ALIGNMENT OF DOCTORAL STUDENT AND SUPERVISOR EXPECTATIONS IN MALAYSIA

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ABSTRACT

Aim/Purpose	This paper compares doctoral student and supervisor expectations of their respective roles and responsibilities in doctoral research supervision relationships in Malaysia. It identifies the areas, and the extent to which expectations align or differ.
Background	Incongruence of expectations between doctoral students and their supervisor has been cited as a major contributor to slow completion times and high attrition rates for doctoral students. While researchers urge the need for explicit discussion of expectations, in practice doctoral students and supervisors rarely make their expectations explicit to each other, and few researchers have examined the areas of alignment or misalignment of expectations in depth.
Methodology	Semi-structured interviews were held with fifteen doctoral students and twelve supervisors from two research-intensive universities in Malaysia. An inductive thematic analysis of data was conducted.
Contribution	This paper provides the first in-depth direct comparison of student-supervisor expectations in Malaysia. A hierarchical model of student-supervisor expectations is presented.
Findings	Expectations vary in the degree of congruence, and the degree to which they are clarified by students and supervisors across four different areas: *academic practice, academic outcomes, skills and personal attributes, personal relationships.* A hierarchical model is proposed to describe the extent to which both students and supervisors are able to clarify their mutual expectations arising throughout the doctoral student-supervisor relationship.

Recommendations for Practitioners	Institutions should support discussions with both doctoral students and supervisors of expectations of their student-supervisor interactions, and encourage them to be more proactive in exploring their mutual expectations.
Recommendations for Researchers	Data is recommended to be collected from students who have recently completed their studies, given the observation that some student participants were uncomfortable speaking about their supervisors while still in the student-supervisor relationship.
Impact on Society	Opening opportunities for discussions of expectations by students and supervisors, supported and encouraged by the institutions within which they work, can help set the scene for positive and productive relationships.
Future Research	Findings indicate there is need to examine in depth the impact of gender, and the competing pressures to publish and graduate on time, as they relate to the student-supervisor relationships and experience.
Keywords	doctoral, supervision, expectations, model, Malaysia

INTRODUCTION

Quality supervision of doctoral students is key not only for the successful completion of their degrees (Bitzer, 2010; Hunter & Devine, 2016), but also for students' satisfaction with their overall research experience (Davis, 2019; Pearson & Kayrooz, 2004; Roach et al., 2019). Doctoral supervision has evolved over time, and become increasingly demanding and complex (Taylor, 2012). Possessing academic and research skills is necessary, but no longer sufficient, to make a good supervisor. Developing and maintaining a healthy student-supervisor relationship on the other hand, has become viewed as an increasingly essential part of the supervision process (Howells et al., 2017; Mantai, 2019; Vereijken et al., 2018), and a major determinant of student success (Roach et al., 2019). Developing and facilitating such a relationship however, presents challenges to students and supervisors alike.

This article examines the development of student-supervisor relationships, with particular emphasis on doctoral students' and supervisors' expectations of their respective roles and responsibilities. Like many human relationships, student-supervisor relationships can be problematic if expectations between individuals are vague or misunderstood. While the growing literature on doctoral supervision acknowledges the importance of setting, clarifying, negotiating and reviewing student-supervisor expectations (Parker-Jenkins, 2016; Sambrook, 2016; Stracke & Kumar, 2020) and considers it a key success factor in the supervision process (Phillips & Pugh, 2005), expectations around the roles and responsibilities of each party remain largely unarticulated (Barry et al., 2018; Davis, 2019; Helfer & Drew, 2019; Mantai, 2019; Masek, 2017). Therefore, this study addresses two central questions:

1. What are supervisor-student expectations regarding their roles and responsibilities in doctoral research supervision in Malaysia?
2. Are there any misalignments in expectations between doctoral students and supervisors?

By addressing these research questions, mutual expectations between students and supervisors are explicitly explored. Similarities and differences in expectations of doctoral students and their supervisors are identified, and a Hierarchical Model of Student-Supervisor Expectations is developed.

BACKGROUND: THE MALAYSIAN CONTEXT

For many developing countries, postgraduate research programmes have become an important pillar of their national development strategies (Wan et al., 2018; Gray et al., 2018). Malaysia is one such country that has been aiming to achieve developed nation status by 2020. In support of this aim, Malaysia launched the National Strategic Plan for Higher Education (Ministry of Education Malaysia, 2015) to produce a critical mass of high-quality human capital through holistic education (Sidhu et al.,

2013). Malaysian Higher Learning Institutions (HLIs) have been tasked to increase the number of PhD holders in the country from an estimated 23,000 in 2014, to 60,000 by 2023 (The Economic Planning Unit, 2010).

To achieve Malaysia's ambitious plan, a total of RM2.26 billion (GBP 500 million) in scholarships has been made available to eligible Malaysian students via the MyBrain15 program. While generating a rapid growth in numbers of doctoral students, this initiative has attracted criticism from local academics. In particular, concerns over "how quality will be ensured, maintained or even upgraded" have been raised (Singh, 2014). HLIs are faced with the challenge of achieving the quantitative target set by the government without compromising the quality of research programmes.

With slow completion times and high attrition rates becoming increasingly prevalent in Malaysia, HLIs have recently been advised by the government to think of ways to increase the number of students who can achieve 'graduation on time' (GoT) (Ministry of Higher Education Malaysia, 2016). Studies addressing low GoT have identified several factors that contribute to slow completion times. These have been classified under four broad categories including: institutional factors, which include the ability to provide sufficient services and resources and development opportunities (Shariff et al., 2015); personal factors, such as financial circumstances, marital status and inner motivation (Pauley et al., 1999; Pitchforth et al., 2012); professional skills factors relating to English proficiency, writing and reading, and critical thinking (Mohamed et al., 2013; Pitchforth et al., 2012); and others, such as lack of quality research materials, inadequate research equipment, and growing job opportunities (Ministry of Higher Education Malaysia, 2016). A recent study by Singh (2018) suggests that supervision quality is a major contributor to low GoT, high attrition rates, and overall student satisfaction in Malaysia. This confirms previous findings by Suhaimi (2016), in which poor supervision was the most commonly cited problem among Malaysian PhD students.

In Malaysia, student-supervisor expectations have been recently placed under the spotlight. Both government officials and scholars have acknowledged student-supervisor expectations to be among the factors affecting doctoral students' timely completion and overall satisfaction (Abiddin & Ismail, 2011; Masek, 2017). To our knowledge, the limited number of studies attempting to explore expectations of postgraduate supervision in Malaysia investigated either research students' views only (Abiddin, 2018; Krauss & Ismail, 2010; Masek, 2017; Naim & Dhanapal, 2015; Sidhu et al., 2014) or supervisors' views only (Masek, 2017), rather than exploring a direct comparison.

Scholars in Malaysia have highlighted many aspects of student-supervisor expectations similar to those found in Australian and UK contexts (Al-Naggar et al., 2012; Krauss & Ismail, 2010; Naim & Dhanapal, 2015; Sidhu et al., 2014). There have been some differences noted, however. In a comparative study of expectations of research students towards their supervisors in Malaysia and the UK, Malaysian students tended to be more dependent on their supervisors and expected their supervisors to apply a people-oriented approach, while students in the UK expected supervisors to be experts in their research field (Sidhu et al., 2014).

