Developing creative and innovative thinking and problem-solving skills in a financial services organisation

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Orientation: An important evaluation function is to determine whether creative and innovative thinking and problem-solving skills can be developed through training and to assess whether these skills, on their own, are sufficient to ignite innovation in organisations.

Research purpose: The evaluation question that the present study aimed to address is whether employees in a corporate context, such as a financial services organisation, can develop creative and innovative thinking and problem-solving skills through an intervention such as a workshop.

Motivation for the study: A financial services organisation commissioned the primary author of this article to design a workshop with the intent to develop the creative and innovative thinking and problem-solving skills of their employees in order to ignite innovation and competitiveness.

Research design, approach and method: This study employed mainly qualitative research. Utilisation-focused evaluation (UFE) was employed and findings from the literature review, questionnaires, pen-and-paper tests and interviews were used. The unit of analysis was a niche business unit in a South African financial services organisation.

Main findings: From this study's point of view, the most critical finding related to the confirmation that individuals can acquire creative and innovative thinking and problem-solving skills. The acquisition of these skills, however, is not sufficient on its own to establish a culture supportive of creativity and sustainable innovation.

Practical/managerial implications: The development of creative and innovative thinking and problem-solving skills of employees is not sufficient on its own to support sustainable innovation. Managers should consciously establish determinants on an organisational as well as an individual level to create an environment supportive of sustainable innovation.

Contribution/value-add: The present study indicated how a workshop can assist individuals to develop creative and innovative thinking and problem-solving skills. The acquisition of these skills is not sufficient on its own to ignite sustainable innovation.

Introduction

Problem statement

Retailers and unexpected competitors, such as telecommunication role players, have begun to enter the traditional financial services domain. Subsequently, a financial services organisation has realised that they are losing valuable customers and decided that innovative ways of doing business are required to ensure future sustainability. This led to the following questions: Can individuals develop creative and innovative thinking and problem-solving skills by means of a workshop? Can the acquisition of these skills ignite innovation that can ensure the long-term competitiveness of the organisation?

Key focus of the study

In this article we examine whether or not employees in a financial services organisation can acquire creative and innovative thinking and problem-solving skills by means of a workshop to ignite innovation. If they can, could the financial services organisation then use this strategy to remain competitive?

Background to the study

A specific financial services organisation in South Africa came to the realisation that they had to join the innovation revolution in order to remain commercially competitive in the twenty-

first century. With retailers and other competitors, such as the telecommunication role players, entering the traditional financial services domain, financial services organisations were losing customers and revenue. The organisation realised that they had to create a new business model in order to 'create new value for customers, provide rude surprises for competitors, and create new wealth for investors' (Hamel, 2000, p. 18).

Consequently, the financial services organisation commissioned the primary author of this article to design a creativity and innovation workshop to improve the creative and innovative thinking and problem-solving skills of their employees.

Research purpose

The current focus of the literature review indicates a definite shift towards a more systemic understanding of innovation because '… innovation has gone through a crisis of credibility in many organisations' and many organisations have simply concluded: 'We tried innovation. It didn't work!' (Skarzynski & Gibson, 2008, p. 15). Although the focus has shifted towards a more systemic approach, the recurrent emerging trends continuously revert back to the individual as the nucleus from which innovation ultimately emanates.

The focus has also been extended from the internal individual (the employee), to the external individual (the customer) (Hamel, 2000; Prahalad & Krishnan, 2008). The promotion of creativity and innovation in an organisational context is well supported and well documented, as is confirmed by the literature review below, although the issues around creativity and innovation are not necessarily related to financial services organisations. Prahalad and Krishnan (2008) briefly mention the role of innovation in financial services but there is little literature available on how the acquired skills could be applied in a highly regulated environment. This lack of research confirms the need for the study and creates an opportunity for the researchers to make an original contribution to the field of knowledge.

Trends from the research literature

The development of creative and innovative thinking and problem-solving skills is crucial for the survival of organisations in the twenty-first century (Hamel, 2000; Levesque, 2001; Skarzynski & Gibson, 2008). Organisations have no option but to innovate. To achieve this, they have to design a strategy that is able to convert creativity into innovation (Allison, 2005; Cook, 1998; Krippendorff, 2008). Man (2001) and Prahalad and Krishnan (2008) argue that a valuable degree of creative skill can be acquired by anyone that sets out to acquire such skills. Training in the field of creative problem solving is generally found to be most effective when organisations wanted to equip employees with creative and innovative thinking and problem-solving skills (De Bono, 1995; Williams, 2001). The environment plays a crucial role in enhancing creativity and innovation (De Bono, 2005; Krippendorff, 2008). The research indicates that creative and innovative thinking and problem-solving skills can be acquired by means of a workshop but that they are not sufficient on their own to ignite sustainable innovation.

