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Assessing the Extent of Individual's Creativity: Pilot Assessment

Nur Ainatul Mardiah Mat Nawi*, Huda Hamidon, Salliza Md Radzi, Mohamad Rahimi Mohamad Rosman, Noor Arina Md Arifin, and Siti Aishah Mokhtar

College of Computing Informatics and Mathematics, Universiti Teknologi MARA Kelantan,18500, Machang Kelantan, Malaysia

Corresponding author's e-mail address: ainatulmardiah@uitm.edu.my

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ABSTRACT

Individual creativity plays a vital role in how the individuals approach and solve problems. The purpose of this pilot study is to investigate the relation between organizational culture and individual creativity in higher education institutions. The study is adopting quantitative research methodology. 30 academics completed on the online survey which consist of 6 sections. The research framework is based on four organizational culture that include adhocracy, market, clan, and hierarchy. In the study all four cultural dimensions have been reported to positively impact individual creativity. Cronbach alpha coefficients further supported the reliability coefficient of the instrument. One of the identified indicators, which is managing coordination is discovered to be unreliable as it resulted to a coefficient of 0.28. Thus, the item is omitted from the study. The findings of the study explore on the effect of organizational culture on individual creative behavior and its implications for higher learning institutions. It is recommended that more respondents should be included in future research study and future research should look at creativity in a variety of organizational settings.

INTRODUCTION

Creativity can be referred to as generating new, different, and useful ideas, products, or solutions. The concept of creativity is possible in the context of numerous disciplines that are related to learning, change, and decision-making, entrepreneurship. In other words, creativity can be described as one of the key elements that define innovation and thinking, which contributes to individual and social change. The individual's creativity has emerged as a key factor of innovation and development in both organizational settings and education environments. According to Anderson et al. (2014), in the organizational setting, being creative helps people to solve problems, stay adaptable, and keep the organization to remain competitive in today's fast-moving world. In line to this, studies by Litchfield et al. (2015) and Rumanti et al. (2023) highlight that individual creativity among the employees plays a key role in driving innovation

and staying competitive. Rumanti et al. (2023) further explained that when people are encouraged to think outside the box, it improves overall performance.

On the other hand, Beghetto and Kaufman (2014) in a study explain that creativity is valued in educational learning environments as a component of learning. The authors also added that individual creativity enables learners to think critically as well as improving their skills in generating new ideas. Similarly, Huang et al. (2021) and Sternfeld et al. (2024) mention that creativity is a practical knowledge for students to generate and implement new concepts. Therefore, the educational institutions must take efforts in stimulating innovation as a way of enhancing their competitiveness in today's environment. Studies in the recent past have shifted towards the objectives of creative thinking contexts developments.

Researches by Amabile and Pratt (2016) and Carmeli et al. (2013) verify that creativity is not an individual trait, but it is stimulated and moderated by organizational and cultural factors. Later research by Gazzaroli et al. (2019) extended the analysis towards the relationship between individual creativity and organizational culture. The researchers also further explored the influence of organizational culture on individual creative solutions.

RESEARCH MODEL

In developing the Research Model for this pilot assessment, we aim to explore the connection between organizational culture and individual creativity within Malaysian higher education institutions. The model is structured around four hypotheses, which form the foundation of the study as follows:

H1: Adhocracy culture has positively influenced individual creativity.
H2: Market culture has positively influenced individual creativity.
H3: Clan culture has positively influenced individual creativity.
H4: Hierarchy culture has positively influenced individual creativity.

To clearly examine the connections mentioned in the hypotheses, this study has defined these research objectives:

1.To investigate the relationship between adhocracy culture and individual creativity.
2. To investigate the relationship between market culture and individual creativity.
3. To investigate the relationship between clan culture and individual creativity.
4. To investigate the relationship between hierarchy culture and individual creativity.

These objectives collectively contribute to understanding the broader research question: Does organizational culture positively affect individual creativity?

The framework can be visually represented in Figure 1. This model outlines the suggested connections between each type of organizational culture and how it may affect individual creativity. It breaks down how different cultures like adhocracy, clan, market, and hierarchy can shape the way people express their creativity. By examining these relationships, we can better understand the impact that the work environment has on an individual's ability to think creatively and come up with new ideas.