In a study by Naim and Dhanapal (2015), the authors explored PhD students' expectations towards their supervisors. Their results suggested students in Malaysia have relatively high expectations of their supervisors suggesting supervisors are responsible for timely completion of theses, for setting regular meetings with students, and for tracking their progress. The authors further suggested more research is required to understand why students disagree with supervisors that student-supervisor relationships should be of a purely professional nature. In an investigation from the opposite perspective, Masek (2017) explored how supervisors communicate their expectations with research students. These findings showed supervisors believe themselves to have a high level of interaction with students, good discussions, and clear communication of research expectations during supervision meetings.

While other respected authors have discussed aspects of student-supervisor expectations (Gunnarsson et al., 2013; Mcginty et al., 2010; Woolderink et al., 2015; Woolhouse, 2002), to date we are not

aware of any in-depth comparison of student-supervisor expectations having been conducted in Malaysia or elsewhere. Previous literature serves as a guide for our study; however, the one-dimensional nature of those studies is not aligned with the spirit of the negotiated order model, which necessitates the involvement of both students and supervisors in the negotiation of mutual expectations. This study is therefore, the first in a Malaysian context to explicitly compare and contrast student-supervisor expectations regarding their respective roles and responsibilities and how they are aligned or misaligned. In addition to clarifying the areas where student-supervisor expectations align or misalign, we further categorise those expectations. The findings have then been applied to the development of a student-supervisor expectations model. In doing so, the results presented in this article contribute to the growing literature on student-supervisor expectations in Malaysia and worldwide.

LITERATURE REVIEW

SUPERVISION MODELS: THE MISSING ROLE OF EXPECTATIONS

The growing concern for quality student-supervisor relationships (Katz, 2018; Orellana et al., 2016; Roberts et al., 2019), and their significant impact on the quality of supervision and overall students' satisfaction (Davis, 2019; Friedrich-Nel & Mac Kinnon, 2019; Helfer & Drew, 2019; Hunter & Devine, 2016; Mantai, 2019; Roach et al., 2019), has put the student-supervisor relationship at the center of the supervisory process (McCallin & Nayar, 2012, p.5), leading to the development of a number of models of supervision (a brief discussion of the most popular models can be found in Lee (2010) and Benmore (2016)). Such models are commonly developed based on traditional master-apprentice pedagogy that considers the supervisor (the master) as an expert in the subject and methodology, and the student as an apprentice who learns from their guru. Though this pedagogy aims to prepare students to be independent researchers (McCallin & Nayar, 2012), it is assumed that supervisors know what works best for students and are aware of the processes that would ensure their success.

Several models of doctoral student supervision arising within master-apprentice pedagogical discourse have been proposed to describe and guide supervision relationships. A model by Gatfield (2005) describes four supervisory styles depending on the level of *structure* and *support* provided to students: the laissez-faire style (low support and low structure); the contractual style (high support and high structure); the pastoral style (low structure and high support); and finally, the directorial style (high structure and low support) (Deuchar, 2008). The findings of interview sessions suggested a transition occurs to different styles of supervision at different times during the candidature, depending on the various stages of research or a student's abnormal condition such as crisis (Gatfield, 2005).

A similar model by Gurr (2001) describes supervisors' styles (hands-on vs. hands-off) and a student's level of dependence on their supervisor (dependent vs. competently autonomous). The goal of this Supervisor/Student Alignment Model is to help research students become independent and eventually achieve competent autonomy to be actively involved in discussion and alignment of their needs. It is suggested, however, supervisors may not mediate among styles, using only one throughout candidature, without considering the growth and emerging needs of the student. This occurs within master-apprentice pedagogy where power plays a significant role in creating a teacher-centered environment (Gurr, 2001). Spear (2000) in comparison, has categorised supervision styles based on the level of interaction (weak, intermediate and strong) between student and supervisor.

Most existing supervisory models assess student-supervisor relationships based on three main dimensions: level of support provided to students; level of interaction between supervisor and student, and the degree of direction provided by supervisors. While useful as descriptors, none of these models seem likely to improve student-supervisor relationships if expectations are not explicitly considered. Establishing the appropriate level of support, interaction, and direction required in the supervision process depends heavily on mutual expectations. If these expectations are not made clear, or expectations are unmet, student-supervisor relationships can be severely affected (Lee, 2010), thus

contributing to lower completion rates (Bitzer, 2010) and dissatisfaction among doctoral students (Pearson & Kayrooz, 2004).

THE BIG SHIFT: FROM TEACHER-CENTRED TO STUDENT-CENTRED SUPERVISION

To accommodate various political, social, and workforce demands, research supervision has significantly changed over the years (McCallin & Nayar, 2012). However, in the context of student-supervisor relationships, the shift to a student-centred paradigm of education is perhaps the most notable among all. If we consider research supervision as a specialised branch of teaching (Bruce & Stoodley, 2013; Vereijken et al., 2018) or as a pedagogy (Benmore, 2016; McCallin & Nayar, 2012), then adopting a student-centred paradigm in supervision implies the need for significant changes in supervision practice.

Indeed, this important shift in the philosophy of supervision has enacted a parallel shift in power between students and supervisors (Benmore, 2016), providing students with a greater say in what, how, and where they learn depending on their backgrounds, capabilities, needs and levels of preparation. This new context has imposed yet another shift in supervision practice from what Acker et al. (1994) call a technical rationality model, to a negotiated order model. The former considers a supervisor as a manager whose ultimate objective is to achieve a certain outcome (i.e., PhD thesis) by providing the necessary guidance and motivation to a relatively passive student. In contrast, the 'negotiated order model' considers supervision as a process open to negotiation between supervisors and students, including the negotiation of expectations (Acker et al., 1994; Benmore, 2016; Gurr, 2001; Spear, 2000b).

With students becoming more empowered, student-supervisor relationships require supervision practice which not only facilitates knowledge production (theses), but also an identity formation with students (B. Green, 2005). This can only be achieved when the student-supervisor relationship is based on mutual respect, trust, clear, and negotiated expectations (P. Green, 2005, p. 4). Despite the growing emphasis on the importance of clarifying student-supervisor expectations, especially at the early stage of candidature (Parker-Jenkins, 2016; Stracke & Kumar, 2020), the treatment of expectations in the existing supervision models (i.e., Acker et al., 1994; Benmore, 2016; Gurr, 2001; McCallin & Nayar, 2012) has always been either implicit (Masek, 2017; Sambrook, 2016) or completely missing. The importance of expectations and the failure of current supervision models to fully account for them in the student-supervisor relationship points to a clear deficit which requires attention.

IDENTIFYING EXPECTATIONS IN SUPERVISION RELATIONSHIPS

Within the context of these various demands, the alignment of expectations between the student and supervisor has become paramount to both sides (Phang et al., 2014; Severinsson, 2015). While the growing literature on student-supervisor relationships over the past 30 years suggests the importance of clarifying student-supervisor expectations at the early stage of candidature (Cadman, 2000; Masek, 2017; Woolderink et al., 2015), expectations around the roles and responsibilities of each party in research remain mainly implicit (Barry et al., 2018; Helfer & Drew, 2019; Masek, 2017; Sambrook, 2016).

Despite their often implicit nature, authors have identified various aligned and misaligned student-supervisor expectations. One expectation that has been relatively well aligned between students and supervisors, is the importance of having regular supervisory meetings (Bitzer, 2010; Hunter & Devine, 2016; Roach et al., 2019). The need for constructive feedback is another important aspect of supervision that is agreed upon by students and supervisors (Ali et al., 2016; Friedrich-Nel & Mac Kinnon, 2019; Memon et al., 2014; Roach et al., 2019; Sambrook et al., 2008). The inability to provide high quality feedback to students has been identified as one of the main sources of student-supervisor conflicts and students' dissatisfaction (Adrian-Taylor et al., 2007; Chireshe, 2012; Stracke & Kumar, 2020).