Objectives

Prahalad and Krishnan (2008) briefly mention the role of innovation in financial services but there is little literature available on how the acquired skills could be applied in a highly regulated environment. This lack of research confirms the need for the study and creates an opportunity for the researchers to make an original contribution to the field of knowledge. The first objective of this study is therefore to determine the extent to which creative and innovative thinking and problem-solving skills can successfully be taught. The second objective is whether these skills can be applied in a highly regulated environment where very few determinants supportive of innovation are present. The third objective is how to address the abovementioned challenges.

Contribution to the field

The most critical finding relates to the acknowledgement that individuals can acquire creative and innovative thinking and problem-solving skills as advocated in the literature research and affirmed here by the empirical data. The acquisition of these skills, however, is not sufficient on their own and is dependent on a spectrum of determinants to ignite and sustain innovation. The study confirms the above statements.

What will follow

This article has four parts. Firstly, it reviews the current thinking on creativity and innovation, its role in business and what content to incorporate into the design of a workshop. Secondly, the research methodology is presented and data collection and analysis techniques are discussed. Thirdly, the findings are discussed and summarised and, lastly, the article is concluded with recommendations, managerial implications and directions for further research.

Literature review

The concepts of 'creativity' and 'innovation' had to be defined as a point of departure for the intended intervention. Some authors are of the opinion that innovation needs to be distinguished from creativity (Middleton-Kelly, 2006; Skarzynski & Gibson, 2008), whilst others advocate the interchangeable use of the two concepts (Couger, 1995; Krippendorff, 2008; Man, 2001). The authors are the opinion that the context determines the use of these two concepts.

The concept of 'creativity' is well defined and explored in the literature. Various authors have offered definitions for creativity. However, Baron (1969, 1990) and Guilford (1975, 1986) agree that creativity should result in something new. Various authors identify different phases an individual has to go through to be creative and it is evident that a process is required to reach a creative goal (Lessem, in Henry, 1991; Wallas, in Lytton, 1971). Cook (1998) argues that an idea without commercial application is irrelevant.

If creativity is viewed in an organisational context, the evaluation and application should focus on a commercial outcome. Ford and Gioia (1995), Martins and Terblanche (2003) and Wallace and Gruber (1989) are of the opinion that creativity should be measured in context. From the above it is evident that a number of factors have to be considered when attempting to define creativity. This information, as well as the different views and definitions of creativity, were used to formulate the following definition of creativity for the purpose of this study: Creativity is the accomplishment of new developments as a result of the interaction between an individual and his or her environment, or groups and their environment with commercial intent.

Schumpeter (as cited in Fonseca, 2002, p. 15) defines innovation very broadly as 'all ways of doing things differently', whilst Robbins (1979) and West and Farr (1996) attempt more detailed definitions. Hamel (2000) focuses on the creation of wealth and Kelley (2001, p. 5) argues that innovation is a blend of 'methodologies, work practices, culture and infrastructure'. Grulke (2002, p. 8) defines innovation as 'the change into something new, the introduction of novelties and the alteration of what is established'. Although each researcher has their own interpretation of innovation, most researchers commonly view the central and key concepts as follows: innovation starts with a new idea and in organisations with characteristics that allow individuals to assume the role of entrepreneurs, a process or a blend of methodologies is followed that brings about a change that can be implemented for commercial gain. The same themes that emerged during the discussions of the creativity definitions are evident in the definitions of innovation. These themes are extended to include the thoughts pertaining to the creation of wealth. Innovation, for the purpose of this research, can therefore be defined as: the accomplishment of something new or the change of something that already exists, as a result of the interaction between an individual and the environment, or a group with their environment with the sole purpose of commercial intent in the attempt to create wealth.

Ford and Gioia (1995), Hamel (2000), Kelley (2001) and Krippendorff (2008) agree that interventions should be designed in order to develop a culture of creativity and innovation. They concur that a specific relationship exists between creativity, innovation and culture. Successful organisations also change their strategy and structures firstly to enable innovation, secondly to support the intervention with a well-planned change management process and, thirdly, to choose a methodology or guideline to guide them through the change (Hamel, 2000; Kelley, 2001).

Organisations that successfully establish a culture supportive of creativity and innovation find creative solutions to the barriers of innovation, sanction actions to empower innovators, set boundaries for innovation, tolerate risk and create structures that facilitate innovation (Hamel, 2000; Kelley, 2001; Krippendorff, 2008). It is evident from the literature review that innovative organisations focus on organisational and individual levels to enable and establish creativity and innovation.

Most researchers are able to identify the characteristics of organisations that successfully lead the innovation revolution. These organisations enable and encourage their employees to think creatively and produce innovative ideas and solutions. The challenge for organisations that would like to become more innovative is how to unleash the creative potential of their employees to generate those ideas that can be channelled into innovative business opportunities. This could be achieved by developing the creative and innovative thinking and problem-solving skills of individuals in their organisations. De Bono (1992), Man (2001) and Prahalad and Krishnan (2008) argue that a valuable degree of creative skill can be acquired by anyone that sets out to acquire such skills.

