CREATIVITY-RELEVANT PERSONAL CHARACTERISTICS AMONG INDONESIAN CREATIVE WORKERS

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ABSTRACT

The study aims to identify Creativity-relevant Personal Characteristics among creative workers in Indonesia's creative industry. Identification of the constituent elements of the nature of the changes needs to be measured. Researchers have advocated replacing creativity-relevant personal characteristics based on the five-factor model to investigate how individual differences stimulate creativity. This study presents data supporting reliability (internal consistency) and validity (criterion and construct) of the instrument. Validity of the instrument is based on the content validity involving art and design experts. The 220 creative workers from several creative industry firms in Indonesia participated as samples in this research. Results of a factor analysis indicated a five factor solution of creative characteristics and behavior. Discussion of findings and the most important ways in which individuals differ in their enduring emotional, interpersonal, experiential, attitudinal, and motivational styles for stimulating creativity are presented.

Keywords: creative behavior, creative-relevant personal characteristics, factor analysis, the big five factor personality

ABSTRAK

Penelitian bertujuan untuk mengidentifikasi karakteristik pribadi kreatif yang relevan di kalangan pekerja kreatif di industri kreatif Indonesia. Identifikasi unsur konstituen dari sifat perubahan perlu untuk diukur. Para peneliti menganjurkan mengganti karakteristik pribadi kreatif yang relevan berdasarkan pada model lima faktor untuk menyelidiki bagaimana perbedaan individu merangsang kreativitas. Penelitian menyajikan data yang mendukung reliabilitas (konsistensi internal) dan validitas (kriteria dan konstruksi) instrumen. Validitas instrumen didasarkan pada validitas isi yang melibatkan seni dan ahli desain. Dua ratus dua puluh pekerja kreatif dari beberapa perusahaan industri kreatif di Indonesia berpartisipasi sebagai sampel dalam penelitian ini. Hasil analisis faktor menunjukkan solusi lima faktor karakteristik dan perilaku kreatif. Penelitian menyampaikan pembahasan temuan dan cara beda individu dalam bertahan secara emosional, interpersonal, pengalaman, sikap, dan gaya motivasi untuk merangsang kreativitas.

Kata kunci: perilaku kreatif, karakteristik pribadi kreatif yang relevan, analisis faktor, lima besar faktor kepribadian

INTRODUCTION

The capacity of individuals to create innovations is a crucial element of organizational innovation. However, how to enhance creativity is difficult to answer. The literature on this subject is very large and beyond our capacity to read and integrate. This paper is therefore a reflection of what we have been able to identify individual characteristics that stimulate creativity through an empirical study on creative workers in Indonesia's creative industry.

Globalization and competition have produced new challenges for business. One of the reactions is that many corporations have 'discovered' creativity. According to Munroe (1995), 70 per cent of the cost of a production is determined by its design, so that the creative design can lead to substantial savings. As a result, creativity training and learning for workers is becoming widespread (Clapham, 1997; Thakray, 1995). When creativity is properly employed, carefully evaluated, skillfully managed and soundly implemented it is a key to business success. This is interesting to remind us that it is not just in the output that creativity should be assessed but also the input, the process and perspectives that are brought to unravel creative thinking and execution.

To be competitive in the global market, organizations must continuously develop innovative and high-quality products and services, plus deliver them on time and at a lower cost than their competitors. Therefore, today's employees are required to be creative, yet also conform to rules and standards, and work efficiently to meet time and budget constraints. Creativity is often perceived to be incongruent with conformity and attention to detail (Kirton, 1976; Kirton & De Ciantis, 1987; Levitt, 2002; Rogers, 1983; Mumford & Gustafson, 1988; Schuler & Jackson, 1987; Amabile & Gryskiewicz, 1988). Yet, these latter two characteristics would appear to be the human characteristics that ensure that employees maintain high quality standards. Hence, creativity per se may be dysfunctional to performance outcomes that require conformity and attention to detail.

Several authors have examined the relationship among individuals in the workplace. Theresa Amabile has produced the most empirical research, exploring both personal characteristics and the interaction among people in the work environment. Other researchers considered the interaction process among workers and their personal and combined characteristics (Setiadi, Boediprasetya, & Wahdiaman, 2012; Hoban, 2002). Some authors considered the way groups interact to be the most important factor. One element, personal motivation, received a good deal of attention.

