

Relationship between Creativity and Academic Integrity of Students: An Empirical Study of Management Students in India

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ABSTRACT:

Purpose: Creativity and integrity are two very important pillars of success for any corporate, and looking at some of the recent corporate frauds and scams across the globe, the present study is an attempt to study the relationship between academic integrity and creativity of students pursuing management education in India.

Methodology: The study is descriptive and cross sectional in design. Self reported questionnaires were used to collect data from students studying management courses (PG) in selected business schools from cities like Bangalore, Chennai and Hyderabad. SPSS 17 was used to run the statistical analysis. Reliability and validity of the scales were also assessed.

Findings: The findings of the study suggest that academic integrity and creativity of students are negatively correlated. This is a concern for both academia and industry as co-existence of both is very important and desirable.

Value: The present study is valuable and unique in a sense that the researcher was not able to find any empirical research that tests a similar relationship, having students as the target population. Also, there is no such evidence in the Indian context as well.

Keywords: *Academic integrity, Creativity, Management students*

INTRODUCTION

Creativity is a common aspiration for individuals, organizations, and societies. It can be defined as the ability to produce ideas that are both novel (i.e., original, unexpected) and appropriate (i.e., useful, adaptive to task constraints) (Amabile, 1983). Over the past several decades, researchers have explored many of the psychological factors that are considered vital to the creative process. These factors include both personal characteristics, such as attraction to complexity or tolerance for

ambiguity (Martindale, 1989), and contextual factors, such as deadlines or expected evaluations of creative performance. Related research has suggested that two main components that underlie creative performance are divergent thinking and cognitive flexibility. Divergent thinking refers to the ability of individuals to develop original ideas and to envision multiple solutions to a given problem. It involves thinking “without boundaries,” or “outside the box”. Cognitive flexibility, by

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contrast, describes the ability of individuals to restructure knowledge in multiple ways depending on changing situational demands (i.e., the complexity of the situation).

Past researches have also studied that high levels of divergent thinking and cognitive flexibility are likely to be associated with dishonest behavior when individuals are motivated to think creatively, either because of their own personalities or because of cues in the surrounding environment. Divergent thinking is likely to help individuals develop original ways to bypass moral rules. Similarly, cognitive flexibility is likely to help them reinterpret available information in a self-serving way (e.g., when justifying their immoral actions or choices). Thus, both a creative personality and creative thinking may lead individuals to relax their ethical standards or moral values, especially when self interest is activated.

The present research is an attempt to study the relationship between academic integrity and creativity of management graduates in India.

Literature Review

Creativity is defined as “the production of novel and useful ideas in any domain” (Amabile et al., 1996, p. 1154). The foundation for all creative work is expertise, which includes memory for factual knowledge, paradigms, aesthetic criteria, technical proficiency, and special talents in the target work domain (Amabile et al., 1996). This had been studied across many disciplines (e.g., Kaufman and Sternberg, 2010) and cultures (Kaufman and Sternberg, 2006). A consistent, basic definition (Kaufman, 2009) is that creativity is new (or different, novel, or original) and appropriate to the task (or useful or relevant). Across many viewpoints, creativity is typically presented as a constructive activity. It is often associated with such positive personal attributes as humor and altruism (Vaillant and Vaillant, 1990), positive well-being (Carson, Bittner, Cameron, Brown and Meyer, 1994), better mood (Amabile, Barsade, Mueller and Staw, 2005), and resiliency (Metzl, 2009). Guilford (1950) stated that “a creative act is an instance of learning ... [and that] a comprehensive learning theory must take into account both insight and creative activity” (p. 446). In this regard, Guilford

(1967a) suggested that transformations of information are a key to understanding insight.

More recently, however, a new theoretical approach has emerged that questions the inherent benevolence of creativity. Cropley et al. (2008); Cropley et al. (2010), propose the idea of *malevolent creativity*, which is creativity that is designed with the intent of harming others. There are other, related concepts, such as *negative creativity* (Clark and James, 1999), which emphasize creative actions that have undesirable outcomes, regardless of intent. The roots of malevolent creativity can be seen in broader conceptions of the construct of creativity. For example, fostering creativity can also mean encouraging people to think in different ways than others. The end result can be violations of social norms and expectations. Other examples include commonplace unethical behavior such as lying, committed by people who may value honesty but display unethical behavior for personal gain when given the opportunity (Gino and Ariely, 2011). Kaufman, Cropley, Chiera, and White (2012) studied how people perceive acts of varying malevolence. They found that people judged morally complex or ambiguous actions as being more creative than more straightforward actions (either benevolent or malevolent).

