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EFFECTIVE SUPERVISION AND SKILL DEVELOPMENT FROM UMK UNDERGRADUATE STUDENTS' PERSPECTIVE

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Abstract: *There are many factors that determine the success of final year project students in doing their undergraduate programs. The aim of this paper is to examine elements of effective supervision from the final year students' perspective and to determine the predictor toward student skill development throughout the supervision process. Data were analyzed using SPSS. The Significant level used was 0.05. T- Test and One way ANOVA were conducted to determine the differences between supervision process based on gender and program. The multiple-regression analysis was used to analyze the relationship between the dependent variable (criterion) and several predictor variables (predictors). Results suggest that the four most important elements of supervisors are: guidance, feedback, interpersonal communication and expertise. Meanwhile Infrastructure also considered as important element in the supervision process. Regression model showed that the 69.4% contribution of the three predictor (Feedback, Expertise, Guidance) to student skills development were significant while, the predictor namely Interpersonal Communication were insignificantly correlated.*

Keywords: *effective supervision, skill development, student*

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Introduction

Quality of supervision in student's studies becomes a major concern in today's education world (Ismail *et. al.*, 2017). Most of the students are targeting to finish their study in the given time frame. This is quite a challenge for the weaker students having slower rate of learning, discipline and personality problems. In the Tenth Malaysia Plan (2011-2015), the government emphasized a comprehensive education system and the development of world class human capital. The ultimatum for human capital in the field of information technology and high technology industries increased radically (Siti Rohaida 2005). The importance of generic skills grew more important as the result of changes in employment and economic scenarios. Therefore, the Final Year Project gives students a significant opportunity to demonstrate their generic skills as student producers or scholars. Another way of expressing these competencies is in terms of graduate attributes, which are a description of the generic qualities and skills that students are meant to possess on graduation (Barrie, 2004).

Final Year Project contributes to employability by helping deliver many of the graduate attributes emphasized by employers. Land (2013) suggests that the attributes associated with engaging students in research and inquiry projects include critical understanding; awareness of the provisional nature of knowledge; how knowledge is created, advanced and renewed; the effective communication and dissemination of findings; an ability to analyse problems and issues and to formulate, evaluate and apply evidence based solutions and arguments; an ability to apply a systematic and critical assessment of complex problems and issues; an ability to deploy appropriate techniques of analysis and inquiry; familiarity with advanced techniques and skills; inventiveness and creativity in formulating, evaluating and applying evidence based solutions and arguments; effective project management of time, resources, operations and information; an understanding of the need for a high level of ethical, social, cultural, environmental and wider professional conduct. Some supporting evidence of the importance of skills development through Final Year Project comes from a recent study by Todd *et al.* (2004), Malcolm (2012) and Land (2013).

One of the most crucial steps in successful tertiary study is the selection of a supervisor. This step is made difficult, however, by the fact that there are as many models of good supervision as there are students. For example, one student may work best in an autonomous situation while another may work best under close supervision. The process of selecting a supervisor is also made difficult by the diversity of factors which impact upon the success of the supervision. The guidelines assert that the supervisor's responsibility for student welfare starts with ensuring clear communications with the student (Edwards, 2002; Manathunga, 2005). This is facilitated by ensuring that students are aware of their rights. Supervisors are also advised to be wary of assuming responsibility for student problems that are beyond their personal limitations and are urged to become familiar with the various institutional support structures available to students, such as student counselling services and some other services (Manathunga, 2005; Conrad, 2003). The supervisory competence addresses the importance of basic management aspects of supervision such as time management, management skills, time management, responsibility and working independently (Izah *et al.*, 2012). Supervisors play an important role in the academic life of the students as well as personal careers (Izah *et al.*, 2012). Students should possess certain characteristics, not only personal characteristics but also

characteristics which are relevant to the interests of doing research with the students (Izah *et al.*, 2012).

