Leadership and Personality Influence on Creativity

SABARANI GHAZALI
College of Law, Government and International Studies
Universiti Utara Malaysia, Kedah, Malaysia
Email: sabarani@uum.edu.my

HUSNA JOHARI
College of Business, Universiti Utara Malaysia, Kedah, Malaysia
Email: husna@uum.edu.my

ABDUL AZIZ OTHMAN
College of Business, Universiti Utara Malaysia, Kedah, Malaysia
Email: abdaziz@uum.edu.my

Abstract
Creativity is a pertinent agenda in ensuring the success of an organisation in the face of stiff global competition. Creativity is a trait that can be instilled within an individual, other than occurring naturally. In a person, creativity can result from the interaction between two factors, namely situational factor (external factors to the individual) and person factor (internal factors of the individual). This research focuses on the influence of work design on creativity among workers. Additionally, this study also looked at the influence of leadership moderator (one of the situational factors) and personality (a person factor), toward the relationship between work design and creativity among workers. A total of 158 respondents answered the questionnaire given in this cross-sectional study. Results from the correlational and regression analyses showed that work design has a significant relationship with creativity. Also, results from the hierarchical regression analysis revealed that the personality factor has a stronger moderating effect as compared to the leadership factor toward the relationship between work design and creativity. This shows that the person factor gives a greater effect as compared to the situational factors for forming creativity. Based on the results of this research, several management actions are recommended for enhancing creativity amongst employees at the workplace. In addition, theoretical implications were also discussed in view of the research limitations which were observed. At the end of this paper, future research directions are also presented.

Key Word: Creativity; Work Design, Leadership; Personality, Performance.

Introduction
Creativity is a prerequisite to innovation, effectiveness, competitiveness, as well as long term survival of the organisation (Amabile, 1997; Drucker, 1985; Oldham, 2002; Shalley, Zhou & Oldham, 2004; Woodman, Sawyer & Griffin, 1993). In the context of stiff local and global competition, economies based on innovation are becoming more relevant (Brown & Eisenhardt, 1997; Tushman & O’Reilly, 1996). Within the ever-changing organisational landscape and environment, it had been reported that the main skills that is required at the workplace include creative thinking and problem solving in a creative manner (Carnevale, Gainer & Meltzer, 1990).
Problem Statement

With the commencement of the 21st century, the world economy has shifted more toward an economy that is based on creativity and innovation. In line with this global development, the Malaysian economy had also focused more on innovative and creative approaches starting 2010. It was in 2010 that the Prime Minister had announced that year to be the Year of Innovation. The National Innovation Centre was founded during this time, while the Malaysian Innovation Agency, which was previously known as the Special Innovation Unit, was officially established and placed directly under the supervision of the Prime Minister’s Department. Meanwhile, the 2012 Budget had witnessed the government allocating as much as RM100 million toward facilitating and enhancing creativity and innovation activities. Then, 2012 was announced as the Year of National Innovation Movement. This shows how serious the Malaysian government is at promoting creativity and innovation efforts amongst its citizens.

More specifically, internal motivation has been identified as the most pertinent factor in motivating the individual to become creative (Amabile, 1987; Shalley, 1991; Zhou & Shalley, 2003). Moreover, internal motivation is closely related to the daily work activities. A complex and challenging task is more capable of increasing the internal motivation of the employee than simple and routine tasks (Hackman & Oldham, 1980; Deci & Ryan, 1987; Shalley, 1991). Therefore, it is imperative for organisations to arrange the main tasks of the employees in order to enhance their spirit and internal motivation amongst employees.

This is where work design plays a role in either increasing internal motivation among employees or otherwise weakens or eliminates it. In addition to this, workers that perform daily operations only need to have the character and value in order to be capable of injecting creativity in their daily work activities (James & Mazerolle, 2002; Zhao & Oldham, 2001). Other than this, the organisation as well as its workers needs leaders that can influence their spirit as well as motivation in order for them to produce creative and productive outputs in their work (Arendt, 2009; Yukl, 2013).

Research Objectives

The research objectives include:

1. to study the level of creativity,
2. to examine the relationship between work design and creativity,
3. to observe the moderating influence of personality toward the relationship between work design and creativity, and
4. to observe the moderating influence of leadership toward the relationship between work design and creativity.

Research Significance

This is research is important because, firstly, it gives a deeper understanding toward the existence of creativity in daily work. Secondly, this research also shall look into the extent of daily work activities that may have a relationship with worker creativity. Also thirdly, this research is important in looking at the internal as well as external aspects of the individual worker that can give a moderating effect on the tasks at hand with the emergence of worker creativity. It is anticipated that all of these would become a guideline for scholars to develop new theories and understanding, and thus for the management practitioners to discover the problem sources in order to take action in improving the performance of their organisation.