Creativity is not limited to artists, musicians and marketing people; it is a tangible and abundant wellspring that everyone can tap into (Arenofsky, 2000; Levesque, 2001; Von Oech, 1983). The researchers support this view and the premise underlying the selection of the workshop content is that everybody is creative and that creativity can be developed. The following themes were used as guidelines for the selection of the workshop content.

Creativity and innovation have to be defined in context (Couger, 1995; Man, 2001; Martins & Terblanche, 2003). Couger (1995) propagates the need for both divergent and convergent thinking. Allison (2005), Couger (1995), Hamel (2000) and Prahalad and Krishnan (2008) discuss barriers to creativity and innovation. Krippendorff (2008), Prahalad and Krishnan (2008) and Skarzynski and Gibson (2008) support the importance of an environment that sustains and enables creative and innovative thinking and problem-solving skills. Ford and Gioia (1995), Henry (1991) and Lucas (2003) support the theory that the brain consists of a left side and a right side and that each side has distinct functions and qualities. Kelley (2001), Levesque (2001) and Plompen (2005) are of the opinion that co-operative teams do have an influence on the degree to which creativity and innovation occur in organisations.

As stated, the financial services organisation in question commissioned the primary author of this article to design a workshop to develop the creative and innovative thinking and problem-solving skills of their employees. Some of the design features and the distinctive characteristics of the workshop content taken from the literature were as follows. The commissioned workshop approach is based on adult learning principles and the design incorporated a variety of learning styles and training techniques (Lucas, 2003; Piskurich, 2000). The most effective activities were selected and their utility and practicality had to be evaluated. The ideal group size appears to be 12 people (Lucas, 2003). Amabile (2003) adds that when selecting participants for the workshop, their skill in the domain, potential creative thinking skills, as well as intrinsic motivation, should be considered. Rapid instructional design represents an eclectic approach with a flexible choice of techniques based on the nature of the instructional objective, the characteristics of the participants and the context of training (Thiagarajan, in Piskurish, Bechshi & Hall, 2000). The final workshop

design incorporated the ADDIE (analyse, design, develop, implement and evaluate) process (Beckshi & Doty, in Piskurich *et al.*, 2000), as requested by the client.

As the focus of this study is contained within the training arena, it lends itself to the use of the Kirkpatrick evaluation framework (Kirkpatrick & Kirkpatrick, 2006). It is evident from the literature review that the Kirkpatrick four level model (level one: reaction, level two: learning, level three: behaviour and level four: results) has prevailed and is still used despite its shortcomings (Coetsee, 1998). Owing to the time constraints of this study, the evaluation was limited to levels one and two. Some tentative information regarding level three evaluations was obtained. Furthermore, it was impractical to do a pre-test and post-test because of the subjective nature of the subject matter. A specific body of prior knowledge is required to be able to facilitate the workshop. The process combined sound theoretical information with experiential activities that supported the transfer of learning and retention of information.

Thought leaders acknowledge the interdependency of both individual determinants and organisational determinants for the establishment of an environment conducive of creativity and innovation (Hamel, 2000; Krippendorff, 2008; Prahalad & Krishnan, 2008; Skarzynski & Gibson, 2008). The environment plays a crucial role in enhancing creativity and innovation (De Bono, 2005; Filipczak, 1997; Joubert, 1993; Krippendorff, 2008; Maas, De Coning & Smit, 1999; Wallace & Gruber, 1989; West & Farr, 1996).

Training in the field of creative problem solving was generally found to be the most effective when organisations wanted to equip employees with creative and innovative thinking and problem-solving skills (De Bono, 1995; Von Oech, 1990; Williams, 2001). The commissioned workshop was therefore designed with the intent to develop the creative and innovative thinking and problem-solving skills of the employees of a financial services organisation. Thus as stated above, the objectives were, firstly, for the employees to develop these skills and, secondly, to assist them to apply these skills in a highly regulated environment.

Research design

Research approach

The first motivation for the choice made is that the central research question and problem can only be answered by means of the research design and models found in programme evaluation literature. The present study was, in essence, evaluation research. Furthermore, the design had to be informed by the fact that a qualitative research approach had been considered most relevant, if not mandatory given the nature of the research problem and question. Utilisation-focused evaluation (UFE) enabled the researcher to address both the evaluation need and the qualitative research approach. In addition, UFE was very apt, because it allows the shift from research project conceptualisation right through to an evaluation of the impact and utility or practical value of the intervention being evaluated, namely the workshop to train employees in a financial services organisation to become more innovative and creative in their daily task execution in the interest of the sustainability and continued competitiveness of the organisation.