Final year project student supervision in higher education institutions increasingly plays an important role particularly in ensuring quality research work. Supervision has become an increasingly demanding role for supervisors because they need to lead the candidates towards the successful completion of their projects. Effective supervision has been empirically proven to be one of the elements of success factors for research students (Cullen *et al.* 1994; Buttery & Richter, 2005; Abiddin, 2007; Izah *et al.*, 2012). The relationship between student and a supervisor is essential as it is one of the factors that will affect the progress of students'project and eventually their completion. Abiddin and West (2007) postulated that "without good supervision from a good supervisor, problematic situations will arise which can affect progress". Good supervision from a good supervisor is important because that would assist students to carry out the project and produce output at the end of the given time frame (Izah *et al.*, 2012). Izah *et al.* (2012) also claimed that good supervisors must possess certain characteristics such as: approachable and friendly; supportive, positive attitude; open minded, prepared to acknowledge error; organized and thorough; and stimulating and conveys enthusiasm for research (Cullen *et al.*, 1994). Thus, we can conclude that good supervision is one of the factors that will ensure the success of the students' project.

Effective supervisor is essential in the study process and enhance research progress (Abiddin *et al.*, 2011 & Izah *et al.*, 2012). Cullen et al (1994) concluded that the identification of effective supervisory practice was best accomplished not through the simple aggregation of existing best practice, but rather through the deconstruction of supervisory practice and through the identification of those aspects of supervisory practice which would most benefit from strengthening, elaboration or change. In a more recent study, it was found that good relationship between student and supervisor will ensure research project is completed successfully. In a previous study done by Abiddin (2006), which focused on the support and practices on supervision and experiences of students in United Kingdom found that, supervisor needs to adopt different modes of supervision. Apart from a good supervision methodology, the quality of student project also depends on other elements which include policies, infrastructure, funding, library, computing, office space, conferences, travels, fieldwork and so on (Buttery and Richter, 2006). Customarily the role of the supervisor is to 'provide guidance, advice, instruction, encouragement, support but the work should reflect the work of the student and not the supervisor' (MacKeogh, 2006). Positive supervisory relationships can augment students' potential by building their confidence and encouraging the student to learn independently (Light & Cox, 2001; Todd et al., 2004). Therefore, its'clearly stated that the function of the supervisor is complex and diverse because of the extensive and varied role the academic has in final year project. Therefore the objective of this current study focused on

i. identifying the student experience of good supervisors and the quality of their supervision from the student's perspectives that is the Bachelor in Applied Sciences students themselves. This is reflected by the research questions posited and the various items presented in the instrument of the study and,
ii. this study also focused on determining the predictor factor that contributed to student skill development as there is no study ever conducted in UMK for the time being.

This study is highly significant for it is vital for academicians to understand the need to create a secure environment when supervising to support the students' growth both academically and professionally as research is now part and parcel in all areas of employment. Further, understanding the crescendos of the supervisor-supervisee relationship and how it affects the supervisory process is the key to effective and valuable research (Norbaizura, & Saroja, 2015).

Methodology

The study employed descriptive survey methods with quantitative approaches. All 123 final years Bachelor in Applied Sciences students were involved in this study. Of the 123 final year students surveyed, 93 (81.7%) have responded. This response rate was adequate since it more than 55 % (Ballantyne, 2005) and 75% (Dommeyer et al., 2004). Gender represented by male student 28 (30.1%) and female 65 (69.9%). Program were represented by Husbandry Science (SBH) 15(16.1%), Agriculture Technology Entrepeneurship (SBS) 24 (25.8%), Bio-Industrial Technology (SBT) 24 (25.8%) and Product Development Technology (SBP) 30 (32.3%). The questionnaire, chiefly quantitative in nature, was used to collect demographic information. Students were asked about the character of supervison and their satisfaction with the supervision, infrastructure support, skills developed, the social and intellectual climate, and social support (some of these questions were used or adapted, with permission, from the PREQ; Park *etal.*,2007). These items were measured using a 5-point, Likert-type format with the following anchors: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. Coded responses were analysed using the Statistical Packages for the Social Sciences (SPSS). Cronbach"s alpha values were calculated for dimensions that have been measured as shown in Table 1. The alpha's values of 85 percent showed that the items used were appropriate (Abd. Majid, 2000). The Significant level used was 0.05. One way ANOVA and t Test were conducted to determine the differences between supervision process based on gender and program. Multiple-regression analysis was used to analyze the relationship between the dependent variable (criterion) and several predictor variables (predictor).

