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Factors Affecting Managers and Executives ' Attitude Towards Creativity Training

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ABSTRACT

This paper assesses the significance of individual demographic, job related, and organizational environment factors as correlates of managers and executives ' attitude towards creativity training. Categorical analyses of responses from 133 participants reveal that organizational environment is the most important source of influence on managers and executives ' receptiveness to creativity training. The research results suggest that trainers and training designers should tailor both individual and environmental factors into consideration in order to fully realize the potential of creativity training programs.

INTRODUCTION

Over the last few decades, significant environmental changes have greatly reshaped the corporate world. With the introduction of modern technology and increasing globalization of economic activities, many of the conventional means of conducting businesses have become obsolete. In such a volatile environment, many managers and executives are facing escalating complexity in making optimal and timely decisions. They constantly have to deal with problems that have never occurred before and have to explore new ways of getting things done. With this in mind, many organizations across the world have joined in the bandwagon of providing creative thinking training for their managerial and executive staff (VanGundy, 1992; Austin, 1991; Yamada, 1991), In the case of Singapore, creativity training has also received increasing attention of both corporate and government decision makers (Business Times, 1992; VanGundy, 1992: 3; The Straits Time, 1994). Management and human resource researchers should therefore pay attention to creativity training so as to increase our awareness and understanding of the subject matter.

Organizations that are keen on implementing creativity training for their managers and executives should be aware that the quality of trainees plays a crucial role in the success of such training. In particular, research has shown that the attitude of the trainee affects the learning process (Kraut, 1976; Basadur, Graen & Green, 1982). A favorable attitude towards training usually generates better training results and facilitates the transfer of learning to the workplace (Basadur, Graen & Scandura, 1986). It is thus reasonable to expect that an organization will fare better in its investment in creativity training if it can improve the trainees ' attitude towards training. To this end, the organization may directly influence the trainees ' attitude toward creativity training through such interventions as career counseling, tangible and intangible rewards for training, and realistic training preview. Alternatively, it may identify trainees with the right attitude through the trainee selection process. In both of these cases, it is imperative that the decision makers have a basic understanding about the systematic differences between individual trainees in terms of their attitude towards creativity training. To this end, the present study was specifically designed to examine the significance of a number of individual, job-related, and environmental contingencies that may have linkages with individuals ' attitude towards creativity training.

How can one account for the differences between individuals ' attitude towards creativity training? Although researchers have paid some attention to creativity in organization recently, they have tended to focus their attention on factors affecting creative performance (Getzels and Jackson, 1962; Rossman, 1964; Barron, 1968; Mackinnon, 1978), rather than on individuals ' attitude toward creativity training. Practitioners, on the other hand, have tended to emphasize the effectiveness of training programs and preferred to work on the premise that all individuals are trainable for higher creative performance (VanGundy, 1987, 1992; Goman, 1989). Consequently, little research attention has been paid to factors affecting trainees ' attitude towards creativity training. In the present study, therefore, we attempted to break new ground in research by extending the existing literature on factors influencing creative performance, to include individuals ' attitude toward creativity training. In doing so, we subscribed heavily to the assumption that individuals who had fewer resource constraints on attending training courses, higher expected utility of creativity, and lower psychological resistance to change, would be more receptive and positive towards creativity training. The results of the present study showed that this premise could generate fruitful and interesting insight into individual and situational conditions surrounding trainees ' attitude towards creativity training.

THEORY AND HYPOTHESES

Creativity training refers to formal training activities that are designed to enhance trainees ' ability to apply creative thinking at the workplace. Therefore, a model that encompasses factors affecting attitude towards creativity training should be based at least partly on theory of creative behavior: The more likely an individual is to actually engage in creative behavior, the more likely he/she is to see the value of creativity and hence, the more positive he/she is towards creativity training (Stein, 1991). Fwiher, since training entails individual investment of time and effort (on top of financial costs), a model of training attitude should also be grounded in expectancy theory of motivation (Vroom, 1964). Individuals who expect to derive more benefits vis-a-vis costs from attending creativity training will be nore positive towards such training. Finally, since some creative ideas may turn out to be creative failures, creative behavior carries a certain degree of risk. Such " creative failures " may cost individuals their personal self-esteem, promotion opportunities, career prospects, and others. Individuals who are risk-averse are therefore less likely to see the attractiveness of creativity training and should be less positive towards such training (Fernald, 1988; Amabile and Sensabaugh, 1992; Landrum, 1993). In the ensuing sub-sections, we will derive several testable hypotheses based on the above three theoretical underpinnings.

Demographic Factors

Age, sex, marital status, educational level, and birth order are demographic variables that may affect individuals ' attitude towards creativity training. Younger individuals may see greater utility in creativity training since they have a relatively longer life span to make use of what they have learned from training, compared to their older counterparts. They are also more likely to be in the stage of searching for a career direction and have invested less time and effort in any mode of thinking or area of specialization. These conditions may prompt them to be more willing to accept training and change. Further, research has shown that a person ' s work experiences may push up his/her creative performance (Simonton, 1992; Rossman, 1964). Lacking such an advantage, younger individuals may see greater need in attending creativity training courses to improve their creative competitiveness against the older counterparts.

