art and science (Corbin & Strauss, 2008). Data analysis frameworks combined with the researcher's intuition and interpretation bring great strength to the qualitative inquiry. Ezzy (2002) has contended that analysis is "an art that results in research that is both evocative, in the sense that it produces new insight, and convincing, because it rests on systematic research" (p. 82).

A major challenge facing the qualitative researcher is how to break down voluminous descriptive data into analysable units, organise salient units into themes or categories, and develop or use a framework of analysis to represent data in ways that answer the research questions. It is typical for qualitative researchers to start analysing data once the first set of data is collected – a stage referred to as informal data analysis. During this stage, the researcher will review, make reflections and make notes on the first set of data for example, in the case of the current study, the interview and observation transcripts and field notes. One of the advantages of informal data analysis is that the first set of data can be used to inform the next round of data collection (Ezzy, 2002; Hatch, 2002; Merriam & Tisdell, 2009). For instance, informal data analysis in the present study following initial interviews and observations helped the researcher in deciding the foci for subsequent sessions so relevant data were collected. In addition, informal data analysis enabled the researcher to anticipate possible

themes or categories and circumvent the feeling of being overwhelmed by large amounts of data once formal data analysis began. Therefore, it is argued that informal data analysis was significant as it helped the researcher to have a strong understanding about the data and provided insights into ways in which data could be interpreted (Spencer, Ritchie, Ormston, O'Connor, & Barnard, 2014).

Formal data analysis involves a conscious, organised and systematic approach. It is important to note that unlike quantitative analysis, qualitative analysis is open-ended, meaning there are no fixed rules about how to make sense of the data (Spencer et al., 2014). Due to this, there is a concern that novice researchers might fall into thinking they might not be able to do justice to data which may result in him/her feeling "there are always more data that can be adequately processed, more levels of understanding that can be explored, and more stories that can be told" (Hatch, 2002, pp. 149 - 150). To avoid such feeling, a key point to consider is the principle of "fitness for purpose" (Cohen et al., 2011, p. 538) when deciding the framework of analysis. The fitness of a chosen framework of analysis should be informed by the purpose of the study and the research questions (Hamilton & Corbett-Whittier, 2013; Hatch, 2002).

Therefore, besides aiming to answer the research questions, in the present study, the researcher took the following points into consideration during the analytic process:

- Thoroughly explaining and justifying the approaches and procedures that were undertaken in the analysis of data;
- Using data to construct a complete story of the case that was studied; and
- Organising the results of the analysis in coherently written findings.

(Hatch, 2002, p. 150).

The formal analysis in the present study started after all audio recordings of interviews with the two sets of participants (supervisors and students) and those from the observations were transcribed and artefacts had been organised in an easily retrievable manner. Once data

were organised, what followed was a process whereby the researcher immersed herself in the data. Since verbatim transcriptions and translations of audio files were carried out by the researcher, familiarisation with the data began during these activities. The researcher was able to hear, read and connect with the data, to re-establish the focus of the study and to anticipate how the data would answer the research questions (Patton, 1990).

Inductive and Deductive Approaches to Qualitative Analysis

Qualitative data can be analysed through inductive and/or deductive approaches. In general, an inductive approach involves the emergence from the data of patterns and themes of the phenomenon under study without delimiting the data in any way to fit into pre-existing theories or literature (Patton, 2014). This approach to analysis is data-driven (Braun & Clarke, 2006) as the researcher lets the raw data 'tell' the researcher about the significant themes (Thomas, 2006). It also enables the researcher to build a 'story' of findings that is true to and representative of the experiences, understandings and perspectives of the participants (Ezzy, 2002). In line with the aim of this study which was to capture the uniqueness of the case, an inductive approach enabled this uniqueness to be elucidated as the researcher let possible explanations and/or insights related to supervision and feedback emerge from the participants' experiences (Patton, 2014).

On the other hand, a deductive approach involves the researcher taking into account his or her theoretical sensitivity to give meanings to the data (Strauss, 1987). This sensitivity is derived from knowledge of relevant cognate literature. In other words, the existing body of literature related to the area of study and interest serves as a lens to focus the researcher on specific ideas, concepts and patterns while interrogating the data (Ezzy, 2002). This approach enables the researcher to compare and verify patterns and themes against theories and ideas in the existing literature (Strauss, 1987). With reference to a deductive approach, the literature or theories related to supervision of research students (e.g., Grant, 2005) and feedback (e.g.,

Hattie & Timperley, 2007; Hattie & Gan, 2011) helped the researcher to have a focus in making sense of the data and therefore generate findings that are engaging to those who share an interest in these areas. This approach enabled the researcher to expand further understandings about feedback and supervision as "most good research builds on what has been done before" (Taylor & Bogdan, 1984, p. 135). All in all, these two complementary approaches meant the researcher was able to report a more nuanced and detailed representation of how students and supervisors understood and experienced feedback in the context of supervision of undergraduate final year research projects.

The Constant Comparative Method of Analysis

The constant comparative method was first introduced by Glaser and Strauss in 1967. It is described as a process whereby a researcher compares incident with incident for similarities and differences. This process results in the grouping of conceptually similar incidents together (Corbin & Strauss, 2008; Ezzy, 2002). Corbin and Strauss (2008) argued that this method is crucial to all analyses and it is useful to avoid confusion on the researcher's part in constructing the themes of a phenomenon (Strauss & Corbin, 1990). The process of constantly comparing incidents is continuous until overlapping categories are integrated and given the same name (Grove, 1988; Strauss & Corbin, 1990). The end result is a consistent understanding of a phenomenon as through "comparisons of indicator [incident] to indicator [incident] the analyst is forced into confronting similarities, differences, and degrees of consistency of meaning among indicator [incident]" (Strauss, 1987, p. 25). In addition, the constant comparative method contributes to the validity of findings (Parry, 2004). Boeije (2002) for instance, have posited that a key criterion of qualitative research is to present different levels of descriptions and understandings of a phenomenon. Through constant comparison in the present study, the researcher was able to achieve those different levels of description and understandings which in turn increased the validity of findings.

The constant comparative method is usually associated with an inductive approach to coding. This means a researcher starts the coding process by drawing out incidents from the raw data to construct codes and categories that eventually provide an overall understanding of the phenomenon (Grove, 1988). As mentioned earlier, in the present study, the researcher also applied a deductive approach to coding after initial codes were drawn out inductively in order to present the perceptions and understandings of students and supervisors about their responsibilities supervision (see Chapter Five) and their perceptions about feedback (see Chapter Six). The following section explains how strategies associated with the constant comparative method, in particular, open coding, axial coding and selective coding (Corbin & Strauss, 2008; Ezzy, 2002) were used in the present study.

Coding

Coding refers to "the process of dissembling and reassembling the data" (Ezzy, 2002, p. 94) whereby data are broken into segments. During coding, a researcher will apply notations to segments of data such as a word, a phrase or a sentence that has the potential to address the research question(s) (Merriam & Tisdell, 2009). Coding however, is more than breaking down raw data into segments. Coding is a highly analytical process that involves the researcher "extracting concepts from raw data and developing them in terms of their properties and dimensions" (Corbin & Strauss, 2008, p. 159). This means during coding the researcher has to read the data thoroughly, interpret the ideas reflected in the data, and assign a name or code to the data (Corbin & Strauss, 2008). In the present study, coding involved the researcher in an interrogation of data across all interview and observation transcripts, field notes, and documents; developing concepts or interpretations from the raw data; comparing those concepts against each other; reducing concepts to ensure the relevance of the study and finally assembling similar concepts together to produce understandings of the case that has been studied (Corbin & Strauss, 2008; Ezzy, 2002).

Open coding. Open coding is the first step to the coding of data. It is defined as "the process of breaking down, examining, comparing, conceptualising, and categorising data" (Strauss & Corbin, 1990, p. 61). Strauss (1987) has stated that the purpose of open coding is to "open up the inquiry" (p. 29). At this stage, a researcher has to read the data set closely, line by line, and identify segments of data relevant to the study and assign codes (Merriam & Tisdell, 2009). These codes may consist of word(s) or term(s) used by the study participants i.e. in-vivo codes; word(s) or term(s) borrowed from relevant literature; or word(s) or term(s) coined by the researcher (Merriam & Tisdell, 2009; Strauss, 1987). Since open coding serves to open up the inquiry, the researcher has to keep an open mind during coding and look for segments that appear important and relevant to the study. This can be done by asking questions of data such as: What does this mean? What does this represent? (Strauss & Corbin, 1990). The codes assigned at the stage of open coding are thus provisional and involve a significant amount of "teasing around" or experimentation (Ezzy, 2002). As noted by Strauss (1987) the process of open coding generates a great number of labels:

> Open coding proliferates codes quickly, but the process later begins to slow down through the continual verifying that each code really does fit…Eventually the code gets saturated and is placed in relationship to other codes, including its relation to the core category or categories—if, indeed, they or it are not actually the core (p. 32).

In the present study, open coding started with a close reading of all interview transcripts from students and supervisors. Thorough, line-by-line reading was done so the researcher was able to make sense and reconstruct the participants' experiences and understandings regarding responsibilities in the supervisory relationship and feedback in the context of undergraduate supervision. During reading, the researcher identified recurring words, phrases, and ideas from the transcripts. These were inductively assigned codes such as **"friendly with boundaries"**, **"approach supervisors"**, and **"understand students'**

circumstances". During a further reading of the transcripts, the codes were applied from the literature in a deductive manner, for example, **"guide"**, **"advise"**, and **"provide feedback"**. An example of how the open codes were elicited in the present study is illustrated in Appendix I. The open codes were then transferred to a codebook.

Axial coding. Once all data sets were open coded, the researcher proceeded to axial coding. Corbin and Strauss (2008) have asserted that axial coding is a part of open coding, not a separate step in coding. This is because the mind of the researcher is always actively engaging with the pieces of data and their meanings during coding. They postulated that "as analysts work with data, their minds automatically make connections because, after all, the connections come from the data" (Corbin & Strauss, 2008, p. 198). Axial coding involves a researcher looking for relationships between open codes (at this stage the actual data sets are not revisited). This enables the researcher to form categories and subcategories from the open codes (Strauss & Corbin, 1990). Categories refer to "higher-level concepts under which analyst group lower-level concepts according to share properties" (Corbin & Strauss, 2008, p. 159). Axial coding, however, does not involve a simple act of linking item A to item B like buttoning a shirt. This is because, as a researcher links subcategories to relevant categories, the researcher has to test their relationships against the earlier open codes (Strauss & Corbin, 1990). This action adds to the elaboration and specificity of categories:

> One starts thinking in terms of the full range of types or continua of the category, its dimensions, the conditions under which it is pronounced or minimised, its major consequences, the relation of the category to other categories, and other properties of the category (Glaser, 1965, p. 439).

In the present study, after open codes were elicited inductively and deductively from both students' and supervisors' interview transcripts the researcher made an inventory of the codes. As this study involved both students and supervisors, the researcher firstly identified

and compared open codes for the same group of participants, for instance, open codes from the supervisors' interviews. The researcher then linked these open codes in a hierarchy of categories and subcategories in a set of relationships in terms of its conditions, strategies (action/interaction), and consequences of their occurrence (Corbin & Strauss, 1990). The researcher applied the same process to the open codes elicited from the students' data. What followed was a comparison of codes between student and supervisor groups. According to Boeije (2002), this step is advantageous in three regards: firstly, it helps build a complete story of the phenomenon; secondly, information obtained from the former group can be enriched and thirdly, comparison between groups allow the establishment of data triangulation through the validation of the phenomenon by different groups of participants. An illustration of the outcome of this step can be found in Appendix J. For example, in the present study, the final outcome of axial coding with reference to students' and supervisors' perceptions of their roles and responsibilities generated a number of categories for example: establishing a research plan, clarifying expectations, maintaining regular contact, time management, meeting the standard and giving and acting on feedback as reported in Chapter Five.

Selective coding. Selective coding is the final step to coding whereby similar (axial) categories are clustered systematically under core categories and overarching themes that will explain the central phenomenon that has been studied (Ezzy, 2002). Strauss and Corbin (1990) have reminded us that the researcher should keep on asking questions about the codes and making comparisons while assigning the codes and categories to core categories.

Moreover, the following criteria suggested by Merriam and Tisdell (2009) were used by the researcher to ensure that the categories constructed were relevant to the study:

- Core categories were able to answer the research questions and purposes of the study;
- Core categories were comprehensive to cover all relevant and significant data;

- Core categories were exclusive to a particular unit of data i.e. no overlapping of units of data under different categories;
- The titles of the core categories were explicit to describe their contents; and
- Core categories were conceptually congruent with one another.

(Merriam & Tisdell, 2009, pp. 213-214)

In the present study, ideas from the literature, research questions and the researcher's interpretations of the data (codes and categories) were used to assist in the framing of the core categories. For example, selective coding of the categories in regard to the perceptions of students' and supervisors' regarding their responsibilities in supervision produced two core categories of this phenomenon which were: establishing a research-focused relationship and sustaining a research-focused relationship as illustrated in Figure 4.1:

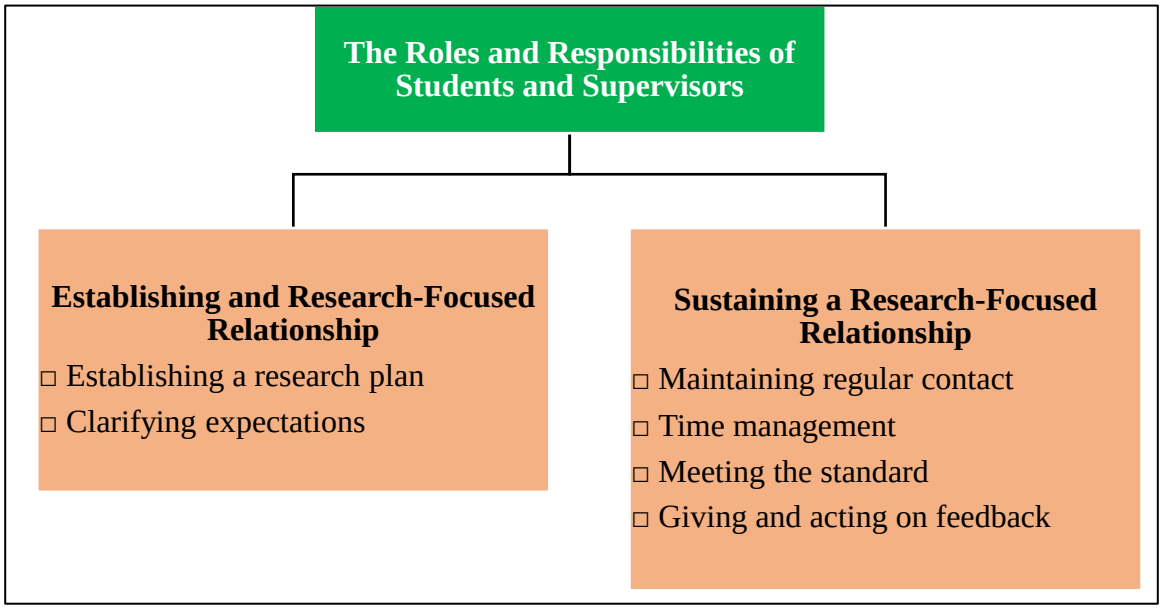


Figure 4.1 The roles and responsibilities of students and supervisors in supervision

These two core categories were seen as able to capture and report the essence of the findings in a coherent and meaningful way. The same process of the constant comparative method through open, axial and selective coding was also used to generate the themes for Chapter Six. It is important to note that the data analysis processes involved in the present study were not a linear one – rather it was iterative (Srivastava & Hopwood, 2009); in other words, it involved

the researcher going back and forth on the data, preliminary themes and categories. During this process, quotes from participants that best illustrated and represented the themes and categories were extracted. This enabled the researcher to provide readers with a picture of the ways in which supervision and feedback in the context of the FYP were perceived while at the same time validating the themes and categories (Sandelowski, 1994).

Utilising Hattie and Timperley's (2007) Feedback Conceptual Framework and Model

In order to elicit how feedback was experienced in supervision of the FYP, the researcher utilised one of the conceptual frameworks available in the feedback literature, namely that of Hattie and Timperley (2007). This framework was used primarily as a lens to analyse and distinguish the focus/level where written and oral feedback was addressed in the context of supervision of the FYP at UG. This framework was chosen for several reasons.

Firstly, it is a well-established framework that is widely discussed and used in the field (see for example Ajjawi & Boud, 2017; Carless, 2015; Evans, 2013; Gan & Hattie, 2014). Secondly, it provides a comprehensive picture of feedback and its effects on learning. Thirdly, a key feature which distinguishes it from other frameworks is that it includes the levels at which feedback may operate including the self-regulatory level (Ajjawi & Boud, 2017). Furthermore, it takes into account both student and teacher roles in the feedback process. This is in line with the contemporary feedback paradigm that situates feedback as a dialogic process that requires teachers and students to play complementary roles.

As discussed in Chapter Three, Hattie and Timperley (2007) have introduced a model of feedback within their conceptual framework. According to the model, effective feedback addresses three questions: where are you/am I going, how are you/am I going and where to next. In addition, it demonstrates that feedback can be directed at four levels such as the self

(FS), the task (FT), the cognitive processing (FP) and self-regulation (FP). The three feedback questions as well as the four levels served as the main lens for the researcher to identify the nature and purpose of feedback in the FYP. The outcomes of this analysis are presented in Chapter Seven.

Written Feedback

Before analysis began, the researcher read through each of the students' drafts of work and research tools containing supervisors' written feedback carefully to obtain familiarisation with the nature of the tasks. During reading, the researcher took note of all forms of written feedback in the drafts such as symbols and more detailed written form. Each of the written feedback was then coded in terms of the focus it was addressed such as FS, FT, FP or FR. This was quite a straightforward process as most of the written feedback involved a one-way transfer of information from supervisors to students. However, in some cases, the written feedback was returned through the WhatsApp application or face-to-face meetings. In such cases, the researcher also read through the WhatsApp exchanges and the ones occurred orally to identify how the written feedback was addressed through these mediums.

Oral Feedback

The analysis of oral feedback was a bit challenging because the researcher desired to preserve and present the context of their occurrences as much as possible to the readers. First of all, all student-supervisor verbal interchanges from the attended observations were transcribed verbatim by the researcher. After that, each line in the transcripts was read thoroughly to identify the context and the nature of the tasks discussed in the meetings.

Because the researcher observed and recorded notes of the meetings, the researcher already had some ideas of the topics discussed in the meetings. Since students and supervisors naturally talked about different issues in each meeting, the researcher then divided the verbal

exchanges into smaller episodes (excerpts). An episode was identified as an initiation-response pattern between students and supervisors that might lead to further responses (Ajjawi & Boud, 2017). In the present study, an episode was initiated by either supervisor or student. Each episode ended when any of the parties ceased to participate in further exchange about the main task. They were assigned names according to what any party considered the critical issue to be attended to. Organising the exchanges in smaller episodes allowed the researcher to present the verbal exchanges in a way that would be easily comprehensible by the readers and at the same time preserving the context in which the exchanges occurred. In addition, this helped the researcher to identify the level of which feedback was addressed. After this process, the exchanges were read once again, this time to identify whether they contained feedback or just pure instructions from supervisors. The episodes that did not contain feedback were then put aside.

Aspects in the episodes with feedback were then coded deductively and inductively in terms of what was said and how they were said. In terms of what was said, the researcher used descriptions and key ideas about the four levels of feedback from Hattie and Timperley's (2007) feedback framework to identify the focus of the oral feedback. These were colour coded to ease the researcher to identify the different levels of feedback addressed in the FYP. The three feedback questions were used to determine how information was sought or provided between the two parties. This also enabled the researcher to identify which party – either the students or supervisors took the leading role in initiating and generating feedback. An example of the outcome of this process is available in Appendix K. The episodes were also coded inductively through an iterative process of interpretation and interrogation between the researcher and her supervisors and the data.

Establishing the Trustworthiness of the Present Study

Since a case study is unique and specific to a particular setting, phenomenon or groups of people, the traditional more positivist concepts of reliability and validity are not applicable (Bassey, 1999). Hence, the concept of trustworthiness is used in qualitative research to explain the merit and respect for the truth-value of the study (Bassey, 1999; Patton, 2014). One of the strengths of a case study is its potential to combine different methods to enhance the trustworthiness of a case. Trustworthiness for the present study was established with reference to four evaluative criteria: credibility, transferability, dependability and confirmability (Lincoln & Guba, 2013).

Credibility

Credibility is established in regard to the extent to which findings capture the reality of the phenomenon being studied (Merriam & Tisdell, 2009). Credibility addresses the congruence between participants' experiences and interpretations with the researcher's representation of the findings (Patton, 2014). Credibility in the present study was addressed using the following strategies: member checks, triangulation and peer debriefing.

Member checks. Member checks refer to the process of "verifying data, findings, and interpretations with the participants in the study, especially key informants" (Patton, 2014, p. 524). In relation to the present study, all participants were invited to read, confirm the contents or make necessary changes to their interview transcripts. In addition, initial drafts of the findings chapters were given to participants to read. Each participant was invited to comment on how well the material represented and provided insights into their experiences and understandings of their supervision process and feedback within the supervisory experience. This enabled the researcher to clarify any issues that arose during data analysis and provided a clear representation of participants' interpretations (Patton, 1990). Participants

were also asked and able to check whether their anonymity was protected and check whether the researcher included significant points they wanted to convey (Lincoln & Guba, 2013).

Triangulation. Triangulation is a procedure in qualitative research that requires the researcher "to examine a conclusion (assertion, claim, etc.) from more than one vantage point" (Schwandt, 2001, p. 298). For instance, it involves "the process of corroborating evidence from different individuals (e.g., a principal and a student), types of data (e.g., observational notes and interviews) or methods of data collection (e.g., documents and interviews) in descriptions and themes in qualitative research" (Creswell, 2012, p. 629). Denzin (1970) has identified four types of triangulations: data triangulation; investigator triangulation; theory triangulation and methodological triangulation. The credibility of the present study was achieved through data triangulation and methodological triangulation.

Data triangulation involves collecting data from different sources across time, space and people (Denzin, 1970). In the present study, data were collected during different phases of supervision. For instance, individual, semi-structured interviews were conducted at four different times during the supervision of each student's FYP – once at the beginning of supervision, twice during supervision and once at the end of supervision while attended observations were carried out up to four times during the student's project. In addition, students' drafts containing supervisors' feedback were collected in an on-going manner.

Triangulation of space or site was achieved by collecting data from each of four different clusters of disciplines: hard-pure, hard-applied, soft-pure and soft-applied. Denzin (1970) has proposed that there are three levels of person analysis: aggregate analysis; interactive analysis and the collectivity. Person analysis is achieved by including the perspectives of different individuals or groups of people related to a study to get a complete picture of the case. The type of person analysis that was carried out in the present study was

interactive analysis as the participants in the study were selected because of their interaction and relationship in the supervisory context as student and supervisor.

Between-method triangulation was achieved by combining different methods to collect data. Data were gathered using multiple strategies such as individual, audio-taped, semi-structured interviews with supervisors and students; attended observations and field notes and the collection of documents and artefacts that included official institutional and faculty documents related to supervision, students' drafts containing supervisors' written feedback and conversation data retrieved from asynchronous medium of communication such as WhatsApp conversation. The rationale for using different data collection strategies was to enhance the credibility of findings and to address shortcomings in any single source of data.

Peer debriefing. Peer debriefing involves the researcher reviewing data and evaluating the research process with someone who is familiar with the research processes (Creswell & Miller, 2000). In the present study, frequent debriefing sessions were carried out with the researcher's academic supervisors. The latter became the main sounding boards, providing feedback and bringing the researcher's attention to issues that were missed out. For instance, during the data analysis process, the researcher and her academic supervisors coded the data separately and then met to discuss the outcomes of the coding. The two parties met frequently to discuss the progression of the data analysis process and debated about the themes and categories drawn from the data. Moreover, they encouraged the researcher to adopt a reflexive approach throughout the research process. In addition, the researcher also engaged in discussions with fellow doctoral colleagues about the analytical processes taken in the present study. These measures that were taken during peer debriefing enabled the researcher to present her interpretations in an honest manner, mitigating possible sources of bias in the reporting of findings (Spall, 1998).

Transferability

This concept deals with the issue of generalisability of the findings. Thick descriptions have the power to immerse readers in the phenomenon under study even without them having had first-hand experience of the phenomenon (Creswell & Miller, 2000). The responsibility for achieving transferability in the present study lied with the researcher in providing in-depth and thick descriptions of the case so readers can decide whether the findings can be transferred to their own setting (Merriam & Tisdell, 2009). These descriptions, together with extensive inclusions of participants' voices were provided in Chapters Five and Six.

Dependability

Dependability emphasises the consistency of interpretations obtained from the data. One way of ensuring this is by using an audit trail – a concept used in qualitative inquiry to describe the provision of evidence regarding the data collection process, construction of categories and how the researcher arrived at interpretations and conclusions (Merriam & Tisdell, 2009). These aspects in the present study were evidenced in this chapter and supplemented through the inclusion of materials in a series of appendices.

Confirmability

Confirmability concerns the researcher's awareness that data and interpretations are derived from the participants and not influenced by the researcher's personal beliefs or bias (Patton, 2014). As discussed earlier in this chapter, it is impossible for research, either quantitative or qualitative to be fully objective and free from the researcher's influence (Hammersley & Atkinson, 1983). Researchers must always be cognizant of their own beliefs and perspectives as well as the perspectives and interpretations of the participants (Patton, 2014). In the present study, confirmability was achieved by providing detailed explanations

about the research process such as the sampling and selection process, methodology and methods for data collection, and the data analysis process as demonstrated in this chapter.

Summary of the Chapter

The case of the present study focused on supervision and feedback within institutional-based research projects. Consistent with the interpretive paradigm, a qualitative case study was the appropriate feasible approach to capture the perceptions, understandings and experiences of undergraduate students and their supervisors about supervision and feedback. To this end, data collection through individual semi-structured interviews, observations, field notes and collections of documents and artefacts were employed. Analysis of data in the present study involved inductive and deductive approaches to provide robust and nuanced representations of the reality of the case studied. Ethical considerations as well as how trustworthiness was established were also explained in this chapter. The subsequent findings chapters (see Chapters Five, Six, and Seven) unfold the case that was studied.

CHAPTER FIVE: THE SUPERVISORY RELATIONSHIP

This chapter presents the perceptions of participants about the responsibilities of students and supervisors in the supervisory relationship. This was explored through semi-structured interviews with each participant. The chapter starts with a preamble to the FYP supervision context at UG as seen through the eyes of the students and supervisors. This is followed by the presentation of the two themes with reference to the roles and responsibilities of both parties in the supervision: establishing a research-focused relationship, followed by sustaining a research-focused relationship.

The Roles and Responsibilities of Students and Supervisors in the Supervisory Relationship

Each bachelor's degree programme at the university had its own way of pairing students with supervisors. Students were either selected by their supervisors or had their supervisors assigned to them by programme coordinators. Details about the final year project (FYP) would usually be communicated to students and supervisors by their respective programme coordinators at the beginning of the first semester of students' bachelor's degree programmes. Students would be reminded again about the FYP at the end of their fourth or fifth semester, depending on the duration of their FYP. Following this reminder, students could start approaching potential supervisors or contact assigned supervisors before the FYP semester started.

Students in the SA (soft-applied) and HA (hard-applied) programmes had their supervisors assigned to them by their final year course coordinators. This information was provided to them at the end of the semester before their FYP semester started. Haikal-Stu, the SA student, was notified about who his supervisor would be at the end of his fifth semester when he attended a compulsory briefing session for all fifth-semester students in the marketing

programme. In this session, students were briefed about matters regarding their practical training and the FYP as marketing students had to complete these two courses simultaneously. Students were also provided in this session with a schedule containing deadlines that they had to meet in the sixth semester. Haikal-Stu said he knew that Sasha-Sup was to be his supervisor because, *"In the briefing session, I saw my name next to my supervisor's name"* (Int. 1).

Meanwhile, Afiza-Stu, the HA student said that students in the mathematics programme were usually assigned supervisors by the FYP coordinator by the end of the fourth semester since the programme required them to complete the FYP over two semesters (semesters five and six). Students were notified about their supervisors through an announcement on the faculty's notice board. Afiza-Stu said, *"At UG Campus 1, we don't select, they pick it randomly and give it to us, so my supervisor is given by my lecturer who——the coordinator of the subject, they chose randomly and I get (sic) madam"* (Int. 1). Since there were insufficient lecturers at the campus available to supervise students in the mathematics programme that she was studying, some students including Afiza-Stu were assigned to supervisors who were not necessarily experts in their proposed research area. Afiza-Stu expressed that she was *"disappointed a bit but it's okay"* (Int. 1) after knowing that she was assigned to a supervisor who did not have expertise in her area of interest.

In contrast, students in the SP (soft-pure) and HP (hard-pure) programmes had to find their own supervisors. This meant they had to use their initiative to approach potential supervisors who were experts in their research area before the FYP commenced. Supervisors in these disciplines had the power to either accept or decline the students who approached them. Nuha-Stu, the SP student studying nutrition, explained her approach to finding potential supervisors during the end of her fifth semester:

> *Once our research methods lecturer informed us that we can start looking for supervisors to supervise our FYP——we have this notice board at our faculty that*

displays a list of lecturers and their expertise so because I am doing nutrition, I tried to find lecturers who are teaching nutrition. There were few of them who are teaching nutrition so I met the lecturers. Some of them already have students to be supervised and some are not taking any students for supervision so when I met Madam Natrah-Sup, she's still free, I mean, she was willing to supervise me although she was supervising another senior student at that time. However, she said that she can supervise me and when I told her my topic, she straightaway agreed to supervise because my topic is related to her field. I didn't show her my proposal to her at that time, I just told her my topic because I went knocking from door to door at the faculty (Nuha-Stu, Int. 1).

