

Six Thinking Hats and Social Workers' Innovative Competence: An Experimental Study

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Abstract

Employees, no doubt, are the main force in organizations, and their innovative behaviours are vital for outcome efficacy. Innovative organisations, therefore, need creative employees who generate new ideas for product or process of innovation. This study investigated the effect of six thinking hats creativity technique on innovative competence of social worker. A pretest-post-test quasi-experimental design was adopted for the study. Forty-eight (48) participants chosen among social workers in two randomly selected Non Governmental Organisations participated in the study. Data were collected using Innovative Competence Scale. Analysis of variance was employed for data analysis with significant level fixed at 0.05. Findings from the study revealed that the treatment significantly affect participants' innovative competence. Based on the results, the study recommended that creativity be integrated into the training programmes for personnel in the workplace.

Keywords: Creativity, Innovative Competence, Six Thinking Hats, Social Workers

Introduction

The rapid changes, complexities and expansion in the world market and workplace have created lots of challenges to organisations. In order to stay afloat, despite the stiff competition in the market, a learning organisation needs to think "outside the box". To gain competitive advantage, therefore, organizations must rely on employees to innovate in processes, methods and operations (Shalley & Gilson, 2004). Survival is therefore hinged on being innovative. Innovation cannot be sharply dichotomised from creativity. Studies have shown that they are actually two sides of a coin. For instance, organizational literature (Flaatin, 2007; Mumford, Scott, Gaddis & Strange, 2002; West, Hirst, Richter & Shipton, 2004; Westwood & Low, 2003) holds numerous statements on the necessity of organizational creativity and innovation. Their pivotal roles for survival in today's market are acknowledged.

Creativity is innovation's precursor; both are key issues for organisational survival and growth. Innovation is increasingly seen as a key strategic priority due to its potential to create sustainable competitive advantage. Creativity is the making and communicating of meaningful new connections and insights. Innovation is the transformation of these ideas and insights into deliverable business results. Creativity and innovation in any organization are vital to its successful performance. Research field of organizational creativity and innovation has confirmed that the two phenomena are closely related. Creativity and Innovation in the workplace have become increasingly important determinants of organizational performance, success, and longer-term survival. As organizations seek to harness the ideas and suggestions of their employees, it is axiomatic that the process of idea generation and implementation has become a source of distinct competitive advantage (Anderson, De Dreu, & Nijstad, 2004; West, 2002; Zhou & Shalley, 2003).

Management literature reviewed (Tidd, Bessant, & Pavitt, 2005) affirms that organizations that meet the innovation challenge out perform their competitors in terms of market share, profitability, growth and market capitalization. Innovative organizations are better able to mobilize the knowledge, skills, and experiences of people, and successfully create new products, services and ways of getting things done faster, better and cheaper. In fact, Barsh, Capozzi, and Davidson (2008), found that 70% of senior executives identified innovation as one of their top three drivers for improving organizational performance. Numerous creativity techniques exist. This study is however interested in de Bono's six thinking hats and its efficacy in fostering innovative competence of social workers.

Literature evidence (de Bono, 2008; Goleman, 2006) has shown that among the creativity techniques used to enhance the individuals and human organisations performance is de Bono's Six Thinking Hats. The method is a framework for thinking and can incorporate lateral thinking. Valuable judgmental thinking has its place in the system but is not allowed to dominate as in normal thinking. The six hats represent six modes of thinking and are directions to think rather than labels for thinking. That is, the hats are used proactively rather than reactively. The method promotes fuller input from more people. In de Bono's words it "separates ego from performance". Everyone is able to contribute to the exploration without denting egos as they are just using the yellow hat or whatever hat. The six hats system encourages performance rather than ego defense. People can contribute under any hat even though they initially support the opposite view.

de Bono (1999) posits that a hat is a direction to think rather than a label for thinking. The key theoretical reasons to use the Six Thinking Hats are to: (a) encourage parallel thinking, (b) encourage full-spectrum thinking and (c) separate ego from performance. There are six metaphorical hats and the thinker can put on or take off one of these hats to indicate the type of thinking being used. The putting on and taking off is essential. The hats must

never be used to categorize individuals, even though their behaviour may seem to invite this. When done in group, everybody wear the same hat at the same time.