Notably, the phenomenon of integrity is not well construed (Sackett and Wanek, 1996). In accordance with the public usage of the word, the term integrity is used in reference to a single absolute morality instead of in reference towards the assumptions of one's value system in question. In an absolute context, the idea of integrity conveys no meaning between individuals with differing definitions of absolute morality, and becomes indeed a vague statement of one being a good or ethical person (Peterson and Seligman, 2004). Within the context of this study, we will say that others “have academic integrity” to the extent that they show a willingness to comply with rules, norms and expectations, according to an internalized set of values, beliefs, and principles they claim to possess (Murphy, 2005).

James H. Quigley, Global CEO of Deloitte Touche Tohmatsu, while emphasizing on the critical role of trust in the professional success of an individual, states: “Simply put, those who

bend rules are not considered trustworthy, and without trust an individual's value is severely diminished. Without trust and confidence, markets do not function, and value is destroyed." (Quigley, 2007). Quigley goes on to note the critical importance of integrity and character in the workplace. Lacking trust, competencies are meaningless. Individuals who are not trustworthy will not be given opportunities or responsibilities, and they will not be wanted as team members by clients or other employees (Quigley, 2007).

Often the concept of integrity can be confused with many philosophical facets, but probably none so much than as it is with honesty. Honesty refers to a facet of moral character that denotes the absence of lying or cheating and is defined by a close matching of what is being experienced and what is being expressed by the individual (Rogers, 1977). Few studies have looked at how factors of integrity such as honesty are influenced by creativity. Gino and Ariely (2011) found that people with creative traits were more likely to manipulate the results of their tests than less creative people by lying more about how well they performed on each trial of the experiment. This tendency was especially true when there was ambiguity that could be interpreted in the favor of the more creative person. It was argued that this creativity then mediates a person's ability to justify cheating and therefore increases the extent that people would lie, leaving the authors to conclude from these results that creativity motivates dishonesty.

In the same manner, Walczyk, Runco, Tripp, & Smith (2008) had students come up with solutions to scenarios in which deception would generally lead to successful outcomes. They found that telling many different lies correlated with divergent fluency (being able to derive many different ideas), which is related to creativity. Additionally, De Dreu, & Nijstad (2008) studied creativity and conflict resolution and found that during competitive negotiation tactics, creativity was associated with integrity factors such as deception. Taken together, these findings suggest that some situational lying can be associated with certain components of increased creativity such as divergent thinking and cognitive flexibility.

Creative thinking depends to some extent on personality characteristics, the discovery of which those of particularly creative people have formed the basis of many studies. For this review, the research of Amabile (1997), Barron and Harrington (1981), and Woodman and Schoenfeldt (1989) provide traits that can be organized into three key themes: independence of judgment, openness of experience, and patience. Traits associated with independence of judgment include: self-discipline, autonomy, internal locus of control, absence of conformity or a relative lack of concern for social approval, narcissism, self-esteem, ability to accommodate conflicting traits in one's self concept, dogmatism, and the secure sense of self as creative. Around an openness of experience, personality traits include: orientation toward risk, broad interests, attraction to complexity, intuition, and a high valuation of aesthetic qualities of experience. Traits associated with patience within the process include: tolerance for ambiguity, perseverance in the face of frustration, and ability to delay gratification.

Research Objective

The present research is an attempt to study the relationship between academic integrity and creativity of students pursuing management studies in India. Based on past research on lying and malevolent creativity, the researcher believes that when integrity is self-reported and assumed to be a personality trait, it will be significantly and negatively related to creativity (H_1).

Research Design and Sampling Technique

The present study is descriptive in nature and is cross sectional in design. Self reported questionnaire were used to collect data on academic integrity and creativity of students. List of AICTE approved B-Schools in the cities of Bangalore, Hyderabad and Chennai was procured from the AICTE website. The combined list gave a total of more than 200 B-schools. This list was considered as the sampling frame for the study. In the absence of a suitable sampling frame that could provide a consolidated list of B-schools in these cities, the AICTE list of accredited management institutes/B-schools was deemed as the most

authentic and reliable sample frame.