Reflecting misaligned expectations on the other hand, doctoral students and their supervisors tend to perceive the need for pastoral care differently. Studies indicate that while students tend to expect their supervisors to provide them with personal support (Costea, 2006; Roach et al., 2019; Woolderink et al., 2015), supervisors have diverse views concerning the pastoral care aspect. While in some studies supervisors indicated willingness to provide personal support to their students (Franke & Arvidsson, 2011), in others they were less enthusiastic, suggesting student-supervisor relationships should be purely professional (Halse & Malfroy, 2010; Lessing, 2011) and students should get attached to their work, rather than to their supervisors (Guerin et al., 2015).

Another area of mismatch in student-supervisor expectations is the importance of having expert knowledge in the research field. While doctoral students expected their supervisors to possess extensive knowledge in the area of their research (Bui, 2014), supervisors did not perceive this attribute to be paramount. It has been suggested by Chireshe (2012) and Ives and Rowley (2005), that to improve the quality of postgraduate research supervision, one should supervise within the same area of expertise. Not all supervisors, however, agree with such perceptions (Bui, 2014).

Another commonly misaligned expectation centers around academic guidance. While both parties agree that supervisors are responsible for providing academic guidance, doctoral students are still not satisfied with the amount of guidance they receive from their supervisors (Ives & Rowley, 2005). In a study conducted by Holbrook et al. (2014), students expected their supervisors to be more directive but, in reality, felt they were more 'on their own' than they had imagined. Therefore, students think that they should receive detailed instructions and guidance on how the research project should be managed. Supervisors, on the other hand, demand students to take responsibility for their research and look for necessary research materials by themselves (Mcclure, 2005).

METHOD

Designed from an interpretivist approach, this study explored student-supervisor expectations regarding their respective roles and responsibilities in postgraduate research supervision in Malaysia. In this research, two central questions have been addressed:

1. What are supervisor-student expectations regarding their roles and responsibilities in doctoral research supervision in Malaysia?
2. Are there any misalignments in expectations between doctoral students and supervisors?

A total of 27 participants, including fifteen doctoral students and twelve supervisors, were recruited from two of Malaysia's designated Research Universities (RUs). Following approval from a human research ethics committee, participants were recruited by email invitation via their institution's research office.

In semi-structured interviews, participants were asked to discuss their understandings of their own roles and responsibilities, as well as those of their counterparts in the supervision relationship (refer to Appendix for Interview Schedule). When available, additional information relating to institutional expectations was accessed through universities' websites such as research handbooks and guidelines.

Interview transcripts were examined, and an inductive thematic analysis was conducted. Five themes that constitute the basis of our student-supervisor expectations model have emerged. Finally, the views of doctoral students and supervisors were compared within each theme, allowing the identification of matched and mismatched expectations.

PARTICIPANTS

Participants included students who were currently pursuing Doctor of Philosophy (PhD) programs, and doctoral supervisors working in public universities in Malaysia. To ensure participants could provide useful insights on relevant topics, the following selection criteria were applied:

- Students had to have passed their *Confirmation of Candidature* (or equivalent) stage or have been enrolled for at least nine months.
- Supervisors were required to have a minimum of three years of experience as an active main supervisor (*Principal Supervisor* or equivalent).

To incorporate a broad range of perspectives, the participants included students and supervisors who are male and female, Malaysians and non-Malaysians, from various fields of study, and different levels of experience. The use of matched student-supervisor pairs was purposely avoided on ethical grounds, given sensitivity of topics discussed and the potential risk posed to relationships between currently enrolled doctoral students and supervisors. Table 1 provides demographic information of the student participants. Table 2 provides demographic information of the supervisor participants.

Table 1. Demographic information of doctoral student participants

Gender	*Male*	11
	Female	4
Place of Origin	*Malaysia*	7
	Middle East	3
	Africa	2
	Asia	3
Years of Enrolment	*1 year*	4
	2 years	2
	3 years	3
	More than 3 Years	6
Discipline	*Business*	7
	Engineering	3
	Computer Science	2
	Education	2
	Architecture	1

Table 2. Demographic information of doctoral supervisor participants

Gender	*Male*	7
	Female	5
Place of Origin	*Malaysia*	11
	India	1
Years of Experience	*3-5 Years*	2
	6-10 Years	2
	More than 10 Years	5
	More than 20 Years	3
Discipline	*Business*	3
	Engineering	6
	Computer Science	2
	Architecture	1

DATA COLLECTION

Semi-structured interviews were held over a period of eight months. Each participant was interviewed once. While the majority of interviews were conducted face-to-face, some of the participants requested Skype to be used. Each interview lasted between 25-45 minutes and was audio-recorded

with the participant's consent. Participants were asked to discuss their understandings of their own roles and responsibilities, and the roles and responsibilities of their counterparts in the student-supervisor relationship. Personal and professional relationships were explored, including reasons of student-supervisor conflict. Open ended questions were used to provide opportunity for participants to highlight aspects of their supervision experiences that were not directly asked about by the researcher.

ANALYSIS

Interview transcripts were transcribed using InqScribe software. Researchers transcribed the interviews listening to each audio file multiple times to capture the spoken words accurately, avoiding any potential error occurrence. Transcripts were coded and analysed using NVivo 11 Plus software. Open coding was used where themes emerged during coding as researchers were trying to understand the emerging patterns from lived experiences of participants (van Manen, 1990). To begin the coding, four broad categories were noted: students' expectations towards supervisors, students' expectations towards themselves, supervisors' expectations towards students, supervisors' expectations towards themselves.

The passages describing particular expectations were coded using descriptive code (Saldaña, 2016) such as *guidance, publications, conflicts* and others. While some codes were predicted based on extant literature, as Creswell et al. (2007) notes, unexpected codes can emerge from data. Indeed, codes emerged that we had not expected from our interview scheduled, derived from extant literature. Table 3 demonstrates the coding development, showing the number of participants whose transcripts were coded with particular codes, and the number of total times the codes arose. While the number of mentions cannot be equated with the relative importance of an issue, this does provide some indication of the relative salience of certain issues.

Table 3. Initial themes and codes development

Categories	Themes	Codes	No. of participants/ No. of mentions
Students' Expectations Towards Supervisors	Access	*Ways of Communication*	9/14
		Frequency of Meetings	14/35
	Academic Support	*Training and Conferences*	11/14
		Research-Related Decisions	11/20
		Feedback	15/33
		Academic Guidance	15/49
	Core Competencies	*Punctual*	*2/2*
		Personal Support	*15/41*
		Motivation	*7/14*
		Diversity Awareness	*4/4*
		Commitment	*2/4*
	Institutional Support	*Aware*	6/7
		Not Aware	11/20
	Conflicts/ Misunderstandings	*Never Had Conflicts*	11/18
		Had Conflicts	8/10
Students' Expectations Towards Themselves	Academic Outcomes	*Updating on Research Progress*	13/15
		Publications	9/12
		Graduate on Time (GoT)	6/7