Natrah-Sup explained further that in her faculty, at the end of the fifth semester, which was one semester before the FYP started, the faculty would hold a symposium where students presented posters and shared some ideas of their proposed study to members of the faculty, including potential supervisors. From there, lecturers who were interested in any particular student's proposal could approach him/her or students could approach potential supervisors. As Natrah-Sup related, *"Most of the time the students will ask around their lecturers who among the lecturers [are] (sic) better in this topic, are knowledgeable about this kind of field, then they will approach the lecturer but the lecturer can reject"* (Int. 1). She said that Nuha-Stu had approached her based on the advice of Nuha-Stu's previous lecturer to *"find someone who focuses on food"* (Int. 1), which was indeed a part of Natrah-Sup's research expertise.

Irrespective of whether students found their own supervisors, or whether supervisors were assigned to students, students and their supervisors then organised for an initial meeting. None of the student-supervisor pairs mentioned the exact amount of time that had elapsed between their first contact and the initial meeting. However, there was an indication that students and their supervisors met either just prior to or at the beginning of the FYP semester. For example, Wardah-Sup said that students would usually contact their assigned supervisors

in the first or second week of the semester. In her case, after she was contacted via telephone by her student, Afiza-Stu, they agreed to meet a few days later.

Establishing a Research-focused Relationship

Both students and supervisors saw the first meeting as critical as it was an opportunity to set the scene regarding their respective responsibilities. Both parties talked about meeting for two main reasons: to establish a research plan or a way forward and to clarify expectations.

Establishing a Research Plan

Students and supervisors alike saw that the first step in undertaking the FYP was to prepare for the upcoming task. Students mentioned that they made preparations prior to the initial meeting such as looking for topics of interest, reading relevant articles and/or preparing a research proposal. Some mentioned they sought assistance from others such as their peers or lecturers in making these preparations. For example, Nuha-Stu consulted her academic advisor who was also a lecturer in her faculty for suggestions on suitable research topics. In addition, she prepared some materials such as readings related to her topic of interest:

> *…in terms of physical preparations, I looked for potential topics, consulted my academic advisor and asked him/her about suitable topics. I also looked for articles before starting my FYP—articles related to my topic so those were the preparations I made before undertaking the FYP* (Nuha-Stu, Int.1).

Students perceived the first meeting as a stepping stone towards formulating their proposal. In addition, they acknowledged the role of their supervisors as the knowledge-expert in their FYP journey. Therefore, in the meeting, students sought feedback in the forms of guidance and confirmation in regard to the suitability of their research topics and the methodology that they were interested in applying to their project. Before attending the first

meeting, Haikal-Stu contacted Sasha-Sup via telephone and informed her about his topic of interest. He said after getting her approval of the topic, he took the initiative to prepare a research proposal before meeting with her. However, in the meeting after having his proposal read by Sasha-Sup, he was instructed to undertake further reading on his topic to help him come up with a more novel proposal. Haikal-Stu explained, *"She asked me to read more because I need to read more about marketing to find new ideas to find [a] new topic"* (Int. 1). Nuha-Stu also discussed her proposal with her supervisor, Natrah-Sup in their initial meeting. In addition to sharing her insights regarding the proposal, including the need to formulate better research questions, Nuha-Stu said that Natrah-Sup's feedback indicated she agreed with her plan to apply a quantitative methodology for data collection. As explained by Nuha-Stu, *"We discussed the research questions together because at first, I had too much framework—the DV [dependent variables] —so we discussed that. I had three DVs in my proposal but after discussion, we decided to have only two"* (Int. 1).

On the supervisors' part, as the academic advisor, they saw that they needed to gain information at this stage from students about their research interests and possible topics and gain insights into their student's capability in terms of their knowledge of the area of interest, especially matters like *"what they want to do, the suitable method that they know, and so on"* (Wardah-Sup, Int. 1). Supervisors elicited this information by encouraging students to explain their ideas orally, through reading their written proposal and/or through a general discussion. The information gained during the meeting would then help supervisors to provide comments that would take the FYP forward. Sasha-Sup said she would usually ask students to share what they already knew about their topic of interest. After listening to them, she would comment so that students could take further action to refine their ideas:

> *Normally, I prefer they share their [research] problems, their findings on particular studies that they are interested in and they will present their ideas—and if there's any improvement to be made so we can suggest that—if they need to—let's say need to*

change their topics, so they will change their topics or they need to change the variables—so they need to change the variables (Int. 1).

She also emphasised that students needed to understand *"first the topic and then the [research] problems"* (Int. 1) and these were the two aspects that she would look at in the first meeting.

Furthermore, with respect to seeing their role as the main guide to students, supervisors thought they too may have to take further action if they were to supervise a particular student. The supervisors realised that as the experts, they needed to *"understand our area first"* (Sasha-Sup, Int. 1). Supervisors thought that having a strong understanding of their own research area would enable them to provide effective supervision to students, especially to those who did not have strong knowledge about the area or the research methodology. Sasha-Sup said she needed to *"clarify from zero until they [students] know—they have the ideas about what they need to do on (sic) the studies—in the research"* (Int. 1). Supervisors also talked about the need to know or revise their knowledge about basics such as software for data analysis, materials related to students' topics as well as faculty protocols related to the FYP such as the marking rubrics and/or the research timeline. For instance, Wardah-Sup said that reviewing the faculty guidelines helped her with the supervision process especially on *"how to monitor and supervise the students, to check the progress, to check the format"* (Int. 1).

Clarifying Expectations

In order to ensure the smoothness of the FYP journey, supervisors established a contract with each student and expressed their expectations in the first meeting. In some cases, this contract was in the form of a research timeline that was developed together by the student and supervisor. Natrah-Sup used the university's academic calendar as a reference when developing a research timeline:

Yes, we prepare it [research timeline] together on the first meeting. I will refer to the academic calendar and then we discuss and then I will explain. Of course for bachelor's degree students they don't understand the Gantt chart most of the time so I will explain, this is the milestone that you need to achieve within this period of time so they get it (Natrah-Sup, Int. 1).

Irfan-Sup saw that it was important to make it clear to students about the work ethic he expected from those under his supervision. To him, this matter needed to be discussed in the first meeting. He said, *"Under my supervision, the first thing I tell my students is be hardworking if you want to be my student"* (Int. 1). Meanwhile, Wardah-Sup who was not an expert in her student's research area saw that it was crucial to inform her students about this matter. Realising she may not be able to support her students in terms of the content of their work, she would tell them to seek feedback and advice from other people: *"I told them I don't know then they have to refer to another lecturer who is an expert in this area"* (Int. 1). Supervisors hoped that by clarifying these matters in the first meeting, students would be able to understand and/or meet expectations during the research process.

The aforementioned practices illustrate the importance of the initial meeting for students and supervisors. Interestingly, neither the students nor the supervisors mentioned they exchanged personal information where they talked about themselves as people, for example, where they came from, their family members or their likes and dislikes. In addition, there was no evidence of supervisors taking an interest in pastoral matters such as students' financial support or accommodation arrangement. As illustrated above, in working towards the establishment of a research plan, students and supervisors were establishing common ground and a common point of reference in relation to academic matters.

Sustaining a Research-focused Relationship

After the foundation for the supervisory relationship was established, what followed built on this foundation. Students and supervisors saw they had complementary roles to play in sustaining and enhancing this relationship. Both parties understood that if the supervisory relationship was to be successful, each needed to fulfil specific tasks.

Maintaining Regular Contact

Students and supervisors kept in touch with each other through synchronous (face-to-face meetings) and asynchronous (emails and/or the WhatsApp application) mediums of communication. Regardless of the medium, both parties were aware they should maintain contact throughout the research journey. Students contacted their supervisors regularly so they could report or discuss their progress with supervisors. Interestingly, they mentioned the need to be honest in reporting progress to their supervisors and this included being open to supervisors about the problems and challenges they faced during the project. An example of this was apparent in Lutfi-Stu's case. As a student who had to conduct experiments for his FYP, Lutfi-Stu made it a rule to always report his experiment results to Irfan-Sup. He explained that *"when I collect the data, get the result, I will present to my supervisor as soon as possible"* (Int. 3). However, due to the unpredictable nature of experiments, the results sometimes did not turn out as he expected. Despite this, he would still report the results to Irfan-Sup. He added, *"After doing the experiment I found out that not all results that—there are some false results so I have to report it"* (Int. 4). Secondly, through regular contact, students were able to seek academic advice in the form of confirmation, information or suggestions from supervisors about a range of matters regarding the project such as their thinking and/or understanding, the materials or resources used in the project and the next step to be taken after a certain task had been completed. Afiza-Stu, for instance, sought Wardah-

Sup's confirmation about whether she could use the secondary data she obtained from the internet for her study.

In a similar vein, supervisors thought it was important for students to update them regularly so they would become aware of their students' progress. This enabled them to provide appropriate assistance. Irfan-Sup talked about how students should not keep their problems regarding the research to themselves. He encouraged his students to share problems with him, reminding them, *"If you (students) have anything, negative result, just tell me and then, we will discuss"* (Int. 1). To him, students' honesty in sharing their problems would help supervisors understand the problems students faced better and enabled them to provide appropriate assistance. In his case, as someone who was an experienced researcher, he could provide another point of view when students faced unforeseen circumstances. He gave an example where students sometimes felt doubtful about getting negative results in their experiments, saying, *"Maybe it is not error but it is a true [result] or it is a good finding actually; but normally, students, they don't realise it"* (Int. 1), so that was why he always reminded his students to meet him and be honest in reporting their progress. Supervisors mentioned that in some instances they did not mind if students could not meet them face-to-face as long as the students kept in touch with them by other means. As commented by Natrah-Sup, *"To me, as long as you keep in touch with your supervisor, you are doing okay, rather than you shy away, run away, you don't report at all"* (Int. 1).

Supervisors mentioned that if students were reticent in terms of meeting with them then further action would need to be taken. In the first instance, supervisors might issue a soft warning such as advising them about their attitude and/or reminding them about their progress through email, text message or through their friends. If this approach failed, they had to issue formal warning letters to students, advising them to discuss with the supervisors or FYP coordinator about the reason for their reticence or the last option would be to fail them after appropriate measures had been taken. Wardah-Sup explained there would be a high possibility

for a student to fail the FYP if he or she did not meet the supervisor at all during the FYP process even if the student submitted a completed FYP report at the end of the semester. She said under these circumstances, the student might be under suspicion of not completing the FYP through his or her own effort or in other words, *"Most probably the student copies from the seniors"* (Int. 1). She also added that if students did not consult their supervisors regularly, they might not be able to produce a piece of work that met the faculty's standard. When that happened, it would reflect on the supervisor as well. She explained, *"When's there's no communication, the report [FYP] might be wrong. So when the students submit it to be examined, our names will be mentioned. People will not say it's the student's fault"* (Int. 1). She thought supervisors needed to protect themselves from getting the blame for not keeping up with students' progress. In her faculty, any unresolved matters with problematic students would be brought to the coordinator's attention for further action as the last resort. Supervisors also mentioned they too had to play their part in maintaining contact with their students. In some cases, supervisors would be the ones who initiated contact. For instance, Natrah-Sup said she would frequently text her students via the WhatsApp application to ask them about their current progress.

Some supervisors even created virtual platforms such as setting up a Facebook group or a WhatsApp conversation group to encourage engagement with the students under their supervision. Sasha-Sup said for her, a Facebook group was helpful to engage with her students in the sense that she could share writing tips or share related documents with the group. At the same time, her students could interact with each other, discussing matters regarding the FYP. On a similar note, in some cases, a close engagement between students and supervisors enabled both parties to achieve higher level and complex tasks together. Nuha-Stu talked about how she managed to complete all required tasks for the FYP ahead of time, so she and Natrah-Sup worked on analysing her data using advanced tests in the SPSS (Statistical Package for the Social Sciences) software. Natrah-Sup was pleased that they managed to do something

challenging than what was required at Nuha-Stu's level of study, stating she *"liked it that we managed to explore and discover more tests than what we planned [for the FYP]"* (Int. 4).

The above examples demonstrate students' and supervisors' views regarding the importance of maintaining regular contact during the FYP. Both parties perceived that regular contact and communication would result in better engagement. More importantly, once effective communication was established between the two parties, further expectations were able to be met.

Time Management

Students and supervisors emphasised it was the students' responsibility to manage their time and complete tasks related to the FYP. In relation to time management, students and supervisors talked about organising and deciding meeting dates and deadlines together. In Wardah-Sup's case, she talked about the number of compulsory meetings (five) that she and Afiza-Stu had to meet in each semester of the FYP. This number was set in the faculty's supervision guidelines. Supervisors and students in their faculty could arrange the five compulsory meetings on any dates based on their availability. In deciding the meeting dates, firstly Afiza-Stu would ask Wardah-Sup about when she was available and then both of them would decide on the suitable dates to meet. Wardah-Sup, however, said students and supervisors could meet more than the five compulsory meetings and the number of the additional meetings depended on the circumstances especially the students' progress:

> *It depends on the students' topic. If the student is always available for meetings and she or he has the data at the beginning of the semester, then we don't have to meet many times. However, if the student still does not know what method to use or does not have the data, then I will check their progress frequently* (Int. 2).

Supervisors considered time to be crucial in the process of completing the FYP. Therefore, they had to remind students to manage their time wisely by making sure students met deadlines, be they deadlines that were set between students and supervisors or faculty deadlines. Supervisors also mentioned they would send reminders to students who were not making progress. Both parties saw that students must be responsible to meet expectations regarding time management. Students talked about meeting deadlines, being punctual for meetings and submitting their work on time as examples of how they met their supervisors' expectations regarding time management. Afiza-Stu said she always made sure she was aware of important dates because she did not want to face any unexpected consequences later on. She explained she needed to, *"Just be alert with the deadlines, when to submit my work so I knew when to complete it. I tell myself that if I don't want problems later on, I need to complete my work before the deadlines"* (Int. 4).

Meeting the Standard

In regard to carrying out tasks related to the FYP, students and supervisors held similar views that students should carry out tasks until they were completed to the satisfaction of supervisors. For instance, Sasha-Sup expected Haikal-Stu to make corrections on his writing and bring the revised document to their next meeting. She then checked the document in the meeting and, *"If I am not satisfied, he still needs to do the correction again"* (Int. 2). For students, in order to meet supervisors' expectations regarding the standard of work they had to make necessary preparations before contacting their supervisors such as completing their current work or preparing some questions related to their project. Haikal-Stu thought if students came unprepared to meetings, it would give the impression *"as if the student does not do anything—lazy to do anything"* (Int. 1).

Giving and Acting on Feedback

Students and supervisors considered feedback as part of the supervision process. In that, they saw both parties had complementary roles to play if students were to complete the FYP successfully. Both parties saw that in the main, the role of supervisors was the ones to give feedback. As noted by Sasha-Sup, supervisors needed to *"give clear feedback"* (Int. 4) to students. Supervisors thought that it was crucial to provide students with constant feedback during the FYP. Wardah-Sup, for instance, said she would always provide feedback on every draft of work handed in by Afiza-Stu. She emphasised that supervisors needed to give timely feedback to ensure the smooth progress of students in the FYP. She explained that, *"The supervisor needs to play a part, like provide immediate feedback to students, if not, the students will be wandering aimlessly"* (Int. 4).

In regard to students' role, both parties saw that in the main students needed to act on feedback given by supervisors. As mentioned by Lutfi-Stu, *"It is our responsibility as students [to act on feedback] so we cannot take it for granted"* (Int. 4). He said that usually he would write down Irfan-Sup's oral feedback during supervision meetings so he would be able to read and take the necessary actions after that. Students and supervisors also mentioned that the former should approach their supervisors and request feedback if they had not been getting any feedback. Irfan-Sup explained that students needed to be proactive and *"don't wait for the supervisors to give feedback. Just go and see the supervisors and ask them for feedback"* (Int. 4). In a similar vein, Afiza-Stu said students could ask questions such as, *"Sir/madam, is my work good? Do I need to make further improvements? Do you have any suggestions?"* (Int. 4) when requesting feedback.

Summary of the Chapter

From the perceptions of students and supervisors at UG, supervision involved the establishment of research-focused relationship and the sustaining of the relationship. The establishment of a research-focused relationship which included the establishment of a research plan and clarifications of expectations was seen as the first crucial step in supervision. In addition, regular contact, time management, meeting the standard and giving and acting on feedback were considered important elements to be attended in sustaining the relationship. Participants' perspectives showed that as the experts, supervisors played a leading role in establishing and maintaining the relationship. In turn, students were seen as research novices. As indicated in the chapter, feedback was considered an embedded element in supervision. Therefore, the following chapter focuses on how feedback was understood and perceived by students and supervisors in supervision of the FYP at UG.

CHAPTER SIX: FEEDBACK IN SUPERVISION (PART I)

The previous chapter highlighted participants' points of view about the roles and responsibilities of students and supervisors in supervision. The current chapter presents how participants in the study understood feedback in the context of supervision for the final year project (FYP). The participants' understandings and perceptions about feedback are drawn from the individual semi-structured interviews with participants. As mentioned in the previous chapter, feedback was considered a part of supervision. This chapter is organised into two main themes. The first theme, the nature of feedback outlines participants' conceptualisations of feedback, the sources of feedback, and modes of feedback. The second theme presents the purposes of feedback in the FYP.

The Nature of Feedback

What is Feedback

Essentially, participants perceived feedback as *"providing information to students"* (Sasha-Sup, Int. 4). This information could be conveyed in a variety of ways including *"marks or corrections that we return to students"* (Wardah-Sup, Int. 4), *"an idea or corrections"* (Afiza-Stu, Int. 4) and *"constructive ideas"* (Lutfi-Stu, Int. 4). Feedback was also described as a form of communication between student and supervisor:

> *It [feedback] is communication* (Wardah-Sup, Int. 4).

Information about the quality of students' work and ideas formed the basis of this communication. Ideally, supervisors and students thought this communication should be bi-directional – a process whereby both parties engaged in *"give and take"* (Lutfi-Stu, Int. 2). Clear communication between students and supervisors was important so information could be

passed on effectively. However, rather than being a two-way exchange, it seemed that for some, feedback was considered a one-way transfer of information from supervisor to student:

> *If either party—either the supervisor or the student cannot give or accept feedback…I think it [feedback] would be inefficient—both in giving and accepting* (Natrah-Sup, Int. 4).

In contrast, others talked about feedback in terms of asking questions, clarifying understandings, seeking further information and generally sharing ideas, indicating a more interactive, two-way exchange:

> *We had two-way communication so he [Haikal-Stu] could clarify whether he understood something or not. He can ask what he did not understand…* (Sasha-Sup, Int. 4);

> *We had two-way communication, for example, sometimes I share my ideas with her* [Natrah-Sup]… (Nuha-Stu, Int, 4).

Feedback was thus construed as both a discussion and a transfer of knowledge deemed necessary for the task at hand:

> *[Feedback is] the whole process of discussion or maybe the knowledge transfer…* (Natrah-Sup, Int. 4).

Sources of Feedback

In the course of the FYP, students' development and progress were supported by three external sources of feedback. Participants' talk indicated that these sources consisted of those that were available within their disciplinary and academic context.

Supervisors as a source of feedback. Without exception, when talking about feedback students saw supervisors as *"the most important person, I mean, she needs to be the main person to provide feedback"* (Afiza-Stu, Int. 4). Students saw their role as ones of asking supervisors for feedback about *"what [we] don't understand because our supervisor is there to guide us"* (Nuha-Stu, Int. 3). Supervisors expressed a similar view, identifying themselves as the principal source of information for students – their role was to provide feedback or information that guided students in terms of the research processes:

> *We as supervisors need to guide students' ideas about how to collect the data and ultimately achieve their research objectives* (Natrah-Sup, Int. 3);
>
> *…it is my job to guide the students to the direction that they need to go, I mean, not diverging from the real content* (Wardah-Sup, Int. 1);
>
> *We [supervisors] are already experts in certain [research] areas, we know about research…so I need to guide him [Lutfi-Stu] such as why things need to be done this way, why this one should be done this way…* (Irfan-Sup, Int. 3).

Students considered supervisors the key sources of information about the research project including the quality of their ideas, the research design and any subsequent written work as their supervisors were knowledgeable and deemed to be experts in the area of study and/or research process. In turn, they saw themselves as novices or apprentices who needed feedback from their more knowledgeable and experienced supervisors about the research process and area of study:

> *…my supervisor, he knows better than me, is knowledgeable than me so I have to listen to him* (Lutfi-Stu, Int. 4);
>
> *…madam is more experienced than I am so maybe she can provide me with lots of feedback to improve my content* (Afiza-Stu, Int. 4);

> *...we [students] still don't have enough knowledge on research, so the supervisor needs to tell us what to do, and what should not be done, or the ways to ease students* (Nuha-Stu, Int. 1).

Thus, it seemed students deferred to the superior knowledge and experience of their supervisors.

Peers, senior students and other academics as sources of feedback.

Mention was also made by students seeking or receiving feedback from other external sources. For example, some talked about receiving feedback from peers and more senior students, particularly when wanting to know, prior to meeting their supervisor if *"what I have done is correct"* (Afiza-Stu, Int. 2):

> *...my friends gave me feedback about the questionnaire such as on the clarity and mistake in the questionnaire* (Nuha-Stu, Int. 2);
>
> *...we ask our seniors' opinion, we ask about the result, is it correct or is there any problem, is there any errors in the result* (Lutfi-Stu, Int. 3).

Afiza-Stu mentioned that she sought feedback from a lecturer in her faculty regarding her data analysis and discussion of results. This was because her supervisor, Wardah-Sup was not an expert in Afiza-Stu's research topic. This lecturer *"commented on my writing [on the analysis of data" and "even gave me examples of sentences so that I know the best way to write my results"* (Int. 4).

Print-based sources of feedback. Lutfi-Stu was the only student who talked about feedback in terms of information from external print-based sources. He mentioned how he sought information from disciplinary-related materials such as journal articles, textbooks and notes so he would *"know whether my [experiment] result is correct or not, so I have to read journals so I can compare my results with those in the journals"* (Int. 3). In a similar

vein, one of the supervisors, Natrah-Sup, talked about how she referred students to exemplars such as her master's thesis so they could gather information about their work by comparing it to *"the components of the thesis, what should be in the content, how you achieve the content"* (Natrah-Sup, Int. 3).

In short, both students and supervisors considered the latter to be the primary and arguably the most significant source of feedback. No explicit mention was made by either students or supervisors of the former having a role in generating feedback for themselves. Thus, both students and supervisors perceived feedback as information from external, knowledgeable sources i.e. supervisors, lecturers and to a lesser extent, peers and disciplinary sources.

Modes of Feedback

Supervisors and students talked about providing and receiving information, respectively, in terms of two modes: asynchronous i.e. written (including electronic forms) and synchronous i.e. orally and through the WhatsApp application. Feedback was written on students' work throughout the FYP as they were producing artefacts such as their proposal and drafts of their dissertation chapters. Oral feedback and feedback through WhatsApp occurred throughout the FYP, often in association with written feedback on students' artefacts. Irrespective of the mode, the importance of providing clear and effective information to students throughout supervision was emphasised so they could continue to improve their work and progress and eventually complete the FYP successfully:

> *If there's no feedback, the project will not progress, right? ...the student's project will be haywire because there is no one to guide them so it doesn't matter what mode of feedback is provided like face-to-face or email or whatever* (Wardah-Sup, Int. 4).

Written feedback. In regard to written feedback, students commented that their supervisors' written feedback gave them a clear message about *"which part I did wrong"* (Lutfi-Stu, Int. 3) and highlighted the important points that needed to be addressed. In addition, due to its tangible nature, written feedback provided students with a permanent record of information. Students perceived this to be helpful as they were able to revisit the feedback whenever needed:

> *I like written feedback because we can read it. I can refer to her [Wardah-Sup's] comments because sometimes we tend to forget about the comments, right? …When she writes it [her feedback], I can always refer to it again* (Afiza-Stu, Int. 2).

However, because written feedback was provided outside of face-to-face interactions, it could be prone to misinterpretation due to a lack of clarity. Wardah-Sup was aware of this possibility:

> *If we write the feedback, the students might not understand what we want to convey. There might be some miscommunication* (Int. 4).

Likewise, Lutfi-Stu indicated that he sometimes could not understand Irfan-Sup's handwritten comments on his work so he had to ask Irfan-Sup to read the comments to him.

While written feedback in the main was uni-directional from supervisor to student, there were indications from both parties that when written feedback was provided through the WhatsApp application, there was an opportunity for either party to seek clarification about what was written. Also, from participants' talk, it was understood that compared to the traditional way of providing and receiving feedback, the WhatsApp application facilitated an immediacy in terms of response:

> *…usually when I don't understand something [in her written comments] I will just ask her straightaway [on WhatsApp]* (Nuha-Stu, Int. 1).

Seemingly, when written feedback was provided through the WhatsApp application, it stimulated short, two-way interchanges between supervisors and students.

Oral feedback. Oral feedback was provided in the face-to-face supervision meetings. Face-to-face meetings were considered a space where students and supervisors had the scope to *"discuss a lot of things…"* (Lutfi-Stu, Int. 2). Both supervisors and students thought that miscommunication of information could be avoided when they met face-to-face. Each party had an opportunity to *"explain what we want"* (Wardah-Sup, Int. 3) clearly and thus it was *"easier to understand her [Sasha-Sup's] explanation"* (Haikal-Stu, Int. 2).

For supervisors, face-to-face meetings were seen as an opportunity to delve into students' understandings and ideas. This was because, through the use of questioning, supervisors were able to elicit responses from students about aspects of their work:

> *…if she can explain it [aspects of her work] to me, that means she understands what's she's doing. If I understand her explanation, that means she's doing okay* (Wardah-Sup, Int. 2).

As a consequence, both parties could develop a shared understanding of the information that was exchanged. Students and supervisors could seek clarification from each other immediately should any misunderstandings arise:

> *If she [Wardah-Sup] cannot understand what I am talking about, I can explain more to her* (Afiza-Stu, Int. 1);
>
> *…if he [Haikal-Stu] can't understand anything, I will be able to know and I can respond to him* (Sasha-Sup, Int. 2).

From this two-way exchange of information, students saw that they were able to receive feedback that would help them to take subsequent actions as *"it is clear to me what she [my supervisor] wants from me and she is also clear about what I need to do after this"*

(Nuha-Stu, Int. 3). Also, both parties thought that discussions would increase students' understandings about their mistakes and weaknesses and as a consequence, students could use the information to improve and progress further:

> *From the discussion, I know my mistakes, the steps that I have to take to improvise or improve my research* (Lutfi-Stu, Int. 3);
>
> *After each meeting, I expect the students to carry out whatever we concluded in the meeting, the problems that we solved* (Irfan-Sup, Int. 2).

While oral feedback in the main was seen to involve a two-way form of communication, it was understood from participants that sometimes information was also conveyed as a one-way transfer from supervisors to students. Participants' talk indicated that this occurred when supervisors needed to draw students' attention to specific mistakes and/or weaknesses in their work:

> *If there's anything wrong with my questionnaire, she can straightaway point out the parts that are problematic* (Haikal-Stu, Int. 3);
>
> *She will explain to me why she commented such and such in my work* (Afiza-Stu, Int. 2).

Last but not least, participants perceived that face-to-face meetings could contribute to the development and maintenance of the student-supervisor relationship. Participants' talk indicated that their involvement in the face-to-face meetings could increase the social and emotional awareness towards each other as *"I can see her, I can listen better, I can observe her emotions. She too can observe mine—how I talk to her"* (Haikal-Stu, Int. 2). Along similar lines, Natrah-Sup perceived that the face-to-face meetings indirectly could increase students' trust in supervisors as students felt *"a sense of safety, security because we are there [available for meetings] for them"* (Int. 4).

The Purposes of Feedback

In the eyes of students and supervisors, feedback served three purposes: to improve task-related work, to indicate progress and to enhance motivation.

To Improve Task-related Work

The discourse of students and supervisors emphasised that the purpose of feedback to be in the main, improving students' task-related work:

> *...so when you receive feedback you know what parts [in your written work] you need to improve…* (Lutfi-Stu, Int. 4);
>
> *I need the feedback because...if there's anything incorrect with my work, I need to improve it* (Haikal-Stu, Int. 1).

The main way in which students and supervisors saw improvement occurring was through the identification of mistakes and errors so students could make corrections. However, as some students noted, *"we can't see our mistakes"* (Nuha-Stu, Int. 1). Thus, feedback from supervisors was considered particularly useful when it identified aspects or areas that needed correction:

> *...when she gives me comments on my work…I am able to know the parts that were incorrect* (Afiza-Stu, Int. 2);
>
> *...she will take a look at my data analysis to detect where I did wrong* (Nuha-Stu, Int. 2).

Similarly, supervisors saw feedback helped students identify parts of their work *"that [which] is inaccurate"* (Natrah-Sup, Int. 1) to enable them to make necessary revisions, or as Irfan-Sup mentioned, *"redo it again"* (Int. 4). As explained by Wardah-Sup, supervisors expected students would then know what to fix up:

I expect her [Afiza-Stu] to make the corrections (Int. 1).

Students perceived that when feedback helped them to "know our weakness" (Haikal-Stu, Int. 4) and identify misunderstandings or inaccuracies in their work, it helped them to make changes and as a consequence improve its quality:

> *When I get suggestions from my supervisors, I can use them to further improve my ideas…* (Afiza-Stu, Int. 4);
>
> *I use that [Sasha-Sup's feedback] to improve my work…* (Haikal-Stu, Int. 4);
>
> *…from there [Irfan-Sup's feedback] …I try to improve my next experiments* (Lutfi-Stu, Int. 3).

To Indicate Progress

To a lesser extent, feedback was considered as means of providing students with an indication about the progress they were making. For this reason, it served to confirm whether the tasks that were carried out at various points throughout the research process were in line with the goals of the FYP and what was expected:

> *I will inform him [Haikal-Stu] about his current progress or achievement so far…*(Sasha-Sup, Int. 2);
>
> *I will make it clear about her progress, "I am happy with this correction" or "I am not happy with this progress". I will make it clear* (Natrah-Sup, Int. 2).

