Establishing supervisor-students’ relationships through mutual expectation: A study from supervisors’ point of view

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Abstract. The literature suggests that failure to establish a good relationship in communicating expectations of research supervision is one of the factors contributing to the slow pace of research progress. Moreover, it is not fully understood how students and a supervisor ‘pre-define’ their styles and communicate their expectations through a successful relationship. As a result, the students might lose motivation to do their research during the study period and are not able to complete their research on time. This will subsequently entail an extension of the study period. Without a good relationship between students and the supervisor, miscommunication occurs, leading to mismatched expectations from both parties. This research attempts to explore the establishment of a good supervisor-students’ relationship from supervisor point of views, so that supervision expectations can be clearly delivered and effectively communicated; guidelines will be drawn up for forging the supervisor-students’ relationship basing on mutual expectations of both parties.

1. Introduction
Research supervision for postgraduate students is not merely an academic development, but quite an ordeal of establishing a good relationship between the supervisor and students (Walker, 2010). Building a “working” relationship with supervisor is more difficult for students since they have to overcome the communication barrier with a new person (i.e. supervisor), including balancing a range of commitments and family for adult learners as well as research progress. A necessary step needs to be taken by students or the supervisor to start talking about supervision expectation during the first formal meeting. In this context, it is utterly important to establish a good relationship between the supervisor and students during the initial stage of research supervision so that expectations are properly communicated (Chiappetta-Swanson & Watt, 2011; Hemer, 2012; Grant, Hackney & Edgar, 2014; Ali, Watson & Dhingra, 2016). An expectation is an aspiration of supervision activities that should be preconditioned and mutually agreed upon by both parties (Mainhard et al., 2009); this will eventually prevent occurrences of supervisory problems in the long run (Gill & Burnard, 2008).

Supervisors’ significant contributions to students’ success in research and dissertation were well documented in several previous studies (Pearson and Brew, 2002; Ives and Rowley, 2005; Pyhalto et al., 2012; Odena & Burgess, 2015). Failures in supervision are often the result of different expectations, contrasting ways of thinking and working, and clashes of personality (Turner & McAlpine, 2011). For example, Ives and Rowley (2005) point out that the supervisor-students’ relationship is associated with the students’ progress and satisfaction with their doctoral and thesis project. On the other hand, many students are also not satisfied with their supervisor (Wadesango and
Machingambi, 2011), since students and supervisors have different expectations. Students need more support with all aspects of empirical research but supervisors expect students to progress in their research with minimal support. In other cases, students typically complain about the lack of supervisory support, insufficient knowledge, lack of technical expertise, and outdated approach/styles (Wadesango and Machingambi, 2011). Similarly, the supervisor expects students to come in a complete package of good personality, thinking ability, personal characteristics and attitudes (Turner and McAlpine, 2011), which in reality contradict his or her own expectation during the supervision process. This indicates that the supervisor and students are actually having high expectations from each other.

As a result, students lack supervisory support for research work, resulting in a delay of graduation (Wadesango and Machingambi, 2011). In this case, it is argued that a delay of graduation or drop out is not always due to one-side problem from the supervisor or students; but both parties have to play their own roles, especially in avoiding a communication breakdown. Previous research reveals several predictors that contribute to contradictory or mismatched expectations between the supervisor and students. For example, contradictory of students’ learning styles and supervisory styles contribute to a slow pace of research progress (Malfoy and Webb, 2000) and students’ learning (Felder and Silverman, 1988). According to Walker (2010), these two elements must be mutually aligned; thus, both students and supervisor have to negotiate and agree on their expectations from the beginning, in order to reach a congruent relationship. Therefore, this paper explores the elements of a good supervisor-students relationship and communication between them in delivering research expectations, and then draws up guidelines to establish the good supervisor-students relationship, which will help deliver research expectations for postgraduate supervision. This paper reports the first phase of research findings, thus limits to the respond from supervisors only.