Categories	Themes	Codes	No. of participants/ No. of mentions
Supervisors' Expectations Towards Students	Core Competencies	*Self-Learning*	9/11
		Respect	3/3
		Motivation	7/10
		Hard Working	6/10
	Clarifying Expectations	*Implicit*	3/3
		Explicit	10/23
		Never Discussed	7/9
	Academic Outcomes	*Updating on Research Progress*	4/4
		Publications	9/15
		Graduate on Time (GoT)	7/12
	Core Competencies	*Hard-Working*	2/2
		Motivation	2/2
		Critical Thinking	3/3
		Respect	3/3
		Technical Skills	2/5
	Institutional Support	*Aware/Not Aware*	8/14
	Conflicts/ Misunder-standings	*Never Had Conflicts*	4/7
		Had Conflicts	6/9
Supervisors' Expectations Towards Themselves	Access	*Ways of Communication*	2/2
		Frequency of Meetings	9/20
	Academic Support	*Trainings and Conferences*	3/3
		Research-Related Decisions	4/4
		Feedback	3/4
		Guidance	7/18
	Core Competencies	*Punctual*	2/3
		Personal Support	9/20
		Motivation	3/3
		Diversity Awareness	8/13
		Commitment	2/6
	Clarifying Expectations	*Implicit*	0/0
		Explicit	7/9
		Never Discussed	0/0

Following the initial coding, an inductive thematic analysis was conducted by looking at an overall conception of the phenomenon, moving researchers' focus towards details through coding, and coming back to see how these details might have changed the way we interpreted the larger picture. During multiple rounds of refinement, some codes were conceptualized as belonging to a different theme, some themes and codes were merged together, while others were renamed. The codes that emerged during this round of data analysis were used as prompts for the reflection on more complex issues that arose (Saldaña, 2016). Through analysis five themes emerged: *Academic Practice, Academic Outcomes, Skills and Personal Attributes, Personal Relationships,* and *Clarifying Expectations.* Finally, the views of students and supervisors were compared within each theme, to identify the areas of difference. Table 4 presents the final themes and constituent codes that emerged through data analysis.

Table 4. Final themes and codes

Theme	Constituent Codes
Academic Practice	*Academic Guidance*
	Frequency of Meetings
	Feedback
	Updates on Research Progress
Academic Outcomes	*Publications*
	Graduate on Time (GoT)
	Trainings/ Conferences
Skills and Personal Attributes	*Motivation*
	Knowledge
	Diversity Awareness
Personal Relationships	*Personal Support*
	Conflicts and Misunderstandings
	Respect
Clarifying Expectations	*Implicit*
	Explicit
	Never Discussed

ETHICAL CONSIDERATIONS

While there were no serious negative consequences anticipated for participants, it was acknowledged that they may discuss some potentially sensitive experiences which could cause a level of discomfort for some participants, or risk damage to their student-supervisor relationship. To minimise such risks, as well as avoiding using matched student-supervisor pairs, participants were reminded that they could choose to withdraw from the study or decline to answer any questions they were uncomfortable with. The nature of questioning from the researcher was broad and open. Participants were invited to provide their own narrative accounts of their experiences, which allowed them to drive the topics of discussion which they consider significant in their lives. This decreased the chance of discussions focusing heavily on topics likely to make an individual uncomfortable.

Interviews were held in a private office or other location comfortable to participants such as a quiet cafe, away from the view of other participants/colleagues. Anonymity was maintained throughout. Interviewees were not named, and any identifying features, including the names of participating universities, were omitted during interview transcription. Care was taken not to reveal any identities when describing the roles or comments made during the interviews. Any contextualizing features that could lead to an individual's identification were removed.

RESULTS

The results below describe the above mentioned five themes that emerged from the data. Italics below indicate the interviewer's speech.

ACADEMIC PRACTICE

While both students and supervisors emphasized the importance of students receiving academic guidance, feedback, and availability of supervisors, a degree of mismatch among their views nevertheless emerged in relation to the form and extent to which supervisors were responsible for driving academic practices.

Academic guidance

Both groups spoke equally of supervisors as having responsibility for providing research direction and ensuring the students are "on the right track". However, inconsistencies were evident when the two groups described the form such academic guidance should take. Supervisors viewed it in terms of correcting work, ensuring the student is on the right track, and checking their work credibility and quality. As one described:

> [Supervisor 3]
> I normally let them explore the methodology, so I guide them in terms of the standards. Checking the credibility and ensuring that the work is correct.

Students, in contrast, expected more guidance than their supervisors were often willing to offer. They suggested setting the research aims, planning the project, setting deadlines, and recommending where to start were expected responsibilities of supervisors.

> [Student 8]
> I expect that my supervisor will be with me and [have a] say in problem background […] like give me the instructions for each title and subtitle in the research. But in Malaysia, all supervisors are not like this, it is not only my supervisor, also my friend's supervisor doesn't do it like this.

Thus, student-supervisor views of academic guidance demonstrated a degree of misalignment. While supervisors were willing to guide and help their students, this only comes after students have attempted to explore and do some work themselves. Meanwhile, students expected more direction to be provided, especially in an early stage of their candidature.

Frequency of meetings

Most students and supervisors held similar expectations in regard to frequency of meetings, suggesting they should be held twice per month. Where the difference lay, was in whether meetings need to be scheduled or not. Supervisors preferred to having scheduled meetings especially during the early stage of the candidature. As one of them suggested:

> [Supervisor Participant 1]
> I make a mandatory requirement, this is my personal requirement, that my students will be meeting me every two weeks.

Most of the students, however, did not expect to have scheduled meetings. A common phrase used by student participants was "depends on the workload." For example:

> [Student Participant 3]
> No, actually it depends on the work. Whenever the work demands, we tell each other that I need to meet with you, and just give me some time. It doesn't mean that you have to meet within this stipulated time, not like that.

> [Student Participant 7]
> Well, it depends. It varies. Sometimes every week, sometimes two weeks, sometimes three months. Depends.

Feedback

Expectations around giving and receiving feedback were fairly consistent among participants, although the language used by students and supervisors differed when talking about this topic. The majority of students described the feedback they receive using words *constructive*, *practical*, *useful*, while supervisors use words *as fast as possible*, *edit*, *discuss*, *page-by-page*.

Highlighting acceptable periods within which they should receive the feedback, students identified two weeks as the average time; yet expected this could vary depending on the amount of work

presented and supervisor's availability during particular time. Both students and supervisors highlighted the importance of providing both written feedback and having face to face meetings where they can discuss and edit the work together. As students and supervisors both highlighted:

> [Student Participant 11]
> I have feedbacks in two forms. One in reading form and another one in a way of discussions. In a way of discussions is immediately, I talk to them, I present to them, and they give me feedback immediately. […] And for the reading one, whenever I give them written documents, it will take them maximum of four to five days to get the document back with all the comments.

> [Supervisor Participant 2]
> So, what we do, if the student is sitting here, so we discuss and edit, discuss and edit, like this. They will do the draft first, after that they will come, I see, and then edit it, so like this the student is also learning what mistake they do.

A minority of student participants who did not receive feedback within one month, or who perceived feedback to be low quality indicated that their time was being wasted:

> [Student 8]
> Now, in this stage, my supervisor returned my thesis back about four times. Each time different comments. For me, why you don't put all your comments in the first time, so we can save this time? Six months or seven months we could submit and wait for Viva now.

Updates on research progress

Neither supervisors nor students highlighted students updating their supervisors on their progress as being an important responsibility unless asked by the interviewer. When asked however, all agreed students are responsible to regularly provide updates to their supervisors. Some students suggested this can help to encourage and receive feedback.

> [Student Participant 7]
> Of course. It's a must. You have to. How can I know I'm correct, if I don't update them? It is dangerous to stay away from the supervisors, very dangerous.

> [Supervisor Participant 1]
> *Do you expect them to update you on their research progress?*
> I do, but then I don't really like being so strict about meeting the dates.

ACADEMIC OUTCOMES

Institutional expectations of research outcomes are highly visible in RUs in Malaysia. While students and supervisors similarly recognised the importance of attending conferences, publishing research outcomes, and completing their candidature on time, a degree of misalignment emerged in the way they prioritize these outcomes.