In terms of progress, feedback from supervisors helped students identify what needed to be completed in relation to the research process:

> *[My supervisor's] feedback gives me information on what I need to work on next. For instance, she told me the things I need to complete first before proceeding to the next step* (Nuha-Stu, Int. 2);

He told me after I finish my lab work I have to analyse my results…so he showed me which way I have to go (Lutfi-Stu, Int. 3).

From the supervisors' perspective, feedback provided students with the necessary guidance so they could advance their project. In this way, supervisors saw themselves as guides:

…usually I will call him and discuss with him…and then from there, I will guide him about the steps that he has to proceed… (Irfan-Sup, Int. 3);

…I'll guide him…about what he needs to do next (Sasha-Sup, Int. 2).

To Enhance Motivation

To a much lesser extent, feedback was considered a motivational tool to help students sustain momentum during the project. Supervisors indicated that they deliberately used feedback to motivate and encourage their students:

When I want to motivate him, I will tell him that this is already your last stage before you graduate… (Sasha-Sup, Int. 4);

I will give them some motivational support…I will tell them to—you have to complete this [FYP] in order to pass. Whatever it is, you have to complete this (Wardah-Sup, Int. 1);

while students commented on how information from supervisors took the form of advice and affirmative encouragement:

He gives me advice [in terms of emotional support], sometimes counselling for me…(Lutfi-Stu, Int. 3);

Maybe my supervisors can give me positive feedback on my work, for example, say, "Good"…maybe tell us, "You have done a good job" (Nuha-Stu, Int. 1).

To sum up, the primary purpose of feedback was to help students notice task-related mistakes and/or areas of weaknesses so they could make the necessary improvements to their work. To a lesser extent, feedback helped indicate the state of students' current progress and tasks to be completed next. To a much lesser extent, feedback served to motivate students.

Summary of the Chapter

This chapter addresses the nature and purposes of feedback as perceived by students and supervisors. To students and supervisors, feedback was considered an important component of the supervision experience. Seemingly, feedback involved supervisors conveying information to students. However, as indicated by participants, feedback could also be conveyed through two-way communication where both parties exchanged information and ideas. In supervision of the FYP at UG, supervisors were considered the prime source of information to students. In addition, the main purpose of feedback in supervision was seen as a means to help students improve task-related work. The next chapter addresses how feedback was actually practised by supervisors and students during supervision of the FYP.

CHAPTER SEVEN: FEEDBACK IN SUPERVISION (PART II)

The previous chapter presented how feedback was perceived through the eyes of the students and supervisors. The current chapter draws on research artefacts collected from participants, excerpts of student-supervisor verbal interchanges held during supervision meetings and the researcher's field notes from these meetings to illustrate how feedback was put into practice during the final year project (FYP). Findings in the current chapter are organised in two themes – the nature and purpose of written feedback followed by the nature and purpose of oral feedback.

The Nature and Purpose of Written Feedback

Written feedback was undertaken and experienced in the form of comments at various points during the research journey, for example, proposal drafts, artefacts constructed to collect data, and drafts of dissertation chapters. Supervisors wrote their feedback directly on students' work and used computer-generated applications such as Track Changes in Microsoft Word. Students collected their appraised work from supervisors' offices outside of the face-to-face meetings and/or during face-to-face meetings. On some occasions when the two parties were not able to meet, written feedback on students' work was returned through an electronic medium such as WhatsApp and/or email.

Feedback for Improvement

Overall, written feedback in the FYP was very task-focused. The overarching purpose of written feedback in the main was to improve students' written drafts of the proposal, dissertation chapters and research tools. In this regard, supervisors provided comments to address errors/mistakes, omissions, tasks to complete and to stimulate students' thinking and

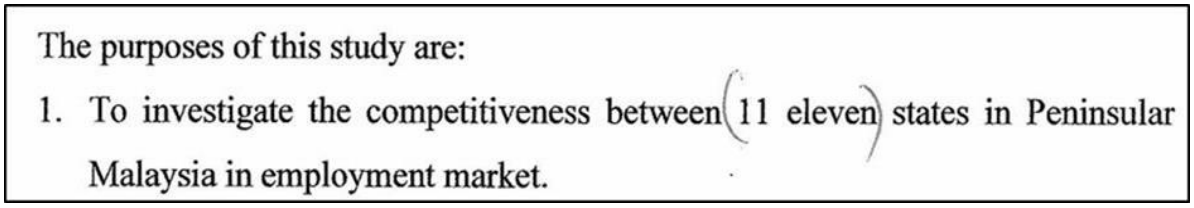
reflection about their work. Following is a range of written feedback provided on students' work.

Feedback to identify errors/mistakes. The most prevalent type of written feedback provided by supervisors identified aspects of students' work that were incorrect. In some cases, supervisors provided the necessary correction(s), in other cases, they left the students to make the correction(s). The majority of feedback addressed surface features and technical aspects of the work such as spelling, referencing, structure, terminology and academic conventions. Typically, when supervisors provided feedback about these matters, they used symbols such as circles, underlining, question marks and arrows that students had to interpret. Figures 7.1, 7.2, and 7.3 illustrate this type of written feedback.

As can be seen in Figure 7.1, seemingly Sasha-Sup used arrows to indicate an issue with the setting out of the reference list in Haikal-Stu's full draft of his dissertation.

Figure 7.1 Sasha-Sup's feedback on Haikal-Stu's references

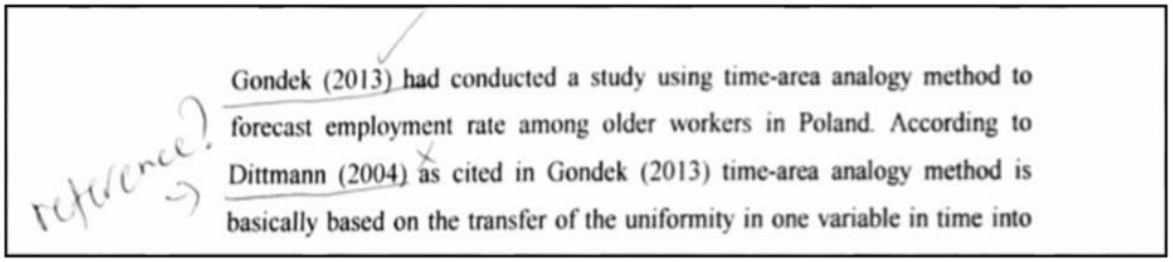
Figure 7.2 is from Afiza-Stu's proposal where she listed the purposes of her study. Here Wardah-Sup has used parentheses around '11 eleven' to draw Afiza-Stu's attention to a mistake in the first purpose statement.


The purposes of this study are:

1. To investigate the competitiveness between 11 eleven states in Peninsular Malaysia in employment market.

Figure 7.2 Wardah-Sup's feedback on Afiza-Stu's proposal draft

In Figure 7.3, Wardah-Sup used a variety of symbols such as ticks, crosses, underlining and arrows to seemingly identify errors.


reference?

Gondek (2013) had conducted a study using time-area analogy method to forecast employment rate among older workers in Poland. According to Dittmann (2004) as cited in Gondek (2013) time-area analogy method is basically based on the transfer of the uniformity in one variable in time into

Figure 7.3 Wardah-Sup's feedback on Afiza-Stu's dissertation draft

A common feature in the feedback provided to students in these three instances is the use of symbols to draw attention to the area needing correction. There is however little in the way of specific detail or guidance regarding the nature of the issue. Supervisors appeared to have assumed students would be able to identify the problem and how to address it.

There were some instances where supervisors provided more detailed written information about the mistakes in students' work. One such instance was evident in the Track Comments on Figure 7.4 where Natrah-Sup indicated that Nuha-Stu had not provided sufficient guidance to potential respondents on her questionnaire.

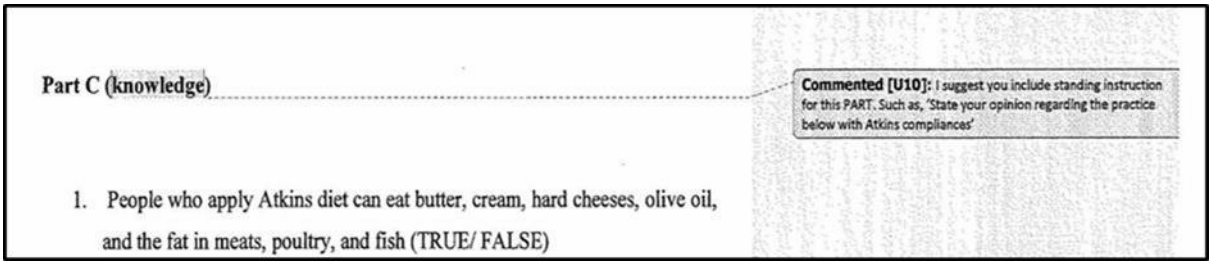
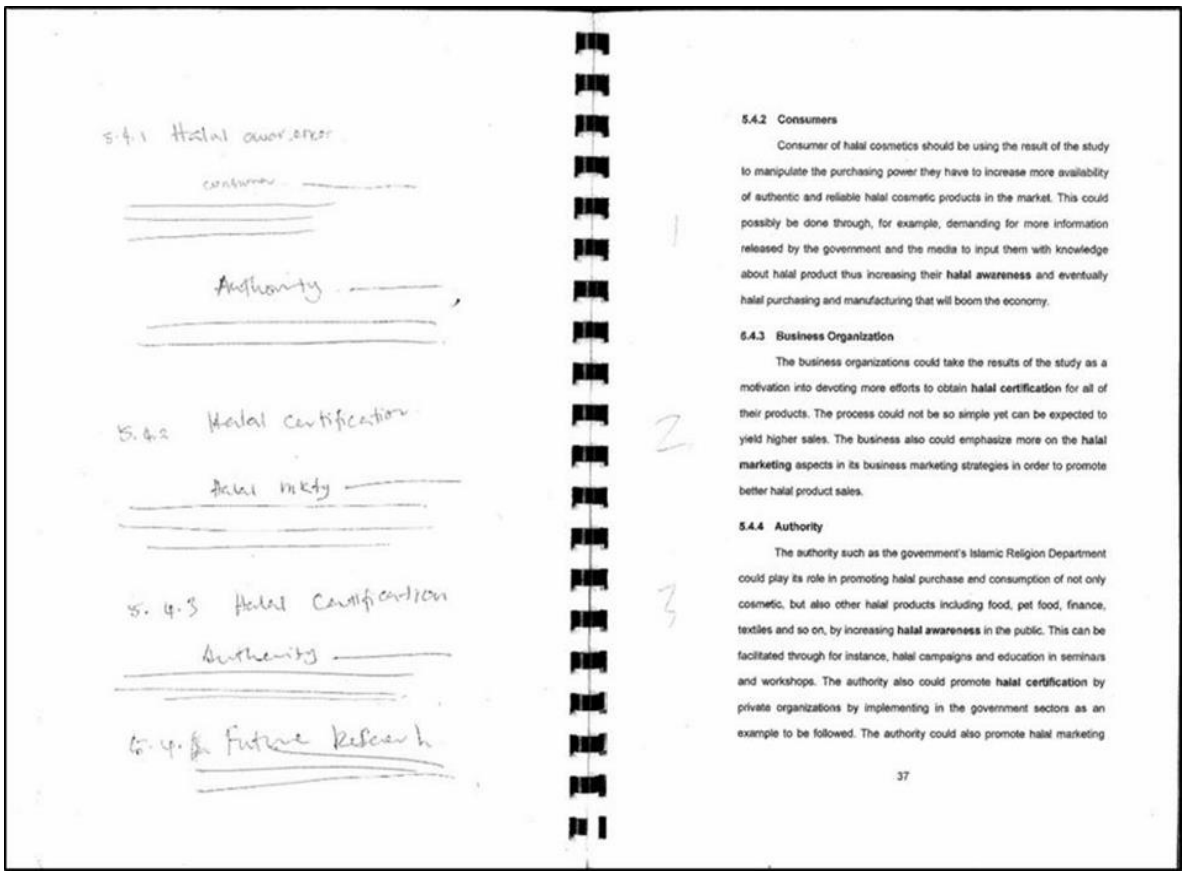


Figure 7.4 Natrah-Sup's feedback on Nuha-Stu's questionnaire draft

Here Natrah-Sup provided a clear suggestion about how the work could be amended and an example of how to write an instruction for the particular section of the questionnaire.

A more elaborate example is evident in Figure 7.5 where Sasha-Sup has written numbers next to each paragraph of the student's Recommendation section[3]. In addition, what appears to be an outline of what is required has been written on page 37 of Haikal-Stu's work. At first glance, it seems that Sasha-Sup was telling Haikal-Stu that he was supposed to reorganise his ideas according to the outline. A closer look suggests Sasha-Sup has used key ideas from Haikal-Stu's writing and rearranged them under new headings and subheadings. It is however unclear whether the student was required to reorganise the ideas or whether he should expand the discussion of the key ideas alongside the reorganisation.

[3] See Appendix L for pages 36 and 38 of the section



5.4.1 Halal awareness
consumer
Authority
5.4.2 Halal certification
Halal Mkty
5.4.3 Halal Certification
Authority
5.4.4 Future Research

5.4.2 Consumers

Consumer of halal cosmetics should be using the result of the study to manipulate the purchasing power they have to increase more availability of authentic and reliable halal cosmetic products in the market. This could possibly be done through, for example, demanding for more information released by the government and the media to input them with knowledge about halal product thus increasing their **halal awareness** and eventually halal purchasing and manufacturing that will boom the economy.

5.4.3 Business Organization

The business organizations could take the results of the study as a motivation into devoting more efforts to obtain **halal certification** for all of their products. The process could not be so simple yet can be expected to yield higher sales. The business also could emphasize more on the **halal marketing** aspects in its business marketing strategies in order to promote better halal product sales.

5.4.4 Authority

The authority such as the government's Islamic Religion Department could play its role in promoting halal purchase and consumption of not only cosmetic, but also other halal products including food, pet food, finance, textiles and so on, by increasing **halal awareness** in the public. This can be facilitated through for instance, halal campaigns and education in seminars and workshops. The authority also could promote **halal certification** by private organizations by implementing in the government sectors as an example to be followed. The authority could also promote halal marketing

37

Figure 7.5 Sasha-Sup's feedback on Haikal-Stu's dissertation draft

Feedback to identify omissions. Written feedback was also used to address parts where students had omitted or left out necessary information from their work. Typically, this type of feedback identified parts of students' written work that needed more or clearer explanation so that improvements might be made. As depicted in Figure 7.6, Irfan-Sup has not only indicated what is wrong with the piece of work but he also added extra detail (see underlined section) to Lutfi-Stu's work:

~~The s~~Solar cell is an invention in technology that contributes to ~~renewable energy~~RE industry for electricity production. Amorphous Silicon solar cell (a-Si), biohybrid solar cell, buried contact solar cell, cadmium telluride solar cell (CdTe), concentrated PV cell (CVP and HCVP), copper indium gallium selenide solar cells (CI(G)S),crystalline silicon solar cell (c-Si) and dye-sensitized solar cells (DSSCs) is examples the technologies developed in solar cell. D~~studies regarding~~ dye-sensitized solar cells (DSSCs) have been carried out due to the low cost to produce the solar cell and easiness

Figure 7.6 Irfan-Sup's feedback on Lutfi-Stu's dissertation draft

while in Figure 7.7, Wardah-Sup has made corrections and added extra information to Afiza-Stu's Methodology chapter:

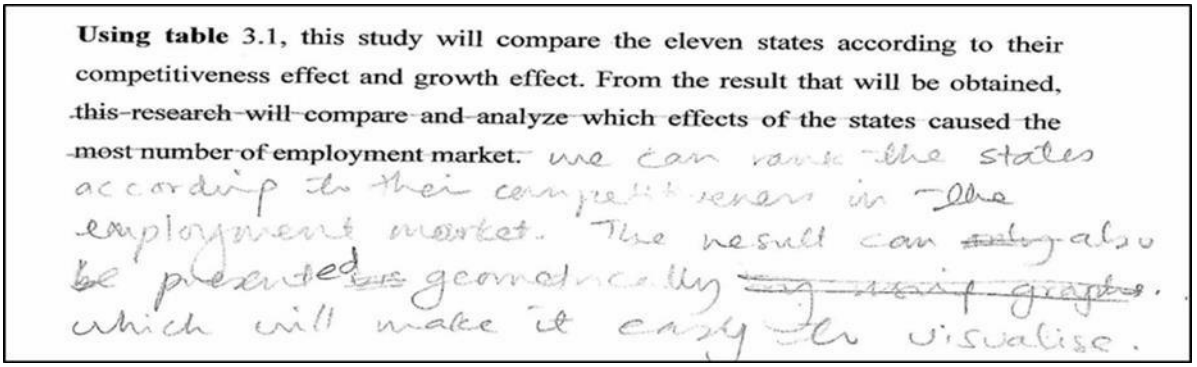


Figure 7.7 Wardah-Sup's feedback on Afiza-Stu's proposal draft

The previous examples (Figures 7.6 and 7.7) show how supervisors provided additional information about the nature of the mistakes and how it might or should be addressed. It seems that the supervisors expected the students would accept and/or make the changes as identified. In some cases, supervisors used symbols to indicate a problematic part of a student's work. For instance, in Figure 7.8, Wardah-Sup has used a curly bracket to indicate an issue in a section of Afiza-Stu's chapter:

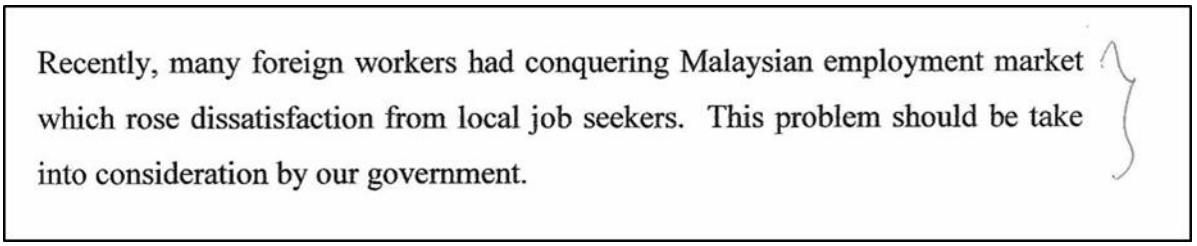


Figure 7.8 Wardah-Sup's feedback on Afiza-Stu's proposal draft

During a face-to-face meeting (see Excerpt 1) where this feedback was given back to Afiza-Stu, Wardah-Sup made it clear that this curly bracket was intended to draw attention to the unsatisfactory way in which she had revised the section.

Excerpt 1, The Introduction, May 2016

Wardah-Sup	:	*Remember last time I asked you to expand the introduction?*	(1)
Afiza-Stu	:	*Yes—*	(2)
Wardah-Sup	:	*I told you to add some explanation about the competitiveness in job employment. Actually what I wanted was for you to explain about the problems regarding employment and include some data or evidence to support that.*	(3) (4) (5) (6)
Afiza-Stu	:	*Yes, you mentioned that I need to do something similar in the other section.*	(7)
Wardah-Sup	:	*Yeah, you can use newspaper reports as one of your sources.*	(8)
Afiza-Stu	:	*Yes, I remember. Last time you mentioned that I need to explain why is there a significant number of foreign workers in Malaysia.*	(9) (10)
Wardah-Sup	:	*Right.*	(11)
Afiza-Stu	:	*I have made the additions but I think my explanation is not sufficient. I don't know what else to include in here.*	(12) (13)
Wardah-Sup	:	*There are a lot of issues that you can talk about in that section—something about job competitiveness—*	(14) (15)
Afiza-Stu	:	*Can you give me some examples? I have written about the job sectors, about the types—*	(16) (17)
Wardah-Sup	:	*Okay. For example, which states have high rates of employment?*	(18)
Afiza-Stu	:	*Oh, right! I have not mentioned that in my writing!*	(19)
Wardah-Sup	:	*And you can explain why the rates in such states are high—perhaps you can link it with the cost of living in the states.*	(20) (21)
Afiza-Stu	:	*Oh, I see.*	(22)
Wardah-Sup	:	*Okay?*	(23)
Afiza-Stu	:	*Yes, I understand.*	(24)

Through this verbal exchange, Afiza-Stu received clear information as to why the particular section has been identified as problematic and at the same time received specific suggestions on how to improve the work. Also, while information mainly came from Wardah-Sup (lines 3-6, line 8, line 18, and lines 20-21), it can also be seen that Afiza-Stu demanded direct answers from her supervisor as to what she needed to do (lines 16-17).

Feedback to stimulate thinking and reflection. In contrast to feedback about errors and the need for further information, there was less evidence of written feedback addressing students' understanding of ideas or concepts underlying a specific task. Where this was apparent, the feedback was mainly expressed in the form of open questions. Seemingly, the purpose of this feedback was to get the students to think and reflect, so they could clarify what they have written. As can be seen in Figure 7.9, Wardah-Sup has circled the *phrase 'not true in all cases'* and used an arrow to draw attention to the question *'Why?'*. As further

prompt, she has written *'you need to justify'* underneath the question presumably with a view to stimulating Afiza-Stu's thinking.

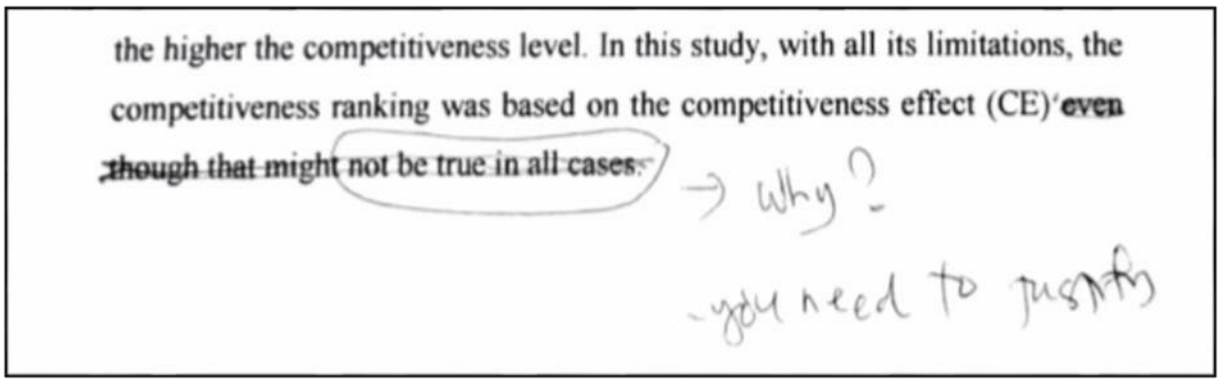


Figure 7.9 Wardah-Sup's feedback on Afiza-Stu's dissertation draft

A further example is apparent in Figure 7.10, taken from Haikal-Stu's questionnaire draft. This example shows how Sasha-Sup used a circle, question marks and a question to indicate a need for clarification. Taken together, these prompts seem to be encouraging Haikal-Stu to reflect on why he included a particular section and/or term in the questionnaire.

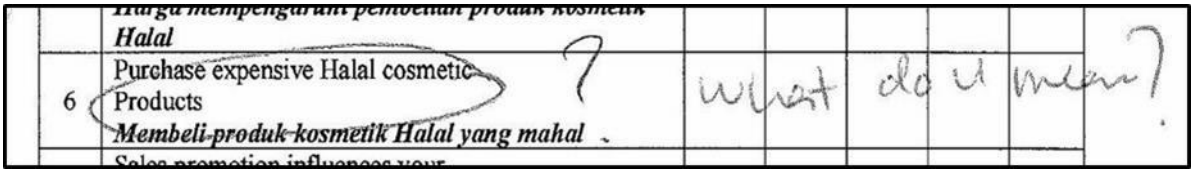


Figure 7.10 Sasha-Sup's feedback on Haikal-Stu's questionnaire draft

While most of the written feedback in the instances above was uni-directional from supervisor to student, there was some evidence of written feedback stimulating a two-way exchange of ideas between student and supervisor either as part of a face-to-face meeting or through an electronic platform. In such cases, students had the opportunity to clarify the feedback and receive further information. Figure 7.11, for instance, prompted an exchange between Sasha-Sup and Haikal-Stu. Here the supervisor circled the words *'Government'*, *'Halal authorities'*, *'Manufacturers'* and *'Supermarkets'* and put an asterisk alongside the text.. At the same time she wrote, *'Check the original questionnaire to see who the respondents are'* (Translated from Bahasa Melayu).

5	Government is responsible for Halal product availability ***Kerajaan bertanggungjawab untuk ketersediaan produk Halal***	
6	Halal Authorities are responsible for Halal product availability ***Pihak Berkuasa Halal bertanggungjawab untuk ketersediaan produk Halal***	
7	Manufacturers are responsible for Halal product availability ***Pengilang bertanggungjawab untuk ketersediaan produk Halal***	
8	Supermarkets are responsible for Halal product availability ***Pasar raya bertanggungjawab untuk ketersediaan produk Halal***	

Figure 7.11 Sasha-Sup's feedback on Haikal-Stu's questionnaire draft

This written feedback was then returned to Haikal-Stu through the WhatsApp application. As can be seen below in Excerpt 2, both parties then engaged in a short interaction about the written feedback. While Haikal-Stu explained why he included the statements identified as problematic (lines 1-7), Sasha-Sup highlighted a potential lack of clarity for respondents (lines 8-10), making it clear to Haikal-Stu that a revision of the statements was necessary. Through this brief WhatsApp exchange, the student had been able to clarify the written feedback on his work, the revision needed, and the nature of the changes to be made.

Excerpt 2, The Questionnaire, June 2016

Haikal-Stu	:	*Madam, for questions 5, 6, 7, and 8 [referring to Sasha-Sup's feedback], what I*	(1)
		meant was, before customers purchase a product, they might have an awareness	(2)
		that the government is responsible for declaring the halal status of a product.	(3)
		Supermarkets are also responsible for ensuring the halal status of a product.	(4)
		For instance, Tesco supermarkets label their cooking oil as halal so that means	(5)
		Tesco is responsible for making sure that their products are halal. The	(6)
		respondents of the study that I adopted were consumers of halal products.	(7)
Sasha-Sup	:	*Are you sure that the original respondents were consumers, not the*	(8)
		manufacturer, or suppliers, or halal agencies? You need to rephrase the	(9)
		statements in the questionnaire so your respondents will not be confused.	(10)
Haikal-Stu	:	*Yes, the original respondents were consumers of halal products.*	(11)
Sasha-Sup	:	*Try and read the literature review section of that study again. Researchers*	(12)
		usually create a questionnaire based on the arguments in the literature review. I	(13)
		am concerned that your future respondents might misinterpret your questions.	(14)
		Try to find evidence from its literature review.	(15)
Haikal-Stu	:	*Check its literature review? You mean check who were their respondents?*	(16)
Sasha-Sup	:	*Yes, and check whether there is any mention in the literature that respondents*	(17)
		should be aware that the government is responsible for ensuring the status of	(18)
		halal products. Again, this is for the question that I have marked.	(19)

A further example is illustrated in Figure 7.12 where Natrah-Sup has highlighted several issues in Nuha-Stu's statements in the research objectives.

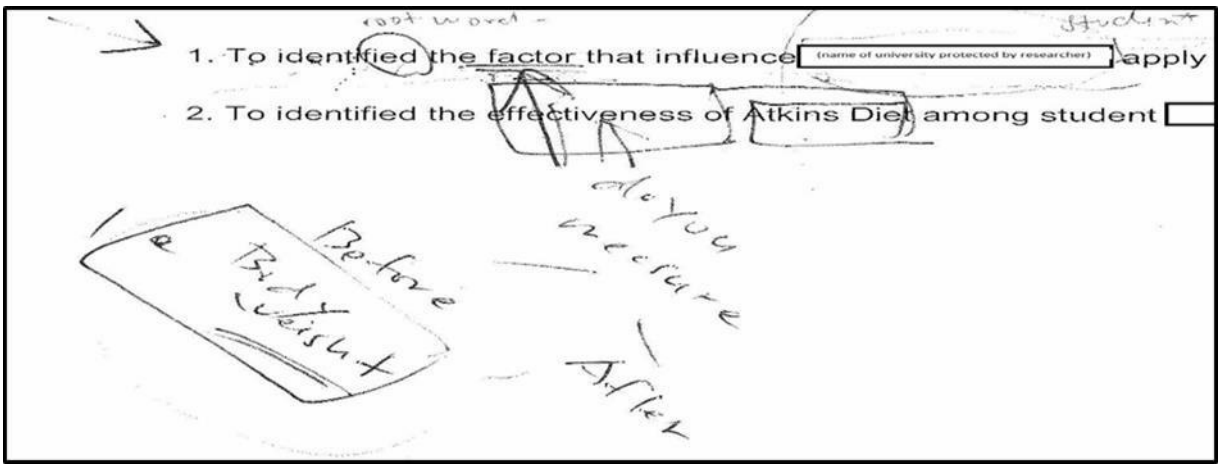


Figure 7.12 Natrah-Sup's feedback on Nuha-Stu's proposal draft

Here Natrah-Sup has identified a technical issue about the correct tense in Nuha-Stu's first research objective statement. At the same time, it appears that Natrah-Sup was stimulating Nuha-Stu's thinking about how she would achieve the objectives of the study through the short comments, *'Do you measure'*, *'before i.e. body weight'*, *'after'* pointing at the words *'factor'* and *'effectiveness'*. From the researcher's conversation with Nuha-Stu, she pointed out that she had an opportunity to receive further information about her supervisor's feedback during a face-to-face meeting. Not only that, as noted in the Field Note, the written feedback provided by her supervisor was useful as a point of reference for her to refer back to:

> Nuha-Stu shared with me a note[4] written by her supervisor during their second meeting. She told me that she referred to the notes as a guide to help her improve her proposal especially when she was away for her practicum. (Field note, November 2016).