Table 1. Cronbach Alpha Value of tested variables

Variable	Nos of Item	Cronbach Alpha
Guidance	4	0.816
Interpersonal Communication	5	0.904
Feedback	5	0.946
Expertise	4	0.919
Skill Development	4	0.902
Infrastructure	5	0.948

Results

The results as shown in Table 2 gave the mean values of the 6 variables for this study. The results showed that all variables have high mean whereby, guidance (M = 4.247, SD = 0.640), Interpersonal Communication (M = 4.529, SD = 0.580), feedback (M = 4.202, SD = 0.831), Expertise (M = 4.107, SD = 0.840), Skill Development (M = 4.137, SD = 0.672) and Infrastructure (M = 2.989, SD = 1.066). Overall, the final year students in the Faculty of Agro-Based Industry (FIAT) in UMK have a high level of satisfaction towards the process of

supervision by their supervisors but low level of satisfaction with the infrastructure provided by the University.

Table 2. Desciptive analysis for tested variables

Variables	Mean	SD
Guidance	4.247	0.640
Interpersonal Communication	4.529	0.580
Feedback	4.202	0.831
Expertise	4.107	0.840
Skill Development	4.137	0.672
Infrastructure	2.989	1.066

A t- test results shown in Table 3 shows no significant difference between the Skill Development, Infrastructure, guidance, feedback, interpersonal communication and expertise based on student gender.

Table 3: One way ANOVA to determine the supervision process compared to gender

Variables	Gender	N	Mean	t-value	Sig
Guidance	Male	28	4.2411	-.061	.951
	Female	65	4.2500		
Interpersonal Communication	Male	28	4.4786	-.548	.585
	Female	65	4.5508		
Feedback	Male	28	4.1357	-.504	.616
	Female	65	4.2308		
Expertise	Male	28	3.9732	-1.011	.315
	Female	65	4.1654		
Skill Development	Male	28	4.0536	-.785	.435
	Female	65	4.1731		
Infrastructure	Male	28	2.8786	-.655	.514
	Female	65	3.0369		

* Significant at level of 0.05 (2 tails)

A one-way ANOVA test results shown in Table 4 shows no significant difference between the skill development, guidance, feedback, interpersonal communication and expertise and the student program except for infrastructure. Infrastructure shows a significant difference based on program.

Table 4. One way ANOVA to determine the supervision process compared to program

Employability Skills	Variation	Sum of Squares	Df	Varians	F	Sig.
Guidance	Between Groups	.756	3	.252	.607	.612
	Within Groups	36.931	89	.415		
	Total	37.687	92			
Interpersonal Communication	Between Groups	.342	3	.114	.331	.803
	Within Groups	30.669	89	.345		
	Total	31.012	92			
Feedback	Between Groups	1.480	3	.493	.707	.550
	Within Groups	62.080	89	.698		
	Total	63.560	92			
Expertise	Between Groups	1.928	3	.643	.906	.442
	Within Groups	63.122	89	.709		
	Total	65.050	92			
Skill Development	Between Groups	1.818	3	.606	1.357	.261
	Within Groups	39.747	89	.447		
	Total	41.565	92			
Infrastructure	Between Groups	16.111	3	5.370	5.397	.002
	Within Groups	88.559	89	.995		
	Total	104.669	92			

* Significant at level of 0.05 (2 tails)