Publications

Students and supervisors held differing views on publishing during candidature. All supervisors interviewed explicitly emphasised the responsibility of students to publish throughout their candidature. While some supervisors matched their university's regulations (typically one or two published papers, depending on their program), others placed higher expectations, demanding as many as four, five, or even 10 papers to be produced during a PhD.

> [Supervisor 4]
> Sometimes, I expect more than basic requirements placed by university. For example, they have to produce two indexed journals [papers] based on requirement, but I expect four, and most of them deliver.

Students agreed they had a responsibility to publish and outlined a number of different reasons for the need to publish. One of the students suggested to have at least one paper published during the PhD will benefit their future career, while another student emphasized publications being a university requirement. Two students indicated explicitly that publishing is stemming more from their supervisors' expectations than their personal ambition or priorities.

> [Student 8]
> Talking about my supervisor, before I graduate I have to publish to ISI in Q1, three Scopus in Q1. It means, if I have four objectives, each objective should be in Q1.

Graduate on time

The need to Graduate on Time (GoT) appeared to be of equal priority for both parties. Aside from meeting university requirements, a number of supervisors highlighted the importance for students to GoT due to financial issues they might face if they do not complete.

> [Supervisor 7]
> The scholarship is only three years. Of course, they want to complete PhD within three years, because after that they have problems with money. So, I ask them to complete before they have problems with money.

Consistent with supervisors' concerns, a number of students spoke of finances being the main driver to complete their thesis on time, especially because of scholarship limits. However, one student suggested his completion time was affected by the supervisor's requirement to publish a number of journal articles, saying:

> [Student 8]
> But my experience says, if I'm working for those four ISI papers, I think I need eight years to finish my PhD, because once I work with the papers, I have to stop my thesis, I cannot do it together, this one and this one.

His view was supported by one of the supervisors, who spoke of having a dilemma between GoT and publications. She suggested time is the biggest constraint to achieve both aspects successfully. Both students and supervisors appear aware and concerned about these competing priorities.

Training and conferences

Both parties suggested that while doctoral students are responsible to choose the right training or conferences for themselves, supervisors tended to be proactive and indicated personal willingness to advise them on this matter. As one student and one supervisor commented:

> [Student Participant 4]
> Yes, my supervisor also gives me a lot of suggestions, and she always encourages me to attend more workshops, which will improve my data analysis skills, and also attend publication workshops and conferences…It depends, yeah. Of course, you cannot wait for the supervisor to do everything. So, you also have your own responsibility to maybe look for any conference, so which you think is good for your area or good place to build networking. So, students also need to take responsibility for looking for any potential conference.

> [Supervisor Participant 5]
> There are two ways. Normally I tell them to attend this course or conference, because they can get more knowledge. Sometimes they want to go for something, but I will advise them.

SKILLS AND PERSONAL ATTRIBUTES

The need for developing essential skills and attributes was rarely explicitly discussed between students and supervisors. Although both parties acknowledged key skills required to successfully perform research activities, they were not consistent in their views of how these should be developed.

Motivation

Although no specific interview questions were asked on the topic of motivation, all students mentioned motivation as an essential researcher attribute. They perceived that their motivation should be derived from both internal (personal) and external (provided by supervisors) sources. A number of student participants stated their supervisors should be a primary source of motivation. As one of student described:

> [Student 2]
> I think if your supervisor is more supportive, they constantly update you, you will create the motivation on your research. […] I think supervisor's support is very important for continuous motivation.

Supervisors, however, were not as willing to consciously provide continuous motivation to their students, suggesting students need to be proactive in developing their own sources of motivation.

> [Supervisor 1]
> If there are on track, they progress well, I ask them how are you and they are saying that they are fine. I don't see it as motivation, but I encourage them. Indirect motivation yes, but to give them motivation every time, I don't do that often.

Knowledge

Students emphasized the importance for supervisors to be knowledgeable in their research field:

> [Student 3]
> Basically, from my supervisor, a student can expect that he or she will get the basic thought from them... And if the supervisor is not willing enough or not educated in that area of interest, then the students can face a lot of problems.

The importance of supervisors having knowledge in the research field was only concerning to students who worked closely with just one supervisor. These participants spoke negatively of having a supervisor who is not competent in a particular methodology or area of research. Other participants who were involved in a team supervision and worked closely with two or three supervisors, did not raise any concerns of having a lack of practical or methodological knowledge in their supervisors. Supervisors, meanwhile, did not speak about importance of having (developing) knowledge in the same area with students. One supervisor emphasised that they cannot know everything, and that learning is mutual between students and supervisors:

> [Supervisor 5]
> Actually, it is a win-win situation, you learn from students, they also learn from you. A lot of things I leant from my students. I think, nowadays, a lot of new knowledge supervisors get from their students.

Diversity awareness

Awareness of diversity among students and supervisors appeared to be an important attribute acknowledged by both students and supervisors. Students acknowledged that with cultural and personal differences between them, it is essential to understand one's own culture to successfully communicate with people from other backgrounds.

[Student Participant 11]
You see, being an African in Asia, having an Asian supervisor, I mean we have got some differences in terms of culture, in terms of food, background and all of that. So, our discussion was mainly about that and trying to understand ourselves, I mean each other, especially the culture differences.

While students mainly emphasised cultural differences, supervisors described the importance of being diversity aware to not only understand cultural differences, but also student's capabilities, which they described using terms such as strong or weak, slow or fast.

PERSONAL RELATIONSHIPS

Both students and supervisors emphasised their respective responsibilities in developing effective student-supervisor relationships. However, they spoke of various challenges that can harm the development of those relationships. Within this theme, the most variation within and between student and supervisor participants was evident when they discussed the nature of conflicts that had arisen in their relationships.

Personal support

Most students and supervisors agreed on the importance of supervisors providing personal support to students. Some were willing to make themselves available outside of the workplace.

[Supervisor 5]
I should treat them like my friends, ok. I don't see them as my.... I mean because some supervisors tend to take advantage...I don't take advantage of my students. I know their situation and I tell them that they can always get help from me anytime, you WhatsApp me 12:00 am, I will answer you, so it is not a barrier. So, they shouldn't take me as a barrier, they should take me as a person who can support.

Those students who had experienced a high level of personal support from their supervisors spoke of feeling more motivated to work and spoke of their supervisors as being helpful, diligent and kind people. However, students felt less comfortable sharing personal problems with their supervisors.

[Student 6]
I talk about my family […] but this is just general information sharing, and not really problems. I don't want to bother my supervisor with my problems, but maybe there will come a time, I think, she will be OK to share my problems.

Although generally happy to accommodate students' personal issues, some supervisors indicated uncertainty about such discussions being suitable in student-supervisor relationship. As one supervisor described her uncertainty:

[Supervisor 8]
Sometimes, I even go towards being a mother or a sister, and then I realise that it might not be appropriate professionally, so I will come back to the point of professionalism. I think entertaining someone's emotions can also be a part of professionalism.

Another concern around the appropriateness of providing personal support was raised by a supervisor concerned with avoiding any gossip in the university.

[Supervisor 11]
If I'm to share whether I would provide emotional support to students, I would say, perhaps, it depends on the situation. Also, perhaps, gender plays a very important role. If it is of different gender, I would say, we should be mindful, what we might fall in, because I think it is something very real through my own observation, where something happened, because the supervisor and the student were of different genders and they worked too closely.

