

## Fostering creativity understanding: Case study of an exercise

designed for a large undergraduate business cohort at EDHEC Business School

### Abstract

**Purpose** – The purpose of this paper is to encourage initiatives to train large cohorts of undergraduate students for creativity understanding. We describe a case study of a creativity exercise developed within a corporate setting that accommodates a large cohort and discuss the results of empirical research on this teaching experience at a French business school. We reflect on the transferability of this exercise by other educators to similar educational contexts and the usefulness of training future managers to a structured creativity methodology to be exploited in the workplace.

**Design/methodology/approach** – A case study explains the features of the exercise. Hard data on students' perceptions and motivation/satisfaction prior to and after the creativity exercise was collected through an Internet self-completed survey instrument. 245 pairs of survey responses from first-year students were analysed using prototypical analysis, paired samples t-test and content analysis.

**Findings** – The exercise proved an effective tool to help large cohorts of undergraduates to better understand that creativity is a managerial competence that can be trained. We particularly underlined the need for fluidity in the organisation of the exercise; use of a clear creativity process and methodology; the necessity to involve an external creativity consultant; and the importance of the chosen topic being non art-related. In the workplace, this understanding of creativity methodologies will enable future managers to support, promote and manage creativity endeavours.

**Originality/value** – This paper encourages initiatives and provides insights into the difficulties of training large cohorts of undergraduate students for understanding the concept of creativity.

**Keywords** – Creativity Training, Business Education, Undergraduate Students

**Paper Type:** Case Study

## Introduction

Creativity is considered by many to be an essential 21st century competence for business managers and leaders (Robinson, 1999, Colby et al., 2011), the most sought-after trait in leaders today (Kelley & Kelley, 2012), an essential component to succeed and gain sustainable advantage in any industry (Driver, 2001; Anderson et al. 2014) and critical to students' personal and professional development and success (Vance, 2007). As the market for business education has grown, business educators have naturally turned their attention to creativity as an important topic in the classroom, focusing on the role of creativity in organisations and the enhancement of student creativity (Dewett & Gruys, 2007).

It is therefore no surprise that many organisations strive for this competence today, and much like diversity and globalisation, it should be considered as one of several dimensions commonly included in business courses (Driver, 2001). However, we believe that understanding how to foster and manage creativity within corporate settings is as imperative for business students as developing their own creativity. Managerial support is crucial for creativity to be championed within organisation (Marceau, 2011), and leaders should develop a work context that ultimately enhances the employees' creativity (Shalley & Gilson, 2004, Anderson et al., 2014), hence, the need to raise awareness among future managers not only of creativity, but also of creativity method and process.

This paper discusses the results of empirical research on a teaching experience dedicated to fostering creativity understanding to a large cohort of undergraduate business students. The Creativity 'Night' Exercise was specifically designed as a stand-alone module to address the entire cohort of business undergraduate students at a French business school with the objective, not so much to develop students'

creativity, but to make them understand the role managers play in encouraging employee creativity as well as promoting and structuring creativity within organisations.

In higher education, little time or attention is devoted to understanding what creativity is, and in some cases creativity itself is even discouraged (Schmidt-Wilk, 2011). Due to the massification and increasing demand for undergraduate management education (Schofer & Meyer, 2005), business educators might consider it a challenge to embed a culture of creativity at undergraduate level. Most undergraduate business courses nowadays comprise very large cohorts of students. As a result, many universities and schools choose to postpone students' awareness raising of the creativity process to postgraduate level or to train undergraduates for creativity within their specialisation (Marketing or HRM for example), or as an option or elective module. If a growing body of literature addresses the different approaches to creativity in business education (Snyder, 2003; Zimmerman & Gallagher, 2006; McCorkle et al., 2007; Kerr & Lloyd, 2008; Baker & Baker, 2012), teaching for creativity is indeed often linked to marketing modules (McIntyre et al., 2003; McCorkle et al., 2007) or entrepreneurship modules (Morrison & Johnston, 2003; Yar Hamidi et al., 2008). And while the teaching of creativity as a separate module seems to be rather common in MBA graduate programmes (Pinard & Allio, 2005; Dewett & Gruys, 2007), teaching and research into teaching creativity methodology as a stand-alone undergraduate offering is uncommon.