1.1 Supervision model and supervision styles
Existing literature offers various supervision models such as system approach, developmental models, and psychodynamic model (Kaufman and Schwartz, 2003) as well as supervision styles such as structure-support, the directorial-contractual, and laissez-faire (Gatfield, 2005). However, a model that aligns the supervisor and students on establishing relationship remains elusive (Lee, 2007). This is due to numerous predictor variables, including age, prior educational background, gender, attendance status, intellectual environment, and funding (Rodwell and Neumann, 2007) as well as expectation (Chiappetta-Swanson and Watt, 2011; Ali, Watson & Dhingra, 2016). During supervision, a mutual expectation leads to the development of a pattern of relationship message that can be defined as interpersonal style in a relationship (Mainhard et al., 2009) or supervision style, which is unique for each case of supervision.

Supervisors’ styles and approaches are also different according to several categories as in Abiddin (2007). Supervision usually depends on individual capability and skills (expertise) that is based on particular code of practices or prescriptive tasks to be done (Lee, 2007). Some authors propose a supervision approach based on students’ issues and material (Kaufman and Schwartz, 2003). There has been no prescriptive guideline that matches both the supervisor and students in effectively communicating expectations in order to develop a “working” relationship, since there are many variables involved. As a result, both parties have neglected their roles to a process of preconditioning expectations, and supervision does not reach the expected level. In this circumstance, students might lose motivation to do their research.

2. Methodology
This study is a quantitative descriptive research using a survey design. A questionnaire was used to collect data from postgraduates’ supervisors. A quantitative survey design provides accurate information of a phenomenon for a sample or large population (Creswell, 2005).
2.1. Population and Sampling
The population of the study involves the lecturers who are supervisors of postgraduate students (research mode) from the Malaysian universities with an education faculty (Universiti Tun Hussein Onn Malaysia, Universiti Kebangsaan Malaysia, Universiti Putra Malaysia, Universiti Sains Malaysia, Universiti Pendidikan Sultan Idris, and Universiti Teknologi Malaysia).

In this case, two stages of simple random sampling were deployed. In the first stage, an online questionnaire was developed and sent to all the lecturers using email blast in each faculty/university. However, the response rate was very low with only 25 returned questionnaires within two weeks. In the second stage, field workers visited the lecturers’ rooms/offices in the respective education faculties, and distributed questionnaires by hand to them. As a result, a total of 180 completed questionnaires were collected. This figure is considered appropriate for research as the response rate is above the acceptable rate of 65% (Nulty, 2008).

2.2. Instrument
A questionnaire was developed and consists of two sections namely, Part A and Part B. Items in the questionnaire were constructed based on the elements of supervisor-students relationship developed by Mainhard et al. (2009) and were modified to suit the local setting (i.e. system and cultures).

The first section Part A consists of five closed-ended questions. The possible answers to a closed-ended question are defined in advance and so the respondent can only pick one of the pre-coded responses. Respondents are asked to indicate the appropriate answers in the boxes provided for each item. The main purpose of this section is to find out the respondents’ demographic information such as gender, faculty, and duration of supervision experience. In Part B, there are 41 items translated and adapted from the original version, and each question can be answered using the five-point Likert scale. The researcher did the translation and an English teacher (language expert) verified the clarity and accuracy of the meaning of each item.

The original Part B consists of four major constructs, namely dominance, cooperation, submission, and opposition (Mainhard et al., 2009). It is used for measuring students’ perception of supervisor-students relationship. Here are two examples of the items: “my supervisor is quick to criticize me” and “my supervisor thinks I know nothing”. These items were modified since the targeted respondents are supervisors. Items were not classified according to constructs for reclassification, for example, “I criticize students’ work”, and “I am thinking like students know nothing”. The reliability was tested using Cronbach’ Alpha and the value of the result is 0.94; this figure indicates that the instrument is highly reliable for the purpose of research (Perera et al., 2008).

2.3. Data Analysis Methods
The first step was screening the questionnaires; uncompleted questionnaires were put aside for future reference and not included in the analysis, while the rest were keyed into the data analysis software. After all the data had been keyed into the computer, the data underwent the second level of screening and were tested for normality. Extreme scores were removed. Next, the data were analysed descriptively to explain the demographic and the general characteristics of the data collected. Then, the data were analysed according to research questions. Generally, descriptive analysis was employed using central tendency; inferential statistic was utilised using comparison, correlation and factor analysis.