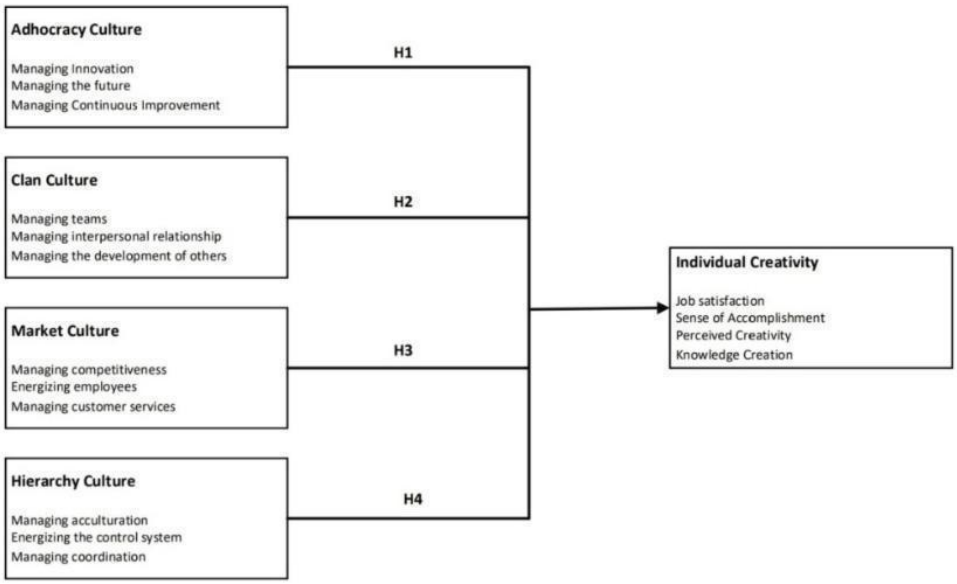

Figure 1: Research Framework

This research model sets the stage for a comprehensive exploration of how different organizational cultures influence individual creativity. The findings from this study will improve academic knowledge and provide useful insights for organization leaders who want to create environments that encourage creativity and innovation.

METHODOLOGY

This pilot study aimed to assess individual creativity in Malaysia educational institutions and further validate an instrument designed for this area of study. The primary goal was to identify potential challenges and refine the procedures and instrument before embarking on a more extensive research effort. The study utilized a quantitative approach to gather insights from respondents on five key dimensions: Adhocracy Culture: examines how innovation and risk-taking are promoted within an organization, Clan Culture: assesses the extent to which collaboration, teamwork, and a supportive environment are encouraged, Market Culture: evaluates how performance, competition, and goal achievement influence organizational behaviour, Hierarchy Culture: looks into the effects of structured procedures, control mechanisms, and stability within the organization, Individual Creativity: measures the level of individual creative output and the support it receives within the educational environment.

To help evaluate the effectiveness of the instrument in measuring individual creativity within an educational setting in Malaysia context, 30 academics from higher education institutions in Malaysia participated. Data were collected over three weeks using a structured questionnaire with 73 items adapted from similar studies (Brayfield & Rothe, 1951; Cameron, 2011; Indriartiningtias et al., 2019; Kern et al., 2014; McPhail et al., 2015) covering the five dimensions mentioned above. The quantitative data were then analysed using SPSS and to ensure the validity of the results and minimize biases related to data collection, Harman's Single Factor Test and Reliability Analysis were performed, confirming that the instrument consistently and reliably measured the five dimensions. Ethical approval for this pilot study was granted by

the UiTM Research Ethics Committee (REC/04/2024 (ST/MR/63)), ensuring that the design and application of the instrument were both ethical and rigorous.

