

BUILDING CREATIVE CONFIDENCE IN IDEA MANAGEMENT PROCESSES TO IMPROVE IDEA GENERATION IN NEW PRODUCT DEVELOPMENT TEAMS

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ABSTRACT

This is a scoping paper that aims to establish effective practices and key players in the domain of Idea Management. The paper defines Idea Management as the generation, evaluation and selection of ideas. The purpose of the paper is to map the current landscape of methodologies and tools in order to identify gaps and support the development of a framework to enhance creative confidence in idea management. The study has two key research questions: (i) what factors are influencing current idea generation practices and (ii) what tools and approaches exist for idea generation. This will help identify how creative confidence can influence the idea generation processes. Creative confidence is the capability to come up with breakthrough ideas, associated with the bravery to perform. If stimulated in the right way with a valuable framework, its impact on employees' performance is significant in improving team members' innovation performance and quality of ideas.

Keywords: creative confidence, idea management, creative performance.

1 INTRODUCTION

Bono (2007) identifies two current issues in innovation and new product development departments. The first one is that the access to data and information has become a commodity available to every organisation, so it is not a competitive advantage anymore. The second one is that, consequently, ideas are the trigger for innovation and without innovation companies won't succeed.

The first research question that this paper addresses in current literature is idea generation practices and explores emerging concepts such as creative confidence, performance and productivity to help generate strategies and conditions for improving collective creativity (Kao, 1996)

The purpose of this study is to identify strategies that can help build creative confidence in NPD teams and impact on their performance of idea generation. The methodology used will be a systematic literature review along with the analysis of data gathered.

The second key question is addressed by identifying tools and frameworks to build a robust idea generation process that brings together research concepts and activities relating ideation and creativity and how to manage the idea generation more effectively.

The literature reviewed 88 papers from internationally known journals using three databases: Scopus, EBSCO, and Web of Knowledge. A thematic coding analysis (Robson, 2011) was used as well as by keyword search strings.

This paper will add value and contribute new knowledge through exploring (Levitt, 1963) the established problem associated with the lack of conversion of ideas into actual innovations, through testing frameworks to prove how they can improve the ability of teams to generate better quality ideas. Current idea management processes include diverse approaches to generate, select and evaluate ideas, but there is not a clear set of practices to improve employees' performance, which is addressed just from a psychological and social point of view with no clear tools or methodologies to enhance

their performance and productivity. The study will conclude by discussing the implications of increased creative confidence on improving innovations in New Product Development.

2 ROLE OF CREATIVE CONFIDENCE IN IDEA GENERATION

According to Bono (2007), the word 'create' means to set up something with value that did not exist before, by which creativity can be defined as bringing into existence something that has value. Many authors (Bono, Chandle, Tharp) state that creativity can be taught and it is something we are born with but we lose as we get older if we do not exercise it, as Anderson (2006) claims it is the non-creative behaviour the one that is learned.

Confidence is defined by the Oxford Dictionary as the feeling or belief that one can have faith in or rely on someone or something. Belief and relying are important within idea generation and management as it is a collaborative process in which participants must trust in others and be open to share ideas, thoughts and opinions. It is a core skill in idea generation processes, as it is needed to express people's ideas. The relation with this project is to understand how people can have not just confidence but a creative one on the innovation progression within a company and how it can be built by a solid framework and tools to support it.

In current literature we have found there are three approaches to creative confidence: (i) physiological, (ii) social and (iii) work environment influenced. Psychologically creative confidence has been defined as the ability to come up with breakthrough ideas, combined with the courage to act (Kelly and Kelly, 2012). The approach of Kelly has been to look at it from a psychological point of view, focusing on understanding the fears and behaviours that block creative confidence. They offer examples from the work of Bandura (1977), a Stanford professor and well-known psychologist, relating to his experiments about getting over a fear. From their research they identified four key types of fears that constrain creative confidence. The first one is the fear of the messy unknown, which means the apprehension to get into an unfamiliar field. The second relates to the fear of being judged, by which people usually gets stuck to safe ideas to avoid rejection. The third connects to the fear of the first step and the last one about fear of losing control by leaving their comfort area. However, this approach does not offer a clear example of how to restore and enhance people's creative confidence with specific tools and methodologies.