Richardson (1986) recently conducted an experiment with 320 Jamaican adolescents to determine gender differences in creative performance. The female sample was found to fare significantly better than the male counterpart on five creativity tests. Since Torrence (1962) have found that creative individuals are willing to take risks, curious, and receptive to new ideas, Richardson ' s (1986) research findings suggest that female nianagers and executives may be more positive towards creativity training, compared with the male counterparts.

There is no prior research on the relationship between marital status and creative performance. However, we expect that singles are more positive towards creativity training than married people. In general, married people can be expected to have more financial and family responsibilities. These responsibilities may demand their attention and reduce their willingness to spend time on attending training courses. The responsibilities may also pose constraints on married individuals ' ability and willingness to take " creative risks " since their dependents may be adversely affected if they fail. These conditions point to a less favorable evaluation of creativity training among married individuals compared with singles.

The relationship between education and creative performance is not strictly a linear one. Simonton (1983) found that the relationship between education and creative performance was curvilinear, resembling an inverted-U shape. Among the less educated, an increase in education was accompanied by an increase in creative performance. Among the more educated, in contrast, an increase in education led to a decrease in creative performance. Simonton (1983) attributed this finding to the narrow focus of university education, which tended to emphasize areas of specialization. In the present study, we subscribe to the assertion that tertiary education tends to be specialized and may erode individuals ' orientation towards creative thinking. Higher educated individuals may be less positive towards creativity training since it may be less apparent to them that such training will add to their core technical competency.

Studies of creative achievers have consistently shown that first borns or only children are more creative than others (Ochse, 1990; Runco and Bahleda, 1986; janial, 1985). One common reason cited by researchers was that only children enjoyed a greater deal of attention from their parents. Similarly, first borns also enjoyed a period of sole attention from their parents before their younger siblings were born. This period of parental attention might help them to develop a sense of inquisitiveness and curiosity. First borns and only children should therefore be more receptive to new ideas and more willing to travel the unbeaten path. They should therefore be more positive towards creativity training.

> *H1: Demographic factors (including age, sex, marital stat us, educational level, and birth order) are systematically linked to managers and execu tives ' attitude towards creativity training.*

Job Factors

Organizational tenure, job nature, organizational position, teamwork, managerial style, and work performance are job-related factors that may affect individuals ' attitude towards creativity training. With respect to organizational tenure, we expect that the longer an individual stays in a company, the more he/she will be trapped in the status quo, prompting them to conform to prevailing practices and norms. As such, the motivation to be creative and imaginative should reduce with an increase in organizational tenure. Further, in his/her initial years with the company, the employee is likely be in the learning stage. He/she is likely to be more willing to go for courses that will improve his/her chances of promotion. In the later years, however, the perceived chance of moving up may diminish, motivating the employee to strive for job security and avoid risk taking.

In terms of job nature, we expect that individuals holding jobs that are subject to greater pressures from the top in terms of initiative, imagination, and creativity will be more likely to be positive towards creativity training. Sales and marketing positions, in particular, have been widely regarded to require a high degree of creativity and responsiveness to customers ' needs (e.g., Amabile, 1988).

This is because sales and marketing personnel have to deal with many customers, in particular those who have bought or will buy the company ' s products or services. These customers may exert a great deal of demand on the company for satisfactory value in return for their purchases. Further, top managers may pay more attention to the performance of sales and marketing personnel since they deal directly with customers, who provide the bulk of corporate revenues, The compelling need to think creatively and manage diverse customer service situations therefore may cause sales and marketing managers and executives to be more receptive to creativity training, compared with incumbents of other jobs, such as those in finance, human resource, and administration. Note that this assertion is based on the greater pressures for creative performance on sales and marketing personnel, but does not rule out the possible need for different styles of creativity in non-sales and non-marketing occupations.

Roach (1988) put a sample of 420 organizational decision makers through a series of creativity tests and found that higher level decision makers were more creative than their lower level counterparts. Higher level managers tend to make more strategic decisions and steer the course of the organization. The path-finding decisions involved are often unique and require decision makers to come up new and untried solutions. The ability to think creatively thus constitutes an important value-added activity in higher level managers ' job. Lower level managers, on the other hand, may tend to focus on the execution of higher-leve] decisions and engage themselves in relatively more routinized decisions. Facing the need for creative thinking, higher level managers should be more receptive to creativity training compared with lower level managers.

Several studies have shown that individuals might require independence and autonomy to achieve creative performance (Whiting, 1988; Yamada, 1991). Yamada (1991) has found that teamwork may be an obstacle to creativity. Working in a team requires that members conform to group norms in order to achieve results and group longevity, which may limit their creative behaviour. Supported with extensive empirical evidence, however, Kirton ' s (1944) research has shown that individuals may differ in their creative style. While creative adaptors may prefer to work under a certain level of structure and look for solutions within the current paradigm, creative innovators may prefer to look beyond the current paradigm and work with little regard to existing norms or structure. From this perspective, the fact that an individual is engaged in teamwork does not necessary point to an across-the-board reduction in creativity, as teamwork may generate a better condition for creative adaptors, but a less desirable condition for creative innovators. Nevertheless, to

the extent that teamwork exposes the individual to more criticism if he/she fails, or creates greater pressures on the individual to produce only ideas that will succeed, it may discourage some creative behaviour from taking place. Individuals who try to come up with creative ideas, only to find themselves scrutinized and upset by other group members, may reduce their creative efforts to some extent. Teamwork thus may lead to a loss of motivation for creative thinking on the part of individuals through unconstructive social interactions or experiences.