The Six Hats method has been used and reported to have achieved great successes by organisations. For Siemens in Germany, IBM, DuPont, NTT (Japan) Shell, BP, Statoil Norway among others have recorded remarkable productive outcome as a result of the introduction of the Six Hats method (de Bono, 1999). Six Hats is a simple, yet powerful tool that can be learned rapidly and used immediately to achieve long-lasting results. Six Hats helps group to generate ideas quickly, evaluate them efficiently, and implement action plans effectively.

Despite ample literature on the efficacy of the six hats in enhancing behavioural and organizational outcomes, there is dearth of evidence on its application to social work. The paucity of its inclusion to outcomes in social work drove this study. To achieve the objective of the study, it was hypothesised “there is no significant effect of Six Thinking Hats on participants’ innovative competence.

Methods

Design and Participants

This study employs the use of pretest - post-test quasi-experimental design. Participants of this study were 48 social workers randomly selected from two Non-Governmental organisations in Ogun State, Nigeria. Twenty-four participants each were randomly assigned to the experimental treatment group and the control group.

Instrument

Innovative Competence Scale (ICS) developed by Akinboye (2003) was employed for this study. The scale measures the individual’s ability to generate novel ideas and practically apply such to daily activities. The scale contains fifteen items on innovation, scored on a five-point Likert scale. The scoring is as follows: N = Never (1), O = Occasionally (2), S = Sometimes (3), F = Frequently (4), A = Always (5). Participants with high score indicate high innovation quotient. Examples of the items are: “I regularly review and update my vision and mission as a worker”, “I could see possibilities within the seemingly impossible by actively exploring the environments.” Akinboye reported a Cronbach alpha of 0.85 and reliability co-efficient of 0.88.

Procedure

Participants were briefed on the purpose and nature of the study. They were then randomly distributed into experimental group and control group. The Innovative Competence Scale was administered on the participants for pre-intervention data. The pre-test data served as the baseline against which the post-treatment data would be compared. The tasks for each group were explained to the participants. The process adopted lectures, discussion, case study analysis, simulation exercise and take home assignments. The tasks were presented to the experimental group and participants were made to respond to them, first, as an individual and the whole group was also made to consider the same problem.

To ensure focus on the objective of the study (i.e. fostering their innovative competence); participants were encouraged to generate novel ideas/solutions to the problem presented to them. They were told to come up with fresh ideas that were “out of the box” as against those presented in normal day life situation. The programme lasted for eight weeks - eight sessions of one-hour intensive training at each level of the experimental group. In each session, participants were given 30 minutes’ lectures and discussions. Participants were encouraged to work on the presented issues at home. At the end of the 8th week of the intervention, the innovative competence scale was re-administered on all participants to collect post-test scores. The study was simultaneously carried out in two organisations. Participants in the experimental group were subjected to the treatment package while those in the control group received placebo (Pauk’s SQ3R study skills technique) for the same duration as the treatment group.

Method of Data Analysis

The Analysis of Covariance was employed for analysis of collected data through pre-post-test treatment administration.

Results

The result in Table 1 revealed that participants in the six thinking hats group had a mean score of 47.29 with a standard deviation of 6.656 while participants in the control group had a mean score of 46.54 with a standard deviation of 8.278

Table 1: Descriptive Statistics

Group	Mean	Std. Deviation	N
Control	37.92	9.934	24
Six Thinking Hats	47.29	6.656	24
Total	42.60	9.613	48

Table 2: Analysis of covariance of the main effect of six thinking hats on innovative competence of participants
 Grand Mean = 42.604

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	1149.256 ^a	2	574.628	8.095	.001
Intercept	1623.049	1	1623.049	22.865	.000
Innovative	94.569	1	94.569	1.332	.254
Group	1115.460	1	1115.460	15.715	.000
Error	3194.223	45	70.983		
Total	91469.000	48			
Corrected Total	4343.479	47			

a. R Squared = .265 (Adjusted R Squared = .232)

b. Covariates appearing in the model are evaluated at the following values: Pre-test Innovative competence = 42.83.

