

FEEDBACK ENVIRONMENT IN THE WORKPLACE: IMPLICATIONS FOR INTRINSIC MOTIVATION

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ABSTRACT

Most of the leaders see the importance of motivation in the workplace, but when it comes to providing the feedback that fuel it, they often fall short. This study intended to determine the significant relationship between feedback environment and intrinsic motivation in the Malaysia construction industry. Specifically, the objective of the study was to identify the significant influence of feedback environment towards intrinsic motivation within the construction industry. The study targeted on 50 employees from the construction industry in Kuching using random sampling technique. Data was collected using the questionnaire method. Pearson's correlation and linear regression analysis techniques were used to analyze the data collected. The results showed that there was a strong significant and positive relationship between feedback source credibility, feedback quality, feedback delivery, constructive feedback, and feedback seeking with intrinsic motivation dimension. The study further identified that the significant influence between feedback environment towards intrinsic motivation within the organization and the results have proven that several of feedback environment dimensions has a significant influence towards the intrinsic motivation such as feedback quality, feedback delivery and constructive feedback. Thus, the study concluded that there is a significant relationship between feedback environment and intrinsic motivation and on the other the hand feedback environment has significant influence towards intrinsic motivation.

Keywords: feedback, intrinsic motivation, construction industry

INTRODUCTION

The construction industry in Malaysia has grown rapidly. This growth has led to a more challenging work environment and in turn leads to high work pressure on workers (Justin, 2013; Henk & Hoonakker, 2000). In line with the heavy working pressure faced by workers, the construction industry relies heavily on wages as a means of motivating their employees. However, many employers have overlooked the intrinsic motivation among employees (Rebecca & Simon, 2017). Due to the favorable working environment will enhance individual self-efficacy (Ling, 2016), the construction industry must work towards creating a less stressful work environment by providing feedback quality and profitable employees. In this regard, feedback is seen as one of the ways employers can use to motivate the workplace and to create a more positive and high working spirit within the organization (The Employer Edge, 2018).

The environment and nature of the construction industry has long been plighted with negativity such as long working hours, high amount of stress, and non-recognition of performance, aggressive forms of communication and uncertainties that arises during the line of work (Smithers & Walker, 2010). According to Iskandar, Ismail and Khan and Yong (2014), the work stress within the

construction industry has always existed due to the ambiguity of the work responsibilities within the workforce, excessive workload, aggressive work nature and environment, excessive work demand and expectations. The construction industry is in need of a new working environment that is more attractive to work within and that intrinsic motivation plays an important key role in creating such an environment. It is believed that intrinsic motivation will bring about a positive vibe towards the working environment of the construction industry and thus generate better performances to counter for all the negativity of work environment surrounding the construction industry. For the creation of such environment with intrinsic motivation, the construction management needs to take into consideration the creation of a feedback environment that is effective to create clear role distributions and a good management of task mitigation (Smithers & Walker, 2010). This is in line with the support by Paul, Peter, and Rajen (2014) that the construction management should look seriously into the need of employee's intrinsic motivation and empowerment through the creation of a conducive work feedback environment for the construction workforce. Feedback environment has been shown to be able to have a positive impact towards the performance level of employees within an organization and on that the improvement of the performance happens due to the intrinsic values achieved from feedback environment (Steelman, Levy, & Snell, 2004). Thus, this research has to be conducted in order to determine the significance relationship of feedback environment towards intrinsic motivation within the organization. Specifically, the hypothesis of the study is listed as follows:

Ho₁: There is no positive and significant relationship between feedback environment and intrinsic motivation.

Ho₂: There is no significant influence of feedback environment towards intrinsic motivation.

CONCEPTUAL FRAMEWORK

This study aims to identify significant and positive relationship between feedback environment and intrinsic motivation. At the same time, this study also aims to examine the significant influence of the feedback environment on intrinsic motivation. The independent variables in this study comprise the six dimensions of the feedback environment proposed by Ling (2016) in the context of Malaysia. The six dimensions are the credibility of feedback sources, feedback quality, feedback delivery, availability of feedback source, constructive feedback and encouragement for feedback seeking.