Amabile and Gryskiewicz (1988) identified the factors that promoted problem solving or personal creativity by studying a group of 120 innovators working in research and development. Although one factor, qualities of the group, assisted creativity, other group factors were not shown to do so. Personal characteristics were related to creativity, including specific personality traits, self motivation, special cognitive abilities, a risk orientation, diverse experience, expertise in the area, social skill, brilliance and naiveté (Amabile & Gryskiewicz, 1988). The qualities of problem solvers that inhibited creativity, on the other hand, were lack of motivation (30%), unskilled (24%), inflexible (22%), externally motivated (14%), and socially unskilled (7%) (Amabile & Gryskiewicz, 1988). Individual creativity was enhanced, in other words, by domain relevant skills, creativity-relevant skills and intrinsic task motivation.

The study was conducted because of the phenomenon creative workers' performance in Indonesia creative industries are not identified in term of its mindset, attitude, behavior, and act in the realization of creative works. Therefore, the identification of the constituent elements of the nature of the changes needs to be measured. Several previous studies have been initiated when we conduct a study on identification of the constituent elements of the nature of change (change of DNA) in the establishment of ways and mindset of business students (Setiadi, 2009). Similarly, the results of

Wahdiaman's study (2009) showed that a series of visual expression to grow in media art is always based on the reality of space and time. Both of these studies provide the inspiration for this study to determine the factors that encourages creativity and creative industries. Based on Horng and Lin (2009), and Setiadi, Boediprasetya and Wahdiaman's studies (2012), the study was conducted. The results are expected to obtain a clearer description of the identification of Creativity-relevant Personal Characteristics among creative workers in Indonesia's creative industry.

Creativity is the personal characteristic that is most clearly associated with innovation. Creativity is defined as the production of novel ideas that are useful and appropriate to a given situation (Amabile, 1983). A large body of literature has focused on identifying the personal characteristics, cognitive styles, and other attributes associated with creative achievement (see Kirton, 1976; Amabile, 1983; Scott & Bruce, 1994; Woodman, Sawyer, & Griffin, 1993; Oldham & Cummings, 1996; Tierney, Farmer, & Graen, 1999). Personality theorists have offered hundreds of candidates and for decades factor analysts attempted to bring order to the resulting confusion by factoring personality scales. Traits are consistent patterns of thoughts, feelings, or actions that distinguish people from one another. Traits are basis tendencies that remain stable across the life span, but characteristic behavior can change considerably through adaptive processes. A trait is an internal characteristic that corresponds to an extreme position on a behavioral dimension. There have been different theoretical perspectives in the field of personality psychology over the years including human motivation, the whole person, and individual differences. The Big Five falls under the perspective of individual differences.

Creativity and Personality

The empirical work of the past 15 years on the personality characteristics of creative people brought few surprises. In general, a fairly stable set of core characteristics (e.g. high valuation of esthetic qualities in experience, broad interests, attraction to complexity, high energy, independence of judgment, autonomy, intuition, self-confidence, ability to resolve antinomies or to accommodate apparently opposite or conflicting traits in one's self-concept, and, finally, a firm sense of self as "creative") continued to emerge as correlates of creative achievement and activity in many domains.

One manifestation of this apparent emergence of core characteristics was the development of several empirically keyed "creative personality" scales for Gough's Adjective Check List (Gough, 1979). Reasonably encouraging evidence of the construct validity of these scales has subsequently emerged (Domino, 1974). A 5-year follow-up (Schaefer 1972c) has demonstrated the temporal stability of one of these scales, and studies (Harrington, 1975) have revealed very high inter-scale correlations. The magnitude of these correlations (typically in the .70s and .80s after statistical removal of general adjective-endorsing tendencies) establishes the existence of a set of core characteristics associated with creative achievement and activity in a fairly wide range of domains. The adjectives in the Composite Creative Personality scale (Harrington, 1975) provide a good sense of these scales: active, alert, ambitious, argumentative, artistic, assertive, capable, clear thinking, clever, complicated, confident, curious, cynical, demanding, egotistical, energetic, enthusiastic, hurried, idealistic, imaginative, impulsive, independent, individualistic, ingenious, insightful, intelligent, interests wide, inventive, original, practical, quick, rebellious, reflective, resourceful, self-confident, sensitive, sharpwited, spontaneous, unconventional, versatile and not conventional and not inhibited.

Personality Factors Determination

The Big Five represents taxonomy (classification system) of traits that some personality psychologists suggest capture the essence of individual differences in personality. These traits were arrived at through factor analysis studies. Factor analysis is a technique generally done with the use of computers to determine meaningful relationships and patterns in behavioral data. You begin with a large number of behavioral variables. The computer finds relationships or natural connections where

variables are maximally correlated with one another and minimally correlated with other variables, and then groups the data accordingly. After this process has been done many times a pattern appears of relationships or certain factors that capture the essence of all of the data. Such a process was used to determine the Big Five Personality factors. Many researchers tested factors other than the Big Five and found the Big Five to be the only consistently reliable factors.