Socially, creative confidence is linked to our childhood. Common approaches are based on reminding people how creative they were during their childhood (Chandler, 2012) and restoring their confidence to improve the idea generation process. Land (1992) states the "non creative behavior is learned". This assertion is based on his comparative study where he tested 1600 children's creativity when they were 5, 10 and 15 years old; and the compared them with 280,000 adults. The genius level creativity results were respectively 98% at the age of 5 years old against 2% for the adults.

A third approach to Creative Confidence relates to self-efficacy and how it is influenced by individual factors, supervision and work environment (Chong and Ma, 2010). Their work focuses on the concept of creative self-efficacy and determining that individual (such as ethnicity, polychronicity, managerial experience) and organizational (supervisor support, risk taking, collegiality) factors have an impact on idea generation.

3 CURRENT IDEA MANAGEMENT PROCESSES

Idea generation can be discussed from two different approaches, either from a process or outcome perspective. Nelson (2009) argues that the outcome perspective is usually more prevalent. Other authors have a more focused approach of idea generation in relation to innovation practices, for example, Sutton (2002) claims that the improving standards of innovation techniques are an enhancing idea variance. He also suggests that active imagination is very important for idea generation, seeing the old things in a new way by giving a fresh perspective to every challenge faced, as innovation aims to break with the past and bring into life something new.

Traditional approaches to the ways in which organizations generate ideas are radically changing (Sowrey, 1990). For example, many companies have set up diverse web tools to help them improve their idea generation process, such as *Brain Juicer* used by Nike and Nestlé, which provides fast feedback and is deemed to cost effective, or *Mind Manager*, used by Bayer for brainstorming. Gumble (2003) provides examples of the specific advantages of these new web based approaches, by

indicating how web tools can offer the opportunity for both loud and the quiet personalities to simultaneously submit and evaluate ideas, getting rid of what he defines as *the power of the pen*. From the psychological point of view, the main advantage of web tools are that they provide the opportunity for anonymous contribution by employees to generate, publish, evaluate and select ideas without the worries of feeling biased or constraint by others opinions.

At the early stages of idea generation many business are attempting to integrate information technologies to create a robust base. According to Gordon (2008), technology usage in the early stages of the fuzzy front is helping internal teams to improve their innovators productivity by collaborating and exchanging the information for solutions, analysis, simulation and visualization, in summary, ideation. These approaches are integrated into both online and offline strategies. In fact, some companies are integrating social networks to enhance their new product development from idea generation to idea evaluation (Kijkuit, 2007).

The changing approaches to idea generation are being paralleled in the search for new sources of ideas. According to Alam (2003), companies and managers do not need to obtain ideas from just customers, suppliers, universities and even competitors but from what he defines as *unutilized sources*.

Over the last few years companies have gone from closed innovation to open innovation. For example, companies such as IDEO and P&G have opted for open innovation, which means open platforms where people from outside of the organization can provide knowledge, ideas and input to a series of exposed projects. Chesbrough, (2003) suggests there are two sources by which organizations can get ideas from: (i) innovation investors (in house Research & Development department) and (ii) benefactors (companies funding early stages of innovation projects from outside of the company). However, idea generation by in house employees is still very common. To enhance the in-house process, Wood (2003) advocates the use of idea supervisors (facilitators) in idea generation workshops so that participants can feel encouraged and supported. The use of idea supervisors helps make sure participants feel part of the idea development process providing techniques and encouragement not to be afraid of failure.

Björk J. and Magnusson M. (2009) have examined the use of social networks as a source of ideas. Based on the analysis of a database from a sample company, with an active idea management process, they found a strong relationship between network connectivity and the quality of the ideas generated. They also identified that ideas created among people with a wide and supported network resulted in an increased number of high-quality ideas. Social networks have are also being used for idea evaluation (Kijkuit, 2007). Kijkuit (2007) suggests social integration does not affect in a negatively to the quality of the idea evaluation.