Our aim with this paper is to encourage initiatives to train large cohorts of students for creativity understanding at undergraduate level. Indeed few studies explore teaching creativity to undergraduate business students, which assess student pre- and post- creativity exercise perceptions with the aim of leveraging student

perception on creativity as well as discussing the integration of creativity training as an independent entity in business education. This paper is divided into five sections. The first describes the case study of the Creativity 'Night' Exercise. The research aims and methods are presented in the second section, followed by findings in the third section. In the fourth section, the findings are discussed. Finally, the limitations of the research and suggestions for future research are outlined and a brief conclusion is provided.

### The Creativity 'Night' Exercise

This section outlines the key elements of the exercise and establishes the case for claiming that the design supports the development of creativity understanding.

Context - The Creativity 'Night' Exercise is an obligatory non-accredited seminar offered to more than 600 undergraduate students at a French Business School. The undergraduate students in question are in the third year of a Bachelors programme having already completed a 2-year pre-business administration general education or an equivalent 2-year undergraduate education and prior to continuing a 2-year Masters in Management cycle. The creativity exercise, originally developed by a creativity consultancy (Raison, 2014) within his company Yellow Ideas<sup>[i]</sup> and designed for mega-storming exercises in corporate settings, was adapted for business school undergraduates. The creativity consultant has worked with teams in both French and international companies (Christian Dior, Guerlain, Sephora, Unilever, Danone, kenzo, Eads, Toyota, Caterpillar, amongst others) bringing together between 100 and 1,000 people to lead creative reflection seminars around concrete corporate endeavours. This expertise gained in the corporate world has enabled him to develop

a tailor-made creativity seminar for the business school setting.

The seminar has been organised since 2005 with external partners and has dealt with for example philosophical questions: ‘How to train the necessary knowledge of the future?’ commissioned by the Edgar Morin Centre<sup>[iii]</sup>; or innovation questions: the Lille Chamber of Commerce and Industry on ‘How to make the North of France a European entrepreneurial hub?’ It was initially decided to organise this exercise in the evening between 6pm and midnight in order to break with conventional time frameworks to enhance the liberation of the creative process (Giampietro and Cavallera, 2007).

Learning objectives - The main objectives of this seminar were to give undergraduates the opportunity to work on a real consultancy project commissioned by an external partner; to help them understand the importance of creativity as a managerial skill; to enhance student perception of creativity potential; and to train students to specific creativity models. It was designed to provide the main elements needed for creativity, namely 1) a creative process involving a specific method or technique; 2) underlying cognitive mechanisms; 3) motivation on behalf of the participants; 4) a creative context and environment and 5) a creativity outcome (Amabile, 1983).

Design Elements - The research presented here was conducted using the 2013 Creativity ‘Night’ Exercise commissioned by Réseau Entreprendre Nord<sup>[iii]</sup> to reflect on the jobs of the future. The seminar was organised as follows:

General Presentation (13:00 – 14:30 and 14:45 – 16:15): All students (660 in 2013) attended the presentation to explain the principles of creativity, the usefulness of creativity in a business context and specific examples of creative endeavours that

became successful products. The two creativity consultants decided to half the cohort to ensure more interactivity when launching the seminar.

Training of Facilitators (16:30 – 18:30): The whole cohort was divided into groups of 12 students. Two students from each group were asked by the creativity consultants to volunteer to be trained as group facilitators. 120 students volunteered to train in creativity facilitation and their role was clearly defined by the consultants, i.e. to support, foster and manage the creativity process of their peers within their group during the exercise.

Launch of Creativity ‘Night’ (19:00 – 19:30): The creativity consultant positioned the relevance of the topic whereas the external partner presented the theme and its importance to the students.

Creativity Exercise (19:30 – 22:00): Students (in groups of 12) worked through the creativity exercise facilitated by two of their peers. The exercise comprised 4 main phases: 1) Introduction to the seminar to include the project, the rules and the timing; 2) Divergence, which included a series of liberation techniques to generate original, distinct and elaborate ideas; 3) Convergence, which involved the logical evaluation and selection of the best ideas; 4) Recommendation Write-up and Presentation, whereby students transformed the idea into a persuasive written and oral presentation (see Appendix 1).

Deliberation (22:00 – 23:00): A jury (comprising the creativity consultants, external partners, business school faculty and staff, and other invited guests) deliberated on the best ideas while the students watched a photo exhibition.

Closure of the Seminar (23:00 – 23:30): The 12 best ideas were selected and pitched

to the other students in the auditorium before the three winners were announced. The creativity consultant and external partner appraised and closed the evening.

#### The student data

We collected data from students prior and after the Creativity 'Night' Exercise.