FINDINGS

Table 1 shows the demographic details of the study. A total of 30 respondents were involved in in this pilot study analysis – indicating a sufficient minimum number of respondents based on central limit theorem. Remarkably, this study managed to gather an equal number of respondents in relation to participant's gender – with a total of 15 respondents for each gender (Male: N=15 or 50%; Female: N=15 or 50%). In relation to respondent's age, the majority of respondents are from the age of 36–40 years old (N=15 or 60%), followed by 31–35 years old (N=7 or 23.3%), 46-50 years (N=3 or 10%), and 24-30 years (N=2 or 6.7%). On the other hand, analysis of respondent's qualification indicates that most of the respondents have at least a master's degree (N=21 or 70%), while on 9 respondents with a doctorate degree (N=9 or 30%). In relation to experience, the majority of respondents have more than 11 years of experience (N=16 or 53.4%) while others possess experience of 10 years and below (N=14 or 46.7%). In response to grade increment trends, most respondents agreed that it took them less than 5 years (N=16 or 53.3%), followed by 6-10 years (N=9 or 30%), and 10 to 15 years (N=5 or 16.7). On the other hand, the last indicator of subordinate reporting shows that most respondents are not involved with management (N=19 or 63.3%), while the rest supervise a total of 1 to 3 subordinates (N=7 or 23.3%), 4 to 6 subordinates (N=2 or 6.7%), and 7 to 9 subordinates (N=2 or 6.7%).

Table 1: Demographic

Item	Sub-Item	Frequency	Percentage
Gender	Male	15	50%
	Female	15	50%
Age	24 - 30 years	2	6.7
	31–35 years old	7	23.3
	36–40 years old	18	60.0
	46–50 years old	3	10.0
Qualification	Master's Degree	21	70.0
	Doctorate	9	30.0
Academic Position	Lecturer	17	56.7
	Senior Lecturer	12	40.0
	Associate Professor	1	3.3
Experience	1 - 5 years	9	30.0
	6 - 10 years	5	16.7
	11 - 15 years	11	36.7
	16 - 20 years	5	16.7
Grade Increment	Less than 5 years	16	53.3
	6 - 10 years	9	30.0
	10 - 15 years	5	16.7
Subordinate Reporting	0	19	63.3
	1 - 3	7	23.3
	4 - 6	2	6.7
	7 - 9	2	6.7

Harmann-Single Factor Test

Harman's Single Factor Test was conducted to determine the issue of common method bias (CMB). According to Podsakoff and Organ (1986), CMB occurs whenever the relationship between variables are subseptible to biases due to several factors *same method factor). The following Table 2 shows the Harman's Single Factor Test of the study. The result indicates that a single factor accounted for 42.6%, indicating that the instrument is free from common method bias.

Table 2: Common Method Bias

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	31.068	42.559	42.559	31.068	42.559	42.559
2	8.791	12.043	54.602			
3	6.727	9.216	63.818			
4	4.209	5.765	69.583			
5	3.643	4.990	74.573			
6	3.128	4.284	78.858			
7	2.703	3.703	82.561			
8	2.530	3.465	86.026			
9	2.009	2.752	88.778			
10	1.641	2.248	91.026			
11	1.476	2.023	93.049			
12	1.199	1.642	94.691			
13	0.903	1.237	95.928			
14	0.703	0.963	96.891			
15	0.562	0.770	97.661			
16	0.472	0.647	98.308			
17	0.326	0.447	98.754			
18	0.306	0.419	99.174			
19	0.229	0.314	99.488			
20	0.155	0.213	99.700			
21	0.077	0.105	99.805			
22	0.065	0.089	99.895			
23	0.056	0.076	99.971			
24	0.021	0.029	100.000			
25	3.461E-15	4.741E-15	100.000			
26	2.816E-15	3.858E-15	100.000			
27	2.132E-15	2.921E-15	100.000			
28	1.856E-15	2.542E-15	100.000			
29	1.804E-15	2.472E-15	100.000			
30	1.705E-15	2.335E-15	100.000			
31	1.677E-15	2.297E-15	100.000			