In general, a manager can adopt either an authoritative or a participative managerial style. The authoritative style is associated with emphasis on managerial prerogatives, whereas the participative style is associated with employee involvement (Lamming & Bessant, 1988). Plunkett (1990) recently found that there was a positive correlation between participation and creativity. For individuals using the participative managerial style, they were more willing to accept the ideas of other people and were also more open to fresh perspectives. Since creativity training encourages free flow of ideas and open discussion, participative managerial style should be associated with a more positive attitude towards creativity training.

Torrance (1962) compiled a list of characteristics from several studies to differentiate highly creative individuals from the less creative counterparts. Individuals who were more creative were found to possess higher levels of desire to excel, determination, persistence, self-confidence, and need for goal attainment. Stein (1991) also found a strong orientation towards achievement among creative people. Given that creative individuals are goal achievers and are determined to perform well on the job, there should be a positive linkage between performance and creativity. Further, high performing employees may have attained some leverage against the lower performing counterparts by virtue of their good performance. They may have more buffer for risk taking and therefore are more willing to subject themselves to making creative decisions. This willingness may make higher performers more positive towards creativity training.

Finally, when the employee feels satisfied on the job, he/she may be more or less willing to go for creativity training. For employees with high need for growth and challenge, the attainment of satisfaction on the existing job may propel them to seek new challenges and growth opportunities, which will make them more positive about creativity training (Stein, 1991). Conversely, for employees with low growth needs, their satisfaction with the status quo may lead them to avoid changes and see creativity training in less positive light. We expect that managers and executives possess high growth need, which means that job satisfaction should make them more positive towards creativity training.

> *H2: Job-related factors (including organizational tenure, job nature, orga nizational position, teamwork, persona] managerial style, work per formance, and job satisfaction) are systematically linked to manag ers and executives ' attitude towards creativity training.*

Organization Climate Factors

Organization climate encompasses the work environment in which an individual performs his/her job. Group conformity expectation, availability of resources for innovation, organization ' s encouragement, corporate culture, rewards and recognition for creative behavior, social support, and organizational decision making approach are organizational conditions that may affect individuals ' attitude towards creativity training (Amabile, 1988; Amabile, Conti, Coon, Collins, Lazenby, and Herron, 1993).

Group conformity may lead to a loss of need for creativity among creative innovators (see IKirton (1994) for a detailed description of different types of creative individuals) who prefer to perform in unstructured situations. An organization that demands employees who are creative innovators to conform to group norms, company rules, and common practices suppresses its employees ' creative potential. Innovators working in such an environment will lose interest in performing creatively and will conform to group norms. They will be less open to creativity training since they will not find it rewarding to commit time and effort to such training. As for adaptors (Kirton, 1994) who may prefer to work with some degree of conformity, continuity, and stability, they may also be discouraged from engaging in creative behaviour if the pressures for group conformity become excessive, or when other organisational members attuned to group conformity create pressures that eschew any form of change. Adoptors will also be discouraged if their peers resist differences in creative performance between organisational members and ostracise adaptors who try to be creative.

Resources for innovation include facilities, finances, and personal assistance. When more resources for innovation are available, employees should be more motivated to engage in creative behavior as they face fewer resource constraints on their actions. Encouragement from higher authority in promoting creativity will also affect employees. Employees should be more willing to perform creatively if top managers give their support. Extant research has shown the critical role of top management and organizational support in implementing such changes as quality circles, total quality management, and others. Creativity training will be regarded as an useful tool to enhance performance if creativity is valued by the organization.

The corporate culture of an organization is manifested in its policies, philosophy, and practices. A corporate culture that promotes creativity and innovation will encourage employees to embark on creative ventures. Thus, creativity training will be more valued by employees in such organizations. Similarly, when the organization publicly rewards and recognizes the efforts of innovators, employees will feel more secure and motivated to undertake creative projects. If the organization is more tolerant of " creative failure " , the risk of losing one ' s job will be reduced even if the project fails. Individuals in such organizations will be more likely to perform creatively and will be more positive towards creativity training.

Employees do not work alone. They have to deal with co-workers and supervisors. If an individual is not supported by his/her co-workers and supervisor, he/she will attract only criticism and disapproval when he/she attends a creativity training course or uses innovative approaches to get things done. Conversely, with the support from peers and the supervisor, the individual should be more willing to take risk and approach situations with new and unique perspectives. He/she should then be more receptive to creativity training.

Finally, managerial decisions can be either top-down or bottom-up. A bottom-up approach encourages participation from all levels of the organization. This will generate a more open climate for new ideas and suggestions. Employees are encouraged to voice their opinions before top managers make the decision. In such an organization, employees will be more willing to contribute novel ideas and suggestions. Creativity training should then be more valued by the employees. By contrast, in an organization that adopts the top-down approach, individuals ' ideas and suggestions are rarely heard or considered by decision makers.

Employees are not likely to be positive towards creativity training since they will not expect it to be worthwhile to do so.