To summarise, written feedback in the FYP emphasised on identifying issues in students' written work so these could be attended to. Relatively, less attention was given to

[4] See Appendix M

students' understanding and the promotion of reflection about the work and understanding. Further, written feedback in the main was experienced as a uni-directional transfer of information from supervisors to students whereby supervisors indicated what was not satisfactory with the work and students were expected to make the necessary corrections. There were only a few instances where students and/or supervisors followed up on this feedback during a face-to-face meeting and/or through electronic communication.

The Nature and Purpose of Oral Feedback

Students and supervisors engaged in oral feedback during formal face-to-face supervision meetings. These meetings were generally conducted in the supervisor's office where students had the opportunity to have a one-to-one discussion with their supervisor. The exception was Lutfi-Stu who had occasional formal meetings with Irfan-Sup in the laboratory which sometimes occurred with the presence of other students under Irfan-Sup's supervision.

Feedback within the formal face-to-face supervision meetings occurred within a respectful relationship. Students typically addressed their supervisors with honorifics such as *"madam"* (Nuha-Stu, Excerpt 6, line 1) and *"doctor"* (Lutfi-Stu, Excerpt 5, line 1). Students' respect towards their supervisors was further apparent through their gestures. Based on observations of the meetings, students of the same gender as their supervisors would shake hands with their supervisors at the end of each meeting. In the Malaysian context, especially within the Muslim community, shaking hands with teachers is regarded as a gesture that shows students' respect towards teachers. During these meetings students and supervisors usually talked about work submitted prior to the meeting and other issues pertinent to students' progress. Sometimes students prepared questions to ask their supervisors.

Feedback for Improvement

It appeared that the overarching purpose of oral feedback in the FYP was to improve students' written work and/or aspects of the actual study such as the experiment and questionnaire. To this end, oral feedback was experienced as a means to address students' errors/mistakes, omissions, tasks to complete as well as thinking and reflection about their work. In most instances, supervisors identified the mistakes or aspects that needed further clarification. However, there were a few instances where students were aware of the nature of the issue. In such instances, students initiated the exchange to seek information from their supervisors about the nature of the issue and how they might address it. This section illustrates the nature of the oral feedback experienced during face-to-face meetings, drawing on typical student-supervisor exchanges observed by the researcher.

Feedback to identify errors/mistakes. A key aspect focused on by supervisors in their oral feedback was the correctness and accuracy in students' written work i.e. proposal draft and drafts of chapters. In the main, this feedback addressed how students went about presenting ideas in their writing. The following excerpts are typical examples of how students' inaccuracies and insufficiencies in expressing their ideas in research writing were addressed through oral feedback.

In Excerpt 3, Irfan-Sup addressed an inadequate explanation of a particular result in Lutfi-Stu's draft. Irfan-Sup began the episode by asking Lutfi-Stu to explain the result of an experiment. Instead of directly telling Lutfi-Stu what issue was, Irfan-Sup encouraged Lutfi-Stu to recognise the issue in his work by getting him to talk about it (line 1 and line 5).

Excerpt 3, The Results Chapter (Dissertation), November 2016

Irfan-Sup	:	*Can you explain the result of your experiment?*	(1)
Lutfi-Stu	:	*I have used FT-IR to analyse the titanium dioxide, PANI, reactive red 4 dye,*	(2)
		and carbon doped. I found that the PANI showed a major peak as stated	(3)
		here and the same peak was also found in the three other samples.	(4)
Irfan-Sup	:	*Okay, why do the samples show a peak around this wavelength?*	(5)
Lutfi-Stu	:	*They represent the surface hydroxyl and absorbed water molecules.*	(6)

Irfan-Sup	:	*Yes, but I think you did not explain that thoroughly in your writing.*	(7)
		What you can do to make your writing clear, to make other people	(8)
		understand your result easily, is to include figures and graphs with your	(9)
		explanation.	(10)
Lutfi-Stu	:	*Okay.*	(11)
Irfan-Sup	:	*When you include graphs or figures accompanied by descriptions, like what*	(12)
		you've explained just now, the examiners especially will be able to see your	(13)
		points clearly. This is the way we make our discussion of results more	(14)
		organised.	(15)
Lutfi-Stu	:	*I see.*	(16)

Lutfi-Stu's contribution to the talk was acknowledged by his supervisor: *"Yes, but…"* (line 7) and *"…like what you've explained just now…"* (lines 12-13). Lutfi-Stu's understanding about his work, as elicited from the questions was then used by Irfan-Sup to help Lutfi-Stu understand why there was an issue in his written work and how he might improve it so the readers would understand the result.

Excerpt 4 shows how a question from the supervisor at the beginning of an episode led to a negotiation between the two parties. Here oral feedback was used to address the inclusion of a map that the supervisor thought was unnecessary.

Excerpt 4, The Introduction Chapter (Proposal), May 2016

Wardah-Sup	:	*Why did you include a map here?* [referring to a section in the student's work]	(1)
Afiza-Stu	:	*Um, about the map—because I want to introduce Malaysia so I thought*	(2)
		maybe—okay—	(3)
Wardah-Sup	:	*I want to know, what is the significance of the map to your research topic?*	(4)
Afiza-Stu	:	*Like I said, I wanted to introduce Malaysia, something like the location of*	(5)
		Malaysia. Something like that.	(6)
Wardah-Sup	:	*Um, I am asking because I cannot see the significance of the map in this*	(7)
		section.	(8)
Afiza-Stu	:	*I just added it because I felt like including a figure in that section.*	(9)
Wardah-Sup	:	*Okay, let's say you want to include a figure—when I did my study on the*	(10)
		distribution of rainfall in Malaysia, I included the map of Malaysia as one of	(11)
		the figures. But—I also included a legend with the map, explaining the	(12)
		distribution of rainfall in each state in Malaysia.	(13)
Afiza-Stu	:	*I see.*	(14)
Wardah-Sup	:	*If you want to include a map, what kind of information do you want to convey*	(15)
		about it? By the way, I included the map in the results chapter in my	(16)
		dissertation then I explained about the map in the results—about the rainfall in	(17)
		the states of Malaysia. You need to know what kind of information you want	(18)
		toconvey or explain when you include a figure. So what it is that you want to	(19)
		explain in this section?	(20)
Afiza-Stu	:	*Something about Malaysia—I thought I can add something to make the*	(21)
		introduction chapter more comprehensive but I did not know what else to	(22)
		include.	(23)
Wardah-Sup	:	*I think the map is not significant here.*	(24)
Afiza-Stu	:	*Yeah, maybe it is out of place.*	(25)

This excerpt opened with Wardah-Sup hinting about an issue with the map in Afiza-Stu's introductory chapter. Instead of telling Afiza-Stu directly what the issue was, Wardah-Sup gave Afiza-Stu an opportunity to defend her work. After Wardah-Sup realised that Afiza-Stu was not able to provide a satisfactory answer, she prompted Afiza-Stu's by referring to the use of figures and by relating and elaborating on an example from her experience. As Afiza-Stu was still not able to come out with a solution to rectify the issue at hand, she finally agreed with her supervisor to remove the map from the chapter.

While the previous examples portrayed supervisors establishing the context to the issue by opening the episodes with a broad question, the following examples illustrate how students initiate exchanges to seek specific feedback about issues in their work.

Excerpt 5 was opened by the student, Lutfi-Stu who was aware of an issue in his experiment result. Oral feedback in this situation was used to address the need to check the result of the experiment.

Excerpt 5, The Experiment Result, November 2016

Lutfi-Stu	:	*I understand, doctor. I think my results were not satisfactory for the effect of the light source.*	(1) (2)
Irfan-Sup	:	*Okay, tell me why do you think the result of the experiment is different from what we expected? How are you going to improve it?*	(3) (4)
Lutfi-Stu	:	*Maybe I need to test the cell again under sunlight and also spotlight.*	(5)
Irfan-Sup	:	*Yes, do it once more and see whether this time there are any improvements in that. Take note also that different times of the day affects the quality of sunlight that the cell receives. So that is one of the factors that may affect your result.*	(6) (7) (8)
Lutfi-Stu	:	*Yes, you are right. Okay, I will repeat the experiment again.*	(9)

Rather than giving a direct solution to Lutfi-Stu, Irfan-Sup prompted him to think of a plan to rectify the issue (lines 3-4). Irfan-Sup supported Lutfi-Stu to solve the issue by providing hints that could help him evaluate his work (lines 6-8). The episode ended with Lutfi-Stu agreeing to repeat the experiment.

Excerpt 6 is another example of how a question from a student at the beginning of an exchange finally helped clarify the student's confusion about an issue in her work. The

exchange began with Nuha-Stu asking Natrah-Sup for an affirmation regarding the correct number of research questions for her FYP.

Excerpt 6, The Research Question (Dissertation), November 2016

Nuha-Stu	:	*Madam, about the research questions—it's not necessary to have two research questions, right? Mine is already okay, right?*	(1) (2)
Natrah-Sup	:	*Let me see [your research questions]—*	(3)
Nuha-Stu	:	*I am confused about the relationship between the research questions and the objectives.*	(4) (5)
Natrah-Sup	:	*I understand what you're trying to say. If you have more research questions than your research objectives, then it is fine but not the other way round. The research questions should be equal to or more than the research objectives.*	(6) (7) (8)
Nuha-Stu	:	*Okay.*	(9)
Natrah-Sup	:	*Why? Because in order to achieve the research objectives, we need to tackle a certain number of factors.*	(10) (11)
Nuha-Stu	:	*Okay. So it is okay if the number of research objectives is the same as the research questions?*	(12) (13)
Natrah-Sup	:	*Yes, as long as the objectives answer all the research questions.*	(14)
Nuha-Stu	:	*After data collection, I realised that we did not manage to capture the effectiveness of the Atkins diet because it cannot be measured through the questionnaire so can I just cancel this objective?*	(15) (16) (17)
Natrah-Sup	:	*Um, yes but then check again what you've got from our findings so we can change the objectives, for instance, you can refer to the factors why they choose Atkins.*	(18) (19) (20)
Nuha-Stu	:	*Okay, I got confused because I stated in the objectives earlier that I will look at the effectiveness of the Atkins diet but then the data collection yielded different findings.*	(21) (22) (23)
Natrah-Sup	:	*Yes, yes. It's okay. So you can just cancel that objective.*	(24)
Nuha-Stu	:	*Hmm, I think we have discussed this before. You mentioned that we will not be able to measure the effectiveness of Atkins diet through the questionnaire because some respondents might have gained weight after applying Atkins diet but at the same time, the weight gain does not necessarily mean they are not healthy.*	(25) (26) (27) (28) (29)
Natrah-Sup	:	*Yes, I remember we have discussed this. Maybe we just forgot to make the changes.*	(30) (31)
Nuha-Stu	:	*Yes, I think so too.*	(32)

Natrah-Sup stimulated Nuha-Stu's thinking on how to resolve the issue by drawing upon related research concepts (lines 6-8). This caused Nuha-Stu to reflect on the research processes that she had performed. Natrah-Sup gave Nuha-Stu the opportunity to decide the direction of her work as she did not confirm nor deny whether the number of research questions and objectives was right or wrong, rather she guided Nuha-Stu to decide for herself. Near the end of this episode, Nuha-Stu realised that the issue has been discussed and resolved at a previous meeting. In this excerpt, it was the student who has largely directed the course of feedback.

Feedback to identify omissions. This type of feedback was used to address relevant information that students left out from their work. In most instances, students were not aware of the issue in their work therefore supervisors led the exchanges by telling them the nature of the issue and what they needed to do to rectify the issues.

Excerpt 7 is an episode that occurred while Sasha-Sup was reading the results chapter of Haikal-Stu's dissertation draft. Here Sasha-Sup was indicating to Haikal-Stu that further explanation was needed in a section of his result chapter.

Excerpt 7, The Results Chapter (Dissertation), June 2016

Sasha-Sup	:	*In this section, you have to explain the model.*	(1)
Haikal-Stu	:	*The model?*	(2)
Sasha-Sup	:	*I mean, you have to explain about this table. You haven't done that.*	(3)
Haikal-Stu	:	*Okay.*	(4)
Sasha-Sup	:	[Referring to Haikal's analysis] *Oh, I thought that the previous one was a descriptive result.*	(5) (6)
Haikal-Stu	:	*No. That's just the ANOVA results. I don't have to include the ANOVA results in the report, right?*	(7) (8)
Sasha-Sup	:	*Yup, no need.* [After reading Haikal's analysis] *I think everything is fine. You just have to explain the model that I mentioned just now.*	(9) (10)
Haikal-Stu	:	*Okay. Are there other tables that I need to include in my report?*	(11)
Sasha-Sup	:	*Let me see. You already have the tables for the frequency, descriptive—*	(12)
Haikal-Stu	:	*Coefficient. I have to include that and it is already in my report.*	(13)
Sasha-Sup	:	*You can combine the information in the elaborations.*	(14)
Haikal-Stu	:	*For which one?*	(15)
Sasha-Sup	:	*Look at this example* [referring to a previous student's FYP]. *This student combined the elaborations about the table.*	(16) (17)
Haikal-Stu	:	*Which one?*	(18)
Sasha-Sup	:	*The one about regression analysis.*	(19)
Haikal-Stu	:	*Oh. I have created two different tables in my report.*	(20)
Sasha-Sup	:	*Yes. Also, you have to explain the figures that you have included in the report.*	(21)
Haikal-Stu	:	*Can I see the example* [the exemplar]? [After reading the exemplar for some times] *So I need to have some kind of summary.*	(22) (23)
Sasha-Sup	:	*Yes, it should come after each figure. For example, here you have to explain about the adjusted R squared.*	(24) (25)
Haikal-Stu	:	*Okay.*	(26)

This excerpt illustrates how the student and supervisor sustained a conversation around the need for an explanation of a table in the results section of Haikal-Stu's work. Haikal-Stu's question at the beginning of the episode (line 2) indicated that he was not aware that his work was problematic. As the interaction progressed, Haikal-Stu and Sasha-Sup engaged in a series of questions and answers. This enabled Haikal-Stu to request specific information from Sasha-Sup about the clarity and inadequacies in the way he wrote his findings. While Sasha-Sup

provided direct and specific feedback about the correctness or inaccuracies following Haikal-Stu's query (for example lines 9-10 and line 12), she also provided the opportunity for Haikal-Stu to compare and reflect on his current work against the standard that he needed to achieve through the use of an exemplar.

The situation portrayed in Excerpt 8 shows how Irfan-Sup highlighted an omission in the results section of Lutfi-Stu's first draft.

Excerpt 8, The Results Chapter (Dissertation), November 2016

Irfan-Sup	:	*Okay. I think you what you have here* [the writing of the results] *is okay for the*	(1)
		first try but what I want you to do is to find more similar studies and use their	(2)
		results to support your arguments here. Try to find more evidence from the	(3)
		literature. That way your arguments will sound more convincing and academic.	(4)
		If you want to write a good result and discussion, you need to observe your	(5)
		product carefully. Describe what you see in your writing and use arguments from	(6)
		the literature to discuss your own results.	(7)
Lutfi-Stu	:	*Okay. I will try and find more articles to support my arguments. Actually, I have*	(8)
		made some readings. For example, in my study, I found that that the PANI that	(9)
		was dried in the oven and hot plate at 60 degrees disintegrated from the plate's	(10)
		surface when I washed it. The same results were also found in a study that I	(11)
		referred to.	(12)
Irfan-Sup	:	*Okay, so when you report your results, you have to refer to previous studies in*	(13)
		order to justify your results. However, sometimes we might find that previous	(14)
		studies do not have the same results as what we have but that is fine. That does	(15)
		not mean that your results are not good or totally incorrect. Sometimes	(16)
		contradictory results might be a new contribution.	(17)
Lutfi-Stu	:	*I see.*	(18)
Irfan-Sup	:	*When I did my study, I found that one of my results was a bit contradicting with*	(19)
		results from similar studies. I discussed with my supervisor about that and both	(20)
		of us worked together to explain the results. So if you find that your results are	(21)
		different from what people have done, come and discuss with me so we can think	(22)
		about the ways to solve it.	(23)

Here Irfan-Sup was telling Lutfi-Stu that he needed to include evidence from similar studies to support and justify his results (lines 2-3 and lines 13-14). He emphasised his point by telling Lutfi-Stu that the inclusion of the evidence would improve his work by making his argument stronger. In addition, while there was no explicit invitation from Irfan-Sup for Lutfi-Stu to talk about his work, Irfan-Sup's talk at the beginning of the episode led to a short discussion between the two parties. While Lutfi-Stu accepted Irfan-Sup's suggestions, he also reflected on the strategies that he had taken to discuss and justify the results of his experiment (lines 8-12). The episode continued with Irfan-Sup giving Lutfi-Stu some broad suggestions that may help to improve his experiment results.

Excerpt 9 starts with the student telling her supervisor that she only found one article related to her study. However, as the conversation progressed, Wardah-Sup noticed that Afiza-Stu was still not able to grasp the nature and scope of a literature review.

Excerpt 9, The Literature Review (Proposal), May 2016

Afiza-Stu	:	*For the literature review, I only managed to find one more article that explains about constant market share.*	(1) (2)
Wardah-Sup	:	*Okay. So you are not able to find more articles about this?*	(3)
Afiza-Stu	:	*About constant market share? No. I tried to find about it in articles that discuss job competitiveness but I cannot find that much info about constant market share. However, I found info about constant market share in other non- related articles. I think that by discussing constant market share analysis in relation to job competitiveness, my discussion will be more specific to my scope.*	(4) (5) (6) (7) (8) (9)
Wardah-Sup	:	*But you can discuss the constant market share analysis using information from other articles outside the [job] competitiveness scope as well.*	(10) (11)
Afiza-Stu	:	*I can do that?*	(12)
Wardah-Sup	:	*Of course.*	(13)
Afiza-Stu	:	*I thought it has to be specific—*	(14)
Wardah-Sup	:	*What is the meaning of 'literature review'?*	(15)
Afiza-Stu	:	*Previous studies by other people.*	(16)
Wardah-Sup	:	*Yes, everything that has been done—*	(17)
Afiza-Stu	:	*Including their methods, analysis—*	(18)
Wardah-Sup	:	*Yes. You include what has been done by previous researchers, right? It does not necessarily mean that you have to discuss constant market share analysis within the scope of competitiveness. For instance, if your study uses forecasting method of analysis, you don't have to limit your literature review on studies using forecasting in job competitiveness. You can discuss other studies using the forecasting method or even discuss studies on competitiveness that use different types of methods of analysis.*	(19) (20) (21) (22) (23) (24) (25)
Afiza-Stu	:	*I see. What do you think about my subheadings in my literature review? Is there anything wrong there?*	(26) (27)
Wardah-Sup	:	*The way you structure the subheading is already fine. I can see the categories—*	(28) (29)
Afiza-Stu	:	*That means they are correct?*	(30)
Wardah-Sup	:	*Yes, it's just that I want you to enrich your literature review. One more thing, when you do the literature review, don't copy the exact sentences. You remember that you need to paraphrase the sentences from the articles, don't you?*	(31) (32) (33) (34)
Afiza-Stu	:	*Yes, I always paraphrase.*	(35)

She then probed Afiza-Stu to stimulate her thinking about what a literature review should entail (lines 15 and 17). Moreover, Wardah-Sup provided examples to supplement Afiza-Stu's understanding of the nature of a literature review (lines 19-25). At the same time, Wardah-Sup made it clear that she wanted Afiza-Stu to enrich the literature review by including more references to related studies. Afiza-Stu, however, chose not to talk further about this 'bigger'

issue regarding the literature review and instead, diverted the talk to seeking feedback from Wardah-Sup about specific surface features in her literature review.

Feedback to identify tasks to complete. Supervisors also helped students identify the next tasks through oral feedback. In passing, some supervisors also provided feedback to sustain momentum and effort within interchanges about the substantial aspects of students' work and progress. Based on the observations of the meetings, supervisors typically gave this feedback before concluding a meeting.

Excerpt 10 is an exchange between Natrah-Sup and Nuha-Stu about the tasks that Nuha-Stu had yet to complete for her findings chapter and how to do them.

Excerpt 10, The Findings Chapter (Dissertation), November 2016

Natrah-Sup	:	*Translate the findings. Keep writing on even if you don't have the ideas. Just*	(1)
		keep on writing. See my example and try to write something like that. Once you	(2)
		are able to get into the mood of writing, you can start writing in your own style.	(3)
		You need to start something. So your task for today is to start writing Chapter 4	(4)
		for your Part 1 and Part 2. I will study the tests for Part 3 and also for the	(5)
		open-ended questions.	(6)
Nuha-Stu	:	*Okay, so for tomorrow I have to complete the descriptions for Part 1 and Part*	(7)
		2.	(8)
Natrah-Sup	:	*Yes but I think you have a lot to do.*	(9)
Nuha-Stu	:	*It is okay. I'll try my best.*	(10)
Natrah-Sup	:	*I will study the suitable tests for Part 3. The data gained from questions about*	(11)
		their weight before and after applying Atkins are called comparison. We call	(12)
		that two variances because we want to compare. What you need to do after this	(13)
		is just translate it in statistics numbering like what I showed you just now.	(14)
Nuha-Stu	:	*Like how many respondents answered those questions—*	(15)
Natrah-Sup	:	*Yes, but the explanation about how we played around those questions, how we*	(16)
		analysed them will be in Chapter 5.	(17)
Nuha-Stu	:	*That is where we will explain everything in detail, right?*	(18)
Natrah-Sup	:	*Yes.*	(19)
Nuha-Stu	:	*That means I need to explain each question in detail in Chapter 5?*	(20)
Natrah-Sup	:	*What's most important in Chapter 5 is we have to answer the research questions.*	(21)
		So we have to focus on answering the research questions. On top of that, if we	(22)
		find some interesting findings, significant findings, something similar	(23)
		to what you've read in the literature before, or maybe something contradicting to	(24)
		what you've read before so there is where we explain those things.	(25)
Nuha-Stu	:	*Okay.*	(26)
Natrah-Sup	:	*In my opinion, you already have a lot of items, more than what we planned to*	(27)
		find as stated in the objectives and research questions so I think you will have no	(28)
		problems to answer the research questions. However, if we have more time, we	(29)
		can play around with the results. What I mean is we can add new research	(30)
		questions and objectives but in order to do that we have to be clear about how	(31)
		to process the data.	(32)
Nuha-Stu	:	*Okay, madam.*	(33)
Natrah-Sup	:	*Is everything clear?*	(34)
Nuha-Stu	:	*Yes, thank you, madam.*	(35)

While the main issue was about the tasks that Nuha-Stu needed to carry out prior to the next meeting, along the way, Natrah-Sup was encouraging Nuha-Stu to maintain her momentum with her work and progress (lines 1-4). Further evidence of her support was by providing an exemplar to help Nuha-Stu get started with her writing (line 2). As the interaction progressed, Nuha-Stu sought information from Natrah-Sup about future tasks or goals that needed to be accomplished (lines 18 and 20). In the exchange, Natrah-Sup also mentioned Nuha-Stu's positive progress by highlighting her attainment in relation to the accomplishment of a previous learning task and at the same time indicated further goals they could be able to achieve. The exchange ended with Natrah-Sup seeking Nuha-Stu's feedback about whether she was clear about the tasks to be completed.

The following excerpt starts with Sasha-Sup reminding Haikal-Stu about a remaining task he was required to complete. At the same time, realising that the student seemed to doubt his capacity and capability to proceed, the supervisor attempted to instil confidence in him.

Excerpt 11, The Conclusion Chapter (Dissertation), June 2016

Sasha-Sup	:	*Please send the full report to me a day before your presentation.*	(1)
Haikal-Stu	:	*I don't think I will make it, madam.*	(2)
Sasha-Sup	:	*What do you mean? You are going to make it.*	(3)
Haikal-Stu	:	*I still have to do the revisions.*	(4)
Sasha-Sup	:	*Do whatever you can. I mean, as much as you can.*	(5)
Haikal-Stu	:	*Okay.*	(6)
Sasha-Sup	:	*Don't say you can't do it. Everyone is able to do it, so can you.*	(7)
Haikal-Stu	:	*But other students started writing earlier than me.*	(8)
Sasha-Sup	:	*Good that you realised that. Don't worry. You can just have a little bit more*	(9)
		to do. You just have to do some minor revisions, write the conclusion and	(10)
		recommendations and that's all	(11)
Haikal-Stu	:	*Okay, thank you, madam.*	(12)

In this episode, Haikal-Stu expressed his concern regarding his progress in relation to the deadline. In this exchange, Sasha-Sup guided Haikal-Stu to refocus on his progress by reminding him about the remaining goals to be completed and that these were realistic and within the scope of his capability.

Feedback to stimulate thinking and reflection. Oral feedback was also used as a platform for supervisors to enhance students' understanding about their work. In other words, oral feedback provided the opportunity for supervisors and students to exchange information that enabled the development of students' understanding and thinking about disciplinary-related concepts as well as the processes involved in research in relation to their work. The following are typical examples of exchanges where students' thinking and reflection were addressed in oral feedback.

Excerpt 12 shows how Sasha-Sup led Haikal-Stu towards realising what was missing from his report – a table and description of a set of results.

Excerpt 12, The Results Chapter (Dissertation), June 2016

Sasha-Sup	:	*Can you tell me about the relationship between your IV* [independent variables] *and DV* [dependent variables]? *What is the correlation?*	(1) (2)
Haikal-Stu	:	*I don't understand what you mean. I have already written about that in my report. Correlation is an analysis to show the relationship between the IV and DV.*	(3) (4) (5)
Sasha-Sup	:	*I know that but I want you to tell me the correlation between the IV and DV in terms of your study.*	(6) (7)
Haikal-Stu	:	*So in my study, I used correlation analysis to identify whether the relationship between the variables is strong or weak. For example, if the correlation is from 0.00 to 0.19, it is interpreted as very weak and so on. I have that in my report.*	(8) (9) (10)
Sasha-Sup	:	*But what does that mean in terms of your study?*	(11)
Haikal-Stu	:	*I see. In my study, the correlation between the variables indicated a moderate correlation.*	(12) (13)
Sasha-Sup	:	*Yes, that is what I mean. That's what missing in your report. Make sure you describe that in your report. Include the table of the correlations analysis and explain the definition of correlation and its meaning in relation to the results of your study.*	(14) (15) (16) (17)
Haikal-Stu	:	*Okay, madam.*	(18)

Here Sasha-Sup initiated Haikal-Stu to the issue in his work by first exploring his understanding about a methodological concept – correlation and how he applied the particular concept in his research project. Sasha-Sup then used Haikal-Stu's understanding of the concept to prompt him to recognise the connection between his knowledge and its relevance to the area that was insufficient in his work. In this episode, Sasha-Sup guided Haikal-Stu to think and reflect so he would then be able to write the results up correctly.

The following episode occurred in a meeting between Lutfi-Stu and Irfan-Sup in the laboratory which was attended by Mr Ali, a colleague of Irfan-Sup and a fellow student of Irfan-Sup who would undertake her FYP in the following semester. In this situation, the student sought feedback about a result that was not stable.

Excerpt 13, The Experiment, November 2016

Lutfi-Stu	:	*I don't understand why this time the result is not stable although I have taken the same steps—*	(1) (2)
Mr Ali	:	*What you can do now is try to change the chemical that you are using right now. You have to make sure that you drop the chemical slowly and carefully, drop-by-drop.*	(3) (4) (5)
Lutfi-Stu	:	*Okay. I will. I will also try and refer to other similar studies and see how they conducted the process.*	(6) (7)
Irfan-Sup	:	*Yes, that is a good idea. You have to find more related studies and see how they do the characterisation. Make sure you stir and shake the chemical slowly because sometimes it takes time for it to polarise. Try and apply that first and see what happens next.*	(8) (9) (10) (11)
Lutfi-Stu	:	*Okay. It seems that I have a problem with the concentration of the solution.*	(12)
Irfan-Sup	:	*I think so too. It is okay, Lutfi. I am sure you will be able to overcome this. You still have lots of time to complete the experiments.* [To a junior student] *If you have any problems, you can ask Lutfi. He is a good student.*	(13) (14) (15)
Lutfi-Stu	:	[Grinned] *I am not that good. All thanks to you, doctor.*	(16)
Mr Ali	:	*I think the problem is not that serious. You just need to use an alternative chemical and most importantly, work on the method thoroughly as it takes time for it to degrade*	(17) (18) (19)
Lutfi-Stu	:	*Thank you for your suggestion, doctor. I will take note of that.*	(20)

The excerpt starts with Lutfi-Stu expressing concern regarding an issue in his experiment (lines 1-2). Mr Ali assisted him by providing directions on how Lutfi-Stu might solve the issue. Meanwhile, Irfan-Sup prompted Lutfi-Stu to self-correct the issue by acknowledging Lutfi-Stu's plan to seek feedback from disciplinary-related resources and offered some strategies that Lutfi-Stu might apply in his experiment. At this time, Lutfi-Stu identified why the issue in his experiment occurred (line 12) and this was verified by his supervisor (line 13). Both Irfan-Sup and Mr Ali appeared to try and boost Lutfi-Stu's confidence by persuading him that he would be able to handle the issue in his work.

To conclude, in contrast to written feedback where information from supervisors addressed accuracy and correctness of surface issues in students' written work, oral feedback provided a platform for substantial issues in the work to be addressed in a more

comprehensive manner. Through oral feedback, both parties were able to address issues in students' work in terms of the nature of the issue i.e. what is the issue about, why it needed improvements/corrections and how to improve/correct it.

Summary of the Chapter

This chapter reflected the experiences of students and supervisors about written and oral feedback in the context of supervision of the FYP at UG. Written feedback involved a one-way information transfer from supervisors to students. On the other hand, oral feedback involved two-way interactions between supervisors and students. However, in the main, it was the supervisors who largely identified the nature of the issues and ways students might rectify them. In the context of the FYP, all feedback, be it written or oral was task-related. It dealt, it the main with the drafts of students' proposal and dissertation chapters. Further, there were only a few instances of feedback regarding the actual research process. The next chapter discusses the key findings of this study.

CHAPTER EIGHT: DISCUSSION

Set within the context of supervision of final year research projects in a Malaysian university, Universiti Gemilang, this chapter discusses findings presented in Chapters Five, Six and Seven of the thesis with reference to the following research questions:

1. How do undergraduate students and their supervisors understand and experience supervision of the undergraduate final year project?