Literature Review

This research adopted the person-situation interactionist approach that was introduced by Pervin (1989) and Schneider (1987), who stated that personal, as well as situational factors will interact with each other to
influence employee creativity. Also, similar to other creativity studies (Amabile, 1987; 1996; Oldham & Cumming, 1996; Shalley, 1991; Zhou, 1998), motivation theory forms the basis of this research. The detailed explanation regarding the studied variables is as follows:

Creativity

Creativity is the main driver for change, improvement in competitiveness, as well as overcoming competition in ensuring the survival, as acknowledged by many management scholars and practitioners (Shalley et al., 2004; Amabile, 1997; Scott & Bruce, 1994). Shalley, Gilson, and Blum (2001) had stated that a certain level of creativity is required in almost all aspects of work. Meanwhile, Runco and Richard (1997) asserted that creativity is not confined to just literature, science, and philosophy, but it is also part of our daily lives.

So, Amabile (1988) and Woodman et al. (1993) defined creativity as an idea that is characteristically novel. Martindale (1990) established that an idea can be said to be creative when it has three characteristics, which are originality, usefulness, and suitable within the context of a situation that it occurs in, and it is ultimately used. An idea is said to be novel when it is unique when compared to all the existing ideas, and it is useful when it potentially adds value, either directly or indirectly, to the organisation, in the short or long term (Shalley et al., 2004).

A literature review revealed two factor categories that can facilitate or retard creativity at work. Firstly, personal factor has a relationship with creativity, which include value factors held by the individual person, deep interest, attraction to complexity, intuition or instinct, sensitivity to aesthetics, accepting ambiguity, as well as having self-confidence (Amabile, 1983; Davis, 1989; James & Mazerolle; 2002; Shally, 1995; Watton, 2003; Woodman & Schoenfeldt, 1989), and personality (Zhou & Shalley, 2003). Secondly is the situational factor, including organisational factors such as complex work and also supervision style (Amabile, 1988; 1996; Basu & Ray, 2009; Bommer & Jalajas, 2002; Sailer, 2011). These personal and situational factors will interact and result in creativity.

Work Design

The individual would be more motivated if he or she performs work tasks based on the level of interest in the tasks, and not because of the expected results (Deci & Ryan, 1985). It is motivation (internal) such as this that is sorely needed, as often emphasised by scholars like Amabile (1983) and Simon (1985).

Dovenbosch, van Eugen, and Verhagen (2005) claimed that the Job Characteristics model is one of the main theoretical principles in research related to work design at the individual level. The work design that was introduced by Hackman and Oldham (1980) has a direct relationship with internal motivation and creativity. Hackman and Oldham (1980) stated that a task will become more attractive and promote motivation, and thus enhance the performance and job satisfaction, when it inherently has the five dimensions of skill variety, task identity, task significance, autonomy, and feedback on achievement. These five dimensions are very closely related to the psychological effect as well as internal motivation that are experienced by employees (Oldham & Oldham, 1980).

All these dimensions measure and change work objectively, and thus it has the potential to motivate those who perform the task. Other than Hackman and Oldham (1980), scholars like Amabile (1988), and West and Farr (1990) had long established work design as an important contributor of internal motivation in the employee and creative performance at the workplace. Therefore, the first hypothesis that was formed for this research is:

H1: Work design has a significant positive relationship with creativity.
Personality

Many of the previous research efforts had focused on the direct relationship between personality factors, especially the Big-5 Personalities, with creativity and innovation. Studies by James and Mazerolle (2002), and Zhao and Oldham (2001) revealed that the Big-5 Personality is a major promoter of individual behaviour and performance.

In this research, the Big-5 Personality variable was chosen as a moderator because of the following reasons. The first reason is that several researchers, including Runco (2007), recommended that more research needs to be carried out in relation to the environment for facilitating creativity. Thus, several variables can be adopted as a moderator, which includes individual factors (where personality one of those highly recommended) that could moderate the effect toward the organisational environment.

Secondly, the use of the personality moderating variable would reveal new findings and understanding, both from the theoretical and practical perspectives, since this would be the first time it is used as a moderator. Thirdly, personality can have an influence on the perception of any relationship since it inherently exists in the mind and soul of the individual. Therefore, the hypothesis that can be formed for this aspect is as follows:

H2: Personality moderates the relationship between work design and creativity.

Leadership

Many of the previous studies looked into the direct relationship between the factor of Transformational Leadership, and creativity and innovation (Tierney & Farmer, 2002; Shin & Zhou, 2003; Zhou, 2003; De Jong & Hartong, 2007; Arendt, 2009; Haq et al., 2010; Wang & Rode, 2010).