> *H3: Organizational climate factors (including group conformity expectation, availability of resources, organization ' s encouragement, corporate cul ture, recognition for creative contributions, social sup port, and organi zational decision making style) are systematically linked to managers and executives ' attitude towards creativity training.*

METHODS

Sample and Procedure

The sample for this study consisted of 133 managers and executives from different organizational levels and industry sectors. Managers and executives were defined as employees who made or implemented decisions on behalf of the organization. They excluded first line and supporting employees, such as operatives/ production workers, clerks, bank tellers, cleaners, construction workers, and others. To reduce cost and increase the speed of collection and response rate, the first author communicated with the organizations contacted and delivered the survey questionnaires by hand. The contact persons in the companies were given instructions as to who were eligible to participate in the survey and how the questionnaires should be filled out. A total of 150 survey questionnaires were handed out, together with a cover letter that assured respondents of their anonymity. This process of data collection lasted from December 1994 to January 1995. A total of 133 survey questionnaires were returned, representing a response rate of 88.7%. Table 1 shows the breakdown of the responses.

Table 1
Response Rates by Industry Sector

Industry Sector	No. of Questionnaires Handed Out	No. of Questionnaires Received	Response Rate
Banking & Financial Services	35	35	100%
Business Services	30	24	80%
Commerce (include, tetail)	20	19	95%
Construction & Building	10	10	100%
Government Services	25	24	96%
International Trading & Distribution	15	11	73.3%
Manufacturing	15	10	66.7%
Total	150	133	88.7%

Out of the 133 managers and executives, 62 (46.6%) were male and 71(53.4%) female. Their age ranged from 17 to 57 years, with an average of 29.7 years. The majority of them (62,4%) were junior managers. Middle level managers constituted 31.6% of the sample and top managers, 6%. With respect to their marital status, 65.4% were single and 34.6% married. There were no cases of divorce or separation. Thirty-point-one per cent of the sample were first borns and only cliiidren, 36.1% middle children, and 33.8% last borns. Table 2 provides a summary of the profile of the respondents.

Dependent Variable

Five items were used to measure attitude towards creativity training. The items were measured on a five-point scale, from strongly disagree to strongly agree: " A person ' s creativity can be improved through training ", " creativity training does not have any relevance to my job (reverse scored) ", " attending creativity training programs will have a positive impact on my career prospects ", " I feel that attending creativity training programs is a waste of time (reverse scored) ", and " given a choice, I will go for a creativity training program ". Factor analysis revealed that these items heavily loaded on one common factor, with an eigenvalue of 2.77, a Cronbach alpha of .79, and factor loadings of between .61 and .82. The 5 items were equally weighted and summed.into an overall score. A higher score meant a more positive attitude towards creativity training.

Table 2
Profile of Respondents

Variable	Category	No. of Respondents	Percentage
Age:	20 and below	5	3.8%
	21-30	83	63.4%
	31-40	24	18.3%
	41-50	17	13.0%
	51 and above	2	1.5%
Birth order:	First borns/Only children	40	30.1%
	Middle children	48	36.1%
	Last borns	45	33.8%
Marital status:	Single	87	65.4%
	Married	46	34.6%
Organizational position:	Top management	8	6.0%
	Middle management	42	31.6%
	Junior management	83	62.4%
Sex:	Male	62	62
	Female	71	53.4%

Independent Variable

There were nineteen independent variables used in this study. Age was measured by the number of years since the birth of the respondent. Sex was male or female. Marital status was defined as whether the respondent was single or married, A respondent who was legally registered for marriage was considered married. There were no cases of divorce or separation in the sample. Educational level was the highest level of accredited education the respondent had attained. Four levels of education were detected: Secondary (junior high) or below, " A " level or diploma (senior high or 2-year college), university degree, and Masters ' degree or higher. Birth order was defined as th.e placing of the respondent among the siblings in the family. Only children and first borns were regarded as one group, middle children another, and last borns the third.

Organizational tenure was measured as the number of years the respondent had spent working in the present company. Job nature was the nature of the job the respondent spent most of his time doing, which could be sales/marketing, purchasing, accounting/finance, production/operation, engineering/R&D, personnel/ human resource, administration, or general management. Organizational position was the level of management the respondent was in, which could be top, middle, or junior management. Teamwork was defined as how often the respondent had the opportunity to work as a member of a group. Managerial style was defined as the respondent ' s preferred mode of making managerial decisions and delegating duties, which could be either authoritative or participative. Work performance was

the respondent ' s self-perceived overall work performance. Job satisfaction was measured by the respondent ' s self-rated level of satisfaction with his/ her job.

Group conformity was the perceived level of the organization ' s requirement that employees behave and perform according to organizational rules and norms. Availability of resources for innovation was measured by the perceived amount of financial and management backing available to help implement creative ideas. Organizational encouragement was the perceived level of organizational actions aiming at inspiring and supporting creative behavior. Corporate culture was measured by the respondent ' s personal view about the beliefs and way of life among members in the organization in relation to creativity. Recognition for creative behavior was measured by the perceived level of rewards for creative behavior and performance. Social support was the perceived amount of assistance, support, and encouragement coming from colleagues and supervisors for creative behavior. Organizational decision making approach was the respondent ' s impression about the organization ' s preferred style of making decisions, which could be either top- down or bottom-up.