The research design allowed us (albeit in a limited way because of the time constraints of the study) to attempt to answer the ultimate evaluation question, namely how useful the intervention was beyond the individuals who had participated in the training, as the training is not an end in itself; it should ultimately be instrumental in benefiting the financial services organisation as well in the short, medium and longer term. UFE as a research design enabled the researcher to attempt to answer (evaluative) questions related to the immediate impact of the workshop and its longer-term effect. In that sense it was a very productive and heuristic research design for this study.

Research strategy

In general, the strategy for evaluation research involves getting clarity about the reason for the evaluation, identifying stakeholders and respondents, defining what needs to be evaluated, developing the research approach design and methods, collecting data and producing the report. In this study, evaluation research was used to determine the merit or worth of the programme (the workshop format and content), to improve the programme and to generate knowledge about the expected impact of the programme on the individual and on business competitiveness.

Patton (1997) developed a relatively comprehensive approach to programme assessment that provides an overall framework within which the individuals involved can proceed to develop an evaluation design with built-in utilisation of the unique circumstances they encounter. The financial services organisation insisted that the results had to be utilised.

According to Patton (1997), UFE starts off with the premise that evaluation initiatives should be judged by their level of utility and actual use. Therefore, in facilitating and designing the process, an evaluator should carefully consider from the outset how every activity that is undertaken will affect the utilisation of the initiative by real people or stakeholders in the real world. It should be clear that UFE is not only highly personal but is also situational. The evaluators developed a working relationship with intended users in order to assist them in deciding on the type of appropriate evaluation for their situation which will address their needs optimally. Patton (1997) believes that UFE should not promote any particular evaluation content, model, method, theory or use. In his view, this approach rather represents a process through which the evaluator should assist primary intended users to select the most appropriate content, techniques, methodologies and use for their situation.

From the above exposition, it transpires that UFE rests on two fundamental requirements. Firstly, the intended

evaluation users should be identified and organised – real, visible, specific and caring human beings; not ephemeral, general and abstract audiences, organisations or agencies. Secondly, evaluators should work actively, reactively and adaptively with these specific stakeholders to realise all other decisions about the evaluation – decisions about focus, design, methods, analysis, interpretation and dissemination.

Research method

Research setting

One of the key features that distinguishes qualitative research from quantitative research, as identified by Babbie and Mouton (2001), places the main thrust of this study in the qualitative research paradigm, namely that the research takes place in the natural setting of the social actors, which, in this study, was a niche business unit in a large financial services institution in South Africa. This business unit comprises 72 highly creative employees and they agreed to the intervention. Fifty-one of the employees attended the workshops. Eleven of them were interviewed.

Entrée and establishing researcher roles

Cultural and other forces shape and surround the researcher. It is therefore crucial for a researcher to be competent in exploring his or her own personal perspectives (Babbie & Mouton, 2001; O'Leary, 2005). The researcher should have a:

> … prolonged engagement with the study to ensure the investment of sufficient time to achieve certain processes; learning the culture [of the participants], testing for misinformation introduced by distortions, either of the self or of the respondents, and building trust [with the participants]. (Lincoln & Cuba, cited in Oka & Shaw, 2000, n.p.)

The primary researcher in this study had a prolonged engagement with the financial services organisation in question and a trust relationship between them was established prior to the research being conducted. This author designed and developed the workshop, designed the evaluation questionnaires and pen-and-paper tests, facilitated the workshop, designed the structured interviews, conducted the structured interviews and integrated the results from the questionnaires, pen-and-paper tests and interviews. The second author acted and supervisor and the third author as co-supervisor.

Sampling

As Babbie and Mouton (2001) and Grinell (1993) indicate, sampling within the qualitative paradigm is almost always by means of purposeful sampling, as is the case here. The niche business unit volunteered and agreed to the intervention. A total of 51 employees out of a possible 72 attended the workshops, which constitutes a 70% response rate and which reflects 8% of the division's population. There were 25 male and 26 female participants. Fourteen were between the ages of 20 and 30 years, 28 between the ages of 31 and 40 years, seven between 40 and 50 years and two between 51 and 60 years. Most participants were English-speaking. Fifteen participants had diplomas, seven had Bachelor degrees, 13 had Honours degrees and six had Masters degrees.

Data collection methods

It is rare to find a study that is based on only one method of data collection; rather, the norm is to employ a range of data-collection techniques (Clarke & Dawson, 1999). Firstly, different instruments are used to collect different types of data. Secondly, these serve as a means of triangulating data and improving authenticity and validity of findings. As Clarke and Dawson (1999, p. 86) remark: 'Using more than one reference point enables greater accuracy of measurement'. The measuring instruments used for the purpose of this research were questionnaires, pen-and-paper tests and interviews.

Questionnaires are one of the most frequently used data-collection instruments in evaluation research (Clarke & Dawson, 1999). For the purpose of this study, questionnaires were used to collect formative data about the satisfaction of participants with various aspects of the delivery of the programme and also the key design features and characteristics of the intervention or workshop.