Aims - Our main research questions were: Did students change their perception of what creativity is after participating in the Creativity 'Night' Exercise? Was student assessment of being creative and of the importance of creativity within organisations influenced by their experience? What was the students' motivation prior to the seminar and their satisfaction afterwards?

Survey Design - An Internet self-completed questionnaire (Figure 1) was used as a survey instrument to gather students' perceptions. The influence of the Creativity 'Night' Exercise was first investigated by comparing the changes in students' three free associations to the stimulus word "creativity", prior to and after the seminar took place. Word associations' procedures are a technique frequently used in research to define the semantic universe of a social representation (Seca, 2010). Words elicited in this manner are spontaneous productions subject to fewer constraints, which a researcher typically imposes in closed questionnaires. It can be assumed that responses depend on the stimulus word, and the images and knowledge that the respondent has of the denoted object (Wagner et al., 1996). We, therefore, looked for differences in the content of free word associations made by students before and after participating in the Creativity 'Night' Exercise. The adoption of a social representations theoretical framework, as a method for assessing conceptual change in education, i.e. conceptual representations and the changes they underwent (as suggested by Hovardas & Kofiartis, 2006), allowed us to consider the students as a

social group that has to modify its representation(s) of a social object (here creativity) in accordance with the exercise's objectives.

Insert Figure 1 here

Five statements were also selected as particularly relevant to the intended learning outcomes of the Creativity 'Night' Exercise, to measure whether the methodology used had raised awareness of the usefulness of creativity in business as well as the awareness of student creative potential. The respondents were asked to indicate on a 5-point Likert scale whether they strongly agreed (5) or strongly disagreed (1) with each statement. Students were asked to complete the survey instrument twice: two weeks before being briefed on the exercise and two weeks after the exercise took place. In the first questionnaire, students were asked to complete two additional questions giving feedback on situations when they had already demonstrated some creativity and on their motivation prior to attending the exercise. In the second questionnaire, students were asked to complete four additional questions giving feedback on their experience of the Creativity 'Night'. The surveys were not anonymous to allow matched pairs analysis.

Sample – The exercise was conducted with a population of 660 students. A convenience sample consisted of 245 volunteers out of the 660 students who were asked to participate. We gathered 481 surveys for the first questionnaire, and 283 for the second. In total, the research produced 245 pairs of surveys (completed before and after the exercise) for analysis, representing a response rate of 37.1%. Some students completed the second questionnaire without having completed the first one, which explains why we have fewer than 283 pairs of responses.

We used average variability (variance of the mean) statistical technique as proposed



by Cochran (1977) in order to be confident that the 245 pairs of surveys fully represented the population from which the sample had been drawn and to ensure that we did not recruit only those individuals who felt strongly about creativity or had transformed their understanding of it, which might have favoured certain outcomes (Moore, 2001).

Analysis Method - For free associations, the statistical units considered were responses, not individuals. Therefore, there were a total of 735 words obtained prior to and after the exercise, namely three times the number of participants. Before running the statistical analysis, the responses were slightly simplified. For example, all words were used in the singular and similar words (examples: imagination – imagine – imaginary; novelty – new) as well as metaphors (examples: avant-gardist – visionary; playful – entertaining – fun) were semantically aggregated. This semantic factoring was performed by two authors whose agreement on categorisation reached a level of 100 per cent.

All responses were considered independently, with the computing of their ranks, and analysed using prototypical analysis, first proposed by Vergès (1992) as a method to define a representation's core, upon considering that the central elements are more prototypical, in the sense that they are more accessible to consciousness (Vergès, et al., 1994). The notion of prototypicality is operationalised by the fulfilment of two conditions: "1) high participant consensus in mentioning the element, through high word or expression evocation in comparison with the average frequency mean of all the mentioned elements; and 2) evocation readiness, or prevalence of situations in which the word or expression is mentioned early in discourse, through lower-than-average evocation order. Elements with high frequencies and low evocation orders

form the first quadrant, which gives a preliminary approximation of the representation's central core, formed by the most consensual elements that define the representation object. The other elements form the representation's peripheral system" (Wachelke, 2008, p.3). Those elements are less shared and have a conditional nature. Idiosyncratic responses were arbitrarily eliminated to leave those meanings shared by at least four subjects, so only words with frequencies four or higher were included in the tables. The mean rank was employed as a cut-off point between low-rank words (those mentioned earlier in discourse) and high-rank ones. As for the frequency cut-off point, it was equivalent to the mean frequency of word occurrences.