3. Results
A total of 180 sets of questionnaires were collected; however, only 146 respondents had completed the questionnaires. Respondents consist of lecturers from five local universities with an education faculty, who are supervising postgraduate students. The composition of the 146 respondents is as follows: 70 male lecturers, representing 47.9 percent of the total number of respondents; and 76 female lecturers, representing 52.1 percent of the total number of respondents. Based on the percentage analysis, the number of female participants is higher than that of the male respondents. Also, the data analysis
indicates the breakdown details of the respondents’ educational qualifications: 17 with a master's degree in education, representing 11.6 percent of the total number of respondents; 129 with a PhD, representing 88.4 percent of the total number of respondents.

Further analysis provides more information about the lecturers: 26 percent of the 146 respondents have been supervising postgraduate students for more than 10 years, 24 percent for 7-9 years, and 24.7 percent for 4-6 years. The remaining respondents have been supervising students for less than four years. The details of the figures are contained in Table 1.

Table 1. Distribution of Years of Supervisory Experience for N=146

| Years of Supervisory Experience | Frequency | Percentage (%) |
|---------------------------------|-----------|----------------|
| 1-3                             | 37        | 25.3           |
| 4-6                             | 36        | 24.7           |
| 7-9                             | 35        | 24.0           |
| 10 and above                    | 38        | 26.0           |
| Total                           | 146       | 100            |

3.1 Interaction levels of Supervisor-students in supervision: A supervisors’ point of view

A total of 39 items are included in the analysis. The average mean for all the items is 4.13 (SD = 0.37). This figure indicates that supervisors perceived a high level of interaction between supervisors and students--having meaningful discussions and effective communication of research expectations during supervisions. An analysis of t-test was used to compare the supervision skills of junior and senior supervisors. The result indicates that there is no significant difference between the interaction levels of junior supervisors (M=4.07, SD=0.39) and senior supervisors (M=4.10, SD=0.34) [t (144) = 2.08, p > 0.05]. This means that both junior and senior supervisors have similar skills in handling discussion sessions; supervisors perceived that they can interact with students during supervision to communicate research expectations. Table 2 lists the details of the independent t-test result.

Table 2. Interaction levels of supervisor-students in supervising postgraduate students between senior and junior supervisors (N=146)

| Variable                      | N  | Mean | Std. deviation | Std. Error | t     | df  | Sig. |
|-------------------------------|----|------|----------------|------------|-------|-----|------|
| Supervisor-student interaction|    |      |                |            |       |     |      |
| Junior supervisor             | 73 | 4.07 | 0.39           | 0.05       | 2.08  | 144 | .40  |
| Senior supervisor             | 73 | 4.10 | 0.34           | 0.04       | 2.08  | 144 | .40  |

3.2 Types of relationships and communication between supervisors and students in delivering research expectations

Exploratory Factor Analysis (EFA) was used to reclassify items. The original version of the instrument is used for measuring students’ perception of supervisor-students relationship (Mainhard et al., 2009). In this study, items were adapted from the original instrument and used in a different context, and in a reverse situation--students to supervisor. Thus, reclassification of items yields new factors that may have significant meanings and useful for supervisors.

Before running EFA for the dataset, several assumptions must be confirmed such as items to samples ratio, and multi-collinearity. In this case, although the ratio of number of items to the number of samples is not adequate, according to the acceptable ratio of 1:5 (Williams, Brown, & Onsman, 2010; Chua, 2014), the Bartlett’s Test of Sphericity is significant (p < .05); the multi-collinearity indicated by KMO test is at 0.78, which is more than 0.5. These figures indicate that correlations
between items are adequate and the data do not have serious problems with multi-collinearity. Since the KMO measure of sampling adequacy and Bartlet’s test of sphericity are fulfilled, factorability is assumed (Coakes & Ong, 2011). Table 3 contains the KMO and Bartlett’s test results:

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | .786 |
| Approx. Chi-Square | 4052.816 |
| Bartlett's Test of Sphericity | df | 630 |
| Sig. | .000 |