In the context of this research, Transformational Leadership has been chosen as a moderator because of two reasons. Firstly, potentially new understanding can be developed because there had not been any previous investigations that look into the moderating effect on the relationship between any variable with creativity. Secondly, a leader that has Ecological Powers, as introduced by Cartwright (1965) in Yukl (2013), would be capable of directly and indirectly influencing the organisational environment. Therefore, the following is the developed hypothesis:

H3: Leadership moderates the relationship between work design and creativity.

Research Model

Based on the above literature review, the research model formed is as follows:
Research Method

This research is characteristically quantitative in nature, utilising a cross-sectional survey method performed in the natural work setting. Hypothesis testing was used to observe the relationship between work design with creativity, including the moderating effects of personality and leadership toward this relationship.

Sampling

The research population for this study involved individuals (researchers and non-researchers) from three agencies related to research in the Northern Peninsular area in Malaysia, which are located in the states of Kedah and Penang. The method used for selecting respondents was proportionate stratified random sampling. Since the total population was revealed to be as many as 270 individuals, the sufficient sampling number was calculated to be 158 respondents, which is in line with the table introduced by Krjcie and Morgan (1970) (as in Sekaran, 2003). As many as 62.7% of the respondents was among the research staff members and the rest of the 37.3% was non-research employees.

Research Instrument

Data was gathered using a questionnaire that was formed based on previous research instruments in the fields of creativity and innovation. The test items were divided into five sections, which were Section A – questions related to the respondent demography, Section B – questions related to creativity, Section C – questions related to work design, Section D – questions related to personality, and Section E – questions related to leadership.

Measurement

i. Creativity

The measurement for creativity consisted of 13 items, produced by Zhou and George (2001).

ii. Work Design

All items for measuring work design were directly adopted from Johanim, Daratul, and Khulida (2009), based on the Job Diagnosis Survey (JDS) that was initially introduced by Hackman and Oldham (1976).

iii. Leadership

Transformational leadership was measured using the 20 items adopted from the Multifactor Leadership Questionnaire (MLQ) Form 5X-Short (Bass & Avolio, 1997).

iv. Personality

As many as 50 items were used to measure personality, which were obtained from Yean (2009) that was originally based on the instrument generated by Goldberg (2001).

Data Analysis

The “Statistical Package for Social Science” (SPSS) version 19.0 was used for analysing the collected data. The correlational test was performed to observe the relationship as well as the influence of the work design variable on creativity. Meanwhile, the hierarchical regression analysis was carried out to reveal the moderating effects.
Reliability and Factor Analyses

i. Creativity

Factor analysis was performed on the creativity variable to reveal that the all underlying assumptions for the factor analysis had been met, with the KMO value of 0.895 and a significant Bartlett’s test of sphericity. The results of this test had shown that there is no item that needs to be removed. The Cronbach Alpha value was 0.922.

ii. Work Design

The factor analysis for the work design variable had resulted in the KMO value of 0.840 and the Bartlett’s test of sphericity is within the prescribed limits. The Cronbach Alpha value was 0.867.

iii. Leadership

The factor analysis on the leadership variable had given the KMO value of 0.932, and it was revealed that the Bartlett’s test of sphericity was significant. The Cronbach Alpha value was 0.952.

iv. Personality

The factor analysis on the personality variable had yielded a KMO value of 0.767, while the Bartlett’s test of sphericity was as expected. The Cronbach Alpha value was 0.826.

Research Results and Discussion

For the first objective of this research, it study outcome had shown that the level of creativity among workers in the research and development (R&D) sector in Malaysia, on the whole, is high, with a mean creativity score of 3.799. According to Hair, Black, Babin, Anderson, and Tatham (2006), a high level mean score would be between 3.76 and 5.00.

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Std Beta Model 1</th>
<th>Std Beta Model 2</th>
<th>Std Beta Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORK DESIGN</td>
<td>.524</td>
<td>.444</td>
<td>.997</td>
</tr>
<tr>
<td>Modifying Variable</td>
<td>.310</td>
<td>.884</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Personality Moderator Test on Relationship between Work Design and Creativity

The results of the performed hierarchical regression analysis are as follows:

1. The value of $R^2$ was 0.275, explaining 27.5% of the variation occurs on creativity by work design.
2. When the personality variable was inserted, the total variation that explained creativity increased to 36.4% (sig. $F = 0.00$). The B=0.310 value at $p<0.01$ showed that personality has a significant
influence on creativity. This shows that personality has a significant influence on creativity, and thus this is evidence that personality is a predictor that can enhance creativity.

3. When the interaction variable between work design and personality was inserted into the equation, it was revealed that the $R^2 = 0.367$ value showed that this interaction can explain the variation in creativity by as much as 36.7%.