Control Variables

To arrive at stronger conclusions about the linkages between attitude towards creativity training and the various demographic, job, and organizational climate factors, we selectively employed two control variables in the analyses. The control variables were self perceived creativity level (Stein, 1991) and risk attitude (Amabile & Sensabaugh, 1992). Self perceived creativity level was defined as how creative the respondent saw himself or herself to be. Since a person who perceives him/herself as creative is likely to be more positive about creativity training, we attempted to partial out the effects of this self-perception.

Risk attitude referred to the respondent ' s willingness to engage in activities that might fail. A study of personality profiles by Landrum (1993) has revealed that creative individuals were prone to taking risks. Other studies (Fernald, 1988; Amabile & Sensabaugh, 1992) also have drawn the same conclusion. We therefore tried to rule out the effects of general risk taking attitude in the analyses.

Analyses

We employed categorical data analytic procedures (ANOVA and ANCOVA) to test the hypotheses since a large number of the independent variables involved in the present study were by nature categorical, such as sex, job nature, organizational position, birth order (e.g., only children versus middle children), and marital status. To achieve consistency across the testing of the hypotheses, we categorized all other independent variables in the analyses.

We used single-item, global measures to operationalize such concepts as teamwork, managerial style, work performance, job satisfaction, group conformity expectation, availability of resource innovation, social support, and others, for three reasons. First, our attention was on the overall relevance of the three group of independent variables (individual, job, and organizational), rather than on the specific effects of the individual concepts, in creativity training. Second, a more refined measure of the individual concepts would contribute little since we used categorical techniques in the analyses. Third, if indepth, multi-item instruments were used to measure the numerous constructs, respondents would be faced with a lengthy questionnaire. As the respondents were busy managers and executives, it would have been difficult to obtain their consent and cooperation to answer the questions. Hence, given that the present study was a path-finding, exploratory research, we settled with the simpler and more direct approach to operationalizing the hypotheses.

A total of five models were run for each of the hypotheses. Model 1 was a simple ANOVA to detect the main effects of the independent variables. Model 2 introduced the two control variables, self-perceived creativity level and attitude towards risk taking, into the analyses. Models 3 through 5 each added demographic, job, and organizational climate variables to the analyses as controls, on top of self-perceived creativity level and attitude toward risk taking, respectively.

RESULTS

Table 3 presents the zero-order intercorrelations between all variables used in the present study. It is apparent that the 5-item measure for attitude towards creativity training was significantly associated with I of the 5 demographic variables, 4 of the 7 job variables, and 6 of the 7 organisational environment variables. The correlations between creativity training attitude and self-rated creativity level and risk taking attitude were significant at the 0.05 significance level, confirming our assertion that their effects should be controlled for. Creativity level and risk-taking attitude were positively correlated, The strongest correlation was between age and length of service (0.79; $p<.0001$).

Table 3
Intercorrelations of all Variables

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. Attitude Score (sum)	18.97	3.57																					
2. Age (years)	29.68	8.14	-.16																				
3. Gender	1.55	.50	.13	-.33																			
4. Marital Status	1.35	.48	-.11	.69	-.14																		
5. Educational Level	2.34	.79	-.18	-.20	-.04	-.09																	
6. Birth Order	2.04	.80	-.16	-.11	.04	.01	.04																
7. Length of Service (years)	4.30	5.46	-.21	.79	-.18	.59	-.30	.03															
8. Job Nature	1.29	.46	.34	-.27	.11	-.16	-.39	-.03	-.19														
9. Job Position	1.62	.49	.10	-.56	.11	-.51	.15	-.00	-.41	.12													
10. Teamwork	2.48	1.08	-.01	.13	.01	-.00	.10	.01	.01	-.34	.00												
11. Management Style	1.73	.45	.24	-.21	.24	-.12	.04	.05	-.18	.13	.05	-.04											
12. Work Performance	2.18	.59	-.14	-.18	.16	-.14	.02	-.13	-.07	-.09	.27	.08	.13										
13. Job Satisfaction	2.04	.53	-.18	-.11	.12	-.02	.13	.21	-.15	-.14	.23	.21	.04	.32									
14. Group Conformity	1.71	.68	.15	.06	.14	.12	.02	-.06	.03	-.12	-.08	.06	.19	-.06	-.27								
15. Availability of Resources	2.34	.75	.32	.05	-.04	.12	-.11	-.10	-.04	.15	-.15	-.08	.15	.02	-.28	.15							
16. Org. Encouragement	2.37	.75	.43	.16	.10	.11	-.26	-.16	.15	.23	-.12	.14	.14	.09	-.23	.13	.37						
17. Open Culture	2.21	.83	.30	.08	.06	.14	-.33	-.18	.08	.24	-.16	-.04	.16	.05	-.37	.24	.50	.62					
18. Reward for Creativity	2.35	.75	.30	.18	-.08	.18	-.29	-.03	.14	.31	-.24	-.07	.19	-.13	-.34	.18	.39	.52	.54				
19. Social Support	2.20	.81	.22	.28	.01	.31	-.28	-.13	.19	-.02	-.28	-.09	.13	-.13	-.25	.24	.30	.31	.38	.25			
20. Decision Making Style	1.56	.76	.20	.14	-.13	.03	-.19	-.27	.06	.14	-.19	.07	.18	-.17	-.32	.26	.16	.31	.35	.34	.28		
21. Creativity (1=high;2=low)	1.40	.49	-.18	.14	.21	.09	-.06	.10	.14	-.15	.06	.18	.11	.46	.21	.00	-.27	-.03	-.21	-.16	.06	-.15	
22. RiskTaking (1=like; 2=dislike)	1,47	.50	-.25	.09	-.11	-.06	.09	.22	.08	-.15	.08	.05	.05	.24	.19	-.20	-.09	-.27	-.27	-.05	-.19	-.04	.31

The basis of grouping is the same as for Table 4 unless otherwise specified.
Bolded correlations are significant at alpha = .05.

