MANAGERIAL CREATIVITY AS A FUNCTION OF DISCIPLINE OF STUDY AND RISK TAKING BEHAVIOUR AND THEIR INTERACTION

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Abstract: The recent findings of research in major disciplines indicate towards the seemingly exponential potential in human beings in terms of skills and thinking abilities. This opens up the arena of research to explore the ways of optimizing the performance using this potential, ascertaining the cultural and sociological factors / influences that need to be harnessed in the changing times in this context. Managerial Creativity is one of these quintessential skills. This paper examines the influence of Discipline of study, Risk taking behavior and their interaction on the Managerial Creativity of graduate students. The study was conducted on 288 Higher Education students with the age above 22 years from Science, Management and Education Disciplines and belonged to colleges and University Teaching Departments situated in Indore. Managerial Creativity was assessed with the help of a time bound Managerial Creativity Test developed by researcher and Risk Taking capacity with the help of Verbal Measure of Risk Taking Scale developed by Bhawalkar. The data were analyzed with the help of two way ANOVA. The results indicated that Discipline of study was found to influence Managerial Creativity significantly whereas Managerial Creativity was found to be independent of Risk-Taking, and interaction between Discipline of study and Risk Taking Behaviour.

Key words: Managerial Creativity, Discipline of Study, Risk Taking Behaviour

INTRODUCTION

In this technology driven economy the scope and nature of human performance is posed to new challenges and has undergone radical change due to technological, economic and socio- cultural factors. At one hand, information and communication technology as a boon has bestowed the independence to individuals by placing the world of information, contacts and resources at their finger tips giving them access to all the options to choose from the pool of available alternatives worldwide. On the other hand , the sphere of interdependence and connectivity has increased with beginning of liberal commercial exchange across the globe, markets reaching out to each individual through technology and the distance amongst individuals, societies and nations at large reducing virtually, turning the world into a close-knit society.

This concurrent situation of increased independence and interdependence has brought along with it a cut throat competition, more areas of decision-making, raised onus of
responsibility, elevated benchmarks of quality, and higher individual accountability. Each person equipped with his education, training, experience and all the resources is forecasting, planning, controlling, directing, and organizing more material, financial and human resources that are out of his geographical or physical reach in his own capacity and finding solutions of his multifaceted problems. Resultantly, this demands each person to excel in his achievements by influencing the accomplishments of others, and thus becoming a manager at his own level.

Each individual as a manager copes up with unpredictable future and unforeseen problems hence his once successful strategies prove inadequate in the scenario of radical change. Therefore acquiring a generalized thinking skill which enables one to cope up with all that is encountered, a thinking skill that is creative and constructive but not critical, proactive but not reactive, perceptual but not logical seems to be the plausible solution. Hence there is a refreshed interest in being novel, creative which is a state of mind where all our intelligences are working together (Craft, 2000) thinking where all the different dimensions of Intelligence—Rational, Emotional and Spiritual integrate to predict better flexibility and openness to change (Wadhwani, 2013). It is this propensity of human beings of being Creative to which progress of civilization can be attributed and that no longer remains an option but has become indispensable. It being described as a key thinking skill and no longer a mystical gift for few but can be fostered in every individual increases its importance manifolds.

Thus, the human management skills and their creative thinking ability become the key resources in this era (Robinson, 2001). With the competition getting tougher for openly accessible limited opportunities, mere competency to manage the resources or being creative, singularly often proves to be insufficient. Both merging together in the form of Managerial Creativity, that is finding solutions of the problems managing physical, human, financial resources in novel ways gives a winning edge to any individual. Thus, Managerial creativity becomes one of the vital higher mental ability to be possessed by all the trained manpower of any nation irrespective of their bailiwick.

Certain Personality traits cardinal to managerial decision making, like, Risk-taking, Tolerance of Ambiguity, and Openness to change have been found important for Managerial Creativity (Scratchley, 1998). One of these key traits, Risk-Taking refers to the tendency to engage in behaviour that has the potential to be dangerous yet at the same time provide the opportunity for some kind of positive outcome. Though the concept gives a negative connotation at a cursory thought but actually means pursuing an idea when the probability of its success is low. Risk-Taking and Creativity were found to be positively related by Singh, (1978); Agarwal, (1982); and Pandey, (1992). But Krishnagowda (1991) found no significant relationship between Risk-Taking and Creativity. Bhawalkar (1992) studied the relationship between Risk—Taking and Scientific Creativity and found high risk-takers to possess high Scientific Creativity but there are no studies exploring the relationship between Risk-Taking and Managerial Creativity.