2. How do undergraduate students and their supervisors understand and experience feedback within the context of supervision?

Chapter Five explored the perceived roles and responsibilities of students and supervisors in the supervisory relationship. Participants' perspectives suggested that their roles and responsibilities in supervision involved establishing a research-focused relationship and sustaining of the said relationship. Participants' perspectives suggested students were considered research novices who required close guidance in navigating the research journey. Supervisors were perceived as skilful knowledgeable-experts who were capable of assisting students to complete the research project successfully. Chapter Six presented the perceptions of participants about feedback in the supervision context in relation to the nature and purposes of feedback. Feedback in the main was seen as information provided by supervisors. Specifically, feedback was used to highlight students' mistakes and error in their tasks so improvements could be made. Participants' experiences of the feedback process were explored in Chapter Seven in relation to the nature and purpose of written and oral feedback respectively. In the main, written feedback was experienced as a uni-directional process of information transfer from supervisors to students. Oral feedback was experienced as a two-way interaction between students and supervisors. Based on the perceptions and experiences of participants presented in Chapters Five, Six and Seven, it was apparent that in the FYP, the

overarching purpose of feedback, be it written or oral, was to improve students' work. In addition, the experiences of students and supervisors revealed that much emphasis was given on task-related feedback compared to the other types/levels of feedback such as feedback about understanding, self-regulation and the self.

The current chapter brings together the three findings chapters, providing an in-depth discussion of the key points highlighted above. The chapter is organised into two main themes. The first theme discusses participants' articulation and enactment of a traditional approach to supervision. It starts with a brief explanation about the undergraduate final year project and the supervision approach that allow the fulfilment of the overarching purpose of the undergraduate final year project. This is followed by a discussion of the case of supervision in the present study. In doing so, the characteristics of the supervision relationship are highlighted, as are participants' roles in the relationship and how these influence students' subsequent learning experiences. The second theme discusses the articulation and enactment of a traditional feedback discourse. It addresses the case of feedback in the present study with reference to the roles of those involved, the focus of feedback and the form of feedback used in supervision.

The Articulation and Enactment of a Traditional Approach to Supervision

To date, research studies that explore undergraduate research supervision experience globally and locally are scarce (Ashwin, Abbas, & McLean, 2017; Howitt et al., 2010; Todd et al., 2004). The present study aimed to address this gap by investigating the understanding and experiences of undergraduate students and supervisors in a Malaysian university in the context of supervision of final year projects (FYP). The final year project (FYP) is one of the compulsory requirements for bachelor's degree students at Universiti Gemilang (UG), Malaysia. It is a capstone project that allows students to integrate the knowledge and skills they haveacquired from the previous semesters into a research project under the supervision of an academic (Hashim & Hashim, 2010). A key aim of undertaking the FYP is to develop

students' independence in learning (Aziz et al., 2018). This is in line with one of the objectives of bachelor's degree programmes in Malaysia, which is to produce graduates who possess independent learning skills as a preparation for postgraduate studies (Malaysian Qualifications Agency, 2017).

If students are to become independent learners, ideally the supervision relationship needs to be enacted through a psy-supervision discourse (Grant, 2005; Wisker et al., 2003). Notably, psy-supervision is powerful when it comes to developing students' independence and self-regulation as it recognises their role as active participants who are capable of managing, controlling and deciding the direction of their work (Mackinnon, 2004; Wisker et al., 2003). Psy-supervisors support students by introducing research knowledge, ideas and processes to them, yet the dialogic nature of their interactions means there is opportunity for the latter to negotiate and discuss with their supervisors the kind of information that suits their course of learning/research (Mackinnon, 2004). This allows students to have informative interchanges about their work/learning with supervisors rather than being passive recipients who are dictated to by supervisors (Wisker et al., 2003). Compared to other styles such as trad- and techno-supervision, psy-supervision takes a holistic approach as it supports the development of the students academically and pastorally. Furthermore, in contrast with other supervisory styles, psy-supervision promotes a facilitative, two-way relationship between supervisors and students, built on trust and respect (Mackinnon, 2004). This relationship facilitates the dialogic sharing of ideas and tasks thus diluting the power differential between the two parties (Grant, 2005). In contrast, supervisors operating within the other two styles tend to take a directive approach in imparting research knowledge, skills and processes to students to ensure completion, leaving little room for students to take an active role in learning. As a result, the other styles might not be sufficiently powerful enough to develop students' independence.

Furthermore, these styles prioritise successful, timely completion as the primary purpose of supervision (Grant, 2005).

While psy-supervision is seen as the ideal supervisory relationship, it was apparent in the present study that during the FYP at UG, supervision was enacted in ways that reflected the more traditional-academic (trad-supervision) style of supervision (Grant, 2005). Students and supervisors were engaged in a relationship that shared pursuit of a mutual goal – the successful and timely completion of the FYP. Moreover, participants' perspectives indicated this relationship was one-directional rather than dialogical. The discourse indicated both students and supervisors expected the latter to take a leading role in the relationship, for instance, guiding how the research was structured, reminding students to keep contact and ensuring students met supervisors' expectations in terms of progress and quality of work. Meanwhile, students were expected to follow their supervisors' leads. Thus supervisors were considered knowledgeable research masters and students their apprentices (Mackinnon, 2004). Interestingly, neither party made mention of any dissatisfaction with the nature of this relationship or with the associated responsibilities. It seemed that both students and supervisors expected and accepted their respective roles and responsibilities. Moreover, the nature of this relationship was reinforcing, with each party shaping the other's behaviour.

Findings from the present study suggest that the trad-supervision style fulfilled the aspirations and expectations of both supervisors and students as the latter worked towards the completion of the FYP within the specified timeframe. Grant (2008) noted that close and direct guidance from supervisors increases students' commitment in completing tasks. However, while a supervisor-led relationship can be productive in helping students accomplish tasks, it can hamper students' independence in learning as it encourages student reliance and dependence of the supervisor (Roberts & Seaman, 2018a). Arguably, while in the present

study the trad-supervision style helped students to complete tasks; it did not work to develop students' independence.

The literature contains reference to a range of elements that influence supervisory styles and relationships, for instance, the disciplinary culture (M. Armstrong & Shanker, 1983; Spear, 2000), supervisors' expectations (Holmberg, 2006; Mackinnon, 2004), the stage of the student's project (Roberts & Seaman, 2018a; Todd et al., 2006) and the cultural background of those involved (Filippou, Kallo, & Mikkilä-Erdmann, 2017; Wisker et al., 2003). The present study suggests that the adoption of the trad-supervision style was likely to be a reflection of cultural expectations. Similar outcomes have been reported in studies involving postgraduate (master and doctoral) students where it was established that cultural values about learning had an influence on the experiences and perceptions of students and supervisors about their respective roles in the supervision process (Filippou et al., 2017; McGinty et al., 2010; Sidhu, Kaur, Fook, & Yunus, 2014; Wisker et al., 2003).

As illustrated in the present study, supervisors were positioned as the experts who possessed the necessary knowledge, skills and competencies to take on this position. Recognising the supervisory relationship as hierarchical, students adopted the role of submissive and obedient subordinates. The hierarchical structure of this relationship between educator and student is not unusual in the Malaysian learning context. As a country located in Southeast Asia, the educational landscape in Malaysia reflects the values of collectivist societies (Hofstede, 1986). Strong hierarchical rules and a significant power differential between educators and students are features that characterise collectivist societies (Nguyen, Terlouw, & Pilot, 2006). The asymmetrical structure of the relationship is reflected in the ways in which students defer to and show respect towards their supervisors. In collectivist societies, educators are considered gurus – authorities in the teaching-learning context who are respected due to the knowledge and competencies they possess (Hofstede, 1986; Nguyen et al., 2006). In fact, a recent Global Teacher Status Index study revealed that teachers in Malaysia

are more respected in their society compared to their European counterparts (Dolton, Marcenaro, De Vries, & She, 2018). This implies educators in Malaysia are revered not only by students but also by those external to the instructional setting (Hallinger, 2010).

Findings in the present study suggest the supervision process reflected a traditional view of learning and approach to teaching. In the main, the teaching-learning context revolved around supervisors transmitting information to students rather than the catalysing of students' self-directed learning skills. This was especially apparent in participants' emphasis on the role of supervisors as the knowledgeable-expert, academic advisor and guide to students. In fact, both students and supervisors seemed to put the onus for deciding the direction of the FYP and the solving of research issues onto the supervisors. As noted earlier, a possible explanation for this traditional teacher-centric approach to supervision of the FYP is that collectivist societies tend to conceptualise learning and teaching as the transfer of 'wisdom' from educators to students (Hallinger, 2010; Hofstede, 1986). The directive, uni-directional transfer of knowledge is typical of the Asian learning context. In some instances, this is referred to as 'spoon-feeding' to indicate the transfer of knowledge from educators to students and the passive role of students in this process as recipients of knowledge (Hallinger, 2010; Wong, 2004).

It seemed that some supervisors in the present study perceived themselves as the thinkers for students (Grant, 2008) – they took a leading role in making decisions about the research plan and direction of students' work, a practice that could have been shaped by their teaching experience outside supervision of the FYP. The supervisors were not just involved in supervising final year students' projects, they were also involved in teaching other disciplinary-related courses at UG. Perhaps these supervisors/lecturers were accustomed to being disciplinary experts and individuals who were always listened to by students in the lecture halls (Grant, 2008). As a result, they saw supervision as an extension of this teaching context and so continued to instruct and impart knowledge and skills to students (Grant, 2008).

Alternatively, it could also be that the supervisors' directive role was informed by their personal experiences as students undertaking research and/or as supervisors of past students. The literature suggests that supervisors' own experiences as research students and/or supervisors of past cohorts have an influence on current practice (Deuchar, 2008).

It appeared in the present study that the adoption of the trad-supervision style and the cultural expectations of participants worked together to limit opportunities for the development of students' independence. It was evident that students displayed a passive role in the supervision relationship and supervisors took on the mantle of the knowledgeable-expert. It is important to note that passive does not mean the students were mechanistic actors rather they were passive in terms of planning, decision-making, problem-solving and discussing information and knowledge with supervisors (Mackinnon, 2004). Due to its directive and paternalistic nature, trad-supervision has been criticised for its inability to empower students to become independent and critical thinkers (Grant, 2005; Mackinnon, 2004). Furthermore, as the literature suggests, Asian students rarely question or interrupt their teachers/lecturers unless invited to do so (Hofstede, 1986; Nguyen et al., 2006). It would seem students in the present study were not used to dialogic approaches to learning and teaching such as negotiating, evaluating and generating knowledge alongside educators. These are noted as relatively rare practices in the Asian learning-teaching context (Pham Thi Hong, 2011; Wong, 2004).

The outcomes of the present study suggested students and supervisors at UG failed to appreciate and realise the potential of the FYP as a site through which they could develop students as independent researchers. It could be that supervisors and students were more focused on getting the students to pass the FYP successfully and in a timely manner rather than treating the FYP as an opportunity to engage students in critical and analytical dialogue. As indicated in the literature, the Asian learning context tends to be exam-oriented (Wong, 2004). Emphasis placed on passing the FYP course and meeting requirements may well have impacted on the perceptions and behaviour of participants in the present study.

Correspondingly, local studies suggest Malaysian undergraduate students and supervisors lack understanding about the significance of the FYP in developing students as independent researchers despite it being one of the important courses at the undergraduate level (Bakar et al., 2011; Halim et al., 2014).

Overall, the trad-supervision approach as experienced by participants in the present study seemed to work against the objectives of the bachelor's degree programme – that is to develop students' independence as they develop their research-related skills and knowledge. Arguably, the trad-supervision experience may influence students' future learning and teaching experiences. For instance, Asian students who are used to teacher-centric learning and teaching have reported feeling anxious and lacking in confidence when it comes to assuming an independent role at postgraduate levels (Kaur & Sidhu, 2009; McClure, 2005). They tend to feel intimidated when approaching supervisors to discuss matters pertaining to their research (McClure, 2005). Similarly, evidence indicates Malaysian postgraduate students feel apprehensive as they believe they lack research knowledge and as a consequence, they feel worried that they are not able to meet their supervisors' expectations (Sidhu, Kaur, Fook, & Yunus, 2013).

Moreover, the trad-supervision experience at the undergraduate level may affect students' perceptions and expectations of supervisors when they undertake research at advanced postgraduate levels of study. Students for instance from the United Kingdom, Australia and Finland where student-centred learning is commonplace believe they have a central role to play as the main actor in supervision (Filippou et al., 2017; McGinty et al., 2010). In contrast, students who come from cultures where teaching and learning are led by the educator tend to have a greater dependence on and expect more assistance from their supervisors (Filippou et al., 2017; McGinty et al., 2010; Norhasni, 2007; Sidhu et al., 2014). That is, they want supervisors to guide and help them in a range of matters such as structuring the research, choosing an appropriate methodology and approach to data analysis, solving

arising research problems and motivating them (McGinty et al., 2010; Sidhu et al., 2013; Sidhu et al., 2014). Studies have also found that Malaysian postgraduate students are highly dependent on their supervisors (McGinty et al., 2010; Sidhu et al., 2014). They regard close and direct guidance from supervisors as important when it comes to the successful completion of their research (McGinty et al., 2010; Norhasni, 2007; Sidhu et al., 2014).

Supervision is a personal relationship between students and supervisors. While universities may outline the roles and responsibilities of both parties in the form of guidelines, in practice the enactment of these depends on the understandings, expectations and interpretations of both parties (MacKeogh, 2006). As demonstrated in the present study, supervision of the FYP at UG was enacted through a trad-supervision discourse (Grant, 2005). As with any relationship, supervision is complex and open to benefits and risks i.e. gains and losses (Grant, 2005). As illustrated in the present study, on the one hand, the directive, supervisor-centric style allowed students and supervisors to complete research-related tasks in a timely manner. Nevertheless, this approach holds significant risks when it comes to the development of student autonomy in research/learning (Grant, 2005). Students are more likely to develop a dependence on supervisors to direct the research and make decisions thus defeating the purpose of the FYP (Mackinnon, 2004; Roberts & Seaman, 2018a).

The Articulation and Enactment of a Traditional Feedback Discourse

Given the enactment of a trad-supervision style, it is not unexpected to find that the feedback-related understandings and experiences of students and supervisors in the FYP reflected the traditional paradigm (Carless, 2015). Indeed, both students' and supervisors' perceptions of the latter as the knowledgeable-experts and masters of research influenced the way they viewed their respective roles in the feedback process. Supervisors were regarded as the principal and most significant source of feedback in terms of the research processes, the development of students' thinking, understanding and the quality of their written work.

Essentially, written feedback and to a large extent oral feedback were seen and experienced as a uni-directional process – a one-way transfer of information from supervisors to students. Both parties shared the same view of the purpose of feedback that is for improvements of task-related work. In addition, neither party made mention about students being the source of feedback, which further indicated that participants viewed feedback as information that is passively received by students from external sources.

It was apparent that most of the feedback throughout the FYP took the form of directives from supervisors. Such practice contradicts contemporary views of feedback that promote the active involvement of students in the feedback process (Molloy & Boud, 2013). Both parties seemed to believe that the onus for initiating and interpreting feedback in terms of where the students were going, how they were going and where to next (Hattie & Timperley, 2007) lay with the supervisors. As observed, supervisors contributed most of the ideas and suggestions to students, in the main to help the latter correct misunderstandings in their work and thinking and to help them move forward. In addition, supervisors' feedback both in written and oral forms provided only a few opportunities to engage in genuine dialogical exchanges. It is concerning that feedback in supervision was experienced as telling, given one of the objectives of the FYP is to produce independent students who are analytical and critical in their thinking.

Indeed, feedback as telling has been identified as problematic for 21st century teaching and learning as it suppresses students' active engagement in the process (Carless, 2015; Molloy & Boud, 2013). As has been argued by others, learning is not a mechanistic process and students should be monitoring their performance and understanding when completing a learning activity (Molloy & Boud, 2013; Nicol, 2013). When feedback involves dialogical exchanges between students and supervisors, it facilitates the development of students' self-regulation (Carless, 2015; Nicol & Macfarlane- Dick, 2006). This is because dialogical feedback provides opportunities for students to play an active role in generating and

negotiating information alongside their supervisors (Carless, 2015). In contrast, feedback astelling limits the development of students' self-regulation as it only encourages students to be dependent on supervisors to provide feedback about their work, understanding and progress rather than generating it themselves (Nicol & Macfarlane- Dick, 2006). As evident in the present study, while students knew where they were going, how they were going and where to next (Hattie & Timperley, 2007), this information was not a result of their self-generated feedback or engagement in dialogue with supervisors. They were able to make the improvements and move on to the next step essentially because supervisors made the judgments about their work and understanding in relation to where they were going, how they were going and where to next. In other words, feedback in the present study was akin to a stimulus-response process (Hattie & Timperley, 2007).

It is interesting to note that students in the present study also appeared to quietly resist taking on the role as generators of ideas. In general, students only spoke when invited to do so or when they wanted to ask a specific question of their supervisors. In some instances where there were invitations for students to engage in a dialogue (for example, see Excerpt 4), students contributed in a minimal manner. In addition, most of the students' talk was of an "explicitly appeasing quality" (Grant, 2008, p. 19); that is, their talk sought affirmation from supervisors about the correctness of their work and ideas and took the form of questions about the next activities they needed to undertake for the FYP. The students' passive behaviour is not however surprising. Students from strong hierarchical societies seldom initiate verbal exchanges with educators and they tend to avoid intellectual disagreement with educators openly due to their respect towards them (Hofstede, 1986; Wang & Li, 2011). Furthermore, it could be that students' desire to be led by their supervisors was influenced by their pre-university experience. Even in non-hierarchical countries, research studies show that undergraduate students lack the skills to take on an independent role at tertiary level as they are used to being directed by teachers during their school years (Beaumont et al., 2011; Price

et al., 2010). Due to this, such students tend to believe they will be able to improve when feedback consists of judgment from educators and instructions from them about how well a task has been carried out (Beaumont et al., 2011).

A further problematic aspect of feedback practice that occurred during supervision of the FYP was that the majority of the feedback was focused at the task level (Hattie & Timperley, 2007). The perceptions and experiences of participants demonstrated that feedback was primarily used to indicate errors and mistakes in research-related tasks, in particular drafts of the final report. The high usage of task-related feedback is not unexpected since it is acknowledged that feedback about the task is commonplace in teaching-learning settings (Hattie & Timperley, 2007). Similar findings have been drawn from previous studies where it was found that educators assumed the role of editors when it came to providing feedback on students' written work. That is, educator feedback has been mostly focused on task-related issues such as indicating the correctness of tasks, linguistic accuracy and information to help students improve the clarity of content (Basturkmen, East, & Bitchener, 2014; Orsmond & Merry, 2011) – this was clearly the case in the present study. Furthermore, it could be that the tendency of supervisors in the present study to provide corrective feedback was influenced by cultural elements. Educators who come from cultures which position them as authorities in learning see themselves as models of correct behaviour (Nguyen et al., 2006). Therefore, these educators believe it is their responsibility to correct students whenever they make mistakes (Tang & Harrison, 2011).

The focus on task-related feedback as found in the present study is indeed an area of concern. One of the reasons is that such feedback is specific to certain tasks thus limiting its usability across other tasks or assignments (Carless, 2006; Poulos & Mahony, 2008). More importantly, feedback at the task level can cause students to put more focus on securing surface level goals such as getting an immediate task done until correct (Hattie & Timperley, 2007). In other words, an overabundance of feedback at the task level works against the

development of independent, self-regulated learners as it detracts from the development of strategies associated with deep learning. Hattie and Timperley (2007) posited that feedback that is most powerful for the enhancement of learning is information that is focused at students' cognitive processing and understanding as well as self-regulation. Feedback that is directed at these two levels has the power to enhance students' comprehension, engagement and development of cognitive and metacognitive strategies for enhanced learning. Unfortunately, the present study showed that there were very few instances of feedback that focused on students' understanding. Further, there was an absence of feedback that would encourage students' self-regulation. The lack of and/or absence of these two levels of feedback suggests students and supervisors at UG have failed to recognise and utilise the FYP as a medium to develop students' deep understanding of the research process, related content and their self-regulatory behaviours, skills and attitudes (Hattie & Timperley, 2007).

Overall, the present study shows that students and supervisors at UG had a narrow view of feedback. While it was perceived and experienced as a tool for the improvement of work and understanding, feedback was most likely insufficient to enhance students' critical and analytical thinking skills, self-evaluation and self-regulation. This is due to the fact that feedback in supervision was mainly used to correct mistakes and improve their written work. Feedback needs to be addressed at students' cognitive processing and self-regulation levels in order to develop independent learners who are capable of monitoring their work and learning. Furthermore, in order to be powerful in the enhancement of learning, there needs to be a shared commitment and dialogical engagement between students and supervisors where together they generate feedback about students' work, performance and understanding in relation to where the students are going, how they are going and where to next (Hattie & Timperley, 2007). As demonstrated in the present study, both students and supervisors at UG

had little recognition in terms of the actions and behaviours needed if feedback is to be effective as per Hattie and Timperley's (2007) model.

Summary of the Chapter

The research process is an avenue for students to engage in dialogue with their supervisor. Over time, the supervisory relationship should stimulate students to be more critical and analytical in their thinking and help develop their capacity to monitor and regulate their learning. However, as suggested by findings in the present study, students' and supervisors' understanding and enactment of supervision through a traditional approach together with their understanding and enactment of a traditional feedback discourse constrained the opportunities for students and supervisors to engage in a two-way relationship that enables the co-construction of learning and development of student independence. The final chapter concludes the thesis by addressing the conclusions and implications drawn from the present study as well as future research directions.

CHAPTER NINE: CONCLUSIONS AND LOOKING TO THE FUTURE

The present study investigated supervision of undergraduate final year projects (FYP) and feedback within the supervisory context. With reference to these two areas, the following research questions were addressed:

1. How do undergraduate students and their supervisors understand and experience supervision of the undergraduate final year project?

2. How do undergraduate students and their supervisors understand and experience feedback within the supervisory context?

The current chapter focuses on the conclusions and implications drawn from the present study. These conclusions and associated implications are reported in relation to the two research questions. This is followed by a consideration of the contribution of the study to the field. Realising there are always new discoveries to be made, the current chapter also includes suggestions for future research with reference to supervision and feedback.

Conclusions and Implications

In regard to the first research question – how do undergraduate students and their supervisors understand and experience supervision of the undergraduate final year project, it can be concluded that the local cultural context was a significant mediator in terms of the perceptions and enactments of roles and responsibilities within the FYP at UG. As a Southeast Asian country, strong hierarchical structures and a large power differential between educators and students shaped the student-supervisor relationship, perceptions, behaviour and teaching-learning practices. Beliefs about the role of supervisors as the bearers of knowledge and skills and students as obedient disciples are typical of the Malaysian teaching-learning context. These roles form the foundation of the trad-supervision approach to supervision and were

apparent in the current case. It would seem students and supervisors at UG had little awareness of alternative roles in or approaches to supervision. It could be that a traditional, teacher-centric approach to teaching and learning is the only approach that participants have been exposed to, given the Malaysian context. This argument is further strengthened by the fact that while there was a large power differential between the students and supervisors, this did not seem to pose any issues for either party. Students and supervisors had a seemingly comfortable relationship where the role to direct and manage the research process resided with the latter while the former took on a passive role.

Arising from the trad-supervision approach and as argued in this thesis, is the possibility that it constraints development of student independence, critical and analytical thinking skills as well as active participation in teaching and learning. While the malleable nature of the supervisory role was highlighted in Chapter Two, this was not observed in the present study. Despite being engaged in the relationship for one or in some cases two semesters, there was little to indicate that the supervisory relationship between students and supervisors evolved over time into a more dynamic, dialogical relationship. It appeared that for the participants at UG, 'best practice' in supervision involves the one-directional transfer of knowledge and skills from expert-supervisor to the submissive student. Such practice can result in students becoming dependent on supervisors to direct, manage and solve problems for them rather than taking an active role in the supervision process. This issue was further exacerbated given that supervisors too saw themselves as the provider of knowledge and skills for students. It can be concluded that students and supervisors were unaware of the potential the FYP as an opportunity to engage in dialogue to develop students' deep learning processes such as critical thinking, problem-solving, decision-making and self-evaluation.

If students are to become active, independent and critical scholars, they need to experience supervision as a psy-supervision approach (Grant, 2005). The facilitative, dialogical relationship between students and supervisors softens the power differential

between the two parties thus building a sense of collegiality. This means neither is superior to the other in terms of decision-making, problem-solving and managing the research process (Mackinnon, 2004). It can also be concluded that there is in practice a gulf between institutional rhetoric and practice in terms of supervision. Therefore, support is needed to make psy-supervision a reality. Providing workshops involving supervisors and students is a strategy that could enable both parties to be conversant with the purpose and nature of the FYP as well as the roles and responsibilities they need to play in order to have a working relationship that supports student independence. Grant and Graham (1999) for instance demonstrated the positive outcomes of institutional-based workshops and mini-conferences in enhancing supervision practice and student-supervisor research experiences. Such workshops and mini-conferences may cover a range of issues such as supervision styles, feedback and management the supervisory relationships for supervisors. For students, issues such as supervisory guidelines, the ideal research student, research writing, self-management skills, referencing and sharing sessions with peers can help develop an awareness of what is expected of them when undertaking the FYP. Furthermore, making these workshops available to students can encourage them to be more responsible and take on an active role in managing their research journey (Grant & Graham, 1999). In turn, this minimizes students' reliance on supervisors as their main source of knowledge and skills.

Another implication arising from this study is the need for supervisors to realise that not all students enter supervision with the readiness to take on an active, independent role. This is especially true for those taking individual research for the first time and those who are not used to student-centric teaching and learning. Supervisors need to create a facilitative relationship in which students are supported academically and pastorally. This supportive climate allows students to engage in learning dialogues with supervisors without the fear of being judged. Rather than being the research authorities, supervisors need to soften their role and provide opportunities for students to voice their ideas, opinions and judgements (Wisker et

al., 2003). Over time, dialogic interchanges enable students to take on learning dispositions such as engagement with their work and disciplinary-related literature, self-monitoring of performance and understandings as well as developing the confidence to share critical thoughts and ideas with others (Anderson et al., 2006; Wisker et al., 2003).

In reference to the second research question – how do undergraduate students and their supervisors understand and experience feedback within the supervisory context, it can be concluded that they had a narrow conception of how feedback operates to effect improvement. Feedback in the FYP functioned as a source of corrective information given by supervisors to students. In other words, feedback in the main was a unilateral form of information that involved students receiving and acting on feedback in a passive manner. Worryingly, most of the feedback given to students during the FYP, be it written or oral, revolved around correcting surface features of students' work rather than building their deep understanding of learning or self-regulation. While there were opportunities for students and supervisors to engage in dialogic feedback especially during the supervision meetings, they failed to utilise these moments to, for example, prompt students to articulate judgments about their work, understanding and/or progress in relation to where they were going, where they were going and where to next (Hattie & Timperley, 2007). This is to say that feedback during the FYP at UG was very much supervisor-directed rather than a process co-constructed by students and their supervisors. Thus, the conclusion is drawn that students and supervisors had an incomplete view of the nature and purpose of feedback and in turn, this impeded their ability to capitalise on the catalytic power of feedback to develop independent, self-regulating students.

If students and supervisors are to engage in effective feedback practice, their understandings of the contemporary paradigm of feedback need to be addressed. Feedback literacy is conceptualised as the understandings, capabilities and dispositions needed by students and educators to make sense of and utilise information to enhance work or learning

strategies (Carless & Boud, 2018; Xu & Carless, 2017). Educators and students who are feedback literate understand the purpose of feedback, the skills and processes needed to utilise feedback and they have an awareness of their distinctive and respective roles in the feedback process (Ajjawi & Boud, 2018; Xu & Carless, 2017). As such, they are more likely to generate and support feedback as a dialogic process where students play an active role in generating and discussing information about their learning rather than regarding educators as the sole source of information. As evidenced in the present study, it appeared both supervisors and students had limited feedback literacy in relation to the contemporary paradigm and this could account for the prevalence of corrective feedback regarding task-related issues. Furthermore, neither party recognised the need for students to take on an agentic role in seeking and generating feedback, indicating that they held a traditional view of feedback as information passed on to and received by students (Askew & Lodge, 2000; Molloy & Boud, 2013).

While the present study did not explore whether participants received any training or guidance with regard to feedback in teaching and learning, it is possible that this aspect is taken for granted at UG. The issue of feedback literacy amongst students and university educators is however not exclusive to the Malaysian educational context. Undergraduate students in the United Kingdom, for instance, have reported they do not receive any guidance on how to use feedback prior to entering university or while studying at university (Beaumont et al., 2011; Burke, 2009; Weaver, 2006). Furthermore, the limited number of research studies in Malaysia that focus on feedback at the tertiary level suggests that the importance of feedback as a mechanism to develop self-regulated learners may have been overlooked by local scholars and educational practitioners.

Feedback literacy is recognised as a crucial aspect in the feedback process as it paves the way for students' feedback uptake and gives them an agentic role within the process (Xu & Carless, 2017). From a practical perspective, educators need to have understandings about the role, purpose and potentials of feedback in developing student self-regulation as well as the strategies needed to support students' understanding of the process (Xu & Carless, 2017). This calls for institutions to provide professional development with an emphasis on developing educators' feedback literacy that corresponds with the contemporary feedback paradigm. Providing workshops that showcase dialogic feedback practices as well as promoting opportunities for educators and their colleagues to review and discuss the comments they provide to students are examples of activities that can enhance educators' feedback literacy (Henderson, Molloy, Ajjawi, & Boud, 2019). In addition, it is important for institutions to introduce students to feedback such as its purpose, ways to utilise it in learning and their roles in feedback at an early stage of their undergraduate programme rather than waiting to introduce feedback during their FYP (Carless & Boud, 2018). As contended by Carless and Boud (2018), "students need to experience the value of feedback so that its benefits are appreciated" (p. 1322) – indicating the crucial need for students to understand the role of feedback and its purpose at the earliest opportunity – ideally in their first year of study if they are to become active generators and users of information (Carless, 2015). Furthermore, institutions need to design assessment tasks that allow student self-evaluation and dialogue with educators and peers. For instance, introducing an interactive cover page on assignments that allows students to request feedback about specific aspects of their work. Practices such as this can develop student capability in generating feedback (Ajjawi & Boud, 2018).