In order to collect data from the students of B-Schools, systematic random sampling approach was adopted. Every 12th B-School was picked up from the list. Thus, in all, 20 B-schools were targeted. Out of these 8 schools denied permission to conduct the research, thus the questionnaire was administered within 12 B-schools (5 B-schools from Bangalore, 4 from Hyderabad and 3 from Chennai). Sampling elements were the students of these B-schools. Data was collected from the sample elements primarily by contacting them personally and sending them links to questionnaire. This methodology has been used by other researchers in the area too (Randhawa, 2007). In all 1150 students were actually contacted from the B-schools and with 456 usable responses generated (285 through physical contact and 171 through e-mails); the response rate comes out to be close to 39% which can be considered acceptable. The responses were collected on a five point rating

scale.

Research Instrument

The research instrument, developed to collect data related to study variables, i.e., Creativity and Academic Integrity, was developed based on previous research. Figure 1 illustrates on the steps taken while developing the research instrument for the study.

Creativity of students was measured using a scale developed by Lyndi Smith in 2010, whereas academic integrity of students was measured using the scale developed by Don McCabe in 2009.

Pilot Test

The questionnaire was pilot tested at a business school in Bangalore. 30 responses were collected and were analyzed. Comments about the questionnaire were used to modify and improve the clarity of each item and determine the time required to complete the questionnaire.

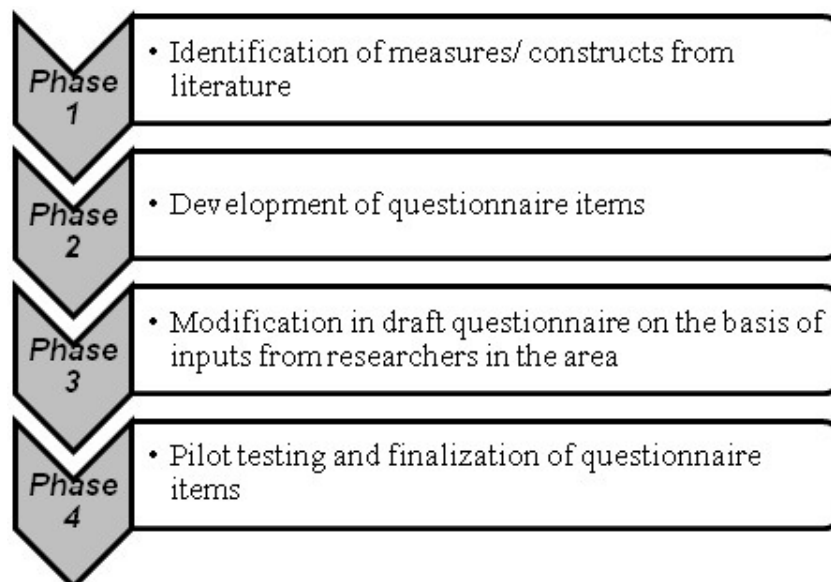


Figure1: Phases of research instrument development

Data Analysis

The relationship between study variables was measured by running statistical tests in SPSS 17.

Scale Unidimensionality: Both the constructs were subjected to Exploratory Factor Analysis (EFA) individually. On the basis of Eigen-value greater than 1 heuristic (Delgado-Ballester et al.,

2003), one principal component was extracted that accounted for majority of the total variance in the case of both scales. Thus, both the scales were proved to be unidimensional after the analysis. Tables 1, 1.1, 2 and 2.1 illustrate more on the test of unidimensionality.

Table 1: AI (Academic Integrity) scale-total variance explained

Component	Total Variance Explained					
	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.58	59.728	59.728	3.584	59.728	59.728
2	0.68	11.469	71.197			
3	0.54	9.143	80.340			
4	0.43	7.274	87.615			
5	0.38	6.471	94.086			
6	0.35	5.914	100.000			

Extraction Method: Principal Component Analysis

Table 1.1: AI Scale-component matrix

Component Matrix ^a	
	Component
	1
AI1	0.820
AI2	0.775
AI3	0.818
AI4	0.734
AI5	0.785
AI6	0.697

Extraction Method: Principal Component Analysis
a. 1 component extracted

Table 2: CR (Creativity) scale-total variance explained

Component	Total Variance Explained					
	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.868	47.801	47.801	2.868	47.801	47.801
2	.921	15.343	63.144			
3	.747	12.446	75.590			
4	.515	8.591	84.180			
5	.486	8.097	92.277			
6	.463	7.723	100.000			

Extraction Method: Principal Component Analysis

Table 2.1: CR Scale-component matrix

Component Matrix	
	Component
	1
CR1	0.654
CR2	0.719
CR3	0.607
CR4	0.775
CR5	0.610
CR6	0.764

Extraction Method: Principal Component Analysis
a. 1 component extracted.