Conflicts, misunderstandings and respect

Conflicts and misunderstandings in postgraduate research supervision are a common occurrence. Among the student participants, six suggested to have at least one conflict with their supervisors. For one student, the perceived breach of agreement by his supervisor led to conflict and the breakdown of the relationship:

> [Student 11]
> In the first place we had some agreement and along the line, there was a breach of the agreement and so I felt no, I'm not here to stay forever. I'm here for the purpose and the way I was going though, I mean I thought it was going to take me forever, so I decided to change [supervisor].

Students who did not report conflicts or misunderstandings, notably used words like mutual understanding, kind, respect, own understanding, and appreciating. These words were used to describe either their own behaviour or the behaviour of their supervisors.

While students reported the nature of any conflicts as being research-related disagreements, supervisors attributed personal conflicts as causing problems with their students. Among the supervisors, five suggested that they had conflicts which in most cases led to a breakdown of the relationship:

> [Supervisor 7]
> That is why I always tell them that they will not walk alone. I always say that to my students, but there is one student currently I'm facing problems with him. He doesn't want to participate in group discussions and is having too much pride and ego.

According to this supervisor, the notion of disrespect from the student's side caused a breakdown in their relationship. Other supervisors also complained of the problems arising from disrespect. Thus, while students who experience conflict with their supervisors may perceive it as being due to disagreements over their research, supervisors appear to judge such conflict as being more personal – perceiving it as stemming from a lack of respect from students.

CLARIFYING EXPECTATIONS

Prior to participation in this study, students and supervisors appeared to have given little thought to how they clarify their expectations of each other across a range of topics. Almost all supervisors spoke about clarifying their expectations explicitly to students either during the first meetings or in a very early stage of students' candidature. However, the expectations they discussed explicitly were around timelines and written reports only. One of supervisors spoke about sharing a template with his students to follow:

> [Supervisor 4]
> I made so-called "Three Years Cycles". The first year what I expect, the second and the third, but most of the students cannot follow, because it is too strict. […] But sometimes, because of word of mouth, some students already know my style, they know my situation, that's why some of them want to come to me, but others want to find another supervisor. My expectations are too high.

While supervisors made their expectations of students explicit, most did not demonstrate any consideration of what students may expect of them as a supervisor. Only one supervisor talked about questioning his students about their expectations towards him and to research overall. Other supervisors did not specifically reply, even when directly asked whether they knew what their students' expectations were. Several supervisors did not appear to understand the question, instead turning the discussion back to their own expectations:

[Supervisor 6]
Interviewer: Are you aware of any student's expectations? Do they tell you what they expect from you?
I tell them, I'm not going to give them everything, the PhD, they shouldn't expect that I know everything, because when you do a PhD you need to have your contribution, that means there is something new in the thesis, so you don't expect that I know everything, so I am just giving you an idea and you need to look for that, so whatever thing that you produce is yours. I can only give the direction what to do, what to do next, so I think they really understand.

While students appeared open in sharing their expectations and perceptions of student-supervisor relationships during research interviews, their views tended to remain unknown to their supervisors. This was particularly common scenario for those students who tried to voice their expectations but were closed down by their supervisor. As described by of one of them:

[Student Participant 12]
Ooh, there was one time, I did have conflict in terms of the area of the research. I really insisted that I wanted to do my area, then we argue, argue, and at the end of the day, I knew there was implied meaning from what they said, from what they told me and [I] started to agree to what they said. So, to disagree to what they suggested you to do is quite difficult in this position. So, I had to force myself to agree to my disagreement, to something I never wanted.

Among all, only two students indicated having directly and explicitly discussed their expectations with supervisors. It was notable that these two students were both male foreign students.

[Student 7]
Just recently I discussed with them my expectations, everything. I gave them a month, in that month I told them, I'm expecting to wrap up my PhD, whatever it takes. If they need to push me, push me, if they need to do anything for me, they should do this.

When students were asked about their supervisors' expectations towards them, the majority spoke of knowing them very well and of supervisors being delivering those expectations explicitly. Among all student participants, only one could not articulate his expectations towards supervisors.

HIERARCHICAL MODEL OF STUDENT-SUPERVISOR EXPECTATIONS

Emerging from the data analysis, parallels could be observed between the level of institutional regulation and the explicitness with which students and supervisors communicated their expectations. Where roles and responsibilities were established by university policies, students and supervisors had few uncertainties on how to perform them and had more closely aligned expectations. These included the more practical and measurable aspects of research, the processes of supervision, and academic outcomes. However, in areas in which roles and responsibilities were not regulated, the expectations participants held were more implicit in nature, and the expectations held by both sides appeared to be more diverse. To demonstrate these patterns, the Hierarchical Model of Student-Supervisor Expectations is presented (see Figure 1). The model describes the extent to which both students and supervisors are able to clarify their mutual expectations arising throughout the supervision relationship.
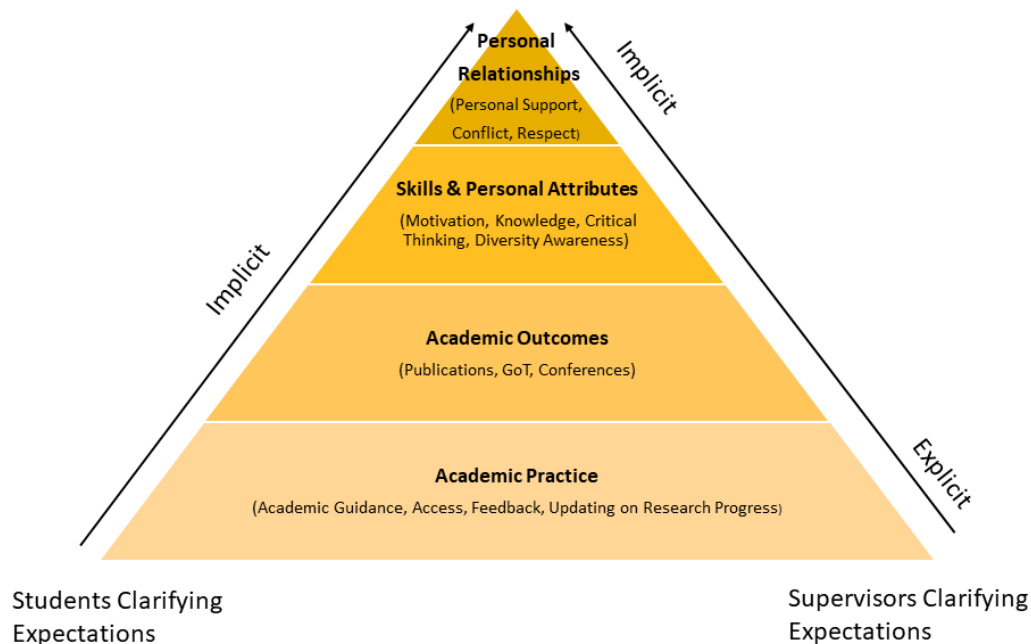
Figure 1. Hierarchical model of student-supervisor expectations

The model was constructed according to the pyramid structure of Maslow's (1943) Hierarchy of Needs, which categorizes human needs from basic biological aspects for human survival going upwards towards more advanced self-fulfilment aspects (Martin & Joomis, 2007; Maslow, 1943). In this process, Maslow suggests, individuals should satisfy lower-level need deficits before proceeding up to the next level (Maslow, 1943). In our model, we similarly suggest the student-supervisor expectations can be viewed in a sequential manner, where for the supervision relationship to flourish, basic academic practice needs to be agreed on to construct a foundation. Students and supervisors develop expectations around guidance, frequency of meetings, feedback and updating on research progress. HLIs state and regulate aspects around such supervision processes, helping both parties to clarify roles and responsibilities and build a base from which to move upwards.