Strict trait personality psychologists go so far as to say our behaviour is really determined by these internal traits, giving the situation a small role in determining behaviour. In other words, these traits lead to an individual acting a certain way in a given situation. Allport, Norman and Cattell (in Pervin & John, 1999) were influential in formulating this taxonomy which was later refined. Allport compiled a list of 4500 traits. Cattell reduced this list to 35 traits. Others continued to analyze these factors and found congruence with self- ratings, ratings by peers and ratings by psychological staff that eventually became the Big Five factors. The Big Five factors are: extraversion vs. introversion; agreeableness vs. antagonism; conscientiousness vs. undirectedness; neuroticism vs. emotional stability; openness to experience vs. not open to experience.

METHOD

This study used an instrument that is prepared to evaluate the performance of creative work developed by the research team. This instrument is a self-assessment version developed from the results of content validity of the experts and actors in the creative industry sub-sectors under review. The process of data analysis performed using the software package SPSS for windows. Factor analysis conducted to explore the components that can represent a set of variables under study. Design factor analysis conducted through the steps of: (a) determining the correlation between variables and (b) the selection of variables, sample size, and measurement.

Analyzed dimensions are important factors perceived by respondents. To reduce these factors and predict appropriateness done through the method of common factor analysis, a method that latent factors are not determined in advance (Kim & Mueller, 1978). This method allowed data to cluster itself into a number of factors (variables). In addition, the reduction factors are also considered statistical criteria are commonly done in factor analysis, namely, the variance and *Eigen-value* criteria of each factor (Hair, Black, Babin, Anderson, & Tatham, 2006).

Collecting data is a part of activities on the recent research. Due to time constraint, convenience sampling was employed. The 220 creative workers from several creative industry firms in Indonesia have participated as samples in this research. Questionnaires and rating-forms were distributed through the "put and pick up system" to the potential respondents, and they were instructed to put the completed questionnaire in a return envelope addressed to researcher.

RESULTS AND DISCUSSION

To identify people characteristics and creative behaviour among Indonesian creative workers, the instrument has been prepared. This instrument is a self-assessment version developed by Setiadi, Boediprasetya and Wahdiaman (2011). Validity of the instrument is based on the content validity involving art and design experts, namely Prof. Permadi Tabrani, Rudy Farid, Boediprasetya and Wahdiaman, when the Focus Group discussion was held. Table 1 presents the results of measuring the adequacy of the sample that demonstrated the value of KMO and Bartlett's Test (0.737) as a significant value for 0.000.

Table 1 The Value of KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.737
Bartlett's Test of Sphericity	Approx. Chi-Square	2975.044
	df	1035
	Sig.	.000

Table 2 presents reliability test through the testing of internal consistency Cronbach's alphas (Cronbach, 1951) for each group based on gender. In this reliability testing, included test-retest reliability and mean inter-item correlations. Results shows that all dimensions of the measurement characteristics of creative people for male is reliable (above 0.60), except for the dimension of Openness to experience (0.44). While for female showed a somewhat different result, namely the dimension of Openness to experience and Agreeableness showed results of internal reliability test did not consistent. Results of reliability testing through the inter-item correlations showed that only Neuroticism and Conscientiousness dimensions that have a high correlation, both for male and female.

Table 2 Internal Consistency Reliabilities (Cronbach's alpha),
Mean inter-item Correlations Based on Gender

Personal Characteristics	Reliability (internal consistency)		Mean inter-item correlation	
	Male	*Female*	*Male*	*Female*
Neuroticism	0.82	0.83	0.28	0.28
Extraversion	0.63	0.70	0.14	0.18
Openness to experience	0.44	0.56	0.06	0.09
Agreeableness	0.64	0.44	0.14	0.07
Conscientiousness	0.81	0.81	0.27	0.27

*$p<0.1$; **$p<0.05$; ***$p<0.01$(2-tailed)

Results of extraction factor in term of the creative nature have been grouped into five factors (Table 3). Twenty seven characteristics have been identified as a measure of the behavioral characteristics of creative people who are useful to determine which of them to support the performance of creative work and which do not encourage the performance of creative people.