Pen-and-paper tests were designed in accordance with Kirkpatrick and Kirkpatrick's (2006) level two evaluation requirements. The pen-and-paper tests determined what knowledge was gleaned, what skills were developed or improved and what attitudes were changed (Kirkpatrick & Kirkpatrick, 2006). All stakeholders who participated in the intervention were required to complete the questionnaires and the pen-and-paper tests.

Conducting an interview is another frequently used data-collection method in qualitative research (Babbie & Mouton, 2001; Clarke & Dawson, 1999). In this study the primary researcher conducted all the interviews. Structured individual interviews were conducted in order to obtain information regarding the contents and design features of the creativity and innovation workshop, as well as to discover how participants attending these workshops experienced the workshops. Managers (more senior) were interviewed on their perception of change achieved and to assess the nascent impact on organisational development.

Recording of data

The participants in the programme were surveyed about their satisfaction with the creativity and innovation programme using questionnaires and interviews, as described above. The interviews were recorded and then transcribed. The information obtained from the pen-and-paper tests was integrated and compared with information from the questionnaires, as well as individual interviews where additional comment was invited.

Data analyses

The analysis of the questionnaires, pen-and-paper tests and the interviews was based on pattern identification. The data were coded by making use of frequency counts and trend identification. The data collected from the questionnaires and interviews of the participants were examined to identify

patterns indicating the impact of the implementation of creative and innovative decisions in the division in the organisation. The data collected from the structured interviews conducted with senior and executive management were used to corroborate employee perceptions of the impact on the individual and on the organisation.

Strategies employed to ensure quality data

The questionnaires were processed by Statcon at the University of Johannesburg. The pen-and-paper tests were assessed by the primary researcher. They were moderated by an internal learning and development resource in the financial services organisation. The interviews were recorded and transcribed. The information obtained from the interviews was integrated and correlated with the findings of the questionnaires and pen-and-paper tests.

Reporting

This final part of UFE entails the making of decisions about the dissemination of the evaluation report. For the purpose of this study, the evaluation is in the form of the present article, which followed the submission of a thesis for degree purposes. It incorporates all the views from the intended users and senior management.

Findings

The study findings are presented on a sequence of selected tables (see Tables 1, 2 and 3). The most important objective was to determine whether creative and innovative thinking and problem-solving skills can be acquired by means of a workshop. The second objective was to determine whether or not the acquisition of these skills is sufficient to ignite sustainable innovation. The results from the questionnaires clearly indicated that the awareness was raised that creativity can be developed, the content of the creativity workshop achieved its objectives and, most important of all, that the workshop enhanced the participants knowledge with regards to creativity and problem-solving techniques.

TABLE 1: The creativity workshop raised my awareness that creativity can be developed.

Validity	Frequency	%	Valid %	Cumulative %
To a lesser extent	4	7.8	7.8	7.8
To a major extent	14	27.5	27.5	35.3
It can be developed	33	64.7	64.7	100.0
Total	**51**	**100.0**	**100.0**	–

The results indicate that most participants (64.7%) are of the opinion that creativity can be developed.

TABLE 2: The content of the creativity workshop achieved the objectives.

Validity	Frequency	%	Valid %	Cumulative %
To a lesser extent	8	15.7	15.7	15.7
To a major extent	17	33.3	33.3	49.0
Yes, it achieved the objectives	26	51.0	51.0	100.0
Total	**51**	**100.0**	**100.0**	–

The results indicate that the creativity workshop achieved the objectives (51.0%).

TABLE 3: The content of the creativity workshop enhanced my knowledge with regards to creative thinking and problem-solving techniques.

Validity	Frequency	%	Valid %	Cumulative %
To a lesser extent	1	2.0	2.0	2.0
To a major extent	15	29.4	29.4	31.4
Yes, it enhanced my knowledge	35	68.6	68.6	100.0
Total	**51**	**100.0**	**100.0**	–

The results indicate that most participants (68.8%) believe the content of the creativity workshop enhanced their knowledge with regards to creative thinking and problem-solving techniques.

The questionnaire contained the open-ended question: 'Please write down what actions you think can be taken by the leaders in your division to support innovation', to which some 36 responses were recorded. Nine participants did not answer this question. Two participants indicated that this question was not applicable to them. In summary, the participants answering this question suggested that the leaders should take action to create a culture supportive of creativity and innovation; that the leaders should support innovation by making time for innovation questions, listening to new ideas, be more open-minded and ensure that everyone attends the workshop.