In conclusion, the results of analysis gave a beta value reading that is not significant, representing the interaction between work design and personality (model 3) and the influence of personality on creativity that is significant (model 2). Therefore, this shows that personality has acted as a Pure Moderator on the relationship between work design and creativity, as recommended by Sharma, Durand, and Gur-Arie (1981).

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Std Beta Model 1</th>
<th>Std Beta Model 2</th>
<th>Std Beta Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORK DESIGN</td>
<td>.524</td>
<td>.486</td>
<td>1.110</td>
</tr>
<tr>
<td>Moderating Variable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEADERSHIP</td>
<td>-</td>
<td>.106</td>
<td>.826</td>
</tr>
<tr>
<td>Interaction Terms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WORK-DESIGN X LEADERSHIP</td>
<td>-</td>
<td>-</td>
<td>-1.112</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.275</td>
<td>.285</td>
<td>.290</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>.270</td>
<td>.275</td>
<td>.274</td>
</tr>
<tr>
<td>Change in $R^2$</td>
<td>.275</td>
<td>.010</td>
<td>.005</td>
</tr>
<tr>
<td>Significant Change F</td>
<td>.000</td>
<td>.169</td>
<td>.323</td>
</tr>
</tbody>
</table>

Table 2: Moderating Test of Leadership toward the Relationship between Work Design and Creativity

The results of the performed hierarchical regression analysis are as follows:

1. The $R^2$ value was 0.275 that explains 27.5% of the variation that occurs in the creativity variable as a result of work design.

2. When the leadership variable was inserted, the total variation that explains creativity increased to 28.5% (sig. F = 0.169). The value of B=0.106 showed that leadership has an influence that is not significant on creativity. This shows that leadership is not a predictor that can enhance creativity.

3. When the interaction variable between work design and leadership was inserted into the equation, it was observed that $R^2 = 0.290$, showing that this interaction is capable of explaining the variation of creativity by as much as 29.0%, which is an improvement of only 0.5%.

In conclusion, this analysis result gives a beta value that is not significant for the interaction between work design and leadership (model 3) and also the influence of leadership on creativity (model 2). Thus, this shows that the leadership variable does not behave as a moderator on the relationship between work design and creativity, as recommended by Sharma, Durand, and Gur-Arie (1981).

The correlation test results revealed that the work design variable had a significant relationship with creativity among workers. This was evident when the $r$ value was at 0.658, which can be considered strong if it refers to the interpretation recommended by Cohen (1988). Even though the correlation can be considered strong, it needs to be increased through the improvement of the five dimensions of work design. Aspects, such as skill variety, task identity, task significance, autonomy and freedom, and feedback, were found to be weakly instilled in the execution of daily work activities.

Meanwhile, the hierarchical regression analysis had revealed that personality gave a moderating effect on the relationship between work design and creativity, as can be demonstrated in Appendix A. Conversely, the hierarchical regression analysis had shown that the leadership variable did not have a moderating effect.
on the relationship between work design and personality, as shown in Appendix B. These findings are evidence that personal factors give a stronger effect on worker creativity. The elements of personality, spirit, attitude, as well as the values that have been instilled in the workers would naturally induce workers to become creative.

However, the situational aspects, which are matters external to the workers, had failed to encourage workers to become more creative. The leaders have been deemed to have failed in forming the company mission and vision among workers for facilitating creativity. These leaders were also observed to be lacking in charisma that would earn the worker respect, as well as making these leaders worker role models. Also, the leaders had failed to give sufficient attention to the individual workers in developing and realising their potential.

**Recommendations**

Several recommendations are presented here based on the results and discussion of this research, which are as follows:

1. The organisation leaders need to improve their leadership style and influence. Leadership is the main key to the success of any organisation (Nanos, 1992; Block, 1993; Yolk, 2013). This research had found that for all this time, the workers had not felt the leadership effect caused by their leaders. This is evidence that there exist a weakness of concern among the leaders of the organisation.

2. Self-improvement programmes need to be implemented more frequently in order to establish better workers instilled with the right attitude and values for the betterment of themselves and the organisation.

3. Work design needs to be constantly updated so that it can become a catalyst for internal motivation among workers.

**Conclusion**

This research had established that the level of worker creativity among staff in several research organisations in Malaysia is still at a level that is not that high. Steps need to be taken in order to improve this situation. Meanwhile, work design was revealed to have a significant relationship with creativity. The elements in work design also need to be enhanced so that its relationship with creativity becomes stronger. This research also found that personal factors have a greater influence on worker creativity as compared to situational factors. Action toward the development of workers and also the leadership quality needs to be implemented in order to enhance creativity and innovation of the nation in the future.

**References**