Table 4 summarizes the results obtained from the analyses. Sub-group means and their multiple comparisons, based on the Student-Newman-Keuls Test (at significance level 0.05), are presented in the rightest two columns.

Table 4
Anova and Ancova Test Results

Test Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Sub-Group Means (N)	SNK Test[1]
Demographic Variables (Hypothesis 1)							
Age	2.84**	2.92**	2.04*	3.46***	3.73***	Gp 1 (<30 yrs; 82) = 19.06 Gp 2 (30-39yrs; 28) = 19.96 Gp 3 (>39yrs;21) = 17.38	GP 2 vs Gp 3
Gender	2.17	2.39	1.94	3.33*	2.96*	Gp 1 (Male; 62) = 18.48 Gp 2 (Female; 71) = 19.39	
Marital Status	1.59	1.72	1.20	1.97	2.20	Gp 1 (Single; 87) = 19.25 Gp 2 (Married; 46) = 18.43	
Educational Level	4.05***	4.17***	4.20***	4.89***	5.02***	Gp 1 (Secondary; 26) = 19.42 Gp 2 (" A " / Dip; 35) = 20.34 Gp 3 (Degree; 71) = 18.23	Gp 2 vs Gp 3
Birth Order	8.98***	9.08***	9.55***	9.66***	11.25***	Gp 1 (First Born; 40) = 20.60 Gp 2 (Middle; 48) = 17.54 Gp 3 (Last Born; 45) = 19.04	Gp 1 vs Gp 2 Gp 1 vs Gp 3 Gp 2 vs Gp 3

Job-Related Variables (Hypothesis 2)							
Length of Service	3.07***	3.29**	2.947**	3.676***	4.42***	Gp 1 (<1 yr;43) = 19.51 Gp 2 (1-2 yrs; 41) = 18.95 Gp 3 (3-4yrs; 17) = 18.82 Gp 4 (5-10 yrs; 16) = 20.06 Gp 5 (>10yrs;15) = 16.20	Gp 1 vs Gp 5 Gp 2 vs Gp 5 Gp 3 vs Gp 5 Gp 4 vs Gp 5
Job Nature	4.43***	4.46***	3.98***	4.68***	5.27***	Gp 1 (Non-sales; 94) = 18.19 Gp 2 (Sales; 39) = 20.85	Gp 1 vs Gp 2
Job Position	1.66	1.77	0.89	1.78	2.32	Gp 1 (Mid/Top; 50) = 18.52 Gp 2 (Junior; 83) = 19.24	
Teamwork	0.396	0.40	0.55	0.42	0.50	Gp 1 (V Often; 32) = 19.38 Gp 2 (Often; 33) = 18.39 Gp 3 (Sometimes; 40) = 19.03 Gp 4 (seldom; 28) = 19.11	
Managerial Style	7.96***	8.90***	7.80***	12.06***	10.74***	Gp 1 (Authorit,; 36) = 17.56 Gp 2 (Particip.; 96) = 19.48	Gp 1 vs Gp 2
Work Performance	2.39*	2.55*	2.95*	2.56*	3.18**	Gp 1 (Excellent; 13) = 18.92 Gp 2 (Good; 83) = 19.45 Gp 3 (Fair; 37) = 17.92	
Job Satisfaction	2.39*	2.50*	3,02**	2.80**	3.21**	Gp 1 (V Satisfied; 16) = 19.69 Gp 2 (Satisfied; 96) = 19.20 Gp 3 (Dissatisfied; 21) = 17.38	Gp 2 vs Gp 3
Organizational Climate Variables (Hypothesis 3)							
Group Conformity (Company demands it?)	1.92	2.00*	1.84	2.39*	2.50**	Gp 1 (Disagree; 55) = 18.51 Gp 2 (Neutral; 61) = 19.03 Gp 3 (Agree; 17) = 20.24	
Availability of Resources (Company has it)	5.47***	5.51***	5.16***	7.15***	6.26***	Gp 1 (Disagree; 22) = 17.27 Gp 2 (Neutral; 44) = 18.09 Gp 3 (Agree; 67) = 20.10	Gp 1 vs Gp 3 Gp 2 vs Gp 3
Organisational Encouragement (Company has it?)	12.83***	12.96***	12.52***	14.38***	12.98***	Gp 1 (Disagree;22) = 17.14 Gp 2 (Neutral; 40) = 17.13 Gp 3 (Agree; 71) = 20.58	Gp 1 vs Gp 3 Gp 2 vs Gp 3
Open Culture (Company has it?)	4.37***	3.61***	3.95***	5.15***	5.16***	Gp 1 (disagree; 34) = 17.59 Gp 2 (Neutral; 37) = 18.32 Gp 3 (Agree; 62) = 20.11	Gp 1 vs Gp 3 Gp 2 vs Gp 3
Reward for Creativity (Company has it?)	5.90***	6.05***	5.55***	7.63***	7.12***	Gp 1 (Disagree; 22) = 17.41 Gp 2 (Neutral; 42) = 18.02 Gp 3 (Agree; 69) = 20.04	Gp 1 vs Gp 3 Gp 2 vs Gp 3
Social Support (Difficult to get peer support?)	5.51	5.69***	6.03***	6.45***	6.56***	Gp 1 (Agree; 33) = 18.45 Gp 2 (Neutral; 40) = 17.73 Gp 3 (Disagree; 60) = 20.08	Gp 1 vs Gp 3 Gp 2 vs Gp 3
Decision Making Style (Top-down?)	1.83	1.89	1.74	2.09*	2.38*	Gp 1 (Agree; 81) = 18.46 Gp 2 (Neutral; 30) = 19.33 Gp 3 (Disagree; 22) = 20.36	