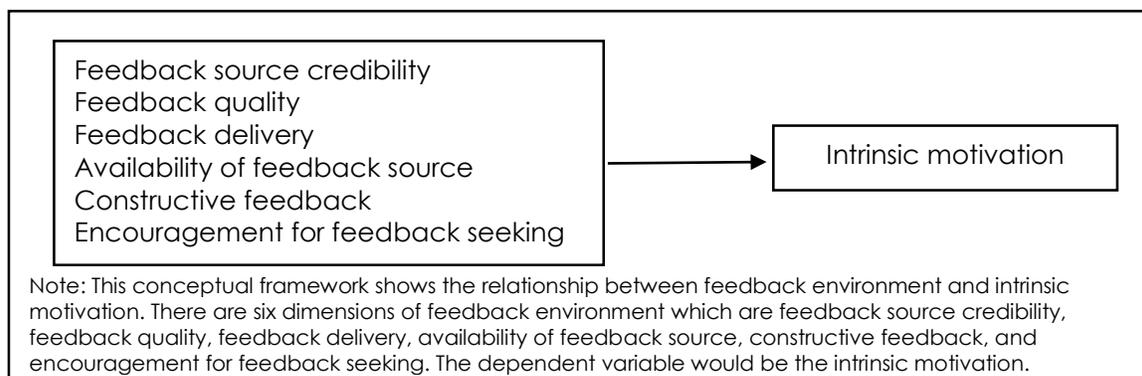


Figure 1. Conceptual framework

Feedback has been listed as one of the job characteristics that enhances intrinsic motivation (Hackman & Oldham, 1976). Feedback environment plays a crucial role in the feedback and motivation relationship and that a supportive feedback environment would meet the desire and need of the employee to feel recognized and this promotes intrinsic motivation within the employees. It is a multidimensional structure with the capability to fully reflect contents of a feedback and the feedback receiver's construction of feedback thus enabling feedback environment to have a consistent relationship with intrinsic motivation (Steelman et al., 2004). It is known to show a positive effect towards increased work productivity and this was due to the intrinsic motivation that was cultivated through the feedback environment (Spector, 1986; George & Zhou, 2007). It suggested that there the design of a job influences the motivations of the employees and feedback environment was among the characteristics mentioned within the design of a job. Humphrey, Nahrgang, and Morgeson (2007) concluding in his research that active participation in a feedback environment is categorized as one of the intrinsic aspects within job quality that has an influence towards intrinsic motivation.

LITERATURE REVIEW

The role of feedback within organizations has been seen as a key tool for organizations as more and more studies have shown that organizations that have a good practice of feedback environment would exhibit much better results within their organizations in terms of employee performance (Steelman et al., 2004). Feedback builds up the intrinsic motivation of the employee within the organization especially through constructive feedback and the presence of a proper hierarchy of feedback system (Louis, 2017; The Employers Edge, 2018).

In the Malaysia context, feedback environment is constituted from six dimensions which are feedback source credibility, feedback quality, and feedback delivery, constructive feedback, feedback source availability, and support for feedback seeking (Ling, 2016; Ling & Abdul Ghani, 2016). Source credibility is regarded as a concept of the trustworthiness and expertise of the feedback source which targets the level to which the feedback would be accepted as undisputed (Steelman et al., 2004) and the recipient trusts the feedback source (Ilgen, Fisher & Taylor, 1979). It means the feedback from a person who has been observing the behavior of an individual, the power to assess and have a motive to provide a reliable feedback response which is more likely to influence the behavior of followers compared to the incompetent source of feedback in assessing the job behavior (Makiney & Levy, 1998).