If students are to take an active role in generating feedback, they need to be involved in a teaching and learning environment that enables them to develop evaluative expertise (Henderson et al., 2019). This includes providing students opportunities to debate the quality of their works-in-progress or performance with other sources (Hawe & Dixon, 2017; Henderson et al., 2019). For instance, allowing students to engage in discussions with peers about their works-in-progress in relation to exemplars can help develop their understanding about quality (Hawe & Dixon, 2017). Educators can also scaffold students to generate feedback about their works-in-progress through the use of question prompts (Hattie & Gan, 2011). Such activities allow students to become "insiders rather than consumers" (Sadler, 1989, p. 135) of feedback hence enhancing their self-monitoring capacities.

The Contribution of the Present Study to the Field of Inquiry

In contrast to supervision at the postgraduate levels i.e. master and doctoral, to date research studies that explore supervisory experiences at the undergraduate level are still limited (Roberts & Seaman, 2018; Rowley & Slack, 2004). In the Malaysian higher educational context, local researchers seem to invest interest on improving the quality of assessment for such projects (Bakar, Jailani, Shukur, & Yatim, 2011; Hashim & Hashim, 2010) rather than understanding how undergraduate students and supervisors perceive and experience the supervision process. The present study contributes to the understanding of undergraduate research supervision by presenting robust and detailed representations of the roles, responsibilities and expectations from both students' and supervisors' points of view. It provides evidence that despite student independence and critical-thinking skills have always been the fore of research, the understandings and enactments of a traditional approach to supervision can hinder students from becoming independent scholars.

As discussed in the literature review, despite being a well-researched area, it is not unexpected to find that feedback does not always fulfil its potential in enhancing student

learning. In addition, while there have been recent calls to reconceptualise feedback as dialogue, research studies that focus on this area are still limited. Findings from the present study did not just illustrate a rich account of students' and supervisors' understandings of feedback, more importantly, it has extended understandings on how feedback was received and responded by students in situ. Therefore, the major significance of the present study is through the exploration of authentic, real-life feedback exchanges between students and supervisors. Through this, the present study managed to capture and present student-supervisor talks in the most natural way hence preserving the context of their occurrence (Ajjawi & Boud, 2017). It provides evidence that although there are opportunities in the teaching-learning process that can be utilised by students and educators to engage in feedback as a dialogic process, this might be difficult to achieve when the understandings and practices of one or both parties are still deeply rooted within the traditional discourse of feedback.

Future Research Directions

The present study has shed understandings on undergraduate students' and supervisors' experiences about supervision and feedback in an in-depth manner. Along with the researcher's interpretations, the 'lived experiences' of students and supervisors with reference to their roles, responsibilities and expectations about supervision and feedback within the context of undergraduate academic research supervision have been captured; yet the work is not complete. As has been noted by other researchers, supervision styles and practices may also be influenced by disciplinary culture (M. Armstrong & Shanker, 1983; Phillips & Pugh, 2010; Spear, 2000). While the present study involved four student-supervisor pairs from four different disciplinary clusters i.e. hard-pure, hard-applied, soft-pure and soft-applied (Biglan, 1973), the small number of participants from each cluster made it impossible for the researcher to identify whether disciplinary culture and practices influence approaches to supervision and the experiences of those involved. It would be interesting if future studies included a larger

number of participants from different disciplinary cultures to investigate whether there are different supervisory approaches and experiences within these cultures. Understanding practices in different disciplinary areas has the potential to add to cross-disciplinary sharing of 'best' practice and contribute to the improvement of practice.

As illustrated in the present study, the hierarchical power structure in Malaysian educational contexts has influenced the supervision style and relationships of those involved. This study however involved student and supervisor pairs who shared the same cultural background as well as teaching-learning experiences and practices. Given the globalisation and internationalisation of higher education, with the increasing number of students studying abroad, future studies could explore supervision relationships and experiences of student-supervisor pairs where the individuals come from different cultures i.e. collectivist and individualist. This would provide interesting insights into how each party's culture shapes the supervision relationship and experiences, the challenges faced by them and how this difference is managed in the supervision process. Findings from such studies would assist higher institutions and faculties to consider a more inclusive and engaging teaching and learning environment that celebrates diversity.

In relation to feedback, the present study suggests that a lack of supervisor and student feedback literacy was a contributing factor to the failure of both parties to engage in feedback practice that promotes student engagement and self-monitoring. Therefore, it is crucial that future studies pay attention to the feedback literacy of students and educators as this can enhance students' feedback uptake and agentic role in the process. This calls for more qualitative and quantitative research to inform us about how student and educator feedback literacy is acquired and enacted in the teaching and learning context. Such studies may be of a longitudinal design with a combination of interventions to promote feedback literacy (Carless & Boud, 2018). It would also be interesting if future studies examine feedback literacy across cultures i.e. collectivist versus individualist, as it cannot be assumed that what works best in a

particular context would produce a similar outcome in another. In addition, considering that feedback in higher education is a relatively poorly developed area in Malaysia, more local studies are needed to investigate students' and educators' feedback understandings and practices. A good start could be a large-scale survey focused on educators and students in Malaysian universities similar to that developed by Dawson et al. (2018). Such studies with a large number of participants across different universities have the potential to generate insights and make generalisations about current feedback understandings and perceptions within higher learning institutions in Malaysia.

A Final Comment

The present study, which was guided by the research questions focusing on supervision and feedback within the undergraduate supervisory context unfolded a story of misalignment between institutional rhetoric and educator-student practice. While developing students' critical and analytical thinking skills, agency and independence have always been the aims of the FYP at UG, the present study revealed that the understandings and practices of students and supervisors worked against this aim. The strengths and uniqueness of the present study lie in the robust and detailed representations of the perceptions and practices of both students and supervisors with reference to two under-researched areas in Malaysia – undergraduate supervision and feedback. Furthermore, with specific reference to feedback, this thesis presents one of the few current studies that capture and present the voices of students and educators in a non-Western teaching and learning setting. The findings from the present study have caused the writer to think more deeply about the ways in which student agency and self-regulation in teaching and learning, as well as feedback literacy, can be managed in a context where strong hierarchical roles between students and educators are well-established in the teaching and learning landscape. Indeed, these are truly interesting areas to be explored in future studies.

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APPENDIX A: INFORMATION LETTER AND CONSENT FORM

(DEPUTY VICE-CHANCELLOR OF ACADEMIC AFFAIRS)

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INFORMATION LETTER
(DEPUTY VICE-CHANCELLOR OF ACADEMIC AFFAIRS)

MONOLOGUE OR DIALOGUE: HOW STUDENTS AND SUPERVISORS IN A MALAYSIAN UNIVERSITY EXPERIENCE AND UNDERSTAND FEEDBACK WITHIN UNDERGRADUATE HONOURS DEGREES RESEARCH PROJECTS

Name of researcher: Razlina Razali
Names of supervisors: Dr Eleanor Hawe (main supervisor)
Assoc. Prof Helen Dixon (co-supervisor)

Researcher Introduction

I am Razlina Razali and I am currently undertaking my PhD in Education in the School of Learning Development and Professional Practice at The University of Auckland, New Zealand.

This Project

Rationale

The reason that I am doing this research is to explore feedback within the context of supervision of independent student research in undergraduate Honours degree programmes in a public university in Malaysia.

Aims

The research goals are to answer two overarching questions:

1. How do undergraduate Honours students and their supervisors understand and

experience feedback within the supervisory context?

2. What disciplinary similarities and differences are there in the supervisory feedback experience in relation to question one?

Duration

This project will continue for 10 months, depending on the duration of the students' final year research project. However, data will not be collected during mid-semester or semester breaks.

Benefits

I expect that the research will provide research participants with the following benefits:

Students will be able to:

- express their understanding and experiences of feedback in supervision
- express their expectations and experiences in the supervisory relationship.

Supervisors will be able to:

- express their understanding and experiences of feedback in supervision
- gain insights into how their students understand, experience, and use feedback in completing their project
- develop an awareness of the expectations that students have in the supervisory relationship as well as the challenges in supervision
- develop an awareness of the different supervision practices in different disciplines.

Risks

This research will not be used to judge the participants' competency as a supervisor/academic staff or student, their English language proficiency, or their personal characteristics. However, since this research will be carried out throughout the students' research process, it is anticipated that this might cause psychological stress and anxiety to the students and/or supervisors. In this instance, there is opportunity for participants to withdraw at any stage up until two weeks after their final interview. Stress will be self-identified by the participants. If this is not related to the supervisor-student relationship, a discussion will be held with the supervisors, while for the students, they will be referred to their respective supervisor.

However, if stress and anxiety are related to the supervisor-student relationship, the supervisors will be encouraged to contact their Head of Department, while the students will be referred to their Academic Advisor.

Other people

Other people who will have access to or use the data and results are my research supervisors and a transcriber approved by The University of Auckland. The transcriber will be required to sign a Confidentiality Agreement prior to commencement of work.

Selection of site

Why

The university has been chosen as my research site as it fulfils the following criteria:

- as the largest institution of higher learning in Malaysia in terms of its size and population, it offers a sufficient pool of possible participants
- bachelor's degree students are the largest group at this university and students who are enrolled in bachelor's degree programmes are required to complete independent research under supervision
- this university offers a wide range of programmes across a number of disciplines thus meeting the requirements for representation of a range of disciplines

I am seeking permission from you to access the University's campus, the programme coordinators, students and their supervisors on your campus. I would also like to seek your assistance to provide assurance to the participants (supervisors and students) that their participation or nonparticipation in this research will not affect their grades, employment, or relationship with the university.

Selection of participants

How

To find potential participants**, I will seek assistance from the programme co-ordinators to inform all students who will be undertaking their final year research project (FYP) in the upcoming semester (2016) about the research through their Faculty's Academic Advisors.** I will need the programme co-ordinators to inform Academic Advisors to forward an advertisement about my research to final year students in the selected programmes via email. After that, the student volunteers will make contact with me through email and once the students are selected, they will provide the names and contact details of their supervisors.

Next, I will contact the supervisors for each student and invite them to participate in the research. If the supervisor is not interested in participating, I will move to the next student-supervisor pair until I manage to secure two student-supervisor pairs for each discipline.

Student participants for each discipline will be selected based on the first two whose supervisors also agree to participate in this research.

Voluntary participation

Student and supervisor participation in this research is voluntary and they may decline the invitation to participate.

Project Procedure

If you grant me consent to access the site, the programme co-ordinators, and participants, I would like, with your permission to carry out the following research procedures with the participants (supervisors and students):

Individual, audio-taped, semi-structured interviews

The purpose of these interviews is to discuss students' and supervisors' experiences, feelings, and perspectives about feedback in the current supervisory experience. To this end, they will be interviewed individually on **four (4)** occasions during the students' project:

- once before supervision commences
- twice during the period of supervision, and
- once at the end of the supervision

The expected time commitment from them for the interviews will be as follows:

1 x 45-60 mins (when supervision commences)
2 x 30-45 mins (during supervision)
1 x 45-60 mins (at the end of supervision)

Approximately 3 hours 30 minutes

During the interviews, participants will be able to have the recording device turned off at any time without giving a reason. With their permission, I would like to audio-record the interviews so that details of our discussions can be retrieved for transcription and analysis. The transcripts will be returned to the participants so that they can make changes if they wish to do so. They will have **two (2) weeks** in which to make these changes, otherwise the transcripts will be taken as an accurate record.

Observations

I will conduct attended observations during supervision meetings.

The purpose of attended observations is to observe and record field notes about verbal and non-verbal aspects of communication between supervisors and students. I will be conducting the observations at regular intervals starting from the students' third meeting with their supervisors. I will observe the supervisor-student pairs on at least four (4) and no more than six (6) occasions during the duration of the student's project. In addition, I would also like to attend the students' proposal defenses.

During the observations, participants will be able to have the recording device turned off at any time without giving a reason.

Documents and artefacts

I will collect official institutional and faculty protocols that are related to supervision. For instance, supervision guidelines, course outlines/descriptions, and final year project module/guidelines.

I would also like to collect students' drafts containing their supervisors' written feedback. These drafts will be collected on four occasions: the first piece of writing, then at four to five weekly intervals during the project. In addition, I would like to collect logbook entries of students (if it applies to the students' project) at the same time as the drafts. Students will be asked to send these documents to me.

I understand that these procedures might cause discomfort to the students and/or supervisors. However, as mentioned in the Risk section, this research will not be used to judge their competency as a supervisor/academic staff member or students' competency as a student, their English language proficiency, or personal characteristics. I assure you that any information including their personal details will not be divulged to other parties, except to my research supervisors and a university appointed transcriber.

I will also seek assistance from the supervisors involved to give assurance to their student that his/her decision to participate (or not) will not affect his/her grade. Although excerpts from his/her project paper with feedback might be published in this research, this will not affect his/her grade as by the time of publication, the student will have had his/her final grade assigned and will have graduated.

Data Storage, Retention, Destruction and Future Use

How

As mentioned in the above section, I will collect data using three methods: individual, audio-taped, semi-structured interviews; observations and field notes; and collecting of documents and artefacts.

Where

During the study, audio recordings will be transferred to a password protected computer and also a password protected laptop as a backup.

The transcripts of interviews will be stored in digital format on a password protected computer.

Hard copies of documents and artefacts will be stored in a locked cabinet in my office at the university.

All forms of data will be kept in a secured manner in my office at the University of Auckland.

How long

All forms of data will be kept for a minimum period of six years.

Destruction

After the minimum period has elapsed, audio recordings will be deleted from the password protected computer, laptop, and digital voice recorders.

Other forms of data (field notes, documents/artefacts) that are stored in the locked cabinet will be shredded.

Right to Withdraw from Participation

The participants have the right to withdraw from the research at any time without giving any reason and they can withdraw their interview data up to **two (2) weeks** after the final interview.

Anonymity and Confidentiality

The preservation of confidentiality is paramount. The information that the participants share with me will remain confidential to me as the researcher, my research supervisors, and a university appointed transcriber.

Their anonymity and confidentiality will be protected by the following procedures:

- the names of the students and supervisors will not be divulged to anyone. However, because this research will involve student-supervisor pairs, each will know the other is participating
- pseudonyms will be used for the institution and the names of students and supervisors in all publications
- the names of the faculties, programmes, and courses involved in this research will be presented in a way that preserves privacy. Also, the sheer size of the student population and the programmes selected at this university is such that anonymity will be preserved
- students and supervisors will be reminded that they are responsible to keep their participation and the other party's participation confidential
- if the information they provide is reported/published, this will be done in a way that does not identify them as its source.

CONTACT DETAILS AND APPROVAL

For any queries, please contact:

Student Researcher name and contact details	Supervisors' names and contact details	Head of Department name and contact details
Razlina Razali School of Learning Development and Professional Practice rraz436@aucklanduni.ac.nz	Main supervisor: Dr Eleanor Hawe School of Learning Development and Professional Practice e.hawe@auckland.ac.nz +64 9 373 7599 ext. 48733 Co-supervisor: Assoc. Prof Helen Dixon School of Learning Development and Professional Practice h.dixon@auckland.ac.nz +64 9 373 7599 ext. 48547	Assoc. Prof Lorri Michelle Johnson Santamaria School of Learning Development and Professional Practice l.santamaria@auckland.ac.nz +64 9 373 7599 ext. 46353

For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Research Office, Private Bag 92019, Auckland 1142. Telephone +64 9 373 7599 ext. 83711. Email: ro-ethics@auckland.ac.nz

Approved by the University of Auckland Human Participants Ethics Committee on 18 December 2015 for three years. Reference Number 016126.

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND

School of Learning Development and Professional Practice
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The University of Auckland
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CONSENT FORM

(DEPUTY VICE-CHANCELLOR OF ACADEMIC AFFAIRS)
THIS CONSENT FORM WILL BE HELD FOR A PERIOD OF 6 YEARS

Project title: Monologue or dialogue: how students and supervisors in a Malaysian university experience and understand feedback within undergraduate Honours Degrees research projects

Name of researcher: Razlina Razali

I have read the Information Letter, and I have understood the nature of the research and why the institution has been selected as the research site. I have had the opportunity to ask questions and have them answered to my satisfaction.

- I agree to give consent to the researcher to access the research site, the programme coordinators, and the participants (supervisors and students).
- I understand that the participation of the supervisors and students in this research is voluntary.
- I agree to provide assurance to the participants (supervisors and students) that their participation or nonparticipation will not affect their grades, employment, or relationship with the university.
- I understand that the participants will be involved in the following research procedures:

  1. Individual, audio-recorded, semi-structured interviews
  2. Attended observations during supervision meetings
  3. The collection of documents and artefacts e.g., official institutional and faculty protocols that are related to supervision and students' drafts containing supervisor's written feedback

- I understand that the participants are free to withdraw from the research project at any time without giving a reason, and that they are able to withdraw any data traceable to them up to two (2) weeks after the final interview.
- I understand that data will be kept for six (6) years, after which time data will be destroyed.
- I understand that the participants' anonymity and confidentiality will be protected by the following procedures:

    1. their names will not be revealed to anyone
    2. any information that they share with the researcher will not be disclosed to anyone except to the researcher's supervisors and a transcriber appointed by The University of Auckland
    3. pseudonyms will be used for their names and the name of the institution
    4. the name of a student's programme and course of study will be presented in a way that preserves privacy
    5. the participants are responsible to keep their participation and the other party's participation confidential
    6. if the information they provide is reported/published, this will be done in a way that does not identify them as its source.

Name: _____

Signature: _____ Date: _____

Approved by the University of Auckland Human Participants Ethics Committee on 18 December 2015 for three years. Reference number 016126.

APPENDIX B: INFORMATION LETTER AND CONSENT FORM

(PROGRAMME COORDINATOR)

School of Learning Development and Professional Practice
Faculty of Education and Social Work
The University of Auckland
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INFORMATION LETTER (PROGRAMME COORDINATOR)

MONOLOGUE OR DIALOGUE: HOW STUDENTS AND SUPERVISORS IN A MALAYSIAN UNIVERSITY EXPERIENCE AND UNDERSTAND FEEDBACK WITHIN UNDERGRADUATE HONOURS DEGREES RESEARCH PROJECTS

Name of researcher: Razlina Razali
Names of supervisors: Dr Eleanor Hawe (main supervisor)
Assoc. Prof Helen Dixon (co-supervisor)

Researcher Introduction

I am Razlina Razali and I am currently undertaking my PhD in Education in the School of Learning Development and Professional Practice at The University of Auckland, New Zealand.

This Project

Rationale

The reason that I am doing this research is to explore feedback within the context of supervision of independent student research in undergraduate Honours degree programmes in a public university in Malaysia.

Aims

The research goals are to answer two overarching questions:

1. How do undergraduate Honours students and their supervisors understand and experience feedback within the supervisory context?

2. What disciplinary similarities and differences are there in the supervisory feedback experience in relation to question one?

Duration

This project will continue for 10 months, depending on the duration of the students' final year research project. However, data will not be collected during mid-semester or semester breaks.

Benefits

I expect that the research will provide research participants with the following benefits:

Students will be able to:

- express their understanding and experiences of feedback in supervision
- express their expectations and experiences in the supervisory relationship

Supervisors will be able to:

- express their understanding and experiences of feedback in supervision
- gain insights into how their students understand, experience, and use feedback in completing their project
- develop an awareness of the expectations that students have in the supervisory relationship as well as the challenges in supervision
- develop an awareness of the different supervision practices in different disciplines

Risks

This research will not be used to judge the participants' competency as a supervisor/academic staff or student, their English language proficiency, or their personal characteristics. However, since this research will be carried out throughout the students' research process, it is anticipated that this might cause psychological stress and anxiety to the students and/or supervisors. In this instance, there is opportunity for participants to withdraw at any stage up until two weeks after their final interview. Stress will be self-identified by the participants. If this is not related to the supervisor-student relationship, a discussion will be held with the supervisors, while for the students, they will be referred to their respective supervisor.

However, if stress and anxiety are related to the supervisor-student relationship, the supervisors will be encouraged to contact their Head of Department, while the students will be referred to their Academic Advisor.

Other people

Other people who will have access to or use the data and results are my research supervisors and a transcriber approved by The University of Auckland. The transcriber will be required to sign a Confidentiality Agreement prior to commencement of work.

Selection of site

Why

The university has been chosen as my research site as it fulfils the following criteria:

- as the largest institution of higher learning in Malaysia in terms of its size and population, it offers a sufficient pool of possible participants
- bachelor's degree students are the largest group at this university and students who are enrolled in bachelor's degree programmes are required to complete independent research under supervision
- this university offers a wide range of programmes across a number of disciplines thus meeting the requirements for representation of a range of disciplines

I am seeking permission from you to access students and their supervisors in your programme. I would also like to seek your assistance to give assurance to the participants (supervisors and students) that their participation or nonparticipation in this research will not affect their grades, employment, or relationship with the university.

Selection of participants – your role

How

To find potential participants, **I would like to seek your assistance to inform all students who will be undertaking their final year research project (FYP) in the upcoming semester (2016) about the research through their Academic Advisors.** I would need your help to inform the Academic Advisors to forward an advertisement about my research to the final year students via email. After that, the student volunteers will make contact with me through email and once the students are selected, they will provide the names and contact details of their supervisors.

Next, I will contact the supervisors for each student and invite them to participate in the research. If the supervisor is not interested in participating, I will move to the next student-supervisor pair until I manage to secure two student-supervisor pairs for each discipline.

Student participants for each discipline will be selected based on the first two whose supervisors also agree to participate in this research.

Voluntary participation

Student and supervisor participation in this research is voluntary and they may decline the invitation to participate.

Project Procedure

If you grant me permission to access the participants, I would like, with your permission to carry out the following research procedures with the participants:

Individual, audio-taped, semi-structured interviews

The purpose of these interviews is to discuss students' and supervisors' experiences, feelings, and perspectives about feedback in the current supervisory experience. To this end, they will be interviewed individually on **four (4)** occasions during the students' project:

- once before supervision commences
- twice during the period of supervision, and
- once at the end of the supervision

The expected time commitment from them for the interviews will be as follows:

1 x 45-60 mins (when supervision commences)
2 x 30-45 mins (during supervision)
1 x 45-60 mins (at the end of supervision)
Approximately 3 hours 30 minutes

During the interviews, participants will be able to have the recording device turned off at any time without giving a reason. With their permission, I would like to audio-record the interviews so that details of our discussions can be retrieved for transcription and analysis. The transcripts will be returned to the participants so that they can make changes if they wish to do so. They will have **two (2) weeks** in which to make these changes, otherwise the transcripts will be taken as an accurate record.

Observations

I will conduct attended observations during supervision meetings.

The purpose of attended observations is to observe and record field notes about verbal and non-verbal aspects of communication between supervisors and students. I will be conducting the observations at regular intervals starting from the students' third meeting with their supervisors. I will observe the supervisor-student pairs on **at least four (4) and no more than six (6) occasions** during the duration of the student's project. In addition, I would also like to attend the students' proposal defenses.

During the observations, participants will be able to have the recording device turned off at any time without giving a reason.

Documents and artefacts

I will collect official institutional and faculty protocols that are related to supervision. For instance, supervision guidelines, course outlines/descriptions, and final year project module/guidelines. To this end, **I will need your permission to collect and access these documents to support my data analysis.**

I would also like to collect students' drafts containing their supervisors' written feedback. These drafts will be collected on four occasions: **the first piece of writing, then at four to five weekly intervals** during the project. In addition, I would like to collect logbook entries of students (if it applies to the students' project) at the same time as the drafts. Students will be asked to send these documents to me.

I understand that these procedures might cause discomfort to the students and/or supervisors. However, as mentioned in the Risk section, this research will not be used to judge their competency as a supervisor/academic staff and students' competency as a student, their English language proficiency, or personal characteristics. I assure you that any information including their personal details will not be divulged to other parties, except to my research supervisors and a university appointed transcriber.

I will also seek assistance from the supervisors involved to give assurance to their student that his/her decision to participate (or not) will not affect his/her grade. Although excerpts from his/her project paper with feedback might be published in this research, this will not affect his/her grade as by the time of publication, the student will have had his/her final grade assigned and will have graduated.

Data Storage, Retention, Destruction and Future Use

How

As mentioned in the above section, I will collect data using three methods: individual, audio-taped, semi-structured interviews; observations and field notes; and collecting of documents and artefacts.

Where

During the study, audio recordings will be transferred to a password protected computer and also a password protected laptop as a backup.

The transcripts of interviews will be stored in digital format on a password protected computer. Hard copies of documents and artefacts will be stored in a locked cabinet in my office at the university.

All forms of data will be kept in a secured manner in my office at the University of Auckland.

How long

All forms of data will be kept for a minimum period of six years.

Destruction

After the minimum period has elapsed, audio recordings will be deleted from the password protected computer, laptop, and digital voice recorders.

Other forms of data (field notes, documents/artefacts) that are stored in the locked cabinet will be shredded.

Right to Withdraw from Participation

The participants have the right to withdraw from the research at any time without giving any reason and they can withdraw their interview data up to **two (2) weeks** after the final interview.

Anonymity and Confidentiality

The preservation of confidentiality is paramount. The information they share with me will remain confidential to all parties including their own supervisor/student, the faculty, and the institution.

Their anonymity and confidentiality will be protected by the following procedures:

- the names of the students and supervisors will not be divulged to anyone. However, because this research will involve student-supervisor pairs, each will know the other is participating.
- pseudonyms will be used for the institution and the names of students and supervisors in all publications
- the name of the faculty, programme, and course involved in this research will be presented in a way that preserves privacy. Also, the sheer size of the student population and the programmes selected at this university is such that anonymity will be preserved
- students and supervisors will be reminded that they are responsible to keep their participation and the other party's participation confidential
- if the information they provide is reported/published, this will be done in a way that does not identify them as its source

CONTACT DETAILS AND APPROVAL

For any queries, please contact:

Student Researcher name and contact details	Supervisors' names and contact Details	Head of Department name and contact details
Razlina Razali School of Learning Development and Professional Practice rraz436@aucklanduni.ac.nz	Main supervisor: Dr Eleanor Hawe School of Learning Development and Professional Practice e.hawe@auckland.ac.nz +64 9 373 7599 ext. 48733 Co-supervisor: Assoc. Prof Helen Dixon School of Learning Development and Professional Practice h.dixon@auckland.ac.nz +64 9 373 7599 ext. 48547	Assoc. Prof Lorri Michelle Johnson Santamaria School of Learning Development and Professional Practice l.santamaria@auckland.ac. nz +64 9 373 7599 ext. 46353

For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Research Office, Private Bag 92019, Auckland 1142. Telephone +64 9 373 7599 ext. 83711. Email: ro-ethics@auckland.ac.nz.

Approved by the University of Auckland Human Participants Ethics Committee on 18 December 2015 for three years. Reference Number 016126.

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND

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CONSENT FORM (PROGRAMME COORDINATOR)

THIS CONSENT FORM WILL BE HELD FOR A PERIOD OF 6 YEARS

Project title: Monologue or dialogue: how students and supervisors in a Malaysian university experience and understand feedback within undergraduate Honours Degrees research projects

Name of researcher: Razlina Razali

I have read the Information Letter, and I have understood the nature of the research and why the institution has been selected as the research site. I have had the opportunity to ask questions and have them answered to my satisfaction.

- I agree to give consent to the researcher to access the participants (supervisors and students) and official institutional and faculty related protocols for supervision.
- I agree to inform all final year students about the research through an advertisement that will be sent via email by their Academic Advisors on my behalf.
- I understand that the participation of the supervisors and students in this research is voluntary.
- I agree to provide assurance to the participants (supervisors and students) that their participation or nonparticipation will not affect their grades, employment, or relationship with the university.
- I understand that the participants will be involved in the following research procedures:
    1. Individual, audio-recorded, semi-structured interviews
    2. Attended observations during supervision meetings
    3. The collection of documents and artefacts e.g., official institutional and faculty protocols that are related to supervision; and students' drafts containing supervisor's written feedback

- I understand that the participants are free to withdraw from the research project at any time without giving a reason, and that they are able to withdraw any data traceable to them up to two (2) weeks after the final interview.
- I understand that data will be kept for six (6) years, after which time data will be destroyed.
- I understand that the participants' anonymity and confidentiality will be protected by the following procedures:

    1. their names will not be divulged to anyone
    2. any information that they share with the researcher will not be disclosed to anyone except to the researcher's supervisors and a transcriber appointed by The University of Auckland
    3. pseudonyms will be used for their names and the name of the institution
    4. the name of a student's programme and course of study will be presented in a way that reserves privacy
    5. the participants are responsible to keep their participation and the other party's participation confidential
    6. if the information they provide is reported/published, this will be done in a way that does not identify them as its source.

Name: _____

Signature: _____ Date: _____

Approved by the University of Auckland Human Participants Ethics Committee on 18 December 2015 for three years. Reference number 016126.

APPENDIX C: ADVERTISEMENT

RECRUITMENT OF RESEARCH PARTICIPANTS

MONOLOGUE OR DIALOGUE: HOW STUDENTS AND SUPERVISORS IN A MALAYSIAN UNIVERSITY EXPERIENCE FEEDBACK WITHIN UNDERGRADUATE HONOURS DEGREES RESEARCH PROJECTS

RESEARCHER INTRODUCTION

I am Razlina Razali and I am currently undertaking my PhD in Education in the School of Learning Development and Professional Practice at The University of Auckland, New Zealand.