32	1.559E-15	2.136E-15	100.000			
33	1.467E-15	2.010E-15	100.000			
34	1.203E-15	1.648E-15	100.000			
35	1.108E-15	1.517E-15	100.000			
36	1.003E-15	1.373E-15	100.000			
37	9.299E-16	1.274E-15	100.000			
38	8.059E-16	1.104E-15	100.000			
39	7.777E-16	1.065E-15	100.000			
40	7.051E-16	9.659E-16	100.000			
41	6.100E-16	8.356E-16	100.000			
42	5.526E-16	7.570E-16	100.000			
43	4.676E-16	6.406E-16	100.000			
44	3.886E-16	5.323E-16	100.000			
45	3.333E-16	4.566E-16	100.000			
46	2.676E-16	3.665E-16	100.000			
47	1.887E-16	2.584E-16	100.000			
48	1.217E-16	1.668E-16	100.000			
49	7.313E-17	1.002E-16	100.000			
50	-2.240E-17	-3.068E-17	100.000			
51	-5.712E-17	-7.825E-17	100.000			
52	-6.023E-17	-8.251E-17	100.000			
53	-1.796E-16	-2.460E-16	100.000			
54	-2.216E-16	-3.036E-16	100.000			
55	-2.508E-16	-3.435E-16	100.000			
56	-4.368E-16	-5.984E-16	100.000			
57	-5.303E-16	-7.264E-16	100.000			
58	-5.724E-16	-7.841E-16	100.000			
59	-6.283E-16	-8.607E-16	100.000			
60	-7.067E-16	-9.681E-16	100.000			
61	-8.208E-16	-1.124E-15	100.000			
62	-9.226E-16	-1.264E-15	100.000			
63	-1.071E-15	-1.467E-15	100.000			
64	-1.113E-15	-1.524E-15	100.000			
65	-1.162E-15	-1.592E-15	100.000			
66	-1.213E-15	-1.662E-15	100.000			
67	-1.314E-15	-1.800E-15	100.000			
68	-1.569E-15	-2.150E-15	100.000			
69	-1.734E-15	-2.375E-15	100.000			
70	-1.835E-15	-2.513E-15	100.000			
71	-1.952E-15	-2.674E-15	100.000			
72	-3.013E-15	-4.128E-15	100.000			

73	-5.295E-15	-7.254E-15	100.000			

Reliability Analysis

Reliability analysis was conducted to determine the reliability of the instrument. The following table 3 shows the reliability analysis of the study. One indicator was dropped; Managing coordination was found to have a negative reliability assessment (-0.340). Once dropped, the final instrument shows a Cronbach's alpha value ranging from 0.729 to 0.981; indicating strong instrument reliability as indicated by Nunnally (1978).

Table 3: Reliability Analysis

Dimension	Variable	Number of Items	Cronbach's Alpha
Adhocracy Culture	Managing Innovation	5	0.755
	Managing the future	5	0.884
	Managing Continuous Improvement	4	0.883
Clan Culture	Managing teams	4	0.845
	Managing interpersonal relationship	5	0.729
	Managing the development of others	5	0.894
Market Culture	Managing competitiveness	3	0.829
	Energizing employees	5	0.923
	Managing customer service	5	0.811
Hierarchy Culture	Managing acculturation	4	0.981
	Managing the control system	3	0.865
	Managing coordination	2	-0.340
Individual Creativity	Job Satisfaction	6	0.897
	Sense of Accomplishment	7	0.927
	Perceived Creativity	6	0.924
	Knowledge Creation	4	0.859

DISCUSSION

This study investigated whether there was a significant relationship between organizational culture and individual creativity. A pilot study was implemented among academicians in higher educational institution in Malaysia. The survey was completed and 30 academicians participated to our survey implementation. Creativity and innovation are critically important for organizations to survive in today's business environments. According to Yeh-Yun Lin and Liu (2012), the different culture in organizations that make perceived innovation has not fully been affected by the freedom, conservatism, organizational internal conflict, and also workload pressure. A creative employee will generate new ideas that help the organizations to produce products, practices or methods. In this study, all of the hypotheses are validated by current study. The results demonstrated that individual creativity had significant effects on determinant namely adhocracy, clan, market and hierarchy culture. Adhocracy, clan, market and hierarchy culture has positively influenced individual creativity. The result of Cronbach's α tests showed that the scales in the survey had a high reliability. According to Nunnally (1978) the result for instruments tested must be more 0.7 and above as it indicating the strong reliability.

However, one indicator was dropped which is managing coordination was found to have a negative reliability (-0.340) and it should be removed. This can be assuming that variable are not important to the context of our study in local higher learning institutions but it's seem important to the context of other higher learning institution abroad. Study by Ramachandran et al. (2011) found that, one similarity between the public and private HEIs, although in different degrees, is the tendency to stress on hierarchical culture. Chandler et al. (2017) in their study of HEI in Hungary discover that staff are not comfortable in reinforcing

hierarchical values and favour flexibility and discretion over stability and control. Trivellas and Dargenidou (2009) found out that Employees at TEI of Larissa are unlikely to recognize problems as they come up due to their limited understanding of the overall process as hierarchy cultures, coordination and problem-resolution is assigned to higher levels of hierarchy.