Although Likert scales fall within the ordinal level of measurement, it has become common practice, although controversial, to assume an interval scale for Likert-type categories (Blaikie, 2003). All the more since research demonstrates that parametric statistics can be used with Likert data with small sample sizes and with non-normal distributions (Norman, 2010). For statements evaluated using Likert scales, the data were, therefore, analysed by computing the arithmetic mean (and standard deviation) for the scores given for each statement. A paired samples t-test was used to determine if there was a significant difference between the matched pairs of Likert scores. It identified whether the difference between the subjects' scores before and after running the Creativity 'Night' Exercise was due to chance variation or could be attributed to participation in the exercise. Data were also contrasted with students' own perception of their creativity and situations they already had faced to exercise their creativity.

Finally, in an interest to improve the design of the exercise, we analysed students' general motivation to participate in the exercise and their satisfaction

afterwards using the mean score. We analysed the three adjectives that students gave to describe the exercise by counting the number of times each one was given after semantic aggregation, not taking the rank into account. The answers to the open questions on what students liked and what they disliked in the exercise brought qualitative insights into ways to improve the seminar in the future.

### Results of the analysis

What is creativity? Students' free associations on "creativity" - The comparative analysis structure of both representations (Table 1) shows some evolution in the way student respondents perceived creativity after the exercise. By looking for differences in the central elements of the representation, formed by the most consensual elements, the most striking differences are twofold:

Insert Table 1 here

The association of "creativity" with "arts", which was quite dominant prior the Creativity 'Night' Exercise in students' perception, completely disappeared afterwards. It was not even found in the peripheral system of the representation anymore, whereas "novelty" and "creation" left the core, but could still be found in the peripheral elements. In our sample, prior to the exercise, 155 students declared they already had had opportunities to experience creativity, 90 students had had no such opportunity. When having had an opportunity to be creative, most students linked it to the artistic world (Table 2), which is a possible explanation why creativity was associated with arts by many of them in the free associations technique used prior to the Creativity 'Night'.

Insert Table 2 here

The central core, if relatively stable with lots of elements which stayed the same (like “imagination”, “innovation”, “ideas”, etc.), was enriched with completely new associations that clearly came from the Creativity ‘Night’ Exercise experience, the message it wanted to deliver and the methods employed. Those were not present in the original core in the periphery of the representation prior to the exercise, thus demonstrating a real evolution in the way students thought about creativity. Associated words like “quantity”, “concentration”, “work”, “method”, “possible”, “tenacity”, “process” and “diversity” appeared with high frequency and low rank, thus demonstrating that students after the exercise related creativity not only with ideas but with the number/diversity of ideas and the process and methods to develop this number.

Perceptions of being creative and of the importance of creativity - The results of the initial survey, prior to running the exercise, indicate that, in general, the students were in agreement with the proposed statements, except the first one (stating that everyone is creative), which got the lowest mean score of only 2.18 (Table 3). The strong mean scores for the two last statements (Business world needs creative people – 4.53; Being creative will be important in my future life – 3.96) indicate that students clearly saw the importance of creativity in relation to their business future prior to the exercise.

Insert Table 3 here

The statistical tests indicate whether the increases in mean score were significant. From Table 3, it can be seen that two statements (I am creative in my personal life 3.62/3.65; Business world needs creative people 4.53/4.57) showed very slight increases in scores that were not statistically significant. This suggests that the perception of students on those statements did not change after experiencing the

exercise. However, the mean score for the three other statements increased (Everyone is creative 2.18/3.43; I am creative in my work 3.14/3.42; Being creative will be important in my future life 3.96/4.28) and the increases were found to be statistically significant at the 0.1% level (i.e. highly significant).

Motivation and satisfaction - Mean score of students' measured motivation prior to attending the Creativity 'Night' Exercise was 3.35 (standard deviation 0.944). Mean score of satisfaction measured after participating in the seminar was 3.25 (standard deviation 0.955). Those scores are rather illustrative of the usual positive mean scores obtained when surveying large enrolment seminars, with different students showing a diversity of needs and expectations (some being highly motivated, others not at all) as well as perceptions (some being highly satisfied, others not at all).