The Risk-Taking ability as a Personality trait in an individual though in a major way is result of social cultural conditioning but is also affected by long period of formal
education. Education as a means, is supposed to equip all individuals with the competencies that boosts up their confidence to seek less tried novel alternatives with seemingly low probability of success and turn them into successful ones by using their knowledge and experience. This would help them to excel in managing all the situations creatively thus, have an edge. Education by itself and in an interaction with the Risk-Taking potential of individuals might serve as a preparatory media that would increase the self-efficacy of any individual as a Creative Manager and an Intelligent Risk-Taker. Few researchers have studied the relationship between formal education (Discipline) and Creativity and found that Science students were more Creative than Arts and Commerce students (Pandit, 1976; Shrivastava, 1977; Shrivastava and Jha, 1977, Mishra, 1978; Awasthy, 1979; Jarial, 1981; Sharma, 1982; Bindal, 1984; Kundu, 1984; Sharma, 1988; Singh, 1988 and Singh, 1990). On the other hand Rawat and Garg (1977), Kaur (1978), Sansanwal and Jarial (1979), and Desai (1987) did not find any significant difference in the Creativity of students belonging to different disciplines, like. Arts, Science and Commerce. Chowhan, (1992) found no significant difference in the Creativity of Medical and Engineering students. But there are no studies exploring the influence of Education (Discipline) on Managerial Creativity of an individual. The question arises does the educational accomplishment and training in itself and in interaction with Risk-Taking ability equip all the individuals irrespective of their stream of study with this indispensable ability of Managerial Creativity. The influence of formal education, the much claimed role of Risk-Taking and their interaction in encouraging the development of Managerial Creativity in all individuals is an aspect to be explored. Looking to the scarcity of the researches and the potential of the concept it was thought to explore the relationship of Managerial creativity with Discipline and Risk taking.

OBJECTIVE
1. To study the influence of Discipline, Risk-Taking and their interaction on Managerial Creativity.

HYPOTHESIS
1. There is no significant influence of Discipline, Risk-Taking and their interaction on Managerial Creativity.

SAMPLE
This study was conducted on Higher Education students belonging to colleges situated in Indore and University Teaching Departments of Devi Ahilya Vishwasdyalaya. Two colleges and two University Teaching Departments were selected randomly. The two colleges were Holkar Science College and Old Girl’s Degree Colleges. The Institute of Management and Institute of Education were two University Teaching Departments. The sample comprised 288 students with the age above 22 years selected through Stratified Random Sampling, who were at least graduates from Science, Management and Education Disciplines and their medium of instruction was both Hindi and English. There were 100 students from Management, 100 from Science and 88 from Education.

TOOLS

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The data were collected in respect of Managerial Creativity, and Risk-Taking. The details of the tools used are given in the following.

**Managerial Creativity**
Managerial Creativity was assessed with the help of a time bound Managerial Creativity Test developed by researcher. It consisted of four items in the form of four situations wherein the subjects had to list problems, alternatives, consequences and all the factors considered by them for each situation. Five minutes were given for responding each item and all responses were scored for Fluency, Flexibility and Originality. The total score of Managerial Creativity was arrived by adding Scores Fluency, Flexibility and Originality. The test had Content Validity and the Test-retest Reliability coefficient was found to be 0.54.

**Risk Taking**
Risk Taking capacity was assessed with the help of Verbal Measure of Risk Taking Scale developed by Bhawalkar. It consisted of nine situations where the subject was asked to imagine himself into the situation and respond by selecting one alternative out of the given six alternatives that stated with what chance of success the task would be taken up by the subject. The weightage assigned to these alternatives were 5, 4, 3, 2, 1 and 0. There was no fixed time to respond to the tool. The tool possessed Content Validity and the Test-retest Reliability coefficient for the tool was found to be 0.66.

**DATA COLLECTION**
Students fulfilling the requirement of the sample were oriented with the purpose of study and rapport was established with them. At a time a group of maximum 20 students or less than that were administered the tool. The Managerial Creativity and Risk Taking tools were administered in the stated sequence after giving proper instructions and maintaining the required environment at all the Institutions. The scoring of all the tools was done as per instructions given in the manual.

**DATA ANALYSIS**
The data were analysed with the help of Two way ANOVA.

**RESULTS**
Influence of Discipline, Risk – Taking and their interaction on Managerial Creativity
The objective was to study the influence of Discipline, Risk-Taking and their interaction on Managerial Creativity. Three were three levels of Discipline, namely, Science, Education and Management. The above average Risk-Takers and below-Average Risk-Takers were the two levels of Risk-Taking. The data were analyzed with the help of 3X2 Factorial Design ANOVA of unequal cell size. The results are given in the Table 1.

**Table 1: Summary of 3X2 Factorial Design ANOVA of unequal cell size for Managerial Creativity**

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>df</th>
<th>SS</th>
<th>MSS</th>
<th>F-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline (A)</td>
<td>2</td>
<td>5854.15</td>
<td>2927.08</td>
<td>32.82**</td>
</tr>
</tbody>
</table>
From Table 1, it is evident that the F-Value for Discipline is 32.82, which is significant at 0.01 level with df = 2/282. It indicates that the mean scores of Managerial Creativity of students belonging to Science, Education and Management Disciplines differ significantly. So Discipline was found to influence Managerial Creativity significantly. In the light of this the null hypothesis that there is no significant influence of Discipline on Managerial Creativity is rejected. In order to know which Discipline student’s mean Managerial Creativity was significantly higher, the data were further analyzed with the help of Duncan's Multiple Range test and its results are given in Table 2.