Table 5 showed the regression coefficient (b) for the four predictor variables in linear combinations. The value of regression coefficient β represented the standard of the five predictor variables in the form of linear combinations. Result showed that the correlation between the criterion variable skills development and predictor variables in model 1. The R^2 of 0.435 showed that 43.5% change in the criterion variable skill development is due to changes in the independent variables. Results of $F(5, 87) = 13.39$, $p < 0.05$) indicated that the relationship between the three predictor variables and the criterion variable was at significant level $p < 0.05$. This value showed that the 43.5% contribution of the three constructs (Feedback, Expertise, Guidance) to student skills development were significant. While, the other predictor namely Interpersonal Communication was insignificantly correlated.

Table 5: Regression Model of the independent variables

Independent variables	**Model 1**	
	b	**Std Beta, β**
Guidance	-0.294	-0.280*
Interpersonal Communication	0.196	0.170
Feedback	0.233	0.288*
Expertise	0.378	0.473*
Infrastructure	0.029	0.046
R^2		0.435
Adj R^2		0.402
R^2 Change		0.435
Sig. F Change		0.000
Durbin Watson		1.809

*p < 0.05, **p < 0.01

Discussion and Conclusion

Overall, the final year students in the FIAT in UMK have a high level of satisfaction towards the process of supervision by their supervisors but low level of satisfaction with the infrastructure provided by the University. A t- test results shows no significant difference between the Skill Development, Infrastructure, guidance, feedback, interpersonal communication and expertise based on student gender. A one-way ANOVA test results shows no significant difference between the skill development, guidance, feedback, interpersonal communication and expertise and the student program except for the infrastructure. Infrastructure shows a significant difference based on program.

Results suggest that the four most important elements of supervisors are guidance, feedback, interpersonal communication and expertise. Meanwhile Infrastructure also considered as important element in supervision process. Reggression model showed that the 43.5% contribution of the three predictor (Feedback, Expertise, Guidance) to student skills development were significant. Effective supervision is a main element in excellently completing the final year project. Supervision can be perplexing for both supervisors and students. It is beneficial to review practice and try new techniques. This study indicates that Feedback, Guidance and Expertise are fundamental to supervision. They play an important role in building trust and goodwill, and help to prevent misinterpretations between supervisor and student. Giving a Feedback to student will ensure the effectiveness and enjoyment of supervision as well as the progress of the student's project. Meanwhile, an expert supervisor will ensure the completion of the project.

The key conclusions derived from this study are that final year projects are an example of a wider set of activities in which students are producers of knowledge and not just consumers. The wide range of skills acquired through the many forms of final year projects supervisory process suggests significant benefits can be made regarding student employability. These skills support students' development by encouraging them to become empowered, confident and capable learners. For students to produce high quality final year projects it is essential that the student had been supervised by an expert and outstanding supervisor.

References

Abd. Majid Konting (2000*). Kaedah Penyelidikan Pendidikan*, Kuala Lumpur: Dewan Bahasa dan Pustaka.

Abiddin N Z. (2006). Effective Supervision of Research Students: A study of University Practices and foreign Students‟ Experiences. *The Journal of Human Resource and Adult Learning*, May, 97-107.

Abiddin N Z. (2007). Postgraduate Students Perception on Effective Supervision: A Case Study at One Public University in Malaysia. *The Journal of International Social Research*, 1(1)l, 7-19.

Abiddin N Z., and West M. (2007). Effective Meeting in Graduate Research Student supervision. *Journal of Social Sciences, 3*(1), 27-35. http://dx.doi.org/10.3844/jssp.2007.27.35.

Abiddin N. Z., and Ismail A. (2011), Attrition and Completion Issues in Postgraduate Studies for Student Development, *International Review of Social sciences and Humanities*, 1, 15-29.

Barrie, S.C. (2004) A research based approach to generic graduate attributes policy. Higher Education & Research Development. 23(3), 261-275.