A total of 36 items were included in the factor analysis, after removing several items, to fit the factor analysis requirements. The items of interaction level of supervisor-students’ (from supervisors’ point of view) relationship were analysed using the principal component analysis of Varimax (orthogonal) rotation. The analysis produced three factors from the overall data, explaining a total of 51.79% of the variance for the entire set of variables (factor 1 = 21.74%; factor 2 = 15.35%; factor 3 = 14.67%). Factor 1 is labelled as deliberative relationship of supervision with 19.95% of the variance, factor 2 is labelled as sceptical relationship of supervision with 14.89% of the variance, and the last factor extracted is labelled as trustworthy relationship of supervision with 14.69% of the variance. Factors extracted using the principal component analysis are contained in Table 4:

| During supervision session: | Component |
|----------------------------|-----------|
|                           | 1   | 2    | 3    |
| I provide feedback of a student’s piece of work | .782 |      |      |
| I help students in writing | .773 |      |      |
| I provide a clear guidance on research | .689 |      |      |
| I am trustable person      | .672 |      |      |
| I am rectifying students’ mistakes | .658 |      |      |
| I am handling a professional discussion | .472 |      |      |
| I am able to manage emotional discussions | .753 |      |      |
| I am thinking like students know nothing | .721 |      |      |
| I supervise without thinking of students’ pride | .703 |      |      |
| I keep my stands flexible according to students’ view | .583 |      |      |
| I criticize students’ work | .578 |      |      |
| I doubt students’ initiative on work | .532 |      |      |
| I put students in uncomfortable situations during discussions | .505 |      |      |
| I need a good clarification from students during discussions | .481 |      |      |
| I give freedom to students’ decision |      | .739 |      |

Table 4. Factors extracted based on the principal components analysis

Rotated Component Matrix
I depend on students’ research proposal  
I allow students determine research direction  
I need evidence of all students’ work 

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalisation.  
a. Rotation converges in 10 iterations. 

The analysis indicates that a total of eighteen items fitted into three main factors, while the rest of items were categorised under multiple factors and were eliminated. Rearrangement of items is indicated in the list in Table 5: 

Table 5: Rearrangement of items 

| Factor 1: Deliberative relationship of supervision, supervisor should provide: |
|-------------------------------------------------|
| I provide feedback of student’s piece of work |
| I helps students in writing                      |
| I provide a clear guidance on research           |
| I am trustable person                           |
| I am rectifying students’ mistake               |
| I am handling a professional discussion         |

| Factor 2: Sceptical relationship of supervision |
|------------------------------------------------|
| I am able to manage emotional discussion       |
| I am thinking like students know nothing       |
| I supervise without thinking of students’ pride|
| I keep my stands flexible according to students view |
| I criticize students work                      |
| I doubt on students initiative on work         |
| I put students in uncomfortable situation during discussion |
| I need a good clarification from students during discussion |

| Factor 3: Trustworthy relationship of Supervision |
|-------------------------------------------------|
| I give freedom for students decision            |
| I depends on students research proposal         |
| I allow students determine research direction   |
| I need evidence of all students work            |

3.3. Model of supervisor-students relationship in delivering their expectations on research supervision 
In order to answer this research question, several sub-research questions were generated as follows: 

(i) What is the level of importance of the factors extracted?  
(ii) Is there a significant correlation between the factors?  
(iii) Is there a significant difference between the factors and years of supervision (experience)?

In order to answer the sub-research question (i), a descriptive analysis was performed to ascertain the level of each factor rated by the supervisors. The mean scores indicate that factor 1 (M = 4.54, SD = 0.47), factor 2 (M = 4.01, SD = 0.62), and factor 3 (M = 3.84, SD = 0.62) were rated according to the order as indicated in Table 6:
Table 6. Mean and standard deviation of factors

| Factor | Mean  | Std. Deviation |
|--------|-------|----------------|
| factor1 | 4.5370 | .47405         |
| factor2 | 4.0061 | .61581         |
| factor3 | 3.8431 | .62407         |