ABOUT THE PROJECT

Participants

I am seeking final year students who will be undertaking their final year project paper (FYP) in the upcoming semester (2016) to participate in my PhD research: "Monologue or dialogue: how students and supervisors in a Malaysian university experience feedback within undergraduate Honours Degrees research projects".
Participation in this study is completely voluntary and you may decline this invitation to participate.

Rationale

The reason that I am doing this research is to explore feedback within the context of supervision of independent student research in undergraduate Honours degree programmes in a public university in Malaysia.

Objectives

The research goals are to answer two overarching questions:

1. How do undergraduate Honours students and their supervisors understand and experience feedback within the supervisory context?
2. What disciplinary similarities and differences are there in the supervisory feedback experience in relation to question one?

CONTACT DETAILS

If you are interested in participating, please contact me at rraz436@aucklanduni.ac.nz to discuss further details about the research and your involvement as a participant.

Approved by the University of Auckland Human Participants Ethics Committee on 18 December 2015 for three years. Reference Number 016126.

APPENDIX D: PARTICIPANTS INFORMATION SHEET AND

CONSENT FORM (SUPERVISOR)

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND

School of Learning Development and Professional Practice
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PARTICIPANT INFORMATION SHEET (SUPERVISOR)

MONOLOGUE OR DIALOGUE: HOW STUDENTS AND SUPERVISORS IN A MALAYSIAN UNIVERSITY EXPERIENCE AND UNDERSTAND FEEDBACK WITHIN UNDERGRADUATE HONOURS DEGREES RESEARCH PROJECTS

Name of researcher: Razlina Razali
Names of supervisors: Dr Eleanor Hawe (main supervisor)
Assoc. Prof Helen Dixon (co-supervisor)

Researcher Introduction

I am Razlina Razali and I am currently undertaking my PhD in Education in the School of Learning Development and Professional Practice at The University of Auckland, New Zealand.

This Project

Rationale

The reason that I am doing this research is to explore feedback within the context of supervision of independent student research in undergraduate Honours degree programmes in a public university in Malaysia.

Aims

The research goals are to answer two overarching questions:

1. How do undergraduate Honours students and their supervisors understand and experience feedback within the supervisory context?
2. What disciplinary similarities and differences are there in the supervisory feedback experience in relation to question one?

Duration

This project will continue for 10 months, depending on the duration of the students' final year research project. However, data will not be collected during mid-semester or semester breaks.

Benefits

I expect that the research will provide research participants the following benefits:

Students will be able to:

- express their understanding and experiences of feedback in supervision
- express their expectations and experiences in the supervisory relationship

Supervisors will be able to:

- express their understandings and experiences of feedback in supervision
- gain insights into how their students understand, experience, and use feedback in completing their project
- develop an awareness of the expectations that students have in the supervisory
- relationship as well as the challenges in supervision
- develop an awareness of the different supervision practices in different disciplines

Risks

This research will not be used to judge your competency as a supervisor/academic staff, your English language proficiency, or your personal characteristics. However, since this research will be carried out throughout the student's research process, it is anticipated that this might cause psychological stress and anxiety to you as a supervisor. In this instance, there is an opportunity to withdraw at any stage up until two weeks after the final interview. If you are stressed or anxious about the student's research project and dependent on the nature of this stress or anxiety, it may be necessary to contact your Head of Department.

Other people

Other people who will have access to or use the data and results are my research supervisors and transcriber approved by The University of Auckland. The transcriber will be required to sign a Confidentiality Agreement prior to commencement of work.

Invitation to Participate

Why

You are invited to participate in this research because one of the students that you will be supervising this semester has volunteered to participate in this research.

How

To find potential participants, like you, I have sought assistance from your programme coordinator to inform all students who will be undertaking their final year research project (FYP) in the upcoming semester (2016) about the research through their Academic Advisors.

The Academic Advisors then forwarded an advertisement about my research to the final year students via email. After that, the student volunteer that you will be supervising made contact with me through email and after the student was selected, he/she provided your name and contact details.

Voluntary participation

Your participation is voluntary and you may decline this invitation to participate.

The Deputy Vice-Chancellor of Academic Affairs and your programme coordinator have given assurance that your participation or nonparticipation will not affect your employment or relationship with the university.

Project Procedure

If you choose to participate, I would like, with your permission to carry out the following research procedures with you, as the supervisor:

Individual, audio-taped, semi-structured interviews

The purpose of these interviews is to discuss your experiences, feelings, and perspectives about feedback in the current supervisory experience. To this end, you will be interviewed individually on **four (4)** occasions during your student's project:

- once before supervision commences
- twice during the period of supervision, and
- once at the end of the supervision

The expected time commitment from you for this will be as follows:

1 x 45-60 mins (when supervision commences)
2 x 30-45 mins (during supervision)
1 x 45-60 mins (at the end of supervision)
Approximately 3 hours 30 minutes

During the interviews, you will be able to have the recording device turned off at any time without giving a reason. With your permission, I would like to audio-record the interviews so that details of our discussions can be retrieved for transcription and analysis. The transcripts will be returned to you so that you can make changes if you wish to do so. You will have **two (2) weeks** in which to make these changes, otherwise the transcripts will be taken as an accurate record.

Observations

I will conduct attended observations during supervision meetings.

The purpose of attended observations is to observe and record field notes about verbal and non-verbal aspects of communication between you and your student. I would like to conduct the observations at regular intervals starting from your student's third meeting with you. I will observe the meetings on **at least four (4) and no more than six (6) occasions** during the

duration of your student's project. In addition, I would also like to attend your student's proposal defense.

During the observations, you will be able to have the recording device turned off at any time without giving a reason.

Documents and artefacts

I will collect official institutional and faculty protocols that are related to supervision. For instance, supervision guidelines, course outlines/descriptions, and final year project module/guidelines.

As already explained, **your student** will also be involved in my research project in the following ways:

Individual, audio-taped, semi-structured interviews

The purpose of these interviews is to discuss your student's experiences, feelings, and perspectives about feedback in the current supervisory experience. To this end, your student will be interviewed individually on **four (4)** occasions during his/her project:

- once before supervision commences
- twice during the period of supervision, and
- once at the end of the supervision

During the interviews, your student will be able to have the recording device turned off at any time without giving a reason.

Observations

I will conduct attended observations during supervision meetings. During the observations, your student will be able to have the recording device turned off at any time without giving a reason.

Documents and artefacts

I would also like to collect your student's drafts containing your written feedback. These drafts will be collected on four occasions**: the first piece of writing, then at four to five weekly intervals** during the project. In addition, I would like to collect logbook entries of your student (if it applies to the student's project) at the same time as the drafts. I will provide instructions to the student regarding the sending of these documents.

Data Storage, Retention, Destruction and Future Use

How

As mentioned in the above section, I will collect data using three methods: individual, audio-taped, semi-structured interviews; observations and field notes; and collecting of documents and artefacts.

Where

During the study, audio recordings will be transferred to a password protected computer and also a password protected laptop as a backup.
The transcripts of interviews will be stored in digital format on a password protected computer.
Hard copies of documents and artefacts will be stored in a locked cabinet in my office at the university.
All forms of data will be kept in a secured manner in my office at the University of Auckland.

How long

All forms of data will be kept for a minimum period of six years.

Destruction

After the minimum period has elapsed, audio recordings will be deleted from the password protected computer, laptop, and digital voice recorders.
Other forms of data (field notes, documents/artefacts) that are stored in the locked cabinet will be shredded.

Right to Withdraw from Participation

You have the right to withdraw from the research at any time without giving any reason and you can withdraw your interview data up to **two (2) weeks** after the final interview.

Anonymity and Confidentiality

The preservation of confidentiality is paramount. The information you share with me will remain confidential to me as the researcher, my research supervisors, and a university appointed transcriber.

Your anonymity and confidentiality will be protected by the following procedures:

- your name and your student's name will not be divulged to anyone. However, because this research will involve you and the student that you are supervising, each will know the other is participating. I would also like to remind you that any information that you share with me will not be disclosed to your student (and vice versa)
- pseudonyms will be used for your institution, your name, and your student's name in all publications
- the name of the programme and course that you are supervising will be presented in a way that preserves privacy. Also, the sheer size of the student population and the programmes selected at this university is such that anonymity will be preserved
- you are also responsible to keep your participation and your student's participation confidential
- if the information you provide is reported/published, this will be done in a way that does not identify you as its source
- A copy of the research findings will be made available to you, if you wish to verify the information that I report.

CONTACT DETAILS AND APPROVAL

For any queries, please contact:

Student Researcher name and contact details	Supervisors' names and contact details	Head of Department name and contact details
Razlina Razali School of Learning Development and Professional Practice rraz436@aucklanduni.ac.nz	Main supervisor: Dr Eleanor Hawe School of Learning Development and Professional Practice e.hawe@auckland.ac.nz +64 9 373 7599 ext. 48733 Co-supervisor: Assoc. Prof Helen Dixon School of Learning Development and Professional Practice h.dixon@auckland.ac.nz +64 9 373 7599 ext. 48547	Assoc. Prof Lorri Michelle Johnson Santamaria School of Learning Development and Professional Practice l.santamaria@auckland.ac. nz +64 9 373 7599 ext. 46353

For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Research Office, Private Bag 92019, Auckland 1142. Telephone +64 9 373 7599 ext. 83711. Email: ro-ethics@auckland.ac.nz.

Approved by the University of Auckland Human Participants Ethics Committee on 18 December 2015 for three years. Reference Number 016126.

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NEW ZEALAND

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CONSENT FORM (SUPERVISOR)

THIS CONSENT FORM WILL BE HELD FOR A PERIOD OF 6 YEARS

Project title: Monologue or dialogue: how students and supervisors in a Malaysian university experience and understand feedback within undergraduate Honours Degrees research projects

Name of researcher: Razlina Razali

I have read the Participant Information Sheet, and I have understood the nature of the research and why I have been selected. I have had the opportunity to ask questions and have them answered to my satisfaction.

- I agree to take part in this research.
- I understand that my participation is voluntary.
- I understand that the Deputy Vice-Chancellor of Academic Affairs and the programme coordinator have given assurance that my participation or nonparticipation in this research will not affect my employment or relationship with the university.
- I understand that I will be involved in the following research procedures:
    1. Individual, audio-recorded, semi-structured interviews. I will be interviewed individually;
        - once before supervision commences
        - twice during the period of supervision, and
        - once at the end of the supervision
    2. Attended observations during supervision meetings
        - My meetings with my student will be observed on **at least four (4) and no more than six (6) occasions** during the duration of the student's final year project and also during his/her proposal defense
    3. The collection of documents and artefacts
        - I am responsible for providing the researcher with official institutional protocols regarding supervision (e.g. supervision guidelines, course outlines/descriptions, and final year project module/guidelines)
        - I understand that drafts containing my written feedback will be collected from the student
- I understand that I have the right to have the recording device turned off at any time during the observations and interviews without giving a reason.

- I understand that I will have **two (2) weeks** to make changes to the interview transcripts after they are returned to me, otherwise they will be taken as an accurate record.
- I understand that should I encounter psychological stress and anxiety during data collection, I would be referred to the appropriate personnel at my university.
- I understand that my student will be involved in the following research procedures:
    1. Individual, audio-recorded, semi-structured interviews
    2. Attended observations during supervision meetings
    3. The collection of documents and artefacts
- I understand that I am free to withdraw from the research project at any time without giving a reason, and that I am able to withdraw any data traceable to me up to two (2) weeks after the final interview.
- I understand that data will be kept for **six (6) years**, after which time data will be destroyed.
- I understand that my anonymity and confidentiality will be protected by the following procedures:
    1. my name and my student's name will not be divulged to anyone. However, since both of us are involved in this research, both of us will know the other is participating
    2. any information that I share with the researcher will not be disclosed to anyone except to the researcher's supervisors and a transcriber appointed by The University of Auckland
    3. pseudonyms will be used for my name, my student's name, and the name of my institution
    4. the name of the programme and course that I am supervising will be presented in a way that preserves privacy
- I am responsible to keep my participation and my student's participation confidential
- if the information I provide is reported/published, this will be done in a way that does not identify me as its source
- I wish to receive summary of findings, which can be emailed to me at this email address: _____

Name: _____

Signature: _____ Date: _____

Approved by the University of Auckland Human Participants Ethics Committee on 18 December 2015 for three years. Reference number 016126.

APPENDIX E: PARTICIPANT INFORMATION SHEET AND CONSENT FORM (STUDENT)

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND

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PARTICIPANT INFORMATION SHEET (STUDENT)

MONOLOGUE OR DIALOGUE: HOW STUDENTS AND SUPERVISORS IN A MALAYSIAN UNIVERSITY EXPERIENCE AND UNDERSTAND FEEDBACK WITHIN UNDERGRADUATE HONOURS DEGREES RESEARCH PROJECTS

Name of researcher: Razlina Razali
Names of supervisors: Dr Eleanor Hawe (main supervisor)
Assoc. Prof Helen Dixon (co-supervisor)

Researcher Introduction

I am Razlina Razali and I am currently undertaking my PhD in Education in the School of Learning Development and Professional Practice at The University of Auckland, New Zealand.

This Project

Rationale

The reason that I am doing this research is to explore feedback within the context of supervision of independent student research in undergraduate Honours degree programmes in a public university in Malaysia.

Aims

The research goals are to answer two overarching questions:

1. How do undergraduate Honours students and their supervisors understand and experience feedback within the supervisory context?

2. What disciplinary similarities and differences are there in the supervisory feedback experience in relation to question one?

Duration

This project will continue for 10 months, depending on the duration of your final year research project. However, data will not be collected during mid-semester or semester breaks.

Benefits

I expect that the research will provide research participants with the following benefits:

Students will be able to:

- express their understanding and experiences of feedback in supervision
- express their expectations and experiences in the supervisory relationship

Supervisors will be able to:

- express their understandings and experiences of feedback in supervision
- gain insights into how their students understand, experience, and use feedback in completing their project
- develop an awareness of the expectations that students have in the supervisory relationship as well as the challenges in supervision
- develop an awareness of the different supervision practices in different disciplines

Risks

This research will not be used to judge your competency as a student, your English language proficiency, or your personal characteristics. However, since this research will be carried out throughout your research process, it is anticipated that this might cause psychological stress and anxiety to you as a student. In this instance, there is an opportunity for you to withdraw at any stage up until two weeks after the final interview.

If you are stressed or anxious about your research project and dependent on the nature of this stress or anxiety, you will be referred to either your supervisor or Academic Advisor.

Other people

Other people who will have access to or use the data and results are my research supervisors and a transcriber approved by The University of Auckland. The transcriber will be required to sign a confidentiality agreement prior to commencement of work.

Invitation to Participate

Why

You are invited to participate in this research because you fulfil the following criteria:

- you are an undergraduate Honours degree student who will be undertaking an independent final year research project (FYP) at your institution for the upcoming year (2016)
- your programme has been selected as one of the disciplines to be included in this research

How

To find potential participants, like you, I have sought assistance from your programme coordinator to advertise about the research to all final year students who will be undertaking their final year research project (FYP) in the upcoming semester (2016) through the Faculty's Academic Advisors. The Academic Advisors then forwarded the advertisement to all final year students via email.

If you agree to participate in this research, please contact me through the email address that I provide in the Contact Details and Approval section. Once selected, you will have to provide the name and contact details of your supervisor.

I will then contact your supervisor and invite him/her to participate in this research. You will be selected as one of the participants only if your supervisor agrees to participate in this research.

Voluntary participation

Your participation is voluntary and you may decline this invitation to participate.

The Deputy Vice-Chancellor of Academic Affairs and your programme coordinator have given assurance that your participation or nonparticipation will not affect your grades or relationship with the university.

Project Procedure

If you choose to participate, I would like, with your permission to carry out the following research procedures with you, as the student:

Individual, audio-taped, semi-structured interviews

The purpose of these interviews is to discuss your experiences, feelings, and perspectives about feedback during your research project. To this end, you will be interviewed individually on **four (4)** occasions during your project:

- once before supervision commences
- twice during the period of supervision, and

- once at the end of the supervision

The expected time commitment from you for this interview will be as follows:

1 x 45-60 mins (when supervision commences)
2 x 30-45 mins (during supervision)
1 x 45-60 mins (at the end of supervision)
Approximately 3 hours 30 minutes

During the interviews, you will be able to have the recording device turned off at any time without giving a reason. With your permission, I would like to audio-record the interviews so that details of our discussions can be retrieved for transcription and analysis. The transcripts will be returned to you so that you can make changes if you wish to do so. You will **have two (2) weeks** in which to make these changes, otherwise the transcripts will be taken as an accurate record.

Observations

I will conduct attended observations during supervision.

The purpose of attended observations is to observe and record field notes about verbal and non-verbal aspects of communication between you and your supervisor. I will conduct the observations at regular intervals starting from your third meeting with your supervisor. I will observe the meetings on **at least four (4) and no more than six (6) occasions** during the duration of your project. In addition, I would also like to attend your proposal defense.

During the observations, you will be able to have the recording device turned off at any time without giving a reason.

Documents and artefacts

I will also like to collect the drafts of your project that contain your supervisor's written feedback. These drafts will be collected on four occasions: **the first piece of writing, then at four to five weekly intervals during the project.** In addition, I would like to collect your logbook entries (if it applies to your project) at the same time.

These documents need to be sent to me on a date that will be discussed and agreed between us. As already explained, your supervisor will also be involved in my research project in the following ways:

Individual, audio-taped, semi-structured interviews

The purpose of these interviews is to discuss your supervisor's experiences, feelings, and perspectives about feedback in the current supervisory experience. To this end, he/she will be interviewed individually on **four (4)** occasions during your project:

- once before supervision commences
- twice during the period of supervision, and
- once at the end of the supervision

During the interviews, your supervisor will be able to have the recording device turned off at any time without giving a reason.

Observations

I will conduct attended observations during supervision meetings. During the observations, your supervisor will be able to have the recording device turned off at any time without giving a reason.

Documents and artefacts

I will collect official institutional and faculty protocols that are related to supervision from your supervisor. For instance, supervision guidelines, course outlines/descriptions, and final year project module/guidelines.

Data Storage, Retention, Destruction and Future Use

How

As mentioned in the previous section, I will collect data using three methods: individual, audio- taped, semi-structured interviews; observations and field notes; and collecting of documents and artefacts.

Where

During the study, audio recordings will be transferred to a password protected computer and also a password protected laptop as a backup.

The transcripts of interviews will be stored in digital format on a password protected computer. Hard copies of documents and artefacts will be stored in a locked cabinet in my office at the university.

All forms of data will be kept in a secured manner in my office at the University of Auckland.
How long

All forms of data will be kept for a minimum period of six years.

Destruction

After the minimum period has elapsed, audio recordings will be deleted from the password protected computer, laptop, and digital voice recorders.

Other forms of data (field notes, documents/artefacts) that are stored in the locked cabinet will be shredded.

Right to Withdraw from Participation

You have the right to withdraw from the research at any time without giving any reason and you can withdraw your interview data up to **two (2) weeks** after the final interview.

Anonymity and Confidentiality

The preservation of confidentiality is paramount. The information you share with me will remain confidential to me as the researcher, my research supervisors, and a university appointed transcriber.

Your anonymity and confidentiality will be protected by the following procedures:

- your name and your supervisor's name will not be divulged to anyone. However, because this research will involve you and your supervisor, each will know the other is participating. Once again, I would like to remind you that any information that you share with me will not be disclosed to your supervisor (and vice versa)
- pseudonyms will be used for your institution, your name, and your supervisor's name in all publications
- the name of your programme and course of study will be presented in a way that preserves privacy. Also, the sheer size of the student population and the programmes selected at this university is such that anonymity will be preserved
- you are also responsible to keep your participation and your supervisor's participation confidential
- if the information you provide is reported/published, this will be done in a way that does not identify you as its source

A copy of the research findings will be made available to you, if you wish to verify the information that I report.

CONTACT DETAILS AND APPROVAL

For any queries, please contact:

Student Researcher name and contact details	Supervisors' names and contact details	Head of Department name and contact details
Razlina Razali School of Learning Development and Professional Practice rraz436@aucklanduni.ac.nz	Main supervisor: Dr Eleanor Hawe School of Learning Development and Professional Practice e.hawe@auckland.ac.nz +64 9 373 7599 ext. 48733 Co-supervisor: Assoc. Prof Helen Dixon School of Learning Development and Professional Practice h.dixon@auckland.ac.nz +64 9 373 7599 ext. 48547	Assoc. Prof Lorri Michelle Johnson Santamaria School of Learning Development and Professional Practice l.santamaria@auckland.ac. nz +64 9 373 7599 ext. 46353

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CONSENT FORM (STUDENT)

THIS CONSENT FORM WILL BE HELD FOR A PERIOD OF 6 YEARS

Project title: Monologue or dialogue: how students and supervisors in a Malaysian university experience and understand feedback within undergraduate Honours Degrees research projects

Name of researcher: Razlina Razali

I have read the Participant Information Sheet, and I have understood the nature of the research and why I have been selected. I have had the opportunity to ask questions and have them answered to my satisfaction.

- I agree to take part in this research.
- I understand that my participation is voluntary.
- I understand that the Deputy Vice-Chancellor of Academic Affairs and the programme coordinator have given assurance that my participation or nonparticipation in this research will not affect my grades or relationship with the university.
- I understand that I will be involved in the following research procedures:
    1. Individual, audio-recorded, semi-structured interviews. I will be interviewed individually;
        - once before supervision commences
        - twice during the period of supervision, and
        - once at the end of the supervision
    2. Attended observations during supervision meetings
        - My meetings with my supervisor will be observed on **at least four (4) and no more than six (6) occasions** during the duration of my final year project and also during my proposal defense
    3. The collection of documents and artefacts

- I am responsible for sending the drafts containing my supervisor's written feedback of my **first piece of writing, then at four to five weekly intervals** and logbook entries (if it applies to my research project) to the researcher on a date that will be discussed and agreed between us
- I understand that I have the right to have the recording device turned off at any time during the observations and interviews without giving a reason.
- I understand that I will have **two (2) weeks** to make changes to the interview transcripts after they are returned to me, otherwise they will be taken as an accurate record.
- I understand that should I encounter psychological stress and anxiety during data collection, I would be referred to the appropriate personnel at my university.
- I understand that **my supervisor** will be involved in the following research procedures:

    1. Individual, audio-recorded, semi-structured interviews
    2. Attended observations during supervision meetings
    3. The collection of documents and artefacts

- I understand that I am free to withdraw from the research project at any time without giving a reason, and that I am able to withdraw any data traceable to me up to **two (2) weeks** after the final interview.
- I understand that data will be kept for **six (6) years**, after which time data will be destroyed.
- I understand that my anonymity and confidentiality will be protected by the following procedures:

    1. my name and my supervisor's name will not be divulged to anyone. However, since both of us are involved in this research, both of us will know the other is participating
    2. any information that I share with the researcher will not be disclosed to anyone except to the researcher's supervisors and a transcriber appointed by The University of Auckland
    3. pseudonyms will be used for my name, my supervisor's name, and the name of my institution
    4. the name of the programme and course that I am studying will be presented in a way that preserves privacy
    5. I am responsible to keep my participation and my supervisor's participation confidential

6. if the information I provide is reported/published, this will be done in a way that does not identify me as its source

- I wish to receive summary of findings, which can be emailed to me at this email address: _____

Name: _____

Signature: _____ Date: _____

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APPENDIX F: INTERVIEW PROTOCOL (STUDENT)

INDICATIVE QUESTIONS – STUDENT INTERVIEW 1 (45–60 mins)

Examples of areas for discussion and probing further are included within key areas.

Demographic information

Tell me about yourself [whatever the student is willing to share – age, members of family, family members who have been to university, …];

What programme are you studying and why you have chosen this programme?

Project

Tell me about your final year project [project area and topic, why this has been selected, research question/s, length of project, methodology, outcome/s].

How did you decide on the research topic; who chose the research topic [self, supervisor, part of a team …]

Why do you think UG requires its bachelor's degree students to complete a final year research project?

Please share with me your feelings about doing this project – how do you feel at the moment, why, which parts of the project do you think will be the most challenging, why, how might you overcome these …

Supervision - expectations, roles and responsibilities of supervisor

What sorts of things do you think a supervisor does when supervising a student?

E.g.: help select area of study, questions, methodology, set up regular meetings, provide support [academic and pastoral support], ***give feedback – oral and written*** [probe this further if mentioned here], encourage independence and critical thinking …..

Your supervisor is [name]. 'Selection' of supervisor – tell me about how you found your supervisor [knew him/her already, he/she was recommended, he/she approached me ….]

Tell me what you expect your supervisor will do during this final year project [this might have been answered above in the first question, if not probe further here for specifics – **mention feedback if not already covered above** – do you expect feedback, about what, in what form] What sorts of things do you think your supervisor is responsible for in relation to this project?

Are there any guidelines about supervision for students and supervisors at this university [check for awareness of these – why / why not aware of them].

Supervision - expectations, roles and responsibilities of self

What sorts of things do you think a student does when they are being supervised / working with a supervisor?

E.g.: initiate meetings, attend meetings, meet deadlines, ask for help, organise aspects of the project such as ……, ask for feedback about what is going well and what needs improvement, hand in drafts of chapters …

What sorts of things do you think you are responsible for in relation to this project? Talk about the ways in which you have prepared for this research project.

Share some of the challenges that you think lie ahead. How might you deal with these challenges?

What sort of support do you expect from your supervisor?

INDICATIVE QUESTIONS – STUDENT INTERVIEWS 2 and 3 (30–45 mins)

Note: Adjustments will be made according to the timing of the interview in relation to the project timeline. The third interview might start with a mention about the previous answers e.g.: in the previous talk, we had you mentioned that…was particularly challenging – seven weeks have gone by, how are you finding this now?

Which part(s) of the project are you enjoying the most? Why? [explore further]

Which part(s) of the project are you not enjoying? Why? [explore further]

Which part(s) of your project have you found challenging? Why?

How have you overcome these challenges? [probe for support from the supervisor, nature of the support, feedback ….]

How often do you meet with your supervisor [probe whether this is sufficient from the student's perspective]; in what ways is your supervisor supporting you with your project – share some specific examples [address academic and pastoral matters].

What preparation do you do before you attend meetings with your supervisor?

Share how you feel during supervision meetings [explore why the student feels like this].

Feedback: Tell me about your progress to date [let the student tell this in their own way; probe where appropriate; suggestions below].

- In what way[s] does your supervisor get you to think about your progress? [find out if the student is asked for his/her opinion about how they are progressing – why/not; explore further]
- What have you achieved; How do you know this [feedback from supervisor and/or from self – content of the feedback/give examples]
- How do you feel about your progress? Is it as you expected? Why / not?
- In what way[s] does your supervisor get you to think about what you need to work on? [find out if the student is asked for his/her opinion about how they are progressing – why/not; explore further]
- What things do you need to work on; how do you know this [feedback from supervisor and/or from self - content of the feedback/give examples]

- What do you need to do next in your project – what is your most pressing or urgent priority; how do you know this [feedback from supervisor and/or from self – content of the feedback/give examples]

At this stage of your project, what type of feedback do you find is of most value? [academic and/or pastoral – give examples]

- feedback about work on the project [gathering data, analysing data …] from whom, how often, what about ….
- feedback about the dissertation [from whom, how often, what about ….].

Explore different formats of feedback - written, electronic, oral, and dialogic. Explore whether the student receives oral feedback; participates in dialogic feedback; receives written feedback. Ask for examples of each if relevant. Which is preferred and why?

How do you feel when you receive feedback from your supervisor? Give examples to illustrate. In what ways has your supervisor's feedback helped you? Give examples to illustrate.

What do you do with your supervisor's feedback? Give examples to illustrate.

Could you share with me the strategies that you are using to help complete your project?

INDICATIVE QUESTIONS – FINAL STUDENT INTERVIEW (45–60 mins)

Project

Now that you have completed your project, can you share some of your feelings about it:

- Are you pleased with your work? Why / not?
- Is there any area where you think you could do better next time? What area and why?

What did you like the most about your research experience and why?

What did you dislike the most about your research experience and why?

Which part of the research experience was the most challenging and why?

Based on your experience, what are some of the important characteristics that a supervisor should have when supervising a student like yourself?

Based on your experience, what are some of the important characteristics that a student like you needs to have when undertaking research?

Feedback

Tell me about the feedback process in the final stages of your project, as you were preparing your dissertation. [Focus here on drafts of the dissertation – what happened; how was feedback provided; from whom; how often; what action did you take; why/not; ….].

Looking back over the whole project, in what ways (if any) did the nature or content of the feedback change over the course of your project? Please give examples to illustrate.

Looking back over the whole project, in what ways (if any) did the feedback process change? Please give examples to illustrate. e.g.: shift from oral to written; supervisor only, student and supervisor together, student generated.

What do you think is the supervisor's role in the feedback process? What is the student's role in the feedback process?

Feedback is considered an important part of the supervisory process – why do you think this might be so? Was it an important part of your experience? Why / not?

Overall what feedback did you find the most useful to you? Why?

Overall what feedback did you find the least helpful to you? Why?

APPENDIX G: INTERVIEW PROTOCOL (SUPERVISOR)

INDICATIVE QUESTIONS – SUPERVISOR INTERVIEW 1 (45-60 mins)

Demographic information:

Tell me about your role at the university [courses taught, areas of expertise etc… and any other information they are willing to share about themselves – how long they have been at the university …]

Supervision of Honours projects

Tell me about the Honours projects you have supervised in the past [topics, how many …]

Tell me about the Honours projects you are supervising this semester / this year [how many; topics].

How do you 'find' students for supervision - do supervisors approach students; do students seek out supervisors? Is some other approaches used?

Supervision – expectations, roles and responsibilities of supervisors

Tell me about what happens when you first meet with a student that you will be supervising for an Honours project. Probe responses – why these things happen.

Describe how an Honours supervision usually proceeds from here. Probe responses – why it proceeds in this way [could cover the responsibilities of supervisors and students in here].

What do you see as the main responsibilities of a supervisor [and of yourself]? Discuss academic and pastoral areas.

If feedback is mentioned, find out more about this – how the student gets information about their progress, things to work on and where to next; what form does this feedback take?