Currently there appears to be no universally agreed set criteria for idea evaluation. However, there are several examples for go/no-go decisions. For example, Anon (2008) claims it is beneficial to use none specialized people for voting ideas, as they will not worry about other people's opinions. From a psychological point of view, using web tools seems to block behavioural embarrassment when making a public contribution to judge ideas Gumble (2003).

Dean et al (2006) state there are two metrics for idea generation evaluation: (i) novelty, defined as rarity or unusualness, and (ii) quality, relating to how an idea addresses a problem at hand, offers an effective solution and is feasible. Nelson and Yen (2009) suggest combining in one single metric variety and novelty as they are very related. They state that variety quantifies the usefulness of the exploration of the novelty.

The final stage of idea management focuses on idea selection, which is usually based on idea quality, its feasibility and its success to solve the problem. To enhance this stage, Girotra et al (2010) examined two kinds of team structures, one in which people work together all the time and one in which each person works independently and then they all work together. They established that the second group performed much better, being able to generate more quality ideas and discern among them to select the best ones, highlighting how counterproductive a brainstorming session can be for idea generation as the capacity to differentiate the good ideas from the bad ideas decreases versus the iterative process in which people generates them independently and then share them and work on them together afterwards.

From a large company point of view, ideas are usually selected by low senior managers, and often they are not the ones the senior managers would have selected, which represents a complex issue for

new product development and innovation teams Reitzig (2011). To enhance this process, Reitzig has developed an innovation funnel so there is a consistent management control for idea quantity and quality proposed by employees within the company. What this paper demonstrates is that companies should invest as much in idea selection as they do for idea generation.

4 THE IMPACT OF CREATIVE CONFIDENCE ON NPD TEAMS

There appears to be a paradox between creativity and productivity, which refers to how things are produced in relation with time, money and people needed to make it real. Productivity is usually referred in some way to efficiency although it may vary depending on the discipline involved.

In a work environment productivity is affected by very diverse factors, Tahira et al (2007) claims that job insecurity increases productivity levels among the employees but creativity, considered as problem-solving skill, decreases drastically. Moreover, creativity and flexibility decreases as well with downsizing when employees feel threatened to be laid-off). On the other hand, Steven et al (2008) state the incentives for high levels of creativity can help reduce mediocre ideas during idea generation process, however, it does not increase breakthrough ideas.

From the literature reviewed, it has highlighted the paradox between creativity & productivity. For example Chang and Birkett (2004) explore this issue in terms of different work environments. For example, an organization is not very focused on innovation, productivity will be considered more important than creativity whilst in an organization where there is a need for innovation the importance will lay on creativity over productivity. It should be desirable to find a way to balance the two of them, by training the managers or by implementing an innovation management culture within the company that addresses both issues.

The creative performance of employees seems to be affected by several factors according to the literature reviewed. According to Liu et al (2012) the creative performance of employees can be jeopardized by an abusive supervision by their managers, which is easily constrained by performance promotion motives. On the other hand, Stobbeleir et al (2011) argue that in a creative work environment, employees' performance can be enhanced by an active feedback, sought from a wide variety of sources. In this context, employees establish a "positive" behavioral strategy that impacts on their self-regulatory behaviours within their creative processes that helps them to achieve their outcomes.

Baer (2012) defines creative performance as the implementation of ideas to achieve business outcomes. The production of ideas is more common than their conversion into innovations (Levitt, 1963). However, this process can be enhanced through several measures by improving: creativity, implementation instrumentality (money and idea implementation related), networking abilities (build up a network to get things done), the way strong ties established (it is easier to get ideas implemented if your colleagues are close to you), implementation and control variables (education, position, division membership and tenure). Baer concludes by stating that creativity and idea implementation are different activities within the innovation process.