The second dimension of the feedback environment is feedback quality. For the feedback to be reliable and useful, it is strongly relying on consistency and usefulness and needs to be not varying and be specific in order to have quality. As closely relevant to the content of feedback quality is feedback delivery. Feedback delivery can be defined as the level to which the recipient of the feedback is able to interpret and perceive of the intentions of the source when giving feedback. The emphasis of feedback delivery is put on the tone and intention of the feedback giver (Steelman et al., 2004) irrespective of the type of media being used. In particular, some leaders are reluctant to deliver negative or unconstructive feedback (Westerman, Heuett, Reno, & Curry, 2014) and may "sugarcoat" their feedback, thus making feedback less accurate. In this study, constructive feedback is when the receiver does indeed recognize that their actions and performance would warrant a feedback (Ling & Abdul Ghani, 2015) either in the positive or negative for.

Next, another influential factor of feedback environment is feedback source availability that refers to the degree of easiness and the amount of feedback communication that the workforce is able

to communicate with the supervisory level at work (Ling & Abdul, 2015). Access to feedback allows individuals to have better understanding of their competency and performance. Last, support for feedback seeking from the 21st century managers concern the extent of supportive or unsupportive environment towards feedback seeking (Ling & Abdul, 2015) and is the degree to which the employees want to seek for more feedback (Steelman et al., 2014). Thus, as suggested by Steelman et al. (2014), it is strongly believed that encouragement of feedback-seeking behavior has an impact on the frequency of workers seeking feedback from their leaders.

Intrinsic motivation is defined as the enjoyment of performing an action for personal satisfaction where the performing of the action results in inspiration and satisfaction. It is an important component in the development of cognitive, social and physical abilities and capabilities (Ryan & Deci, 2000). Ryan and Deci (2001) further explained intrinsic motivation as the innate human desire to apply and advance one's skills or abilities through practice or challenge. Intrinsically motivated individuals tend to be more curious, more cognitively flexible, more open to and willing to search for new knowledge and more willing to search for new knowledge, and more willing to use non-traditional approaches to reach decisions, which in turn may incline these individuals to be creative (Amabile, 1996).

In this study, hypotheses are formed based on the Leader-Follower Exchange Theory. Leader-Follower Exchange Theory is a relationship-based approach towards leadership that concentrates on the dyadic relationship between leader and followers. Bauer, Ergoden and Berrin (2015) indicated that leaders develop an exchange with each of the subordinates and followers and that the exchange of information that takes place between leaders and followers will subsequently influences a work environment. Such environment that will be influenced includes the subordinates' responsibility towards work, decision making in relation towards work matters, access towards work information and crucial resources and the level of work performance.

RESEARCH METHODOLOGY

Research methodology is defined as detailed and specific techniques used to process, identify and analyze information concerning an issue or a topic. Cooper and Schindler (2001) explained in detail that research methodology is a plan consisting of components such as a schedule, framework of research, research questions, sources selection to analyze and determine the relationship between the research variables and the procedures of the research.

POPULATION AND SAMPLING

Holton and Burnett (1997) mentioned that the population usually is the generally targeted group of people within the research topic and that it usually has to be named in a general term but also can be more specific to reduce the population to fit into a research. A sample is a smaller size taken out from the population that would be used to represent the overall population (Holton & Burnett, 1997). Random sampling is described as a method in which samples are chosen without specific strong profiling in the selection of participants from a population and provides for a wide variety of covered variables such as difference in age, difference in gender, difference in profession, difference in thoughts and opinions and difference in financial status. Thus, the population for this study would be the professionals within the construction industry ranging from the junior executive level towards the top management. Based on Krejcie and Morgan (1970), a sample of 50 was chosen randomly on the professionals within the construction industry under the

construction project in a chosen area. As it is impossible to include the whole population into this study, the samples chosen without specific strong profiling in the selection of participants is an unbiased representation of the population.

RESEARCH INSTRUMENTATIONS

Rajasekar, Philominathan and Chinnathambi (2013) defined measurement instrument as the term used to describe devices used to collect data such as questionnaire, survey and test. Measurements usually need to be tested for their usability which would be the scale of reliability and the validity. The reliability of the instrument is the consistency and the degree to which the items within the instrument are related towards the research and that validity is the extent by which the instrument is able to measure what it is intended to measure (Denscombe, 2014). This study was using a set of questionnaire as the instrument and the questionnaire was adopted from existing instruments used previously by other researchers. The questionnaire was divided into three parts. Part A (3 items) was to obtain the demographic data of the sample while Part B (25 items) used to measure the feedback environment within the organizations and Part C (6 items) aimed to measure the intrinsic motivation of the samples. Part B and Part C are the adapted questionnaires of Ling (2016). The researcher has requested permission from the project owner before the questionnaire is distributed. All filled questionnaires were collected the same day.