In order to answer the sub-research question (ii), an analysis of relationship between constructs was performed in order to determine the construct inter-correlation. This analysis indicates the possibility of combining two types of supervisor-students relationships at a time. Three hypotheses were tested as follows (see Figure 1):

\[ H_{01}: \text{There is no significant correlation between deliberative relationship and sceptical relationship at .01 (two-tailed)} \]

\[ H_{02}: \text{There is no significant correlation between deliberative relationship and trustworthy relationship at .01 (two-tailed)} \]

\[ H_{03}: \text{There is no significant correlation between trustworthy relationship and sceptical relationship at .01 (two-tailed)} \]

![Figure 1 Constructs of Supervisory Types of Relationships](image)

Figure 1 Constructs of Supervisory Types of Relationships

Since the items were rated by the supervisors, the values indicate the importance of each single item. Thus, the construct inter-correlation indicates the importance of each construct. In order to increase the validity of findings, reliability was first analysed. The Cronbach Alpha values for all new constructs are highly reliable, above 0.7 (factor 1 = 0.833, factor 2 = 0.792, factor 3 = 0.737). The summary of the analysis is contained in Table 7:

Table 7: Reliability Statistics

| Factor | Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|--------|------------------|---------------------------------------------|------------|
| 1      | .833             | .839                                        | 6          |
| 2      | .792             | .799                                        | 8          |
| 3      | .737             | .730                                        | 5          |
Based on the result of factors inter-correlation using Pearson correlation test, all hypotheses fail to be rejected, which are significant ($p<.05$) with a correlation coefficient lower than 0.5. This result shows that each of the construct is independent. The details of the analysis are presented in Table 8.

| Table 8: Construct inter-correlations |
|--------------------------------------|
|                               | factor1 | factor2 | factor3 |
|--------------------------------------|
| factor1                             |
| Pearson Correlation                  | 1       | .414** | .487**  |
| Sig. (2-tailed)                      | .000    | .000   | .000    |
| Sum of Squares and Cross-products    | 32.136  | 17.301 | 20.604  |
| Covariance                           | .225    | .121   | .144    |
| N                                    | 146     | 146    | 146     |
| factor2                             |
| Pearson Correlation                  | .414**  | 1      | .377**  |
| Sig. (2-tailed)                      | .000    | .000   | .000    |
| Sum of Squares and Cross-products    | 17.301  | 54.229 | 20.737  |
| Covariance                           | .121    | .379   | .145    |
| N                                    | 146     | 146    | 146     |
| factor3                             |
| Pearson Correlation                  | .487**  | .377** | 1       |
| Sig. (2-tailed)                      | .000    | .000   | .000    |
| Sum of Squares and Cross-products    | 20.604  | 20.737 | 55.693  |
| Covariance                           | .144    | .145   | .389    |
| N                                    | 146     | 146    | 146     |

**. Correlation is significant at the 0.01 level (2-tailed).

In order to answer the sub-research question (iii), an analysis of variance (ANOVA) was carried out, to test the hypothesis as follows:

$H_0$: There is no significant difference between constructs and years of supervision (experience).

The test result indicates that construct 1 “deliberative relationship” is significantly different between years of experience [$F(3, 140)=7.972$, $p<.05$], while the other factors are not significantly different between years of experience [$F(3, 140)=1.788$, $p>.05$] and [$F(3, 140)=2.213$, $p>.05$]. The result is contained in Table 9:

| Table 9. ANOVA |
|----------------|
|                | Sum of Squares | df | Mean Square | F   | Sig. |
| factor1        |                |    |             |     |      |
| Between Groups | 4.689          | 3  | 1.563       | 7.972 | .000 |
| Within Groups  | 27.447         | 140| .196        |     |      |
| Total          | 32.136         | 143|             |     |      |
| factor2        |                |    |             |     |      |
| Between Groups | 2.002          | 3  | .667        | 1.788 | .152 |
| Within Groups  | 52.227         | 140| .373        |     |      |
| Total          | 54.229         | 143|             |     |      |
| factor3        |                |    |             |     |      |
| Between Groups | 2.521          | 3  | .840        | 2.213 | .089 |
| Within Groups  | 53.172         | 140| .380        |     |      |
| Total          | 55.693         | 143|             |     |      |

4. Findings and Discussions

The result indicates a high level of interactions between supervisors and students (from supervisors’ point of view)—having good discussions and clear communication of research expectations during supervisions. This is in line with the findings of several previous researches (Chiappetta-Swanson and Watt, 2011; Hemer, 2012; Grant, Hackney & Edgar, 2014; Ali, Watson & Dhingra, 2016), which show that good communication is part of a successful relationship and that the establishment of relationship must reach a certain extent. The extent of relationship however, must carefully be managed by the both the supervisor and students. A relationship may be ongoing within the circle of
the sceptical relationship, deliberative relationship, and the highest level could be trustworthy relationship.