**Table 2: Summary of Duncan’s Multiple Range Test of Managerial Creativity**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>M</th>
<th>Education</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science</td>
<td>23.33</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Education</td>
<td>27.41</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Management</td>
<td>34.37</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From Table 2, it is evident that the mean score of Managerial Creativity of Science students was found to be significantly lower than those of Education and Management Students. Further, the mean score of Managerial Creativity of Education students was found to be significantly lower than those of Management students. It may be concluded that the Management students were found to possess Managerial Creativity significantly higher in comparison to Education and Science students. Further the Managerial Creativity was found to be possessed significantly more by Education students in comparison to Science students.

The F-Value for Risk Taking was found to be zero which is not significant (Vide Table 1). It shows that the mean scores of Managerial Creativity of students belonging to two levels of Risk Taking were found to be equal. So there was no significant influence of Risk Taking on Managerial Creativity of students. Thus the null hypothesis that there is no significant influence of Risk Taking on Managerial Creativity of students is not rejected. It may, therefore, be said that Managerial Creativity of students was found to be independent of Risk Taking ability of students.

The F-Value for the interaction between Discipline and Risk-Taking was found to be 0.99, which is not significant (Vide Table 1). It indicates that students with above average Risk-Taking ability and below average Risk-Taking ability belonging to different disciplines were found to possess Managerial Creativity to the same extent. Thus, there was no significant influence of interaction between Discipline and Risk-Taking on Managerial Creativity. In this context the null hypothesis that there is no significant
influence of interaction between Discipline and Risk-Taking on Managerial Creativity is not rejected. It may, therefore, be said that Managerial Creativity of students was found to be independent of interaction between Discipline and Risk-Taking of students.

DISCUSSION
The study revealed that the Management Students were found to possess Managerial Creativity significantly higher than Education and Science Students. This might be possibly due to the nature of the Discipline that reflects in the Personality of the students studying that subject. Management training exposes the students to think of various alternatives in each situation that develop Lateral Thinking in the trainees. The awareness of the need to manage situations in the diverse and novel ways with optimum use of resources in their career ahead changes the attitude of the Management students and fosters Managerial Creativity in them. Education as a Discipline also provides training to the trainees to manage a classroom in diverse situation using alternative strategies and try novel ideas to transact the curriculum in a short duration of practice teaching session. Hence these students do possess Managerial Creativity to certain extent but it is not as high as in Management trainees. Science being a very structured, logical and systematic subject emphasizes the Logical Reasoning and probably leaves less scope for flexibility that is out of the box thinking.

The emerged results at one hand do confirm that Managerial Creativity can be nurtured through formal education and on the other hand the findings reveal the lacuna of formal Education that it is not catering to the potential of Managerial Creativity of all individuals through its differential curricula under various streams. The higher education seems to emphasize the development of technical skills and discourages the free divergent thinking in the individuals that can help them to be more creative. This assertion is confirmed by the finding of Johannisson (1991). Moreover, these findings leave us with wide implications for the education system. There is need to reorient the curriculum with the changing times where each individual has to possess the managerial skills irrespective of the discipline opted.

Risk-Taking independently and in interaction with the Discipline of study was found to have no significant influence on Managerial Creativity of students. Risk taking individually might not be having a potential to influence Managerial Creativity but in interaction with other aspects, like, experience, age, cultural and family conditioning of the individual might have the potency to leave a significant influence. The Collective Culture provides a secure environment and a strong family support system to the members of society and Individualistic culture leaves its members with a not too strong support system to fall upon which also might lay impact on the person's choice to go for options with differential probability of success. This assertion gains support from Csikszentmihalyi (1996) suggesting that Creativity doesn't happen inside people's head but happens in the interaction between an individual's thoughts and his socio-cultural context including the climate of trust, support system, a conducive environment where his ideas, interest are valued, discussed and celebrated. Further, the subjects of the study lacked the experience of dealing with situations with alternative options that is gained with age.
Moreover, the stream of study together with Risk-taking is also not having any significant influence on Managerial Creativity. This may be because the Risk taking behaviour is Affective domain related aspect and the curriculum at higher levels is focused on Cognitive development and seldom touches the affective development in students. Hence, the individuals with differential Risk-taking ability from different streams of study seem to possess Managerial Creativity to the same extent. Another reason might be due to the fact that the Curriculum doesn't employ strategies that give the freedom to the students to take decisions involving risk. Across all streams there is no scope of uncertain and unknown to be explored by students where they can take the liberty to opt for alternatives with differential chances of success. For promoting this attitude education system has to give them such experiences and place the failure of an opted option involving high risk at par with a successful attempt with low risk in terms of the learning one gain from both. This is again a pointer towards the need to revamp the education system and make it robust enough to cater to the need of developing Managerial Creativity and Risk taking ability in students of different streams alike.

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