Table 4 lists the adjectives that spontaneously came to students' minds to describe the Creativity 'Night' Exercise. This list demonstrates ambivalence in students' perception. If the associations are globally of positive nature (only 137 out of 735, i.e. 18.6% of the words/adjectives given were negative), there were a large number of adjectives describing the exercise such as fun, original and interesting. The seminar however was seen as being "too long" and "late" by some students, but on the whole positively perceived as "enriching", "stimulating", "surprising" and "innovative". Interestingly, 141 (58.4%) students gave only positive associations, and were mostly satisfied (satisfaction mean score of 3.60), 5 students (2.1%) only negative ones (satisfaction mean score of 1.20), and 96 students (39.5%) associated both positive and negative adjectives to the Creativity 'Night' Exercise (satisfaction mean score of 2.85), mainly "interesting" and "stimulating" but "late" and "long"

Insert Table 4 here

## Discussion

The empirical data prior to the exercise suggests that many students associated creativity with artistic endeavours, aesthetics and originality, whereas the post-questionnaire data demonstrates a shift in perception to embrace group work, the creative process and creative methods. Hence, the Creativity 'Night' Exercise provided the opportunity for the undergraduates to better equip themselves with tools to help them understand that creativity is a managerial competence that can be trained, with such comments as: "This exercise enabled me to better understand research of ideas; we do not necessarily realise that quantity and quality are linked". Our recommendation is that this training needs to be well organised and fluid given the large cohort of undergraduates: "The seminar was well organised, which enhanced my motivation to engage when I was not so motivated from the start". It should also be conducted by an external creativity consultant, who is not associated with a particular discipline or sector, as we think this greatly facilitated student understanding of creativity as a process that is not silo-specific. Pena-Vega and Morin (2003, p.59) stated the necessity for "the construction of learning spaces and training in interdisciplinary projects" in order to avoid the association of overarching concepts such as creativity with a particular discipline.

This study also found a shift in perception regarding whether everyone is creative; the importance of being creative in one's work; and the importance of creativity in future life. The exercise increased awareness-raising of what creativity is, and hence, debunking some of the myths around creativity such as "we tend to associate creativity with the arts and to think of it as the expression of highly creative ideas" (Amabile, 1998: 78) or creativity is about personal talent, a gift that a person is

born with. The initial findings that creativity is associated with art would also suggest that educators avoid using themes linked to the art world as this could consolidate student perceptions of creativity as art-related. By dispelling these creativity myths and conceptualising creativity understanding within a clear process and methodology as outlined in such comments as “I liked to discover that creativity is not simply due to chance, that it is possible to apply an original method to help others being creative”, we are preparing future managers to be instrumental in creating an environment that nurtures and promotes creativity in employees who are not naturally predisposed to be creative (Madjar, Oldham and Pratt, 2002).

Employees’ creativity can indeed be increased by training their managers (Williams, 2001). Gong et al. (2009), in research on how employee creativity is likely to benefit organisations, identified several managerial behaviours likely to foster favourable conditions for the development of creativity among employees: “First, managers should serve as creative role models and verbally persuade employees that they too can be creative. Second, managers may personally demonstrate, and instruct their employees on, creativity-relevant skills. (...) Third, by offering support and encouragement, managers can alleviate employee fear and anxiety that may arise from the uncertainty of creative endeavours” (Gong et al, 2009: 774).

Leadership and supervision, although more research in the field still needs to be done, are essential influences on creativity (Anderson et al., 2014). In order to serve as creative role models, demonstrate and instruct employees on creativity issues and offer support and guidance during creative events, business graduates require an in-depth understanding of what creativity is and a critical awareness of creativity methods. We demonstrated that the Creativity Night Exercise goes some way in

increasing students' understanding of creativity, an understanding that could help them promote creativity in the workplace when managers. The clear and structured methodology used during the Creativity 'Night' Exercise informed our students on the importance of structuring creativity within a process.

Indeed, this type of participative exercise has already been exploited in megastorming sessions at major companies (Accord, Axa, Caterpillar, Danone, Eads, Kraftfoods, Toyota, Unilever, among others) to help up to 1,000 business executives and managers reflect on corporate strategy, process improvements and other corporate issues that have creativity at their core (Raison, 2014). Within a workplace environment, this methodology will enable future managers to help employees focus on the generation, capture and subsequent exploitation of ideas. For creativity to occur in organisations, managers need to support and promote it, as they are the individuals who are most knowledgeable about which employee work outcomes should be creative, and they have considerable influence over the context within which creativity can occur (Shalley & Gilson, 2004).