Establishment of relationships are critically important right from the very beginning, in the first meeting. Regardless of in-congruence of students’ learning styles and supervisory styles, a good relationship stimulates good communication for both parties, and it provides a suitable climate to express expectations. In this case of supervision, establishing a good relationship is an advantage, although the supervision relationship is unequal. According to Bogo and Dill (2008), a supervisor who possesses both power and authority, has advantages in supervision. Therefore, developing a congruence relationship between a supervisor and students, especially postgraduate students, requires the supervisor to put aside the advantages.

Additionally, the result indicates that there is no significant difference in the interaction levels of junior and senior supervisors. In this case, the result shows that effective communication of expectations between supervisors and students has not been predicted by the supervisors’ experience although, a previous study has argued that experience constitutes one of the predictors of effective postgraduate supervision (Lee, 2007). This study’s finding is justified based on the practices in these universities. Supervisors need to fulfil several requirements before they can supervise postgraduate students. For instance, lecturers must undergo compulsory training by attending talks and workshops, and sharing experience with senior supervisors; and secondly, supervisors must acquire experience as a co-supervisor at least a year before being appointed as a main supervisor (certain university only).

The analysis has produced a total of three factors, and they are labelled as deliberative relationship of supervision, sceptical relationship of supervision, and trustworthy relationship of supervision. Generally, these constructs are independent indicating that only one type of supervisor-students relationship should be in place at a time. However, a relationship can change from deliberative relationship to sceptical relationship, and trustworthy relationship. This means that for a new student, the supervisor should first utilise the deliberative relationship to deliver the expectation with a positive perception of the new student. In other words, supervisors have to play their role in creating a good environment in delivering expectations; then leave the students to further communicate their expectations. However, fostering a deliberative relationship could be difficult for supervisors, as it requires experience in defining a supervision concept and explain it to a new student. Figure 2 illustrates the phases of the supervisor-students relationship in communicating an expectation.

![Figure 2. Stages of communicating an expectation for effective supervision](image-url)
critical moment to align the perceptions and styles of students and supervisors before the supervision process begins. Once this phase is completed, it would be smooth sailing for the remaining processes, which determine whether the next relationship will be sceptical or trustworthy (phase 2), depending on students’ effort to satisfy the mutual expectation in the phase. The main task for the supervisor is work monitoring in order to track students’ knowledge, skills and attitudes so that they are aligned with the research process and the final goals. The achievement of competencies for these three main components of research has a weak correlation with supervisors’ knowledge, skills and attitudes.

Generally, according to the theory, after a particular duration of supervision, a mutual expectation will develop into a pattern of relationship message that can be defined as an interpersonal style in a relationship (Mainhard et al., 2009); this is also known as supervision style. However, if students fail to act accordingly to establish a good relationship, supervisor-students relationship will fall into factor 2—“sceptical relationship”, and further into factor 3—“trustworthy relationship”. The determinant of relationship factors is not associated with the years of experience.

5. Conclusion
This research explores supervisor-students relationship in communicating expectations of research supervision among postgraduate from supervisors point of views. The findings of this study reveal three major constructs, namely deliberative relationship, sceptical relationship, and trustworthy relationship; they represent processes of how supervisors establish relationships with students in communicating expectations. These constructs are useful as a guideline for a new postgraduate supervisor to establish a supervisor-students relationship by preconditioning the expectations of research supervision. Future research is to explore supervisor-students relationship in communicating expectations of research supervision from students’ point of views, comparing and matching the result would yield a more significant findings for effective supervision.

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