Buttrey E A., and Richter E. M. (2005). An Overview of the Elements that Influence Efficiency in Postgraduate Supervisory Practice Arrangements. *International Journal of Educational Management*, *19*(1), 7-26.

Ballantyne, C. (2005). Moving student evaluation of teaching online: reporting pilot outcomes and issues with a focus on how to increase student response rate. Paper presented at the 2005 Australasian Evaluations Forum: University Learning and Reaching: Evaluating and Enhancing the Experience, UNSW, Sydney, 28–29 November.

Conrad, L. M. (2003). Five Ways of Enhancing the Postgraduate Community: Student Perceptions of Effective Supervision and Support. Retrieved May 27, 2008, from http://surveys.canterbury.ac.nz/herdsa03/pdfsref/Y1033.pdf

Cullen D. J., Pearson, M., Saha, L. J., and Spear, R. H. (1994). *Establishing effective PhD supervision*. Canberra: Higher Education Division, Australian Government Publishing Service.

Dommeyer, C.J., P. Baum, R.W. Hanna, & K.S. Chapman. (2004). Gathering faculty teaching evaluations by in-class and online surveys: their effects on response rates and evaluations. Assessment & Evaluation in Higher Education. 29(5): 611–623.

Edwards, B. (2002). Postgraduate supervision: Is having a PhD enough? In Australian Association for Research in Education Conference. Brisbane, Australia.

Izah Mohd Tahir, Norizan Abdul Ghani, Engku Suhaimi Engku Atek & Zulkifli A. Manaf1. (2012). Effective Supervision from Research Students' Perspective. *International Journal of Education*. 4(2). 211-222.

Ismail, A., Hamid, H., Ahmad S., Ahmad F. S., Samad, N. & Harun, H. (2017). Assessment and Validation of Effective Supervision Among Technical and Engineering Students in Malaysian Technical Institutions. Advanced Science Letters, 23(2), 814-818(5).

Land, R. (2013) Undergraduate research in Scotland: An enhancement led approach. Council on Undergraduate Research Quarterly. 33(3),35-40

Male., S & Chapman., E. 2005. Assessing the generic competencies if engineering graduates : preliminary repart from an going research program. Prosiding ASEE Global colloquium on engineering education.

MacKeogh, K. (2006) Supervising undergraduate research using online and peer supervision. In Huba, M. (Ed.) Proceedings of the 7th International Virtual University Conference. Bratislava: 14-15 December. Available from: http://doras.dcu.ie/82/ [1 August 2013].

Malcolm,M. (2012) Examining the implications of learner and supervisor perceptions of undergraduate dissertation research in business and management. Teaching in Higher Education.17(5), 565-576

Manathunga, C. (2005). Early Warning Signs in Postgraduate Research Education: A Different Approach to Ensuring Timely Completions. Teaching in Higher Education, 10(2), 219-233.

Manathunga, C. (2007). Supervision as Mentoring: The Role of Power and Boundary Crossing. Studies in Continuing Education, 29(2), 207-221.

Park, C., Hanbury, A., Kulej, M. & Harvey, Lee. (2007). *Postgraduate Research Experience Survey*. Final Report.

Ramlee M dan Abu A. (2003). Malaysia Transitions toward a Knowledge-based economy. *The Journal of Technology Studies*.

Siti Rohaida, M Z. (2005).The Use Of Upward Influence Tactics By K-Workers To Achieve Job Satisfaction: The Individual And Interactive Influence Of Leadership Styles, Gender And Organisational Justice. Tesis Doktor Falsafah. Universiti Institut Teknologi Malaysia.

Todd, M., Bannister, P. & Clegg S. (2004) Independent inquiry and the undergraduate dissertation: Perceptions and experiences of final year social science students. Assessment & Evaluation in Higher Education.29(3), 335-355.

Norbaizura, M. N. & Saroja, D.(2015). Students' Perception Of The Supervisory Process: A Case Study At A Private University In Malaysia. Malaysian Online Journal Of Educational Management,3, (4), 31 – 49