Undergraduate students appreciated the opportunity to be coached by their peers during the exercise with such comments as: "I particularly appreciated the opportunity to work in a group, being led by people of our age and at our level with the same experiences". This same-level, equal status peer tutoring/learning brings a certain motivation and cognitive benefits for participating peers as well as bolstering self-esteem and increased interest in the exercise (Falchikov, 2001). In our study, 120 facilitators volunteered to be trained. In order to ensure that all undergraduates have equal status within the group exercise, it may be advisable to train all undergraduates in facilitation techniques and then ask two students from each sub-group to facilitate



their peers. Although this might be more difficult and more expensive to set up due to the large number of students involved, we believe that the companies would benefit directly from those trained as creativity facilitators.

Trained facilitators have been identified as one of the ten cost-effective techniques for enhancing creative teamwork within an organisation: “A trained facilitator can better follow the rules of brainstorming, help to create an organisational memory, and keep teams on track, in terms of making sure that downward norming does not occur” (Thompson, 2003: 105). As future managers, students need to be trained to manage creativity so as to enhance the creative problem solving of their employees, and this requires an understanding of how the team context influences the creativity of individuals with different dispositions.

A final recommendation to other educators, who would wish to replicate this experience, would be to choose a theme that will be of particular interest to the students, thus fostering motivation to participate. Some of the undergraduates were disappointed with the ‘jobs of the future’ topic, saying it was too large and not concrete enough, with such comments as “We would have liked a theme that is related to the school, to participate in school life, a more concrete topic”, which may explain as well the mixed satisfaction by students who otherwise enjoyed the exercise very much.

#### Limitations and further research

As with all empirical studies, we recognise that this study has a number of limitations. First, as with any case study method, our research relied on a student sample from only one business school where the Creativity ‘Night Exercise’ happened, the exercise should be replicated in other schools to avoid this bias. Second, the self-selection of

study participants might have skewed the results to the positive and negative extremes. Students with any strong opinion might have more willingly answered the questionnaires compared with students who simply did not care. The overall response rate of 37.1% and use of average variability technique (Cochran, 1977) counter that threat. In addition, we are confident that our sample is a good approximation of our student population as evidenced by mean scores obtained for Likert scales questions in the first questionnaire, which are similar in the final sample of 245 used and in the original sample of 481 students answering the first questionnaire. We might question why so few students responded to the second questionnaire, however this we consider typical behaviour of undergraduate students switching to other matters once the seminar is finished.

Secondly, the perception of facilitators was not isolated and analysed deeper, although we reckon their representation and appraisal after the seminar could significantly be different from other participants' representation and be of particular interest to improve the experience.

Thirdly, the post seminar questionnaire was given within two weeks of the Creativity 'Night' Exercise, thus measuring students' representation of creativity very soon after the seminar. It would be very instructive to track students' representation of creativity later to see if those changes in perception are long lasting. It might finally be interesting to add qualitative interviews of some students to understand more deeply the phenomenon of conceptual change, as well as another study to analyse more specifically if and how the seminar influenced students' practices within their studies and beyond.

If our study focused specifically on understanding attitudes towards creativity,

it would also be interesting in the future to work specifically on if and how the Creativity 'Night' Exercise improves students' individual creativity and problem solving skills at all, and investigate whether it is possible to train very large cohorts of undergraduate students to develop their creativity. If creativity training is proven to be effective (Scott, et al., 2004), can undergraduate students be trained to be more creative effectively in a large cohort? In the present study we did not include either actual measures of creative behaviour in the later career of the trained students. Future research should aim at collecting such data. The question of international validity also needs further research. It would be interesting to replicate the study in different countries for comparison.

## Conclusion

In this study we have described and tested an innovative way of encouraging large cohorts of undergraduate to better understand what creativity is through a participative exercise, The Creativity Night Exercise. This exercise was developed in a corporate environment for business people and adapted to a business school setting, to prepare future managers to facilitate creativity having developed an enhanced understanding of the creativity process. Our findings have implications for both the educator and organisations. Educators wishing to experiment such an exercise should ensure its fluid organisation, outline a clear and structured creativity process and methodology, and involve an external creativity consultant. In the workplace, future graduates trained with this type of participative creativity exercise should be able to replicate it, having acquired a structured methodology to help them support, promote and nourish creativity endeavours within their future companies. Trained creativity facilitators should be useful within the corporate world.