PILOT STUDY

Pilot study as a minimal scale of the original research that is conducted using the measurement instrument intended for the research to identify the problems that would exist within the research before going into a maximum scale for the research (Zailinawati, Peter, & Danielle, 2006). Browne (1995) suggested that the sample size to perform the pilot study can be ranging from 30 samples per instrument onwards. It is suggested that the sample size required for the pilot study does not need to be too large as the objective of the pilot study is not to perform testing on hypothesis and thus sample sizing is not considered a major issue within the pilot study. Thus, the pilot study was conducted on the professionals within the construction industry ranging from the junior executive level towards the top management and a sample of 30 was involved in this pilot study. The reliability of the instrument used was identified through a pilot study with the alpha Cronbach's value of .947.

RESEARCH DESIGN

This study was a cross-sectional type of quantitative research and the data was collected through the questionnaire instrument. Cross-sectional study is a type of descriptive research that happens during a single time with no manipulated variable and is suitable to be used for identifying the characteristics that are prevailing within a population (Maninder, 2016). Cross-sectional studies collect all data at a set point in time. Cherry (2018) mentioned that there are three advantages in using a cross-sectional type of research. The first advantage is the difference in variables. This is due to the fact that researchers are able to collect data on multiple variables such as age, sex, financial status, educational status, family status and so forth which might relate towards the research variables differently. Next, cross-sectional research is cost-savvy and efficient. This is due to the fact that cross-sectional research provides various data and information through self-report surveys and from a large group of population. Cross-sectional research would be able to provide

the equal data representation of the studied subject of the overall population for all different groups of variables.

RESEARCH FINDINGS AND DISCUSSIONS

Descriptive statistics is the description of the data collected throughout the study and provides a scoring distribution and summaries regarding the variables to measure the relationship that exists between the scores (Field, 2009). For the descriptive findings regarding the independent variable of feedback environment, 25 items are used to represent the dimensions of feedback environment while for dependent variable of intrinsic motivation, 6 items are used to represent the level of intrinsic motivation. The findings revealed that feedback environment has positive influence and significant relationship with intrinsic motivation. Manikandan (2011) described two types of statistics which are descriptive and inferential statistics. Descriptive statistics tries to explain the relationship between the variables of a certain population or sample through a summarization of data in terms of mean, mode and median (Winters, Winters, & Amedee, 2010). According to Zulfiqar and Bala (2016), inferential statistics as the inferences made for a whole population through the selection of a random sample of data retrieved from the population and is useful when the population is large or in the event when it is impossible to obtain data from the overall population of the research.

RELATIONSHIP BETWEEN FEEDBACK ENVIRONMENT AND INTRINSIC MOTIVATION

According to the results shown in Table 1, it was found that five out of six dimensions of feedback environment showed a significant relationship with intrinsic motivation. The results showed a strong correlation and positive relationship between feedback source credibility and intrinsic motivation ($r=.569, p<0.01$), between feedback quality and intrinsic motivation ($r=.705, p<0.01$), between feedback delivery and intrinsic motivation ($r=.497, p<0.01$), between constructive feedback and intrinsic motivation ($r=.668, p<0.01$) and between support for feedback seeking and intrinsic motivation ($r=.642, p<0.01$). However, the results showed poor correlation between source availability of feedback and intrinsic motivation ($r=.195, p<0.05$). This finding showed that there is a need for the construction management to look into improvements towards source availability of feedback environment. The results showed that dimensions of the feedback environment such as feedback source credibility, feedback quality, feedback delivery, constructive feedback and support for feedback seeking are proven to be consistent with researches concerning the positive relationship between feedback environment and intrinsic motivation. The intrinsic motivation of employees is related towards the existence of a feedback environment (Steelman et al., 2014). The weak correlation between one of the dimension of feedback environment which is the source availability of feedback with intrinsic motivation showed that there is still lacking of the availability of feedback sources within the construction management.