Table 3: Scale reliability estimates

Scale	Cronbach Alpha
AI	0.87
CR	0.73

Table 4: Pearson correlation's test values

Correlations			
		CR	AI
CR	Pearson Correlation	1	-0.616**
	Sig. (2-tailed)		0.002
	N	456	456
AI	Pearson Correlation	-0.616**	1
	Sig. (2-tailed)	0.002	
	N	456	456

** Correlation is significant at the 0.01 level (2-tailed)

Assessment of Reliability: Once the unidimensionality of all the scales was established, scale reliability estimates were generated. Reliability can reflect the internal consistency of the indicators measuring a given factor. Scales were statistically measured for scale reliability. Scale reliability was first measured using Cronbach's alpha. A value of 0.87 for creativity and 0.73 for academic integrity scale clearly indicated high scale reliability. Table 3 illustrate on the scale reliability using Cronbach's Alpha. Face and content validity were assessed at the design phase of the questionnaire by consulting

with subject area experts and taking their comments in to consideration.

To test the hypotheses correlation co-efficient between creativity and academic integrity of students was assessed. For this purpose Pearson's correlation co-efficient is used as shown in table 4. SPSS 17 was used to run the Pearson's correlation test.

Correlation is a technique for investigating the relationship between two quantitative, continuous variables. Pearson's correlation coefficient (r) is a measure of the strength of the association between the two variables.

When Pearson's 'r' is negative (-), it means that as one variable increases in value, the second variable decreases in value. This is called a negative correlation. In our example, Pearson's r is -0.616. This value is negative.

DISCUSSION

India is one of the largest feeders of management graduates in the World and considering the huge demand of management graduates in its local market it was felt pertinent and timely to study the relationship between creativity and academic integrity among students pursuing management studies in India. The study hypothesized that there is an inverse relationship between self reported academic integrity and creativity of students which was held true following the statistical examination and test the study underwent. The study's finding is very interesting as all institutes want and tries to make students think creatively and out of the box. At the same time various other researches in the past have concluded with similar findings and have stated that creative thinking can be associated with dishonesty. The study finding are line with the thoughts put forward by the research conducted by McBarnet (1988) & McBarnet and Whelan (1991). While studying a similar relationship, they stated that in the field of professional legal services, lawyers motivated to think outside the box often end up exploiting the loopholes and ambiguities of the law on behalf of clients, and their "creative compliance" with regulatory requirements undermines the purpose and effectiveness of existing regulations. Similarly, Amabile, (1983) and Mednick (1962) in their respective studies have opined that given the creative mindset, individuals are likely to be able to produce novel solutions to problems, as well as novel justifications for their actions – even when those actions are unethical. The study finding are also similar to findings which are robustly demonstrated by recent research which stated that when facing the opportunity to behave dishonestly, individuals tend to cheat (Ayal & Gino, 2011; Gino, Ayal, & Ariely, 2009). Since academic dishonesty is something that certainly cannot be considered during the pursuit of any academic program, the study findings suggest that students showcasing any such symptom can be looked at differently and

attempts shall be made to identify their other interest areas, skills and thought process. This can, presumably, help the educational institutes strategize for all sets of students.

CONCLUSION

The present study was one of the very few studies conducted to test the relationship between academic integrity and creativity of students in Indian context. The research instrument that was used to measure the study variable was found to be reliable and valid further to the responses collected from the target respondents. It can be concluded that the study hypothesis is not rejected and that there is a significant negative relationship between our study variables, i.e., creativity among students and academic integrity which means that students having low academic integrity are high on creativity.

Limitations of the Research

Although efforts were made to carry on a research that was theoretically and empirically sound, the study does suffer from few limitations. Due to very vast and varied geographical expanse of India, the respondents in the study represent only a certain geographical region. A more diverse coverage of geographic regions could have given more generalizable results. It was practically not possible to contact all the students in the sample frame and hence the study was based on a limited sample.

REFERENCES

- Amabile, T. M. (1983). The Social Psychology of Creativity: A Componential Conceptualization. *Journal of Personality and Social Psychology*, 45, pp. 357-376.
- Amabile, T. M., Barsade, S. G., Mueller, J. S. and Staw, B. (2005). Affect and Creativity at Work. *Administrative Science Quarterly*, 50, pp. 367-403.
- Ayal, S. and Gino, F. (2011). *Honest Rationales for Dishonest Behavior*, In M. Mikulincer & P. R. Shaver (Eds.), *The Social Psychology of Morality: Exploring the Causes of Good and Evil*. Washington, DC: American Psychological Association.
- Carson, D. K., Bittner, M. T., Cameron, B. R., Brown, D. M. and Meyer, S. S. (1994). Creative Thinking as a Predictor of School Aged Children's Stress Responses and Coping Abilities. *Creativity Research Journal*, 7, pp. 145-158.