## References

- Amabile, T.M. (1983), *The Social Psychology of Creativity*, Springer-Verlag, NY, Berlin, Heidelberg, Tokyo.
- Amabile, T. M. (1998), "How to kill creativity?", *Harvard Business Review*, pp. 77-87.
- Anderson, N., Potočnik, K., and Zhou, J. (2014), "Innovation and Creativity in Organizations: A State-of-the-Science Review, Prospective Commentary, and Guiding Framework", *Journal of Management*, Vol. 40, No. 5, pp. 1297-1333.
- Baker, D. and Baker, S. (2012), "To "catch the sparkling glow": A canvas for creativity in the management classroom", *Academy of Management Learning & Education*, Vol. 11, pp. 704-72.
- Blaikie, N. (2003), *Analysing Quantitative Data*, Sage, London.
- Cochran, W.G. (1977). *Sampling techniques*. (3rd Ed.). New York, NY: Wiley.
- Colby, A., Ehrlich, T., Sullivan, B. and Dolle, J. (2011), *Rethinking Undergraduate Business Education: Liberal Learning for the Profession*, Jossey-Bass, San Francisco.
- Dewett, T. and Gruys, M.L. (2007), "Advancing the case for creativity through business education", *Thinking Skills and Creativity*, Vol. 2, pp. 85 – 95.
- Driver, M. (2001), "Fostering creativity in business education: Developing creative classroom environments to provide students with critical workplace competencies", *Journal of Education for Business*, pp. 28-33.
- Falchikov, N. (2001), *Learning Together: Peer Tutoring in Higher Education*, Routledge Farmer, London.
- Giampietro, M. and Cavallera, G.M. (2007), "Morning and evening types and creative thinking", *Personality and Individual Differences*, Vol. 42, pp. 453 – 463.

- Gong, Y., Huang, J. C., & Farh, J. L. (2009), "Employee learning orientation, transformational leadership, and employee creativity: The mediating role of employee creative self-efficacy", *Academy of Management Journal*, Vol. 52, No. 4, pp. 765-778.
- Hovardas, T. and Korfiatis, K. J. (2006), "Word Associations as a Tool for Assessing Conceptual Change in Science Education", *Learning and Instruction*, Vol. 16, pp. 416-432
- Kelley, T. and Kelley, D. (2012), "Reclaim your creative confidence", *Harvard Business Review*, Vol. 90, pp. 115-118.
- Kerr, C. and Lloyd C. (2008), "Pedagogical learnings for management education: Developing creativity and innovation", *Journal of Management & Organization*, Vol. 14, pp. 486–503.
- Madjar, N., Oldham, G. R., and Pratt, M. G. (2002), "There's no place like home? The contributions of work and non-work creativity support to employees' creative performance". *Academy of Management Journal*, Vol. 45, pp.757-767.
- Marceau, J. (2011), *Innovation and Creativity in Industry and the Service Sectors*, in Leon Mann and Janet Chan (Eds), *Creativity and Innovation in Business and Beyond Social Science: Perspectives and Policy Implications*, New York: Routledge, pp. 32-49.
- McCorkle, D.E., Payan, J.M., Reardon, J. and Kling, N.D. (2007), "Perceptions and reality: Creativity in the marketing classroom", *Journal of Marketing Education*, Vol. 29, pp. 254-261.

- McIntyre, F.S., Hite, R.E. and Rickard, M.K. (2003), "Individual characteristics and creativity in the marketing classroom: Exploratory insights", *Journal of Marketing Education*, Vol. 25, pp. 143 – 149.
- Moore, D.S. (2001). *Statistics: Concepts and controversies*. (5th ed.). New York, NY: W.H. Freeman & Company.
- Morrison, A. and Johnston, B. (2003), "Personal creativity for entrepreneurship: teaching and learning strategies", *Active Learning in Higher Education*, Vol. 4, pp. 145 – 158.
- Norman, G., (2010), "Likert scales, levels of measurement and the "laws" of statistics", *Advances in Health Sciences Education*, Vol.15, No 5, pp. 625-632.
- Pena-Vega, A. and Morin, E. (2003), *Université, Quel Avenir – Propositions pour Penser une Réforme*, Editions-Diffusion Charles Léopold Mayer, Paris.
- Pinard, M. C. and Allio, R. J. (2005), "Innovations in the classroom: Improving the creativity of MBA students", *Strategy & Leadership*, Vol. 33, pp. 49-51.
- Raison, M. (2014), *Oser la créativité: inspirez-vous des pratiques des entreprises innovantes*, Vitrac Editeur, Limoges.
- Robinson Report (1999), "All our futures: Creativity, culture and education", available at <http://sirkenrobinson.com/pdf/allourfutures.pdf>. (Accessed 18 March 2014).
- Schmidt-Wilk, J. (2011), "Fostering management students' creativity", *Journal of Management Education*, Vol. 35, pp. 775–778.
- Schofer, E. and Meyer, J. (2005), "The worldwide expansion of higher education in the twentieth century", *American Sociological Review*, Vol. 70, pp. 898-920.
- Scott, G., Leritz, L. E. and Mumford, M. D. (2004), "The effectiveness of creativity training: A quantitative review", *Creativity Research Journal*, Vol. 16, pp. 361-388.
- Seca, J. M. (2010), *Les Représentations Sociales*, Armand Colin, Paris.