*F-statistic significant at 0.1 **F-statistic significant at 0.05 ***F-statistic significant at 0.01

[1] Student-Newman-Keuls test at significance level 0.05 (ANOVA test if fewer than three sub-groups are compared).

Moderate support was found for Hypothesis 1. Age, educational level, and birth order significantly affected managers and executives ' attitude to\\7rds creativity training. In terms of age, multiple comparison analyses based on the Student-Newman-Keuls (SNK) Test showed that the differences stemmed from between people aged 40 years and over (17.38) and those aged between 30 and 39 years (19.96). With respect to educational level, managers and executives with " A " level or Diploma were more positive toward creativity training than those with University degree; their attitude scores were 20.34 and 18.23, respectively. The attitude score forthosewith secondary education or below was 19.42. Thus, there was some evidence that advanced education might weaken managers and executives ' attitude towards creativity training.

With regard to birth order, our results were consistent with prior research on creative potential. First borns (including only children) were more positive than middle and last children towards creativity training. Their average attitude scores were 20.6, 17.54, and 19.04, respectively. What was not expected was that last borns appeared to have enjoyed sonic significant " revival " in their attitude compared to middle children (Gp 2 vs Gp 3). This could be due to increased parental attention for last borns during their childhood years. As in the case of first borns and only children, such parental attention could have helped last borns develop cognitive potential and broaden their perspectives and world view in their adulthood. Contrary to expectations, sex and marital status were inconsequential with

respect to creativity training attitude.

Moderate support was found for Hypothesis 2. Organizational tenure (length of service), job nature, and subjects ' personal managerial style were consistently and significantly linked to attitude towards creativity training. Self perceived work performance and job satisfaction were less influential. However, subjects ' job position (organizational level) and extent of teamwork did not pose significant effects on creativity training attitude. In terms of organizational tenure, multiple comparison analyses based on the SNK Test revealed that the difference lied with managers and executives with more than ten years of service. The average attitude score was 16.2 for subjects with 10 years or more of service, compared to averages of between 18.82 and 20.06 forthose with less than 10 years of service. With respect to job nature, managers and executives in sales and marketing positions had an attitude score of 20.85, which was significantly higher than the counterparts in non-sales and marketing positions (18.19). In terms of managerial style, subjects adopting the participative style scored an average of 19.48 on the attitude measure, significantly higher than the 17.56 scored by the authoritative counterparts. The results thus supported Hypothesis 2 in general.

Work performance and job satisfaction also exhibited the expected effects on attitude towards creativity training, albeit in a less compelling fashion than organizational tenure, job nature, and managerial style. Managers and executives who performed better tended to score higher on the attitude measure. Those reported job satisfaction scored 19.20 on the attitudinal scale, significantly higher than the 17.38 scored by those reported job dissatisfaction. Finally, organizational position and opportunity to work in groups did not have effects on attitude towards creativity training, contrary to expectations.

Hypothesis 3 received encouraging support in the present research. Five of the seven organizational variables were strongly linked to creativity training attitude. Subjects who felt that there were resources available for creative work in the organisation scored significantly higher on the attitudinal measure (20.10), compared to those who were neutral (18.09) and those who found otherwise (17,27), Similar results were obtained for organizational encouragement. Those who agreed that there was organizational encouragement for creativity scored an average of 20.58 on the attitudinal measure, compared to those who were neutral (17.13) and those who found otherwise (17.14).

Managers and executives who strongly felt that there was an open, flexible, and innovative culture within the organization tended to be more positive towards creativity training than those who were neutral or did not think so, with average scores of 20.11, 18.32, and 17.59, respectively. Similarly, public recognition for creativity and social support for creative behavior within the organization also contributed positively to subjects ' attitude. Managers and executives who strongly felt that there was organizational recognition for creative performance scored an average of 20.04 on the attitudinal scale, compared with 18.02 and 18.02 for those who were neutral and those who felt otherwise, respectively.

Subjects who strongly felt that there was social support from peers and supervisors for creative performance scored 20.08 on the attitudinal scale, compared with 17.73 and 18.45 for those who were neutral and those who felt otherwise, respectively. Finally, group conformity expectation and organizational decision making approach were not significantly linked to creativity training attitude.