- Clark, K. and James, K. (1999). Justice and Positive and Negative Creativity. *Creativity Research Journal of Business and Psychology*, 12, pp. 311-320.
- Cropley, D. H., Cropley, A. J., Kaufman, J. C. and Runco, M. A. (2010). *The Dark Side of Creativity*, Cambridge UK: Cambridge University Press.
- Cropley, D. H., Kaufman, J. C. and Cropley, A. J. (2008). Malevolent Creativity: A Functional Model of Creativity in Terrorism and Crime. *Creativity Research Journal*, 20, pp. 105-115.
- De Dreu, C. K. W. and Nijstad, B. A. (2008). Mental Set and Creative Thought in Social Conflict: Threat Rigidity versus Motivated Focus. *Journal of Personality and Social Psychology*, 95, pp. 648-661.
- Delgado-Ballester, E., Munuera-Aleman, J. L. and Yague-Guillen, M. J. (2003). Development and Validation of a Brand Trust Scale. *International Journal of Market Research*, 45 (1), pp. 35-53.
- Gino, F. and Ariely, D. (2011). The Dark Side of Creativity: Original Thinkers Can Be More Dishonest. *Journal of Personality and Social Psychology*, Advance Online Publication.
- Gino, F., Ayal, S. and Ariely, D. (2009). Contagion and Differentiation in Unethical Behavior: The Effect of One Bad Apple on the Barrel. *Psychological Science*, 20 (3), pp. 393-398.
- Kaufman, J. C. (2009). *Creativity 101*, New York: Springer.
- Kaufman, J. C. and Sternberg, R. J. (Eds). (2006). *The International Handbook of Creativity*, New York: Cambridge University Press.
- Kaufman, J. C., Cropley, D. H., Chiera, B. A. and White, A. E. (2012). Is Hannibal Lecter Creative? How We Evaluate the Creativity of Different Levels of Malevolence. Manuscript Submitted for Publication.
- Martindale, C. (1989). *Personality, Situation, and Creativity*, In J. Glover, R. Ronning, and C. Reynolds (Eds.), *Handbook of Creativity*, New York: Plenum, pp. 279-301.
- McBarnet, D. (1988). Law, Policy and Legal Avoidance. *Journal of Law and Society*, p. 113.
- McBarnet, D. and Whelan, C. (1991). The Elusive Spirit of the Law: Formalism and the Struggle for Legal Control. *Modern Law Review*, 54, p. 6.
- Mednick, S. A. (1962). The Associative Basis of the Creative Process. *Psychological Review*, 69, pp. 220-232.
- Metzl, E. S. (2009). The Role of Creative Thinking in Resilience after Hurricane Katrina. *Psychology of Aesthetics, Creativity, and the Arts*, 3, pp. 112-123.
- Murphy, K. R. (2005). Why Don't Measures of Broad Dimensions of Personality Perform Better as Predictors of Job Performance? *Human Performance*, 18, pp. 343-357.
- Quigley, J. H. (2007). Trust – An Essential Asset: Creating Individual and Corporate Value, The Raytheon Lectureship in Business Ethics. (Waltham: Bentley College, 2007), pp. 1- 24.
- Rogers, E. M. (1961). Characteristics of Agricultural Innovations and Other Adopters. *Ohio Agricultural Experiment Station Research Bulletin*, 882.
- Sackett, P. R. and Wanek, J. E. (1996). New Developments in the Use of Measures of Honesty, Integrity, Conscientiousness, Dependability, Trustworthiness, and Reliability for Personnel Selection. *Personnel Psychology*, 49 (4), pp. 787-829.
- Vaillant, G. E. and Vaillant, C. O. (1990). Determinants and Consequences of Creativity in a Cohort of Gifted Women. *Psychology of Women Quarterly*, 14, pp. 607-616.
- Walczyk, J. J., Runco, M. A., Tripp, S. M. and Smith, C. E. (2008). The Creativity of Lying: Divergent Thinking and Ideational Correlates of the Resolution of Social Dilemmas. *Creativity Research Journal*, 20 (3), pp. 328-342.