The results of the questionnaires, the pen-and-paper tests, as well as the information obtained during the interviews, clearly indicated that creative and innovative thinking and problem-solving techniques can be taught in a financial services organisation. It is evident from the responses of the interviewees that the workshop participants were eager to apply the creative and innovative thinking and problem-solving skills in the workplace:

> 'Yes, there are some indications that our participants of the workshop are using the techniques we explored during the workshop.' (Executive Sponsor 1, hereafter referred to as ES with corresponding numbers)

> 'Err, with most of the people who spoke around the workshop had thoroughly enjoyed it and the content was actually applicable.' (Research Participant 2, hereafter refer to as RP with corresponding numbers)

> 'I have specifically used them [the techniques] in finalising the architecture in the site of the company for the new website.' (RP4)

The responses indicated that the factors that influenced the application of the creative and innovative thinking and problem-solving techniques are a lack of time because of the fast pace of the business environment, pressing deadlines and changes in staff, for example new recruits, staff turnover and restructuring. This was deduced from the following statements made during the interviews:

> '… we haven't really had the time to put into practice everything that we learned and some of the skills that we picked up.' (RP4)

> '… our work is very repetitive and very pressured so uhm just to get it done quickly, you cannot always revert back (laughing) to the next under pressure.' (RP5)

> 'I think one of the biggest factors we faced at the particular time is that we had a higher turnover rate, so a lot of our people left so some of the stuff was not implemented, another part of it

was probably time constraints these people had giving the big projects that we working on at the moment and the fact that as much as they enjoyed doubling around with the innovative side of things and coming up with new ideas we don't always have a budget to implement them.' (RP6)

'… there is new people coming and leaving and with the economic condition there are budget constraints uhm so I think people would have loved more time to spend on this to actually implement this properly.'(RP7)

The two executives responsible for the intervention and who commissioned and sponsored the workshops not only attended the workshops, but they also viewed the workshops to form part of their future strategic intent. The sponsors are committed to create and establish an environment supportive of creativity and innovation. The following comments made by them support this:

'… was to make sure we create an environment that supports it ...' (ES1)

'… there is a continuous need to share the message ...' (ES1)

'… how much innovation is in our blood uhm fo [*sic*] hence my sort of saying this is a process which is core to our business.' (ES1)

'… the workshops that you ran would have likely helped most people in this area in the different area to help put some structure on how they go about the innovation process forth.' (ES2)

The main conclusion was reached by the creation of a framework derived from the literature review and the empirically engendered data. The most critical findings relate to the acknowledgement and confirmation of the fact that individuals in a financial services organisation can acquire creative and innovative thinking and problem-solving skills.

However, the conclusion had to be extended (Muller, 2004). It was evident that the acquisition of these skills is not sufficient on its own. It is dependent on a spectrum of determinants on both an organisational and individual level that is a prerequisite, to allow for the sustainable and practical application of these acquired skills. The extension of the conclusions may have no logical connection to the data or the evidence presented (Babbie & Mouton, 2001). They are derived as a result of the primary researcher's own interpretation of the findings regarding the impact of the workshop intervention in the financial services organisation. The researcher is very familiar with the financial services organisation as a result of a longstanding strategic partnership and association. It can be derived from the information obtained from the literature review that the financial services organisation only partially displayed the characteristics associated with innovative organisations and that only some of the determinants required on both an organisational and individual level to support creativity and innovation were present.

Ethical considerations

Potential benefits and hazards

The benefit to be derived from participation in this intervention was the acquisition of skills. There were no hazards involved.

Recruitment procedures

Participation was voluntary.

Informed consent

Written and verbal permission was obtained to conduct the research as part of the primary author's completion of her Ph.D thesis.

Data protection

The data published herein was approved by the Executive Sponsors.

Trustworthiness

Reliability

The results of the questionnaires and pen-and-paper tests were consistent and hence were seen as reliable indicators.

Validity

For the purpose of this research, only internal validity or the ability of the research instrument to measure what it is purported to measure is used. The evaluation focused on a specific programme and did not seek to generalise the findings to other, similar programmes because of the time constraints imposed on the intervention.

Discussion

Outline of the results

The first objective was to determine the extent to which creative and innovative thinking and problem-solving skills can successfully be taught. The results presented in Table 1 indicate that most participants are of the opinion that creativity can be developed. The results in Table 2 reflect that the creativity workshop achieved the objectives. The results in Table 3 concur that the participants are of the opinion that the content of the creativity workshop enhanced their knowledge with regards to creative thinking and problem-solving techniques. The responses from the interviews indicate that the participants are using some of the skills in the workplace. The above results support the views expressed by De Bono (1992, 1995), Krippendorff (2008) and Man (2001) that a valuable degree of creative skill can be obtained by anyone who sets out to do so.

The second objective was whether these skills can be applied in a highly regulated environment where very few determinants supportive of innovation are present. The participants were asked to write down what actions they thought could be taken by the leaders in their division to support innovation. The participants suggested that the leaders should take action to create a culture supportive of creativity and innovation; that the leaders should support innovation by making time for innovation questions, listen to new ideas, be more open-minded and ensure that everyone

attend the workshop. The responses from the interviews indicated that other factors that influence the application of the skills in the workplace are: fast pace of the business environment, pressing deadlines, staff turnover and constant restructuring. The highly regulated environment also inhibits and impacts on creativity and innovation. These findings support the views expressed by thought leaders who acknowledge the interdependency of both individual determinants and organisational determinants for the establishment of an environment conducive of creativity and innovation (Hamel, 2000; Krippendorff, 2008; Skarzynksi & Gibson, 2008).