Table 3 The results of Factor Extraction

Personal Characteristics items	Component				
	1	2	3	4	5
tension ,	**0.75**	-0.08	-0.06	-0.01	-0.09
anxiety,	**-0.63**	0.07	-0.20	0.07	0.22
inferior,	**0.59**	-0.08	-0.05	0.05	0.21
ashamed,	**0.56**	-0.06	-0.20	-0.25	0.09
worry,	**0.55**	0.05	-0.13	-0.10	-0.27
sad,	**-0.54**	0.07	-0.08	0.12	0.17

Table 3 The results of Factor Extraction *(continued)*

Personal Characteristics items	Component				
	1	2	3	4	5
worthless,	**0.53**	-0.05	-0.23	-0.10	-0.10
easy to stress ,	**0.52**	-0.18	-0.18	0.04	-0.06
helplessness,	**0.33**	-0.24	0.16	-0.14	-0.03
excited,	-0.14	**0.79**	0.15	-0.04	0.09
sociable,	-0.06	**0.65**	0.11	-0.02	0.02
easy to laugh,	-0.02	**0.61**	-0.07	-0.06	0.01
gregarious,	0.04	**0.60**	-0.04	0.32	0.02
active,	-0.25	**0.60**	0.14	-0.27	-0.04
happy,	-0.24	**0.56**	0.13	0.11	0.07
fun	-0.16	**0.40**	-0.01	0.13	0.09
loneliness	0.21	**0.26**	-0.11	-0.19	0.11
clever use of time,	-0.05	-0.13	**0.68**	-0.04	-0.05
works well organised,	-0.02	-0.09	**0.63**	0.15	0.03
systematic	0.14	-0.02	**-0.56**	-0.01	0.20
responsibility	0.03	0.13	**0.52**	0.23	0.26
Productive	-0.32	0.19	**0.50**	-0.23	0.15
has a target	-0.21	0.16	**0.49**	0.01	0.36
work hard	-0.01	0.32	**0.48**	-0.15	0.17
neat and net	0.12	0.05	**0.46**	0.27	-0.04
do not waste time	-0.26	-0.04	**0.43**	0.17	-0.25
commit	-0.23	0.09	**0.42**	-0.24	0.33
honest	-0.13	0.00	-0.00	**0.61**	0.02
cynical and skeptical	-0.17	0.16	0.13	**0.54**	-0.12
selfish	-0.11	0.28	0.22	**0.48**	-0.00
excessive	-0.16	0.42	-0.02	**-0.47**	-0.08
cold	-0.17	0.29	-0.24	**0.47**	-0.30
quarrelsome	-0.15	-0.12	0.05	**0.46**	0.04
suspicious	-0.28	0.05	0.02	**0.39**	-0.19
likes to work together	0.19	0.25	-0.12	**0.36**	0.23
polite	0.09	0.24	0.31	**0.35**	0.08
empathy	-0.03	-0.14	0.00	**0.32**	-0.06
egotistical	-0.19	0.03	0.24	**0.31**	-0.00
theoretical	-0.16	-0.02	0.02	-0.30	**0.59**
pride	0.06	0.02	0.13	-0.02	**0.55**
irritability	0.03	0.24	-0.10	-0.10	**0.45**
sensitive	0.01	0.28	0.11	0.17	**0.38**
curiosity	-0.17	0.13	0.19	-0.32	**0.36**
speculation	0.16	0.12	0.05	-0.07	**-0.32**
theoretical	0.23	-0.06	0.06	-0.02	**-0.29**

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization a Rotation converged in 7 iterations

These results show that the elements were grouped according to the NEO-FFI personality dimensions of Costa and McCrae's study (Costa & McCrae, 1992). Therefore, the first factor can be called as Neuroticism factor, because it describes the item relating to the attributes of emotional stability. It means that the low levels of neuroticism shows the individual's ability to control his emotions, for example, calm attitude in solving problems, tough, not easily give up, self-conscious and anxious. The second factor is Extraversion. This factor represents the attributes associated with the characteristics of someone who is outgoing and assertive, friendly, warm, and always think positive. The third factor is Conscientiousness. This factor represents the attributes associated with more typical of someone who is meticulous, responsible and hardworking or industrious, obedient, orderly, and

disciplined. The fourth factor is Agreeableness as representing the attributes associated with the typical people you trust and polite, willing to sacrifice for the benefit of others, and rather blunt. Finally, the fifth factor is Openness to experience. This factor represents the attributes associated with creative thinking, sensitive, a lot of ideas, and artistic. Element that has the highest factor loading in each group shows the magnitude of the contribution element in determining the creative nature of creative workers. These elements are enthusiastic, low level in depression, self-discipline, trust and ideas.

Table 4 presents the mean value and standard deviation of each measurement of the characteristic dimensions of creative workers. These measurements were divided into 2 groups based on gender. Levene's test was conducted to examine whether there are differences in each dimension of the measurement of creative workers' personal characteristics based on gender differences. Results showed that there was no significant difference between these two groups of samples when tested each dimensional measurement of creative workers' characteristics.