We access how market has positively influenced individual creativity by fulfilling the three instruments for each namely managing competitiveness, employees and managing customer service. It was found out that there was a significant relationship between market culture and individual creativity as all of market culture dimensions had high reliability and they had positive relationships between dimensions of individual creativity. The study by Chandler et al. (2017) shown that the state is controlling the HEIs in Hungary are being controlled by the state as the pushed towards a market-based economy such as those in student funding and reduced state financing of the institutions. Cameron (1991) in their research found that various group of local universities are more successful in their interactions with external environment as they are very dominant in market culture. Bamber and Elezi (2020) stated that market culture is indicated by most respondents as the culture which best fits and therefore indicates UK universities are results oriented with a focus on market competition and market forces.

According to Khurosani (2013), adhocracy culture support which is suitably used in this study is the flexible working schedule, the improvement of continuous working system and being creative in searching solution. Important of adhocracy culture support to improve working creativity through the three dimensions namely managing innovation, managing the future and managing continuous improvement. An adhocracy culture is an organization characterized by dynamism, entrepreneurship, aggressiveness, and risk taking, where top management is innovative and entrepreneurial, and employees are adventurous, innovative, free, and self-expressive. It emphasizes being at the forefront of the times, accessing new resources, meeting new challenges, trying new things, and seeking new opportunities. It is a cultural type that sets the standard for success by inventing unique, innovative, and leading-edge products and technologies (Hung et al., 2022).

The results of the findings prove the preference for applying the three instruments for a clan culture. Clan culture has positively influenced individual creativity by fulfilling the three instruments namely managing teams, managing interpersonal relationship and managing the development of others. According to Hung et al. (2022), clan culture is a type of culture that is considered by humanistic and family oriented organization, where the top manager is able to take the creativity to lead, support, and attention for subordinates, emphasizing teamwork, consultation, and member contribution, while underlining faithfulness, mutual trust, and obligation, emphasizing human resources development and openness, and using human resources, teamwork, employee commitment, and concern for employee development as the criteria for success. Rohim and Budhiasa (2019) stated that clan culture is a pure moderation variable that strengthens the relationship between compensation and knowledge sharing and also at the same time give impact to individual creativity. The findings from the study by Chege et al. (2022) indicated that clan culture influenced universities' performance and showed the relationship between clan culture and universities performance significant. Clan culture was significantly associated with research output, satisfactory university ranking, student placement and graduation rate. Hence, managers support the clan culture to achieve the goals set by an organization effectively and employees need to be supported by managers by all means together with training needs and learning chances, creativity and innovation.

FUTURE RECOMMENDATIONS AND CONCLUSION

In order to nurturing the creativity culture at the organizational level, it is important for the organization as well as the academicians to experiment with new idea, creative in solve the problem and always make a contribution to the organization as the individual creativity is a critical endeavor in higher educational institutions. Experts from various disciplines highlight the importance of paying significant attention to

nurturing creative capabilities across different educational levels, with particular highlighting on higher education (de Alencar & de Oliveira, 2016).

There are limitations that need to be addressed in future research. First, the sample size in this study was small, and further research could involve larger samples to enhance the generalizability of the findings. The respondents of the study are the academicians from the higher education institution in Malaysia. The future studies should focus on wider participants including the industry in order to investigate the individual's creativity in the organization. Another limitation is that this study only focuses on organizational culture which has been divided into four distinguished quadrants that are clan, adhocracy, market, and hierarchy. Future research should continue to improve the model and examine the individual creativity in organizations across other samples of interest.

In conclusion, future researchers should continue to examine the individual creativity in organizations across other samples of interest. For example, studies could be designed to directly assess the knowledge creation towards the individual creativity in organization. Through studies such as these future researchers may be able to continue to aid organizational leaders in identifying ways to unlock creative potential in order to maximize organizational effectiveness in today's turbulent and highly competitive business environments.

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