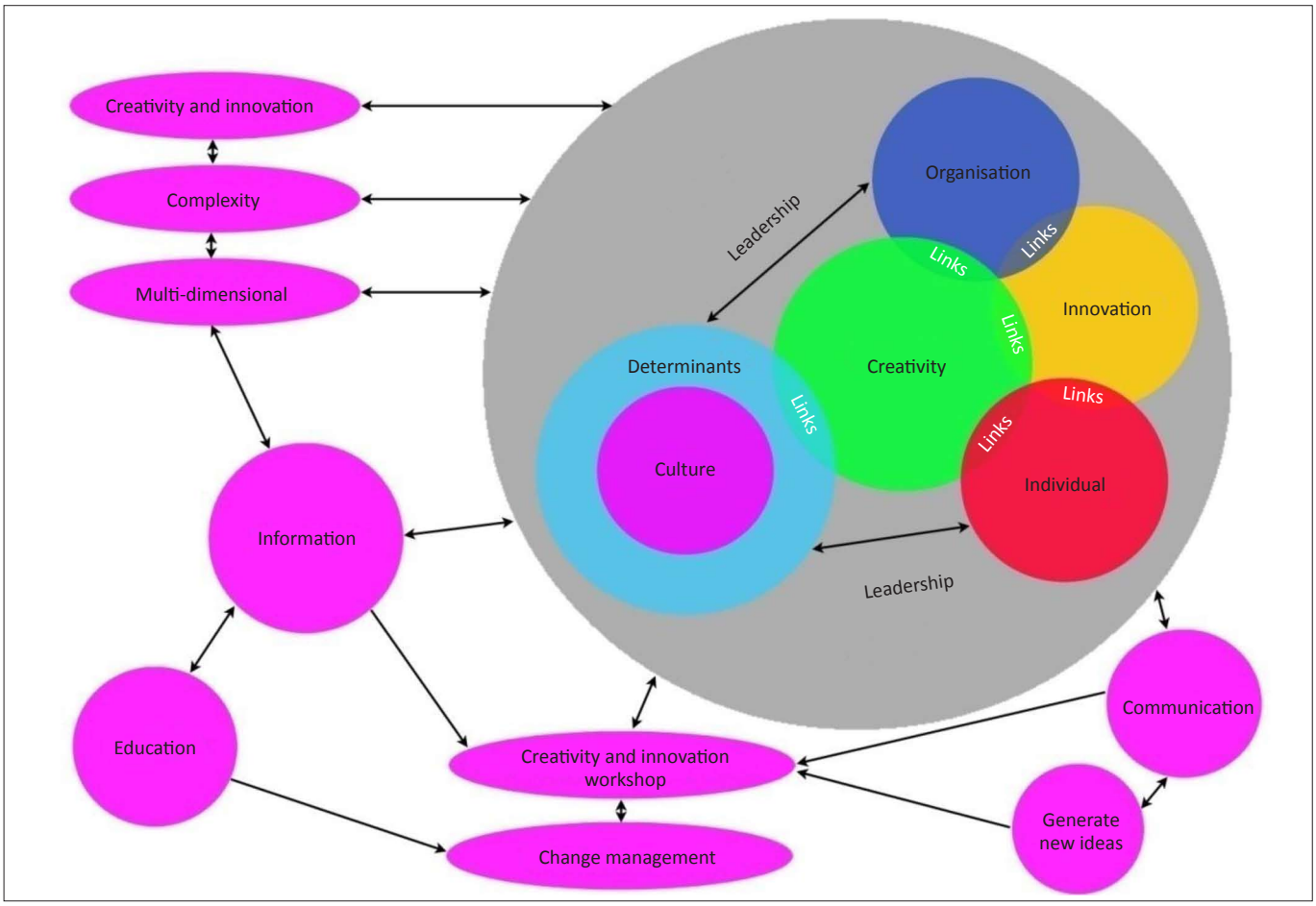
In organisations that are able to unleash the creative potential of their employees to produce ideas, turn these ideas into innovative business opportunities and implement them for successful commercial gain, the determinants, as depicted in Figure 1, are all present and operate in synergy. The temporary establishment of the required conditions in the niche business unit of the financial services organisation, where the research was conducted, temporarily created an environment supportive of innovation for the duration of the intervention. The workplace application of the required skills succeeded to some degree whilst these conditions prevailed. The application of the acquired skills was compromised when the required conditions ceased to exist.

Practical implications

Given the acknowledgement that the acquisition of creative and innovative thinking and problem-solving skills is not sufficient on its own in ensuring the sustainable success of the intervention, the business unit has to be made aware and be informed that certain prerequisite determinants are required prior to the implementation of the intervention.