The result above revealed that there exists positive and significant effect of six thinking hats on participants' innovative competence ($F_{(1, 45)} = 15.715$; $p < .05$). The null hypothesis was therefore rejected by the findings of this study. The implication of the finding is that social workers' innovative competence was significantly improved by six thinking hats training technique.

Table 3: Univariate test effect of six thinking hats training programme on participants' innovative competence

	Sum of Squares	Df	Mean Square	F	Sig.
Contrast	1115.460	1	1115.460	15.715	.000
Error	3194.223	45	70.983		

The F tests the effect of treatment. This test is based on the linearly independent pairwise comparisons among the estimated marginal means. The results in Table 3 revealed that there was significant effect of six thinking hats ($F_{(1, 45)} = .046$; $p < 0.05$) on participants' innovative competence.

Table 4: Pairwise Comparisons of the difference in the level of participants in six thinking hats training and control groups innovative competence

(I) group c	(J) group c	Mean Difference (I-J)	95% Confidence Interval for Difference			
			Std. Error	Sig.	Lower Bound	Upper Bound
Control	Six Thinking Hats	-9.710*	2.449	.000	-14.643	-4.776
Six Thinking Hats	Control	9.710*	2.449	.000	4.776	14.643

a. Adjustment for multiple comparisons: Bonferroni

Results in Table 4 revealed that six thinking hats has a significant effect on social workers' innovative competence high and above the control group (MD = 9.710; std error = 2.449; $p < .05$). This means that participants exposed to six thinking hats technique showed more innovative competence than their counterparts in the control group.

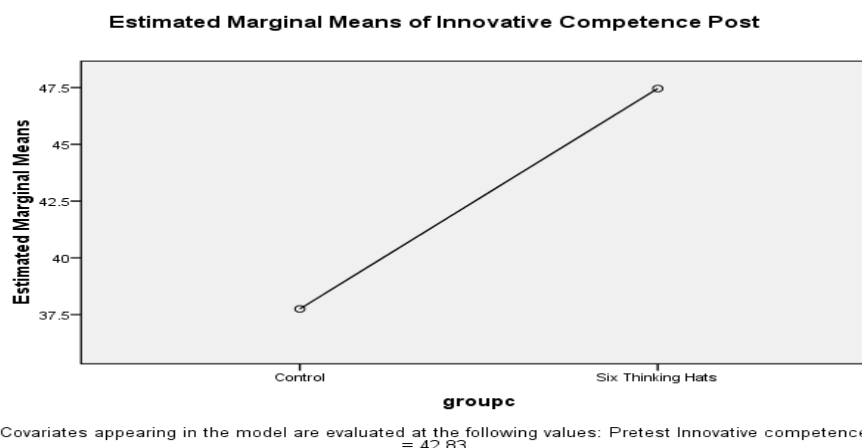


Figure 1: Profile plots

The profile plots in Figure 1 show that there is significant difference between participants in treatment and control groups. Those in six thinking hats group have higher innovative competence than their counterparts in the control group.

Discussion

The outcome of the study revealed that six thinking hats creativity technique significantly affected the innovative competence of participants. The results indicated that the participants in the experimental group had higher scores on the innovative competence scale than their counterparts in the control group. The outcome may be attributed to the training. This implied that the independent variable exerted significantly on the criterion variable. The results corroborate earlier findings by de Bono (2008), Dul & Ceylan (2010), Adenuga (2011) Li, and Zheng (2014) whose studies participants, similar to the present study, showed better outcomes and outperformed their counterparts not trained. The findings of the present study clearly showed that the six thinking hats creativity technique is learnable and usable too in the workplace for better outcomes. Ample research evidence (Lian, Yang & Ma, 2013; Tao & Kang, 2012; Wang, & Duan 2014; Yang, et al., 2011) have shown that the innovative efficacy and creative willingness of employees have been improved and has a direct effect on individual innovative behaviour.

Conclusion and Recommendations

The results of this study have contributed to the research field of organizational creativity and innovation by demonstrating enhanced capacity of trained social workers. This underscores the urgent and systematic introduction of the use of the technique in the social work and beyond, for instance, schools, hospitals and all other social service providers. Workplace psychologists and HRM should make it a point of duty to include creativity elements into their training programmes in order to achieve better productivity. Organizations should focus on the publicity and advocacy of internal innovation culture and innovation concept.

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