In the case of expectations around academic outcomes, supervisors tend to express expectations explicitly compared to students, whose expectations tend to remain implicit. This might occur because supervisors are more familiar with the institutional regulations that provide guidance in this area, and because they have more authority to voice their opinions. Similar to expectations around academic practice, supervisors tend to discuss their expectations about academic outcomes explicitly. Although students tend to keep their expectations implicit, their expectations are fairly similar to supervisors, although minor disagreements on priorities to be achieved are visible. While supervisors place more explicit emphasis on the need for publications, students are more concerned with graduating on time. While the mismatch of student-supervisor expectations about the priority of certain academic outcomes may present challenges in the long-run, both parties have similar understandings, allowing them to build the next level of expectations.

Aligning expectations around academic practices and academic outcomes are paramount to completing a research degree, but the next level of clarifying expectations around skills and personal attributes is an essential, although less appreciated area. Despite national-level statements of important graduate attributes (Malaysian Qualification Agency, 2017) participants did not appear aware of them being discussed at university level. Both students and supervisors tended to have only implicit perceptions towards the skills they expect of each other. The expectations around necessary skills and attributes were accordingly diverse.

The final level of the model refers to the development of expectations around personal relationships. This can be viewed as complementary practice, compared to the more fundamental academic process and outcomes. Such relationships exist beyond the prescribed scope of institutional regulations; no government or university policy can dictate such complex human interactions. This leaves a lot of confusion from students and supervisors as to whether their expectations are reasonable and obtainable. Therefore, personal relationships remain the most unclarified and misaligned area of student and supervisor relationships.

DISCUSSION

Perhaps most practical and measurable in nature, expectations around *Academic Practice* were the most explicitly discussed from the supervisor's side and were closely aligned between both parties interviewed in this study. This is not surprising, given that national and international studies are highlighting the importance of processes such as academic guidance, the giving of feedback, granting of supervisor access, and updating on research progress (Abiddin, 2018; Gunnarsson et al., 2013; Naim & Dhanapal, 2015; Parker-Jenkins, 2016; Tahir et al., 2012). These aspects of research have also been regulated by institutional policies, particularly in RUs in Malaysia. In accordance with previously published results, academic guidance has been suggested by both students and supervisors to be essential in postgraduate research supervision (Doyle et al., 2017; Mcginty et al., 2010; Sidhu et al., 2016). Similar to our study, previously published studies have identified students and supervisors who agreed that supervisors are responsible for providing academic guidance, but a number of students are not satisfied with the guidance they received (Al-Naggar et al., 2012; Ives & Rowley, 2005). The misalignment of interpretation of what 'guidance' means however, indicates a need for more detailed discussions by institutions, students and supervisors.

Academic Outcomes have also been explicitly discussed in universities' handbooks and Malaysian national agendas (MoHE, 2016). In contrast with academic practice, institutional expectations of academic outcomes have clear structure and standards to which students and supervisors must try to adjust and match. Balancing the need for timely completion and publication requirements can be challenging, however. Perceptions of the importance of students publishing has dramatically changed over the past 15 years (Rawat & Meena, 2014). While our results indicated students were not as motivated to publish as their supervisors would expect, this was not always the case. In our study, most students did not appear internally motivated to publish, and rather perceived it as a requirement placed on them by their university and supervisors. Apparently, with growing pressure to complete their thesis within the stipulated time (MOHE, 2016), students in this study tended to prioritise completing their thesis, rather than publishing during their candidature. Financial strain appeared the be the most influential factor in this, with both supervisors and students being mindful of financial pressures, which can cause a lot of stress and anxiety (Khawaja & Stallman, 2011; Khodabandelou et al., 2015; Umar et al., 2014). The dilemma students have between striving for a timely completion and publishing, therefore, needs to be acknowledged by universities and supervisors (Manathunga, 2019), and discussed more explicitly with students. In some cases, supervisors may need to reconsider their expectations of student publication outcomes.

Skills and Personal Attributes required by research students are explicitly defined by the Malaysian Qualifications Authority (MQA, 2017). In university policies, however, little information is provided on what essential skills both parties should develop to successfully carry research activities, and it seems there is little explicit discussion among doctoral students and supervisors on such topics. It was interesting to observe that while the need for critical thinking has been widely discussed internationally (Cadman, 2000), and is acknowledged by the MQA (Malaysian Qualification Agency, 2017) as a key skill required for research students, only three supervisors (and no students) spoke of developing critical thinking skills. However, supervisors who spoke about importance of developing critical thinking skills did not explain how their students should achieve this, or how they (supervisors) should guide them to develop critical thinking. This theme therefore represents areas where universities seem yet

to have translated policy into practice. In particular, universities are advised to move towards developing a people-oriented approach of research supervision and emphasize the development of necessary skills in the researcher, rather than simply achieving academic outcomes and remain product-oriented in nature. This need has been particularly highlighted by Ait Saadi et al. (2018), who note discourses around the researcher development have not gained as much attention in Malaysia as discourses emphasising research output.

Personal Relationships represented the least explicit and most sensitive theme relating to student-supervisor expectations. Given differences in cultures and personalities, and little or no explicit guidance provided by institutions, students and supervisors are left to navigate and manage interpersonal relationships that last for at least three years. As has been highlighted elsewhere, supervisors are now required to not only manage students' research activities, but to also closely monitor students' well-being (Al-Naggar et al., 2012; Franke & Arvidsson, 2011; Halse & Malfroy, 2010; Roach et al., 2019). In Malaysia, where the hierarchical culture and norms of paying respect to older and higher status individuals plays an essential role in social relationships (Abdullah & Pedersen, 2003), both students and supervisors question what is appropriate in those relationships, and where boundaries should lie.

Adding to complexities presented by both doctoral students and supervisors while constructing personal relationships, gender differences were also observed to influence the depth of personal relationships formed between students and supervisors (Yeoh, 2012). Some female supervisors in particular, preferred to avoid having any personal relationships with their male students, being afraid of gossip emerging. Such notions have likely evolved due to conservative norms surrounding interactions between different genders (Heru et al., 2006), which influences the openness and affiliation one experiences in supervision (Hindes & Andrews, 2011). Apart from avoiding having personal relationships with students of different gender, our results indicated some supervisors preferred to accept only students of the same gender under their supervision, limiting opportunities for students of different genders. This aligns with the observations of Cheng (2017), who suggests students who are a different gender to their supervisor perceived to perform worse academically. Therefore, while both students and supervisors indicated a willingness to develop strong relationships at a personal level, Malaysian hierarchical culture and gender barriers appear to hamper this. While it does not seem feasible or desirable for universities to be overly-prescriptive on how to develop interpersonal relationships, we see a need for more explicit conversations to be opened between universities, their staff, and students on what is appropriate, and what may not be. This is where targeted ethics and integrity training can play an important role.

Overall, it was clear that students were aware of some of their supervisors' more explicit expectations, but their own expectations remained implicit. As Masek (2017) indicates, supervisors need to be proactive and initiate discussion about expectations given the power they hold over students. However, Malaysian supervisors demonstrated an unwillingness to try to understand and clarify the expectations students hold towards them and were more concerned to explicitly state their own expectations. Students were commonly afraid to approach their supervisors, and tended to accept the rules their supervisors set, resulting in a negative experience of power exercised over them by their supervisors.