The organisation has to realise that the trained individual is the unit through which the acquired creative and innovative thinking and problem-solving skills permeate into the organisation. It is recommended that certain managerial actions should be taken to establish the determinants needed to support the individual in their ability to apply these acquired skills in practice in order to ultimately benefit the organisation. The following actions can be taken by management:

- Training opportunities can be useful – participants should exhibit some readiness to benefit from participation.
- Stimulate debate and exchange of ideas.
- Be prepared to tolerate more risk.



Source: Researcher's own interpretation and adaptation derived from various sources

FIGURE 1: An integrated overview of the determinants required to support creativity and innovation.

- Contain organisational factors that inhibit creative and innovative contributions from staff members.
- Be prepared to enhance strategies to manage creative individuals.
- Find a balance between the compliant climate in a financial services organisation and the room to manoeuvre what creativity and innovation require.

The literature review and the opinions expressed during the interviews identified common inhibitors of creativity and innovation. The practical realities of the statutory and regulatory constraints, as well as the highly pressured and deadline driven financial services environment, are not conducive to creativity and innovation. Temporary conditions conducive to creating an environment supportive of creativity and innovation should be negotiated between the stakeholders participating in an innovation intervention for the duration of such an intervention.

Limitations of the study

This section reviews the main shortcomings of the study and how these might have been avoided (Babbie & Mouton, 2001). The limitations are related to the literature, as well as to the empirical phases of the study. Literature limitations pertain to the fact that some few cited references did not conform to the chronology-driven notion of 'recency of information and research'. The researchers attempted to source the original or primary reference in all the cases where the reference was cited. The primary reference was used when available. Some of the references could not be sourced and the cited train of thought, as well as the extended argument of the author who cited the author, was used.

The implementation of a number of workshops (in different contexts) was envisaged. Similar organisations are competitors, making work across contexts impossible. The decision of the organisation limited the scope of the intervention to three workshops in a niche business unit. As mentioned before, the quality of the data obtained compensated for the quantitative lacunae and the richness of the data obtained facilitated the realisation of the intended objectives. The transferability of the workshop could therefore not be determined adequately. The organisation decided to allocate limited human resources, time and budget to the intervention to first establish the feasibility of such a workshop intervention prior to considering implementation throughout the organisation.

Recommendations

The proposition for further research is derived from the notable lack of coverage in the literature on the management of creative and innovative employees or individuals. Prahalad and Krishnan (2008, p. 240) illuminate some of the current challenges managers face by arguing as follows: 'Managers need to cope with new tensions in managing seemingly opposing capabilities such as flexibility and efficiency in their business'. A number of authors (Hamel, 2000; Krippendorff, 2008; Prahalad & Krishnan, 2008) are able to identify the managerial skills required for managing creative and innovative people; however, they all fail to provide guidelines on how to acquire and implement these skills.

Proposed for further research therefore, is the development of a flexible management approach towards creativity that allows for flexibility, but, at the same time, contains enough guidelines to realise strategic goals. The challenge is not so much in the development of flexible management practices, but in the implementation of such practices. Further research is required to develop a management model for creativity and innovation interventions.

Conclusion

The literature review and the empirically engendered data conclude that employees in a corporate context, such as a financial services environment, can develop appropriate creative and innovative thinking and problem-solving skills by means of a creativity and innovation workshop. The findings reflected that these skills can be taught.

Furthermore, it is evident that the acquisition of these skills is not sufficient on its own to establish an environment conducive to creativity and innovation. The UFE approach was used to realise the objectives. The findings from the questionnaires and interviews support the latter statements. These skills are furthermore dependent on a kaleidoscope of determinants on both an organisational and an individual level to exert and sustain the required influence. Organisations can create the required conditions on a temporary basis in order to initiate the intervention. Actions should be taken to establish a sustainable culture supportive of creativity and innovation. Future research should aim to develop a flexible management model to allow creatives controlled freedom.

Once organisations understand that their long-term survival depends on the ability to continually create innovative, novel products and services to ensure business competitiveness, their commitment to innovation will result in sustainable idea generating initiatives. Successful commercialisation of novel services and products will ultimately ensure a sustainable future and satisfactory shareholder wealth creation. Indeed, as the great French poet, novelist and dramatist, Victor Hugo, once wrote, 'Greater than the thread of mighty armies is an idea whose time has come'.

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Authors' contributions

A.M. (University of Johannesburg) was the project leader. A.M., C.D.J. (University of Johannesburg) and G.R. (University of Johannesburg) were responsible for the project design. A.M. directed most of the learning and development best practice designs. G.R. was pivotal in the development of the research strategy. C.D.J. was instrumental in formulating the ideas behind the concepts. C.D.J. and A.M. wrote the manuscript. G.R. edited the manuscript.

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