

How are undergraduate students supervised? Perceptions of students and supervisors in a Malaysian university

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Supervision is intrinsic to institutional-based research projects as it acts as a catalyst for the successful execution and completion of said projects. If students are to be independent in research and learning, they need to experience a supervision approach that supports their engagement in learning dialogues alongside their supervisors. This article explored undergraduate research supervision in a Malaysian university. Data were collected using individual, semi-structured interviews with students and supervisors. Findings indicated that undergraduate supervision was perceived and practised as a traditional, supervisor-centric process. The paper argues that a psy-supervision approach which focuses on the academic and pastoral aspects of supervision is catalytic to producing independent and active students in research and learning.

Introduction

Compared to learning in modular courses, supervision demands a commitment from both students and supervisors to work together over an extended period. Ideally, students and supervisors are expected to embrace the supervisory relationship with “professionalism, respect, collegiality, and open-mindedness” (Ismail, Norhasni & Aminuddin, 2011, p. 79). 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).

Contrary to literature concerning postgraduate 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, Bannister & Clegg, 2004) with most having been published prior to 2010. Furthermore, the focus of any literature dealing with supervision in undergraduate programs largely discusses issues associated with students’ organisational skills, timekeeping, and writing skills (Derounian, 2011). Consequently, the roles of academics supervising undergraduate research and the student experience are largely under-explored areas (Boud & Costley, 2007). Further, 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, this study explored supervision in the context of undergraduate students’ final year research projects (FYP) in a Malaysian university. The overarching research question guiding this study was:

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

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.

Roles and responsibilities of supervisors

A number of studies have indicated a consensus, both from the points 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). 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). As described by students and supervisors, this task entails guiding students in deciding on the focus of the research (Anderson, Day & McLaughlin, 2006; Reguant, Martínez-Olmo & Contreras-Higuera, 2018), advising students on the feasibility of their research methodology (Pyhältö et al., 2015; Todd et al., 2004) and introducing students to related literature (Armstrong & Shanker, 1983; Reguant et al., 2018). Some supervisors have also 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). From supervisors' points of view, 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, Smith & Bannister, 2006). Thus, 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; Todd et al., 2006). Interestingly, some supervisors regard themselves as a "dictator" (Stefani, Tariq, Heylings & Butcher, 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 (Armstrong & Shanker, 1983; Pyhältö et al., 2015). As observed in the literature, supervisors impart and explain research concepts (Roberts & Seaman, 2018a), assist students in applying knowledge and skills in research (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., Derounian, 2011; Pyhältö et al., 2015; Todd et al., 2006) 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).

In addition, both parties consider supervisors important figures in developing students' independence (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 (Roberts & Seaman, 2018a).

Supervision also requires supervisors to support emotional and motivational needs of students in the research journey (Lopatto, 2003). 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 supervision 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, available studies demonstrate that in general students are expected to be committed (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). Moreover, 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). Correspondingly, 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, 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 styles

Supervisors' interpretations of their roles and responsibilities shape their supervisory style (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).

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 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. Accordingly, 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 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 (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 gradually 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 (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 both parties work together in a facilitative, two-way supervisory relationship.

Method

This study was carried out at one public university in Malaysia – University Gemilang ('UG', a pseudonym) from March to December 2016. Consistent with the expected outcomes of bachelor's degree programs 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. The FYP gives students the opportunity to apply their understandings of concepts learned during the previous semesters. It also serves to prepare students for postgraduate study through the incorporation of research and problem-solving skills as well as independent learning.

This study followed an interpretive qualitative methodology, specifically a case study design. This form of inquiry was deemed as most suitable as the interpretations of participants in this study would not be able to be captured in a deep way using quantitative methods (Soltis, 1984). Personal and close interaction with participants through semi-structured interviews that were carried out in situ allowed the researcher to get alongside participants and have a better understanding of their actions and thoughts (Krauss, 2005).