While it has been suggested satisfactory supervision depends on initial agreement and future negotiated changes in classification and framing of expectations (Sambrook, 2016) to construct a successful balance within this powerful relationship (Moxham et al., 2013), the implementation of such practice still remains neglected. We therefore encourage supervisors to be proactive in identifying what students' expectations might be in order to clarify and successfully negotiate these with them, or at least attempt to support the development of realistic expectations. We also see this as an important area that universities need to pay attention to. Induction programs for example, should include conversations about clarifying student and supervisor's roles and responsibilities, well beyond just the process and outcomes of research. It is suggested such conversations should frame researcher development in a holistic way, developing a more student-centred approach to supervision. In particular, this study

highlights the lack of explicit student-supervisor conversations about the development of researcher skills and attributes, and the nature of the interpersonal relationships between students and supervisors. While a hierarchical model of student-supervisor expectations helps us to identify those misaligned areas, without direct involvement of both parties in an explicit dialogue and continuous negotiation of those areas, student-supervisor expectations will likely remain misaligned throughout the research process.

IMPLICATIONS AND FUTURE RESEARCH

Similar to Maslow's (1943) argument that individuals can survive without high self-esteem or achieving self-actualisation, we acknowledge that supervision can be carried out without developing positive personal relationships. As suggested by Devos et al. (2017), guidance and frequent meetings are the drivers of completion, rather than positive relationships. We do, however, recommend that more be done to make unregulated and implicit expectations about supervision relationships more explicit. Developing positive relationships and clear sets of expectations discussed between two parties can support student development and increase the satisfaction of both student and supervisor. From the discussion above, we recommend:

1. Universities increase discussions with both doctoral students and supervisors of expectations of student-supervisor relationships and researcher skills and attributes, as well as the more commonly addressed research outcomes and processes in training and development programs.
2. Universities initiate discussions of personal/professional boundaries in supervisor training programs, including the impact gender plays.
3. Universities and supervisors assess whether their expectations of high levels of publications from students are realistic, and always in students' best interests.
4. Students and supervisors be more proactive in exploring mutual expectations of their supervision through constructing continuous explicit dialogue.

A number of limitations are associated with this study. Given the aim of this study was to explore student-supervisor expectations in-depth, the research was developed using a small-scale qualitative approach, therefore we are unable to generalise findings (Bryman, 2012; Fossey et al., 2002). Second, the interviewer noticed a degree of discomfort from some participants when discussing some of the more sensitive topics, which could affect the depth of findings. Because students interviewed were still in the process of completing their research, and therefore still in a relatively dependent relationship with their supervisors, some appeared unwilling to present their full story. While using matched pairs of students and supervisors would have provided a strong basis for direct comparisons, using matched pairs was avoided to reduce the risk of participating in the research potentially damaging relationship, and would likely have resulted in even more guarded responses. It is therefore suggested the findings presented in this paper should be treated as tentative interpretations, aiming to understand meanings and actions and how people construct them (Charmaz, 2014, 231).

Despite the limitations of this study, it does raise new issues and avenues for future research:
1. We suggest an in-depth study be conducted in Malaysia specifically exploring the impact of gender on personal relationships between students and supervisors, and its effect on the quantity and quality of personal support provided by supervisors.
2. An investigation of the impact of increasing and sometimes conflicting pressures to publish and complete research degrees on time.
3. Given the observation that some student participants were uncomfortable speaking of their supervisors, future data relating to student-supervisor relationships should also be collected from students who have recently completed, who are no longer under the influence of being in a dependent relationship with their supervisor. This may make it more feasible to conduct interviews with matched pairs.

CONCLUSION

While many authors have highlighted the need for alignment of mutual expectations between doctoral students and supervisors, to-date there has been little in-depth exploration of the key differences that exist. By exploring the question of what expectations students and supervisors have of each other, and by analyzing where differences and similarities exist, this paper provides a nuanced view of the implicit and explicit expectations held by doctoral students and their supervisors in Malaysia. The novel hierarchical model of student-supervisor expectations presented in this article helps identify the types of expectations that are more or less likely to be articulated clearly in supervision relationships, and where we see a need for more explicit discourses to emerge if an increasingly student focused pedagogy is to successfully emerge. Opening more opportunities for discussions of expectations by students and supervisors, supported and encouraged by the institutions within which they work, can help set the scene for positive and productive relationships.

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APPENDIX

Interview Schedule Questions for Students and Supervisors

Interview Schedule Questions for Students

Background

1. Why did you decide to enroll in a postgraduate research degree?
2. Are you a full time or a part time student? Based on what criteria did your chose the mode of study?
3. What is your field of research?
4. Are you self-funded or a scholarship student? What type of scholarship do you hold?
5. How long have you been enrolled?
6. Where/when did you do your previous degrees?
7. How did you come across with your supervisors?

Students' expectations towards their supervisor(s)

8. What do you expect from your supervisor(s)? What are his (her) roles and responsibilities?
9. Have you shared these expectations with your supervisors?
10. To what extent you think your supervisor meets those expectations?
11. What are some of the characteristics you expect a good supervisor to have?

Student's roles and responsibilities

12. What do you think your responsibilities are in a relation to your research project?
13. What do you think your responsibilities are in relation to your development as a researcher?
14. Are you aware of what your supervisor(s) expect from you?
15. Do you keep your supervisor(s) informed about the progress of your work, the challenges you face and the support you may need?

Student-supervisor interactions/relationship

16. How often do you meet with your supervisors?
17. During the first few meeting(s), what did you discuss?
18. How would you describe the relationship you have with your supervisor(s)?
19. Have you ever had any conflicts/misunderstandings with your supervisor?

20. How much impact does your relationship with your supervisor have on a) the progress of the research, b) your willingness to pursue academic career, and c) your overall experience as a student?
21. If given a chance would you change supervisors? Why or why not?

Institutional support

22. Are you aware of any document which clearly states research student' responsibilities and what is expected of them?
23. Are you aware of any document, which clearly state supervisors' responsibilities and expectations?
24. Does your university research handbook fully clarify those roles and responsibilities? Or is there something else?
25. Do you feel there are other people in the university that can help you with your research and development other than your supervisor?
26. Overall, how can you describe your postgraduate research experiences?

Interview Schedule Questions for Supervisors

Background

1. Why did you decide to become a supervisor?
2. How many years have you been supervising?
3. How have supervision practices changed over the time you have been supervising?
4. How many students until now you have successfully led to completion?
5. How do you get new research students under your supervision?
6. Due to establishment of MyBrain 15, a greater number of students have entered postgraduate research courses. How do you think this affects the quality of research? Do you think all students are equally prepared?
7. How do you view your role as a supervisor?

Supervisor/student interactions – Supervisor perceptions of their student(s)

8. How often do you meet with your students?
9. What do you discuss during the first meeting(s)?
10. How would you describe the relationship you have with your student(s)?
11. What do you expect from your student(s)?
12. Do you expect the same from all students?
13. Are your student(s) aware of your expectations?

Supervisor's expectations of their own roles and responsibilities

14. Are you aware of what your student(s) expect from you? What do you think are your roles and responsibilities?
15. Do you clarify those expectations as early as you start to work with student(s) or it becomes clear for them once the research progresses?
16. Have you ever had any conflicts with your student? If so, why do you think such conflicts arise? Why do you think you have never had conflicts with your student(s)?
17. Have you ever withdrawn from supervision practices with any student? Why did it happen?

Institutional support

18. Are you aware of any document which clearly states research supervisor' responsibilities and what is expected of them?
19. Are you aware of any document, which clearly state students' responsibilities and expectations?

20. Does your university research handbook fully clarify those roles and responsibilities? Or is there something else?
21. Do you feel there are other people in the university that can help you to perform your responsibilities as a supervisor?
22. Overall, how would you describe your supervision experiences?

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