Table 4 The Mean Value and Standard Deviation of Each Dimension
of Personal Characteristics Measurement of Creative Workers Based on Gender

Personality dimensions	Male		Female		t-test
	Mean	SD	Mean	SD	
Neuroticism	2.88	0.81	3.09	0.77	-0.88
Extraversion	3.43	0.56	3.41	0.60	0.13
Conscientiousness	3.26	0.31	3.19	0.41	0.67
Agreeableness	3.15	0.45	3.36	0.54	-1.42
Openness to experience	3.57	0.53	3.68	0.51	-0.64
n	132		88		220

*P<0.1; **P<0.05; ***P<0.01(2-TAILED)

Everyone has the potential to be creative. There are even things that an individual can do to enhance their creativity. For every positive there is a negative and, there are also acts and ideals that can hinder an individual's creativity. On the other hand, there are some of the obstacles that one must overcome in order to be creative. The most common does not believe oneself to be creative. If a person believes themselves to be lacking in creativity they will not pursue creative ways of expressing themselves. Also, if an individual is too busy or involved in a problem they will not be able to find time to focus on a creative endeavor. Individuals that do not allow enough time for relaxation usually will be stressed and their minds will not be able to think creatively because it will be absorbed in the problem at hand.

Hoban [12] further suggests that there are some aspects that hinder creativity within a person that are related to self-esteem. Examples of such issues are a "fear of criticism and lack of confidence." Self-criticism is another major issue that hinders creativity. If an individual is always telling themselves that others will not like something and that it isn't good enough that is what the result will be. Whenever they present their creative endeavor they will not present it with confidence and enthusiasm. People must believe in themselves and their ideas in order for others to believe in them. After the individual has received the negative response there is a good chance that they will not pursue it or further creative endeavors of that sort.

Each person has their own potential. One's potential can be derived from the innate and experience. Even if a person has the innate potential for high levels of creativity, not necessarily that it could realize its potential. Especially when its work was poor stimulation, such as authoritarian boss, does not provide the freedom to subordinates, and never listen to others' opinions. During the period of

measurement development, implementation of these measures provide a more clear identification of the constituent elements of the nature of change (Change of DNA) of workers in creative industries.

The experimental results of this measurement is useful in mapping the potential and creative performance on existing workers in Indonesia's creative industry. Thus, creative workers in the creative industries can be prepared with the provision of excellence in the creative ability to analyze problems, good communication and confidence. In the work context, the creative worker is a strategic focus. The success of the work rely on creative workers. However, it should be realized that the workers have the potential diversity and respective capabilities. They are unique with all the potential and capacity. This uniqueness cannot be uniform. Uniqueness of the workers is causing a separate issue that must be recognized and solved, so that to manage of creative workers in an integrated framework to be considered, especially considered in the development of creativity. Therefore, the development potential and creativity of workers must proceed from the characteristics of giftedness and creativity that needs to be optimized for workers ranging from cognitive (thinking), affective (feelings), and psychomotor (behavioral). Intrinsic motivation and creativity fostered through individual potential and create a psychological climate that guarantees freedom of creative expression for the workers in the work environment.

Although a two-year period of this study was successfully conducted exploratory studies and identify the model to measure the characteristics of creative workers in creative industries, as well as to the application of measurement and utilization of research results to evaluate the performance of creative workers, however, for future studies still needed a study on cultural and aesthetic values as well as the function of the activity of creative workers. Thus, the results provide a direct contribution to the needs of the community. Finally, modeling the development of creative industries in Indonesia can serve as a pilot project for other countries.

CONCLUSION

This study implemented factor analysis to understand creativity-relevant personal characteristics. Findings indicate that there are five factors solution of creative characteristics and behavior. These results show that the elements were grouped according to the NEO-FFI personality dimensions of Costa and McCrae's study (1992). The most important ways in which individuals differ in their enduring emotional, interpersonal, experiential, attitudinal, and motivational styles for stimulating creativity are presented through this study. Benefits of using factor analysis to understand creativity-relevant personal characteristics may provide many benefits in keeping of mind that the traits fall on a continuum and this overhead shows characteristics associated with each of the traits. Looking at these characteristics we can formulate what each of the traits mean. Firstly, Extraversion – means a person is, talkative, social and assertive. Secondly, Agreeableness – means a person is good natured, co-operative and trusting. Thirdly, Conscientiousness – means a person is responsible, orderly and dependable. Fourthly, Neuroticism – means a person is anxious, prone to depression and worries a lot. Finally, Openness – means a person is imaginative, independent minded, and has divergent thinking.

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