Table 1. Correlations of the dimensions of Feedback Environment and Intrinsic Motivation

		FSC	FQY	FDY	SAF	CTF	SFS
ITM	Pearson Correlation	.569**	.705**	.497**	.195	.668**	.642**

Note:

**Correlation is significant at the 0.01 level

*Correlation is significant at the 0.05 level

FSC = Feedback source credibility; FQY = Feedback quality; FDY = Feedback delivery; SAF = Source Availability of feedback; CTF= Constructive feedback; SFS = Support for feedback seeking, ITM=Intrinsic motivation.

INFLUENCE OF FEEDBACK ENVIRONMENT TOWARDS INTRINSIC MOTIVATION

Multiple linear regression has been used to analyze the second hypothesis. For that reason, the assumptions for using this analysis have been met: (1) There is a linear relationship between the intrinsic motivation and feedback environment; (2) The residuals are normally distributed; (3) The dimensions of feedback environment are not highly correlated with each other. Results of the analysis shown in Table 2 indicated that several of feedback environment dimensions has a significant influence towards the intrinsic motivation such as feedback quality ($\beta = .61, p < .05$), feedback delivery ($\beta = -.41, p < .05$) and constructive feedback ($\beta = .40, p < .05$). Table 2 shown the coefficient value and the multiple regressions for the influence of the feedback environment towards intrinsic motivation within the construction industry. The regression analysis has shown that the dimensions of the feedback environment has significantly contributed 59.1 percent of the changes in the intrinsic motivation level of the employees. This has shown that the dimensions of the feedback environment have significant influence towards the intrinsic motivation of employees. The finding has shown that employees exhibit intrinsic motivation when exposed towards feedback environment. George and Zhou (2007) mentioned that the intrinsic motivation of the employees would be triggered through the feedback environment that exists within an organization. The significant F-value shows that the model fits the data and the model is valid. This implies that the dimension of feedback environment does play a very significant influence in the intrinsic motivation of the employees. The results have clearly demonstrated the positive influence of feedback environment significantly towards intrinsic motivation.

Table 2. Coefficients beta for the influence of feedback environment on intrinsic motivation.

Independent Variable: Feedback Environment	Dependent Variable: Intrinsic Motivation Coefficients Beta, β
FSC	-.09
FQY	.61*
FDY	-.41*
SAF	-.07
CTF	.40*
SFS	.25
R	.769
R ²	.591
Adjusted R ²	.534
F Value	10.34**
Durbin Watson	1.43

Note:

**Significant at the .01 level

*Significant at the .05 level

FSC = Feedback Source Credibility; FQY = Feedback Quality; FDY = Feedback Delivery; SAF = Source Availability of Feedback; CTF= Constructive Feedback; SFS = Support for Feedback Seeking

DISCUSSION

Feedback environment is important towards the construction industry as it enables the enhancement of employee's intrinsic motivation (Paul et al., 2014). The relationship of feedback

environment and intrinsic motivation and the significant influence of feedback environment towards intrinsic motivation have been studied. This study has proven that there is a significant relationship between feedback environment and intrinsic motivation and that the dimensions of feedback environment has significant influence towards intrinsic motivation. Pearson Correlation was used to test this hypothesis and the results showed that there is a strong correlation and positive relationship between feedback source credibility and intrinsic motivation ($r=.569, p<0.01$), between feedback quality and intrinsic motivation ($r=.705, p<0.01$), between feedback delivery and intrinsic motivation ($r=.497, p<0.01$), between constructive feedback and intrinsic motivation ($r=.668, p<0.01$) and between support for feedback seeking and intrinsic motivation ($r=.642, p<0.01$). This has shown that feedback environment does have a significant and positive relationship with intrinsic motivation. Thus, the null hypothesis is rejected due to the fact that this the study has found that there is significant and positive relationship between feedback environment and intrinsic motivation within the organization. A regression analysis was used to test this hypothesis and the results has shown that several of feedback environment dimensions has a significant influence towards the intrinsic motivation such as feedback quality ($\beta= .61, p<.05$), feedback delivery ($\beta= -.41, p<.05$) and constructive feedback ($\beta= .40, p<.05$). The regression analysis also shows that feedback environment has significantly contributed 59.1 percent of the variance changes in the intrinsic motivation level of the employees. This has shown that feedback environment does have a significant influence towards intrinsic motivation. Thus, the null hypothesis is rejected due to the fact that this the study has found that there is significant influence between feedback environment towards intrinsic motivation within the organization.