What are some of the challenges that you find in supervising Honours students? How do you address these challenges?

Does your university or department have any guidelines about supervision? If so, how are these shared with students you supervise?

Supervision – expectations, roles and responsibilities of students

Your student is [name].

'Selection' of student – tell me about how you found this student / how they found you [knew him/her already, he/she was recommended, he/she approached me ….]

Tell me what you expect this student will do during this final year project [this might have been answered earlier, if not probe further here for specifics – **mention feedback if not already covered above** – do you provide feedback, about what, in what form]

What sorts of things do you think your student is responsible for in relation to this project?

What are some of the important characteristics that a student needs if they are to undertake an Honours project?

What sorts of things do you expect your students to learn during the project?

Tell me about the challenges students usually face during their Honours project, and the ways in which you help them with these [academic and pastoral]

INDICATIVE QUESTIONS – SUPERVISOR INTERVIEWS 2 and 3 (30–45 mins)

Note: Adjustments will be made according to the timing of the interview in relation to the project timeline. In the third interview, mention could be made of previous answers e.g.: in the previous talk we had you mentioned that ….

How often do you meet with your student [name]. Is this sufficient from the supervisor's perspective; in what ways are you supporting [student] with his/her project – share some specific examples [address academic and pastoral matters].

What preparation do you do before you have meetings with [name]?

Feedback: Tell me about how the project is progressing [let the supervisor tell this in their own way; probe where appropriate; suggestions below].

- In what way[s] do you get [name] to think about his/her progress? [find out if the student is asked for his/her opinion about how they are progressing – why/not; explore further]
- What has [name] achieved so far; How does he/she know they have achieved this [feedback from supervisor – content of the feedback/give examples]
- In what way[s] do you get [name] to think about what he/she needs to work on? [find out if the student is asked for his/her opinion about what they need to work on – why/not; explore further]
- What things does [name] need to work on; how does he/she know this [feedback from supervisor - content of the feedback/give examples]
- What does [student] need to do next in his/her project – what is his/her most pressing or urgent priority; do they know this [feedback from supervisor – content of the feedback/give examples]
- What do you expect [student name] to do with the feedback you provide / what has he/she done with the feedback – give some examples to illustrate.

At this stage of the project, what type of feedback do you think are of most value to [student]?

- academic and/or pastoral – give examples
- feedback about work on the project [gathering data, analysing data …] from whom, how often, what about ….

- feedback about the dissertation [from whom, how often, what about ….].

If not already covered, explore different formats of feedback - written, electronic, oral, and dialogic. Explore whether the supervisor provides oral feedback [how, when …]; if the supervisor engages the student in in dialogic feedback; provides written feedback. Ask for examples of each if relevant. Which do they prefer to give and why?

How does [student] react when they receive feedback? Give examples to illustrate.

Explore other aspects of feedback as they arise during the interview e.g.: why it is given, how often it is given, the format …

INDICATIVE QUESTIONS – FINAL SUPERVISOR INTERVIEW (45–60 mins)

Project

What do you see as the highlights of [student's name] project?

Which part of this supervision did you find the most challenging and why?

Based on your experience, what are some of the important characteristics that a supervisor should have when supervising students?

Based on your experience, what are some of the important characteristics a student like [name] needs to have when undertaking research?

Feedback

Tell me about the feedback process in the final stages of [student's name] project, as he/she was preparing the dissertation. [Focus here on drafts of the dissertation – what happened; how was feedback provided; from whom; how often; what action was taken ….].

Looking back over the whole project, in what ways (if any) did the nature or content of the feedback that you gave [name] change over the course of the project?

Please give examples to illustrate.

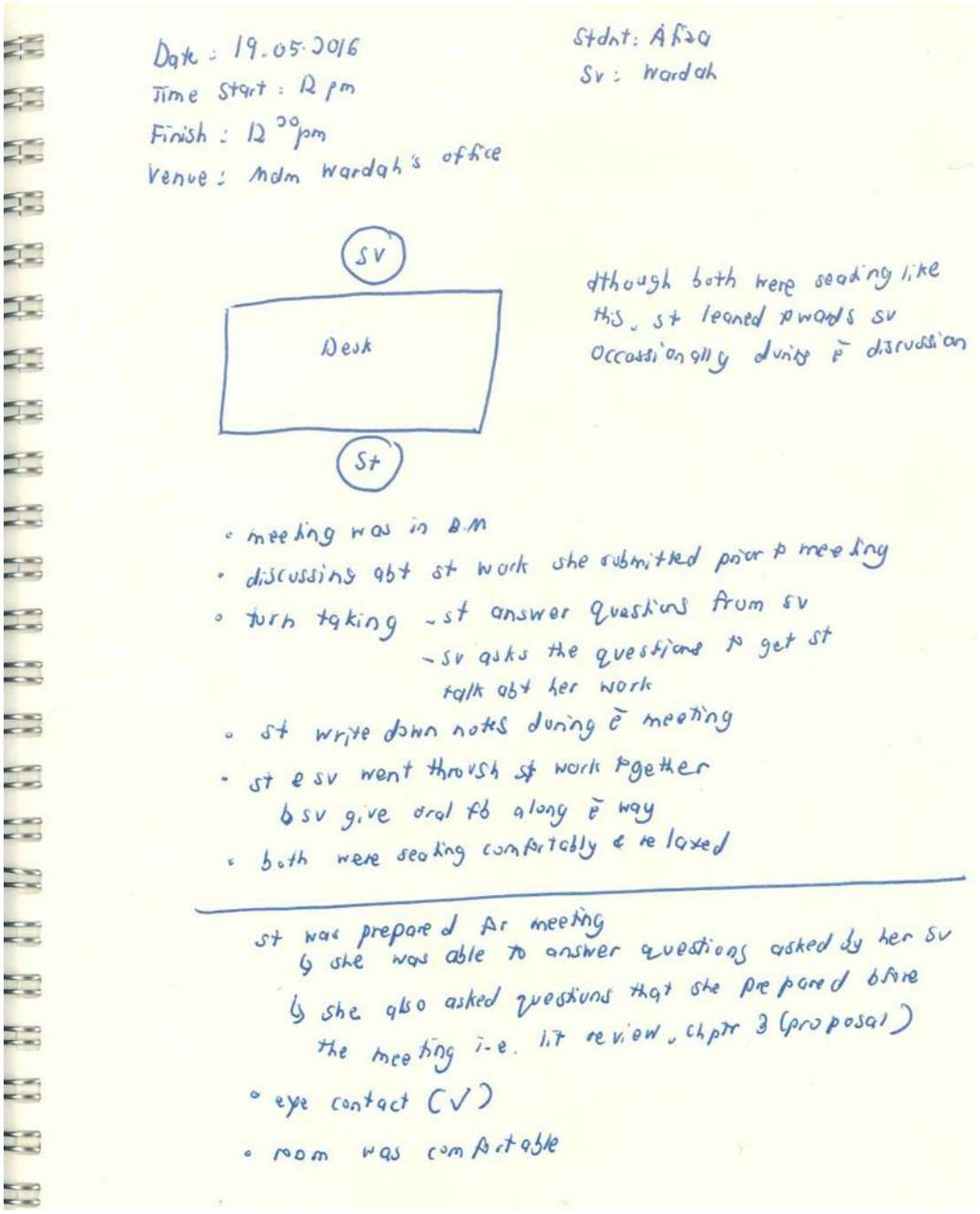
Looking back over the whole project, in what ways (if any) did the feedback process change? Please give examples to illustrate.

[Discuss any shift from oral to written feedback; supervisor only feedback to student and supervisor dialogue and discussion, student generated feedback]

Feedback is considered an important part of the supervisory process – why do you think this might be so? Was it an important part of your experience with [name]? Why / not?

What do you think is your role in the feedback process? What is the student's role in the feedback process?

APPENDIX H: EXAMPLE OF OBSERVATION NOTES



Date : 19.05.2016
Time start : 2 pm
Finish : 12 ^{20}pm
Venue : mdm wardah's office

Stdnt: Afiqa
Sv : wardah

dthough both were seating like this, st leaned towards sv occassionally during the discussion

- meeting was in B.M
- discussing abt st work she submitted prior to meeting
- turn taking - st answer questions from sv
  - sv asks the questions to get st talk abt her work
- st write down notes during the meeting
- st & sv went through st work together
  - sv give oral fb along the way
- both were seating comfortably & relaxed

---

st was prepared for meeting
- & she was able to answer questions asked by her sv
- & she also asked questions that she prepared b4 the meeting i.e. lit review, chptr 3 (proposal)

- eye contact (✓)
- room was comfortable

After ē ~~meeting~~ discussing about the work, sv & st talked about non-academic matters such as ē upcoming break.

I observed that both sv est seem to hv a good relationship as they both smiled & laughed occasionally ~~during~~ while talking.

The st salam w her sv after ē meeting ended.

- This is a practice in ē Malay culture signalling respect from ē young to an older person.

I asked them why ē meeting was short, they told me that it is short because they hv frequent meetings & ē st always follows the sv's suggestions.

- the st is also in her 1st sem of ē project so she just started & there isn't much to be discussed yet.

APPENDIX I: EXAMPLES OF OPEN CODES OF HOW A SUPERVISOR PERCEIVE HIS/HER ROLES AND RESPONSIBILITIES

N	The topics usually revolve around food safety. Things related to food so sometimes they don't really—the students don't really have interest in food safety but the topic will always play around food.
R	So that means the topics are related to your area of interest?
N	Yes, right.
R	So what about the project that you are supervising this semester? Only one?
N	Only one. The student, she is a culinary students, nothing too scientific or health related. She was interested in the practicing of diet, types of diet programmes. So I am supervising her and guiding her to know about Atkins Diet
R	So who chose the topic? You or the student proposed to you?
N	Most of the time I will let the students choose the topic but then we need to guide the students. Sometimes they are too ambitious, perhaps—to actually guide them whether that topic is doable in their level. So most of the time, they will choose what they like but with my advice
R	What about the student for this semester?
N	She chose the topic Atkins. I am not really interested in that topic actually but then I made a lot of corrections especially in terms of the research objectives
R	Can you share with me how do you find your students for supervision? Do they approach you or is there any kind of system?
N	In our place, it could be either way. First, the lecturer can propose the student, let's say the student is supposed to take this project, this final project in the coming semester, so in the current semester they will hold a symposium where they will showcase their posters and then they will explain to the audience. And then, from there on if the lecturers found a topic of interest, a topic that they like, they will propose that student. The other way is the students will approach the lecturers. Most of the time the students will ask around their lecturer who among the lecturers better in this kind of topic, are knowledgeable about this kind of field then they will approach the lecturer but the lecturer can reject.
R	What about Nuha?
N	Nuha she approached me because she was advised by her previous lecturer to find someone who focuses on food.
R	Have you taught her before this?
N	No. I didn't know her before.
R	Sorry, just now you mentioned that before this you were like a co-supervisor, am I right?
N	Yes
R	How long have you been the main supervisor?
N	Let me check—since June 2014 so for two years already
R	Alright. And before—this semester you only have one student to supervise, what about the previous semester? Usually around how many?
N	The most, um, I took two students. But there are also—there is this one particular semester where I didn't have any students at all. Like this particular semester, there are only fourteen bachelor students.
R	Oh?
N	Yes, fourteen. One four.
R	So which programme?
N	The total students undertaking independent study
R	Okay.

ACADEMIC
• guide on topic

ACADEMIC
• guide
• feasibility of topic

FEEDBACK
• correction no

KNOWLEDGE EXPERT

N	For the final project only fourteen students so there might be other lecturers who do not supervise any students at all.
R	Why is the number so small?
N	Because the intake of students differs in every semester. For example, this is another batch, diploma batch, last year there are none, there are no intake for food service students.
R	For diploma?
N	For diploma.
R	Okay. What about degree students? How many usually?
N	Degree? I don't teach degree students so I don't know exactly but as I've said just now the final year students, the final semester students is fourteen only.
R	You're not teaching degree—
N	Degree subjects
R	But you have to supervise—
N	Yes, except for this one because we have to be exclusive here at Campus 3. Those who teach diploma will only teach diploma.
R	Okay
N	Those who teach degree will only teach degree. If we teach both students diploma and degree, most probably there will no break.
R	Yeah, that's right. But why do you still have to supervise degree students?
N	It's not really a problem actually, perhaps— I think because there are not so many degree lecturers
R	Hmm. Alright. Can you share with me what usually happens when you first meet with a student that you'll be supervising?
N	In our first meeting, normally before the meeting the student will propose to see me and then she or he will tell me very briefly about the idea, and then on the first meeting, I will ask the student to come with a printed proposal and then I will ask him or her to tell me everything about the idea of that proposal. After hearing the idea, I will ask a lot of questions to make sure that they really understand the idea. Sometimes students when we twist around, they don't really understand what they are talking about. So the second step is I will ask them a lot of questions, and then we will do some corrections, maybe the things that I think are not necessary, the thing that is inaccurate. We will correct that, I will suggest corrections and then finally, on the first meeting, we must come out with a Gantt Chart and then that will conclude the first meeting.
R	So what kind of meeting do you usually prefer for the first meeting? Is it informal or formal?
N	I would say in between because informal makes us comfortable to talk, to discuss but if too informal, I am afraid the student will feel too casual and laid back.
R	In the first meeting, you'll discuss about the student's idea and prepare the Gantt Chart and then how does the supervision proceed from there?
N	Because recently we are introduced with this new kind of cohort where the students will go back to their industrial attachment place, we will keep in touch via WhatsApp, nowadays we use WhatsApp a lot as well as email. As for me, the students need to email me updates from time to time.
R	Do you set like maybe they have to update you maybe once in a week?
N	No, no, not really but we have to stick to that Gantt Chart. So along these months, perhaps one month, two months, what do we need to achieve and then from time to time, I will text them. Normally I will text them first and ask the updates.

ACADEMIC
• listen to ss ideas
• check ss understanding
• ask questions
FEEDBACK
• Correction
ACADEMIC
• timeline

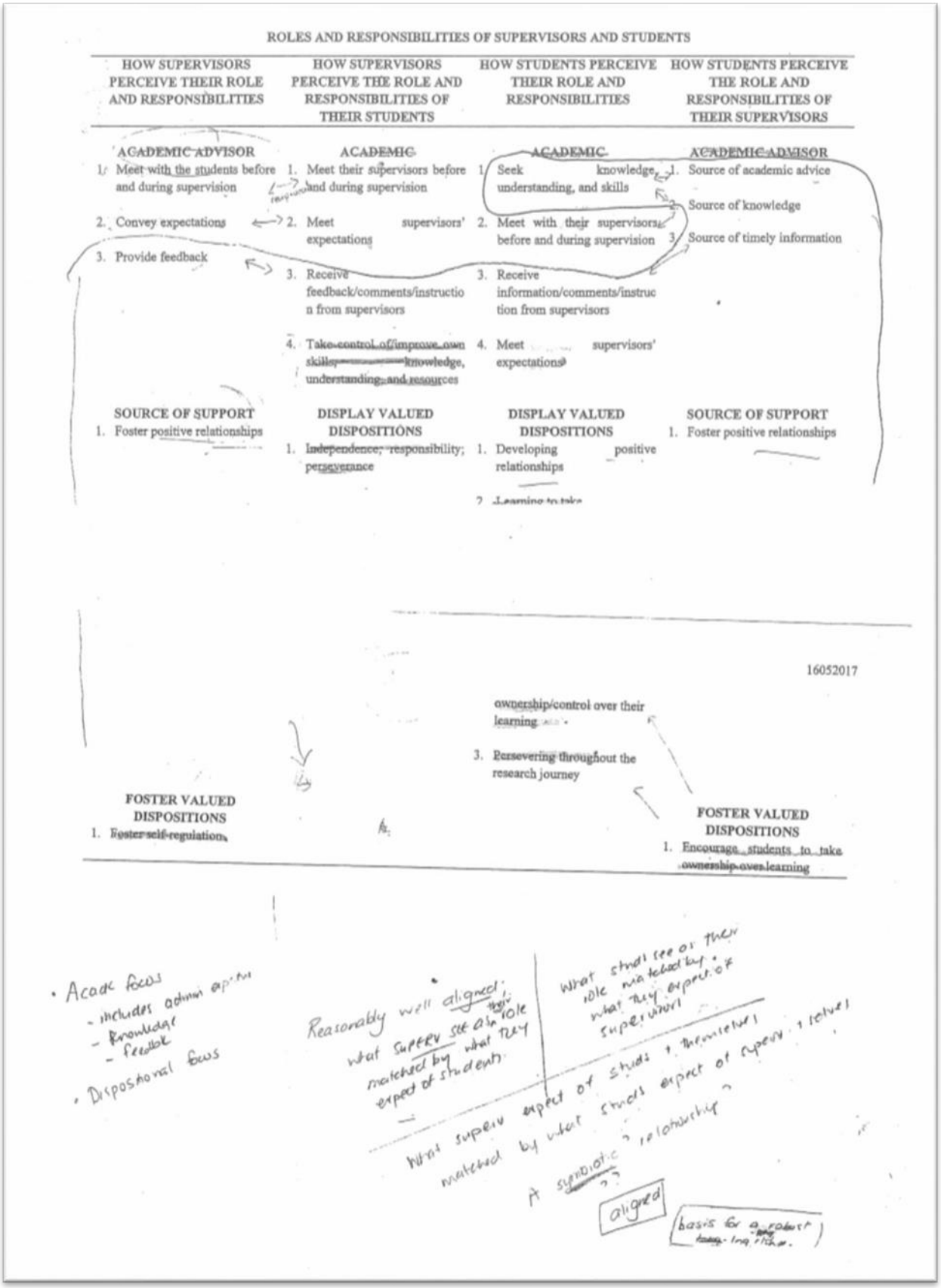
PASTORAL
• related rlship

PASTORAL
• keeping in touch

• keeping in touch

R	How do you prepare the Gantt Chart? Do you discuss with the student?
N	Yes, we prepare it together on the first meeting. I will come out with the Academic Calendar and then we will discuss and then I will explain. Of course for bachelor degree students they don't understand the Gantt Chart most of the time so I will explain this is the milestone that you need to achieve within this period of time so they get it, they understand, we discuss from there.
R	What do you see as the main responsibilities of a supervisor or yourself as a supervisor?
N	In terms of independent study, I think the most important responsibility of a supervisor is to let the student understand how to write a proper thesis report but in terms of—because students will make mistakes. They do lots of mistakes, of course in terms of grammar, of course in terms of formatting, maybe, but then we have to skip that and pay attention to the technicalities of how to write a proper thesis report.
R	About this student, just now you mentioned that she's doing on Atkins Diet—that is something which is not really of your interest.
N	Yes, not really.
R	So how do you prepare yourself to supervise her?
N	To me, if you can refer back to the responsibilities that I talked about just now, not only the content must be academic which we can depend on the literature review, that is the—to me that is the signs that you read academically for Atkins Diet. But then, to prepare myself for topics that I am—that is not really my interest, to me that is not really a problem because what I would I focus more is the way they collect the data, the way they process the data, and then analyse it. But from there on we can actually tell the students so they can see whether this is the correct step of collecting data, this is a useful data, this is a good question so on.
R	Do the students have to sit for like a research proposal course or research methodology course?
N	Yes, they sit for research proposal course a semester before. That is the particular semester where they will present the poster that I mentioned just now.
R	Okay. Alright. And then, okay apart from academic matters, is there—do you think that you are responsible for other matters aside academic?
N	What are the matters exactly?
R	You know, helping the student find a place for industrial training?
N	No, no, no. We just focus on supervising, yes.
	What about providing motivation to the student or things like that?
N	Motivation is terms of warning maybe quite frequent but most of the time we just text "Any updates?" because we are already at the age, to me that we don't need to scold, right? But then, me personally I will text them frequently just asking for updates. They don't need to be scold. I just ask updates, they will send me email. To me, as long as you keep in touch with your supervisor, you are doing okay, rather than you shy away, run away, you don't report at all.
R	So usually who will text first?
N	I will text first.
R	And what about helping them finding related materials for reading? Do you help them with that?
N	Help, not so much but if you can consider this, most of the time the students need introduction how to get the information, so we can introduce them this kind of website, you may go to the library – the library has this kind of assistance, facilities- this kind of help.

APPENDIX J: EXAMPLE OF AXIAL CODES



ROLES AND RESPONSIBILITIES OF SUPERVISORS AND STUDENTS

HOW SUPERVISORS PERCEIVE THEIR ROLE AND RESPONSIBILITIES	HOW SUPERVISORS PERCEIVE THE ROLE AND RESPONSIBILITIES OF THEIR STUDENTS	HOW STUDENTS PERCEIVE THEIR ROLE AND RESPONSIBILITIES	HOW STUDENTS PERCEIVE THE ROLE AND RESPONSIBILITIES OF THEIR SUPERVISORS
~~ACADEMIC ADVISOR~~	~~ACADEMIC~~	~~ACADEMIC~~	~~ACADEMIC ADVISOR~~
1. Meet with the students before and during supervision	1. Meet their supervisors before and during supervision	1. Seek knowledge, understanding, and skills	1. Source of academic advice
2. Convey expectations	2. Meet supervisors' expectations	2. Meet with their supervisors before and during supervision	2. Source of knowledge
3. Provide feedback	3. Receive feedback/comments/instruction from supervisors	3. Receive information/comments/instruction from supervisors	3. Source of timely information
	4. Take control of/improve own ~~skills~~ knowledge, understanding, and resources	4. Meet supervisors' expectations	
SOURCE OF SUPPORT	DISPLAY VALUED DISPOSITIONS	DISPLAY VALUED DISPOSITIONS	SOURCE OF SUPPORT
1. Foster positive relationships	1. ~~Independence; responsibility;~~ perseverance	1. Developing positive relationships	1. Foster positive relationships
		2. ~~Learning to take~~ ownership/control over their learning	
		3. ~~Persevering~~ throughout the research journey	
FOSTER VALUED DISPOSITIONS			FOSTER VALUED DISPOSITIONS
1. ~~Foster self-regulation~~			1. Encourage students to take ownership over learning

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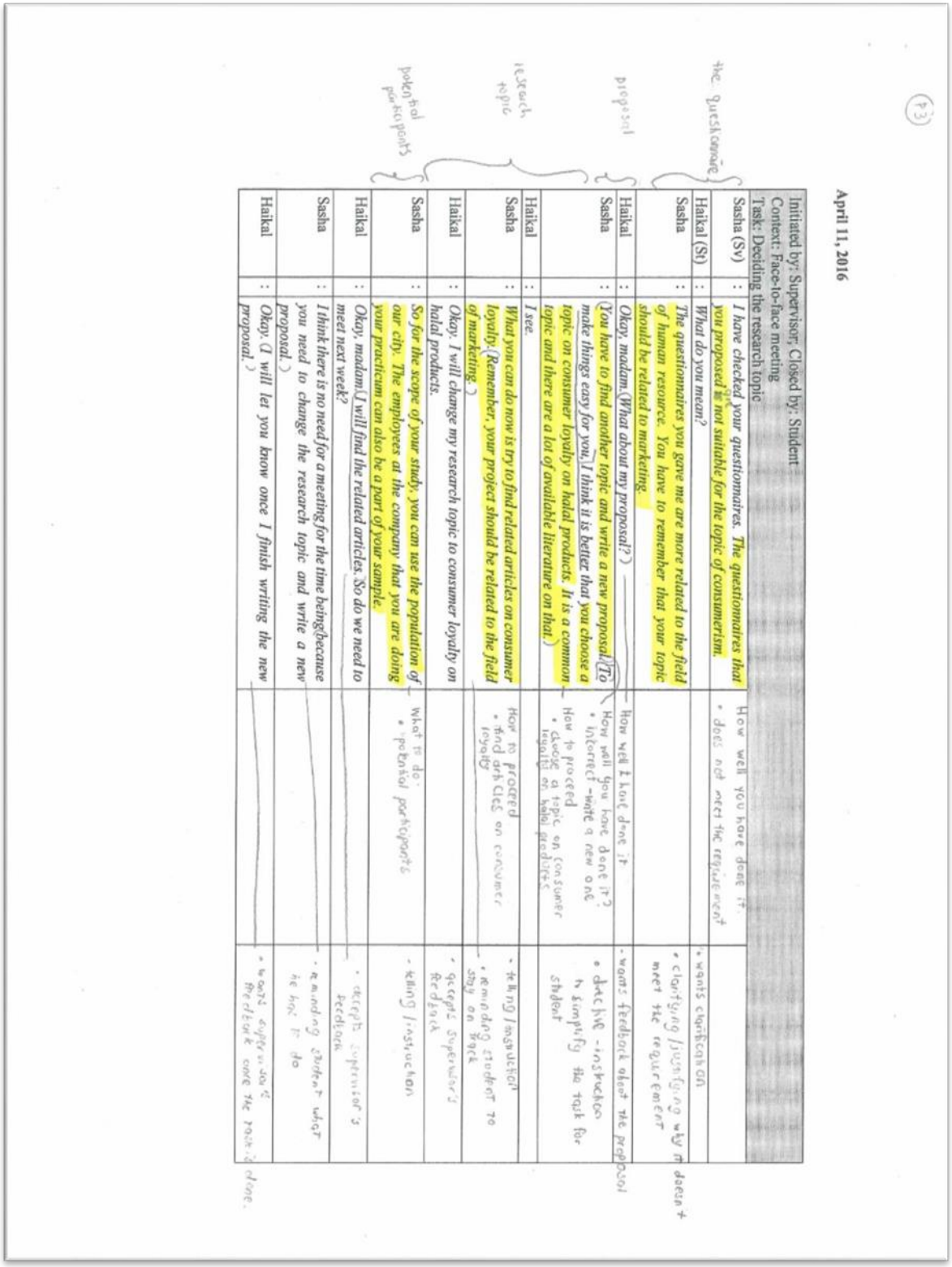
APPENDIX K: EXAMPLE OF CODING USING HATTIE AND TIMPERLEY'S FEEDBACK FRAMEWORK AND MODEL



April 11, 2016

Initiated by: Supervisor; Closed by: Student
Context: Face-to-face meeting
Task: Deciding the research topic

Sasha (Sv)	:	*I have checked your questionnaires. The questionnaires that you proposed are not suitable for the topic of consumerism.*	How well you have done it • does not meet the requirement	
Haikal (St)	:	*What do you mean?*		• wants clarification
Sasha	:	*The questionnaires you gave me are more related to the field of human resource. You have to remember that your topic should be related to marketing.*		• clarifying /justifying why it doesn't meet the requirement
Haikal	:	*Okay, madam. (What about my proposal?)*	How well have done it	- wants feedback about the proposal
Sasha	:	*(You have to find another topic and write a new proposal.) (To make things easy for you, I think it is better that you choose a topic on consumer loyalty on halal products. It is a common topic and there are a lot of available literature on that.)*	How will you have done it? • correct -write a new one How to proceed • choose a topic on consumer loyalty on halal products	• directive -instruction • simplify the task for student
Haikal	:	*I see.*		
Sasha	:	*What you can do now is try to find related articles on consumer loyalty. (Remember, your project should be related to the field of marketing.)*	How to proceed • find articles on consumer loyalty	- asking /instruction • reminding student to stay on track
Haikal	:	*Okay. I will change my research topic to consumer loyalty on halal products.*		• accepts supervisor's feedback
Sasha	:	*So for the scope of your study, you can use the population of our city. The employees at the company that you are doing your practicum can also be a part of your sample.*	What to do: • potential participants	- telling /instruction
Haikal	:	*Okay, madam. I will find the related articles. So do we need to meet next week?*		• accepts supervisor's feedback
Sasha	:	*I think there is no need for a meeting for the time being because you need to change the research topic and write a new proposal.)*		- reminding student what he has to do
Haikal	:	*Okay. (I will let you know once I finish writing the new proposal.)*		• wants supervisor to check the feedback once the task is done.

- supervisor provides feedback to student about the task i.e. the questionnaires that student proposed to be used for his study
- student can be seen to have some confidence with what he had done and wanted to know why the questionnaires cannot be used for his study
- supervisor justified/reasoned out to student and student accepted supervisor's reason
- overall, it can be seen that this exchange is monologic, there is no discussion or negotiation from both parties

Student's roles

1. passive - just accept supervisor's feedback & directives;
2. seems not very clear of the direction that he needs to go - needs to be reminded by supervisor;

Supervisor's roles

- directive - realises that student is not clear of the direction that he needs to go
- lowers difficulty of the task by providing executive help - giving direct answers about
  - a suitable topic
  - potential participants
- reminding student about the right track i.e. topic should be related to marketing
- spoon-feeds student

APPENDIX L: HAIKAL-STU'S DRAFT

5.3 Conclusion

The results of the study have provided answers for ALL the research questions highlighted in the study, thus achieving the study objectives. It is concluded in the study that halal awareness, halal certification and halal marketing are significantly related to intention to purchase halal cosmetic products.

It is also concluded in the study that most consumers of halal cosmetic products in women spend RM1, 000 per month for their halal cosmetic consumptions. These consumers' high values in halal awareness, halal certification as well as halal marketing lead them into high intention to purchase halal cosmetic products.

5.4 Recommendation

5.4.1 Future Research

For the purpose of future researches, the study suggests the exploration into the halal products consumptions that focus on non-Muslim community. This is owing to the fact that the concept of halal not only regarding the religion (of Islam) but also on the emphasis of cleanliness, healthiness and goodness of taste. (Al-Harran and Low, 2008). Thus if one is aware of the halal concept, his or her halal awareness will be inducing him or her into purchasing halal cosmetic products (and other halal products). Future research also could be done into the improvement of the halal marketing strategies in order to promote purchase intention by the public.

strategies by giving incentives to the practitioners of halal marketers, for instance through higher tax exemptions for practicing halal marketing.

The authority could take this result as an opportunity to commercialize not only halal products, but also halal certification itself, by improving and provide higher control on the halal certification quality. This way the certification can be commercialize into the international market, thus promoting higher intention to purchase at the international levels.

APPENDIX M: NATRAH-SUP'S NOTES FOR NUHA-STU