Finally, Shalley et al (2009) states that creative performance can be affected by self-reported creativity. In summary, they state how important it is to understand the nature of a the work environment so it is more likely to foster creativity with the work being performed.

According to authors such as Stobbeleir (2011) creative performance in New Product Development teams can be enhanced by creating a culture that encourages the seeking of "active feedback" within the work environment. The adoption of an "active feedback" approach has the potential to aid an individual's creativity through affirmative input from colleagues and managers, that can result in a person being able to enhance their self-efficacy and improve their ability to manage their creative behaviours within the innovation process.

5 DISCUSSION AND CONCLUSION

Creative confidence can be defined as the capacity to come up with creative ideas, supported by the courage to turn it into actual innovations (Kelly and Kelly 2012). The first research question relates to current influencers in idea generation processes and has been addressed by an analysis of the emerging trends within the domain of idea generation such as creative confidence, creative performance and productivity. It suggests that there is a significantly more emphasis placed on

improving confidence through the process improvement, compared to building confidence through individual and or team based creative capabilities. A potential imbalance exists. There is a gap between the tools and approaches used in idea generation and how effective they are in current activities to better understand: (i) how to enhance people's performance through improving their creative capabilities, and (ii) how and why this will help individuals and or teams to generate better quality ideas faster.

This view is supported by the literature reviewed. Until now, idea management research has focused more on the generation, evaluation and analysis of ideas rather than in employee's performance capabilities. Current research implies that tools act as an enhancer of people's creativity, unveiling a gap between theory and practice in idea management in terms of methodologies, tools and practices. Therefore an opportunity exists, to find ways to more effectively turn creative capabilities into creative confidence. The aim of this study was to address two key research questions. They have been answered with a thorough analysis of best practices and a systematic literature review. There exists a need to identify repeatable ways in which to active the transition of ideas into actual innovations, and therefore improving the productivity of organizations.

This paper suggests that creative confidence can be influenced by three factors. Psychologically, fear can block an individuals capacity to generate ideas within a group context. Socially research suggests Land (1992) that we are born creative and that process of getting older effects our creativity. The third factors that impacts on creative confidence is the work environment.

The literature reviewed highlights how idea generation processes can be affected by social and psychological issues. It also demonstrates how new technologies and social media can help to engage larger groups of people due to their ability to facilitate the anonymous participation of employees within the idea generation process(es). The ability to engage employees, who may lack the creative confidence and or the ability to deal with idea management within their work activities is a key benefit of these emerging technologies. This scoping paper has been able to landscape the topic and identify opportunities for further research, based on the observation that studies typically focus on analysis of generalised frameworks that are often discussed independently of people, is that little emphasis in relation idea generation methodologies and tools has focused on understanding the employee's view point and or on creative performance. The purpose of this study has been explore the two research questions, and to identify possible ways to enhance idea generation and innovation processes through building creative confidence in NPD teams, that will be backed up by a conceptual framework containing tools and practices to enhance their creative performance.

This scoping study proves that creative performance can be an enhancer for New Product Development due to an active feedback seeking approach. The support and advice carried out by managers and colleagues will lead to a more independent approach to innovation in the future. Many papers support the use of tools (Howard et al, 2010), such as templates and stimulus as an active and structured idea generation method in which there must be a balance between productivity and creativity, that aligns with this study that aims to generate this kind of tools to enhance employees' performance.

Past studies on idea generation have been addressed from a traditional point of view, based on tools and methodologies, and this paper has attempted to explore, through the two research questions, the problem of how to generate quality ideas that can be converted into actual innovations.

In summary, this paper has highlighted how creative confidence is a potential game changer for the idea generation processes, as it is based on the generation of breakthrough ideas and the courage to act and turn them into actual innovations (Kelly and Kelly, 2012).

The next step will be to develop a conceptual framework from the literature and test its impact on multiple idea generation scenarios in BSKyB, in order to determine the implications of increased creative confidence on improving innovations in New Product Development. It will specifically evaluate the skill sets and tools needed to improve idea generation effectiveness (more, faster and better) in NPD teams.

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