RESEARCH IMPLICATIONS

The study was met with a few limitations such as some randomly selected participants might give false information in the questionnaire due to the confidentiality of their working background and this could lead to inaccurate data that will influence the result of this study. Recommendations for overcoming this limitation would be that to expand the population sampling to pacify inaccurate data and also the provision of confidentiality whereby the questionnaires will be kept strictly confidential between the researcher and the participants of the questionnaire. The emotions of the selected participants at the time of the study might affect the answers given at the time of answering the questionnaire depending on their events that recently happen within the work environment and might not represent the real overall working environment within the organization, thus affecting the result of this study. Recommendation to overcome this limitation would be to set a limit towards the years of working experience in the organization such as minimum 2 years and above working experience to ensure that the answers are given by a stable employee that has already had a long experience with the organization. The findings of this research is also limited towards the variables of the research which would be the significant relationship and significant influence in between feedback environment and intrinsic motivation. Recommendation to overcome this limitation would be the exploration of further options of variables to further explore the topic of feedback environment and intrinsic motivation.

CONCLUSION

The results of this research are used to investigate the research objectives of this study. The findings of this study have highlighted that dimensions of the feedback environment such as feedback

source credibility, feedback quality, feedback delivery, constructive feedback and support for feedback seeking are proven to have a significant and positive relationship between feedback environment and intrinsic motivation. This study has also shown that there is significant influence between dimensions of feedback environment towards intrinsic motivation such as feedback quality, feedback delivery and constructive feedback.

REFERENCES

- Amabile, T. M. (1996). *Creativity in context*. Westview Press, Boulder, CO.
- Bauer, T., & Ergoden, B. (2015). *The Oxford handbook of leader-member exchange*. Oxford University Press, New York.
- Cherry, K., (2018). *Cross-sectional research method: How does it work?* Retrieved from <https://www.verywellmind.com/what-is-a-cross-sectional-study-2794978>
- Cooper, D., & Schindler, P., (2001). *Business Research Methods*. (7th Ed.) McGraw-Hill Irwin, New York.
- Denscombe, M. (2014). *The good research guide: For small-scale social research projects* (5th ed.). Open University Press, Buckingham, UK.
- Field, A. (2009). *Discovering statistics using SPSS for windows* (3rd ed.). Thousand Oaks, London.
- Holton, E., & Burnett, M., (1997). Qualitative research methods. In R. A. Swanson, & E. F. Holton (Eds.), *Human resource development research handbook: Linking research and practice*. Berrett-Koehler Publishers, San Francisco.
- Humphrey, S., Nahrgang, J., & Morgeson, F., (2007). Integrating motivational, social, and contextual work design features: A meta-analytic summary and theoretical extension of the work design literature. *The Journal of Applied Psychology*, 92(5), 1332–1356. doi:10.1037/0021-9010.92.5.1332
- George, J. M., & Zhou, J., (2007). Dual tuning in a supportive context: joint contributions of positive mood, negative mood, and supervisory behaviors to employee creativity. *The Academy of Management Journal*, 50(3), 605–622. doi: 10.5465/AMJ.2007.25525934
- Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, 16, 250–279. doi: 10.1016/0030-5073(76)90016-7
- Henk, F., & Hoonakker, P. L. T. (2000). Work stress in the construction industry: Causes and measures. *Human Factors and Ergonomics Society Annual Meeting Proceedings*. doi: 10.1177/154193120004403109
- Ilgen, D., Fisher, C., & Taylor, M., (1979). Consequences of individual feedback on behavior in organizations. *Journal of Applied Psychology*, 64(4), 349-371. doi:10.1037/0021-9010.64.4.349
- Iskandar, S., Ismail, S., Khan, N., & Yong, H., (2014). An investigation on level, sources of occupational stress and coping strategies among civil engineers in Malaysia's construction industry. *Australian Journal of Basic and Applied Sciences*, 8(817), 257-264.
- Justin, T. (2013). Study on causes and effects of employee turnover in construction industry. *International Journal of Science and Research*, 4(5), 3041-3044.
- Krejcie, R. V., & Morgan, D. W. (1970). *Determining sample size for research activities*. *Educational and Psychological Measurement*, 30, 607-610.
- Ling, Y. L. (2016). *The influence of feedback environment, trust towards leaders and coaching communication on self-efficacy of teaching in polytechnics Malaysia*. (Unpublished PhD thesis). Universiti Sains Malaysia, Penang, Malaysia.