Conclusion and Discussions

The results obtained in the present study provide some support for demographic and job-related factors, and strong support for organizational climate factors, in terms of their linkages to managers and executives ' attitude towards creativity training. The finding that systematic differences exist between individual managers and executives suggests that individual trainees may not be equally ready for such training. Training planners and trainers thus might be able to enhance training effectiveness by taking the individual differences identified into account when designing creativity training programs.

More importantly, the supportive evidence obtained concurs with the assertion that practitioners and researchers should narrow their perceptual gap. On the one hand, practitioners and training professionals should be more discerning when they assert that people are trainable and assume that trainees are ready for creativity training (e.g., VanGundy, 1992). They should recognize that such factors as age, educational level, birth order, organizational tenure, job nature, individual managerial sty]e, and a host of other factors may be systematically associated with differences in individuals ' attitude and readiness towards creativity training. On the other hand, researchers preoccupied with factors affecting creative performance! outcomes should broaden their perspectives and look at the implications of individual, job-related, and organizational factors for the creative processes, including trainees ' readiness for creativity training. More research attention on the interface between researchers and trainers is thus warranted.

However, several factors which were expected to influence attitude towards creativity training turned out to be irrelevant. They included sex, marital status, organizational position, teamwork, perceived group conformity expectation, and organizational decision making style.

In contrast to what Richardson (1986) would suggest, sex did not play a part in the respondents ' attitude towards creativity training in the present research. One reason could be that the sample used in Richardson ' s (1986) study was Jamaican adolescents, while the sample used in the present study was managers and executives in Singapore. The age, occupational, and cultural compositions of the two samples could have contributed to the contradictory findings. With regard to marital status, our research results suggested that the idea that family responsibilities may adversely affect a manager ' s attitude towards creativity training might not be tenable. The common assertion that individuals are trainable for creative performance (VanGundy, 1987, 1992; Goman, 1989) might thus be tenable as far as marital status is concerned.

Junior managers and executives may be able to see the long-term implications and usefulness of creativity training and thus value such training as dearly as the senior counterparts, resulting in the non-finding with regard to organizational position. With regard to the finding that managers and executives were indifferent to teamwork, perceived group conformity expectation, and organizational decision making style in their attitude towards creativity training, we would speculate that it might be due to the quality of the respondents. Managers and executives represent and carry out decisions on behalf of the organization. They tend to act and stay at the forefront of their organizations and thus may be able to look beyond immediate job and organizational climate constraints when considering creativity training. Another possible reason is that individual creative style may mediate the linkage. While teamwork, group conformity, and top-down organisational decision making style may reduce the level of creative motivation and receptiveness to creativity training among innovators, it may have the opposite impact on adoptors (Kirton, 1994). Thus, the lack of an across-the-board impact of these three factors on creativity training attitude is consistent with the extant literature on the significance of individual creative style (Kirton, 1994).

It is necessary to point out the limitations facing the present study. First of all, we used a single survey to collect data and therefore were not able to specify the directions of the causal relationships between the independent variables and attitude towards creativity training.

Although the attention of the present research was directed at the linkages, rather than the specific causalities, between the variables, future research should address the causality issues with longitudinal research design. (This causality limitation does not apply to such pre-existing, factual variables as age, organizational tenure, sex, educational level, marital status, and birth order).

Second, although justifications were given in the Methods section for the use of single-item, global measures to operationalize such concepts as conformity expectation, organizational decision making approach, and individual managerial style, we would not suggest that future research should do likewise. To the contrary, we would like to suggest that future research replicate our present study using multi-item measures to see if it is worthwhile to commit the additional efforts in measurement.

The present study is by no means the final work on attitude towards creativity training. Several potential future studies can be identified that will shed more light on our understanding of creativity training. One study could look at how non-managers and non-executives behave in comparison to their managerial and executive counterparts in terms of the linkages between demographic, job, and organizational climate factors on the one hand, and individuals ' attitude towards creativity training on the other. Differences between these two categories of employees could arise due to differences in educational experiences, nature of job tasks, stress experienced, information overload, motivation, and other factors.

Another study could extend the present research to include subjects from other countries or economies, such as People ' s Republic of China, Hong Kong, Malaysia, Indonesia, Taiwan, U.S., Canada, Australia, New Zealand, and others. Interesting observations should be forthcoming about the differences and similarities that exist between people living in these diverse cultures.

It also would be fruitful to investigate the effects of demographic, job, and organizational climate factors on trainees ' actual ability to learn on creativity training programs, as well as their ability and tendency to transfer and apply what they have learned in actual work situations. Such research could be done with field or laboratory experimental designs. Transfer of learning to actual work situations could be measured in terms of changes in work behavior or performance outcomes. Individuals ' actual ability to learn on the training programs can be assessed with training performance tests carried out before and after the training program.

Finally, several factors related to creativity training and creative performance may be worthy of consideration. They include the nature or content of creativity training (e.g., emphasis on divergent thinking), the role of individual creative style, and organisational need for creativity training. These factors are tangential to the present study as our focus has been on the general attitude of individuals towards creativity training. Future research should delve into how these factors may influence or interact with attitude towards creativity training.

To conclude, the present research has definitely generated more research questions than it has answered. More work awaits to be done in this interesting area of research.

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