Formal consent to access the site and potential participants was obtained from the Vice Chancellor of Academic Affairs at UG. Following a purposeful random sampling method, four programs: chemistry, mathematics, culinary arts and marketing were selected. The researcher then sought help from the program coordinators of the respective programs to

send an invitation to the supervisors who would be supervising the undergraduate research projects in the following semester to participate in the study. They were provided a Participant Information Sheet to help them understand the purpose of the study and what was involved for those who volunteered to participate. After obtaining the names of the supervisor-volunteers, the researcher asked each supervisor to provide the names and contact of students that they would be supervising in the March 2016 semester so 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 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 might 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. At the end of the participant recruitment process, the researcher managed to secure four student-supervisor pairs from each program. Formal consent to participate in the study was obtained through the signing of the Consent Form. Pseudonyms were assigned to each participant and the university to protect their anonymity. The student-supervisor pairs involved in this study were: Nuha-Stu and Natrah-Sup (culinary arts); Lutfi-Stu and Irfan-Sup (chemistry); Haikal-Stu and Sasha-Sup (marketing); and Afiza-Stu and Wardah-Sup (mathematics).

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, program 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 final year project [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 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, and opinions about the important characteristics of supervisor and student in undertaking the research project. Each interview was audio-recorded with the participants' permission.

The recordings were then transcribed verbatim by the researcher. Data were analysed inductively and deductively using the constant comparative method – open coding, axial coding and selective coding (Corbin & Strauss, 2008). 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. During reading, the researcher identified recurring words, phrases, and ideas from the transcripts. These were inductively assigned codes such as "friendly with boundaries" 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". The axial coding stage involved the identification and comparison of open codes for the same groups of participants, for instance, the students. These open codes were then linked 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 same process was applied to the open codes elicited from the supervisors' data. What followed was a comparison of codes between student and supervisor groups. In the selective coding stage, 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. During the 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.

Findings

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. 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.

Furthermore, with respect to seeing their role as the main guide for 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 for those who did not have strong knowledge about the area or the research methodology.

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. For instance, 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 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).

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.

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) communications. 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.

In a similar vein, supervisors thought it was important for students to update them regularly so they would be aware of their students' progress. This enabled them to provide appropriate assistance. 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 about 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. 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 because 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. 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

Both parties 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. 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, 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). Students and supervisors also mentioned that the former should approach their supervisors and request feedback if they had not been getting any feedback.

Discussion and conclusion

It was apparent that the case of supervision of the FYP at UG 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. 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. Seemingly, 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. This suggests 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 students' reliance and dependence upon supervisors (Roberts & Seaman, 2018a). Arguably, while in this study the trad-supervision style helped students to complete tasks, it did not work to develop students' independence.

The findings suggest 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 masters 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 supervision (Wisker et al., 2003). As illustrated in this 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 educator-student relationship is not unusual in the Malaysian learning context. As a Southeast Asian country, 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 et al., 2006). Moreover, 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). The asymmetrical structure of the relationship was reflected in the ways in which students defer to and show respect towards their supervisors.

This study suggests the supervision process reflected a traditional view and approach to teaching and learning. 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, which is typical of the Asian learning context (Hallinger, 2010). 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 (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 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 as they took the initiatives to prepare for the FYP and carried out tasks as expected. In this context, students were considered passive in terms of 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). 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 this 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 Asian learning-teaching contexts (Wong, 2004).

The outcomes of this study suggested students and supervisors at UG failed to appreciate and realise the potential of the FYP as an opportunity 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 this study.

Overall, the trad-supervision approach as experienced by participants in this study seemed to work against the objectives of the undergraduate research – 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 (McClure, 2005). They tend to feel intimidated when approaching supervisors to discuss matters pertaining to their research (McClure, 2005). 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 (McGinty et al., 2010; 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., 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; Sidhu et al., 2014).

Supervision is a personal relationship between students and supervisors. As with any relationship, supervision is complex and open to benefits and risks, i.e. gains and losses (Grant, 2005). As illustrated in this 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).

This study provides evidence that despite student independence and critical-thinking skills having always been at the fore of research, the understandings and enactments of a traditional approach to supervision can hinder students from becoming independent scholars. Therefore, it is important 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).

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