- Ling, Y. L., & Abdul, G., (2015). Persekitaran maklum balas sebagai penentu efikasi sendiri pengajaran pensyarah politeknik. *Jurnal Pendidikan Malaysia*, 40(2), 101-109.
- Louis, P., (2017). The effects of feedback on intrinsic motivation: A propositional extension of cognitive evaluation theory from an organizational communication perspective. *Annals of the International Communication Association*, 4(1).
- Makeiney, J. D., & Levy, P. E. (1998). The influence of self-ratings versus peer ratings on supervisors' performance judgments. *Organizational Behavior and Human Decision Processes*, 74(3), 212-228.
- Manikandan, S., (2011). Measures of central tendency: Median and mode. *Pharmacol Pharmacother Journal*, 2011(2), 214-215.
- Maninder, S., (2016). Methodology series module 3: Cross-sectional studies. *Indian Journal of Dermatology*, 61(3), 261-264.
- Paul, B., Peter, E., & Rajen, G. (2014). *Workplace stress in the construction industry: An explanatory model*. Paper presented at the 30th Annual ARCOM Conference, University of Portsmouth, UK.
- Rajasekar, S., Philominathan, P., Chinnathambi, V., (2013). Research Methodology. Retrieved from <http://arXiv:physics/0601009v3>
- Rebecca, E., & Simon, K. (2017). *Important motivational factors from a construction worker's perspective*. (Unpublished master's thesis). University of Technology, Sweden.
- Ryan, R., & Deci, E. (2000). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology*, 25(1), 54-67.
- Smithers, G., & Walker, D. (2010). The effect of the workplace on motivation and demotivation of construction professionals. *Construction Management and Economics*, 18(7), 833-841.
- Spector, P. (1986). Perceived control by employees: A meta-analysis of studies concerning autonomy and participation at work. *Human Relations*, 39(11), 1005-1016. doi: 10.1177/001872678603901104
- Steelman, L., Levy, P., & Snell, A., (2004). The feedback environment scale: Construct definition, measurement and validation. *Educational and Psychological Measurement*, 64(1), 165-184.
- The Employers Edge, (2018). *Feedback to boost motivation*. Retrieved from <http://www.theemployersedge.com/providing-feedback/>
- Westerman, C., Heuett, K. B., Reno, K. M., & Curry, R. (2014). What makes performance feedback seem just? Synchronicity, channel, and valence effects on perceptions of organizational justice in feedback delivery. *Management Communication Quarterly*, 28(2), 244-263. <https://doi.org/10.1177/0893318914524060>
- Winters, R., Winters, A., & Amedee, R. G. (2010). Statistics: A brief overview. *The Ochsner Journal*, 10, 213-216.
- Zailinawati, A., Peter, S., & Danielle, M., (2006). Doing a pilot study: Why is it essential? *Malaysian Family Physician*, 1(2, 3), 70-73.
- Zulfiqar, A. & Bhaskar, B. S. (2016). Basic statistical tools in research and data analysis. *Indian Journal of Anaesthesia*, 60(9), 662-669.