- Shalley, C. E., & Gilson, L. L. (2004), "What leaders need to know: A review of social and contextual factors that can foster or hinder creativity", *The Leadership Quarterly*, Vol. 15, No. 1, pp. 33-53.
- Snyder, K.D. (2003), "Ropes, poles, and space: Active learning in business education", *Active Learning in Higher Education*, Vol. 4, pp. 159–167.
- Thompson, L. (2003), "Improving the creativity of organizational work groups", *The Academy of Management Executive*, Vol. 17, No. 1, pp. 96-109.
- Vance, E. (2007), "Colleges should teach broader skills to prepare students for workforce", available at <https://chronicle.com/article/Colleges-Should-Teach-Broad/122735> (accessed 12 September 2013).
- Vergès, P. (1992), "L'évocation de l'argent: Une méthode pour la définition du noyau central de la représentation", *Bulletin de Psychologie*, Vol. 45, pp. 203-209.
- Vergès, P., Tyszka, T. and Vergès, P. (1994), "Noyau central, saillance et propriétés structurales", *Papers on Social Representations*, Vol. 3, pp. 3-12.
- Wachelke, J. (2008), "Relationship between response evocation rank in social representations, associative tasks and personal symbolic value", *Revue Internationale de Psychologie Sociale*, Vol. 3, pp. 113-126.
- Wagner, W., Valencia, J. and Elejabarrieta, F. (1996), "Relevance, discourse and the 'Hot' stable core social representations — A structural analysis of word associations", *British Journal of Social Psychology*, Vol. 35, pp. 331-351.
- Williams, S. (2001), "Increasing employees' creativity by training their managers", *Industrial and Commercial Training*, Vol. 33, No. 2, pp. 63-68.
- Yar Hamidi, D., Wennberg, K. and Berglund, H. (2008), "Creativity in entrepreneurship education", *Journal of Small Business and Enterprise Development*, Vol. 15, pp. 304-320.

Zimmerman, D.K. and Gallagher, S.R. (2006), “Creativity and team environment: An exercise illustrating how much one member can matter”, *Journal of Management Education*, Vol. 30, pp. 617-625.

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<sup>[1]</sup>Yellow Ideas – Website: <http://www.yellowideas.com/>



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<sup>[ii]</sup>Edgar Morin Centre is a teaching and research unit of the Interdisciplinary Institute for the Anthropology of Contemporary Societies (IIAC) looking specifically at transdisciplinary studies in anthropology, sociology and history named after Edgar Morin, the French sociologist and philosopher. Website: <http://www.iiac.cnrs.fr/CentreEdgarMorin/>

<sup>[iii]</sup>Réseau Entreprendre Nord: set up in 1986 by André Mulliez, is a national association comprising 9000 leaders who each year support 500 new start-up. Website: <http://www.reseau-entreprendre.org/>



Table 1: Prototypical analysis results: most frequent free associations to the word “creativity”

	High Rank	Average Rank 2,40	Low Rank
BEFORE			
High Frequency	Imagination (133 ; 1.45) Innovation (104 ; 1.82) Art (87 ; 1.80) Originality (58 ; 2.15) Novelty (42 ; 2.28) Invention (41 ; 1.73) Ideas (30 ; 2.03) Liberty (15 ; 2) Spontaneity (8 ; 2) Reflection (8 ; 2.12) Creation (7 ; 2.23)		Aesthetic (11 ; 2.81)
Average Frequency			
Mean 7,24	Color (7 ; 2.28) Inspiration (6 ; 2.16) Marketing (6 ; 2.16) Genius (5 ; 2) Talent (5 ; 2) Audacity (5 ; 2.4) Design (4 ; 2.25)		Surprise (6 ; 2.83) Dream (5 ; 2.8) Resourcefulness (4 ; 2.5) Difference (4 ; 2.5)
Low Frequency			
AFTER		2,20	
High Frequency	Ideas (69 ; 1.46) Imagination (48 ; 1.79) Innovation (45 ; 1.84) Quantity (44 ; 1.86) Originality (34 ; 1.85) Concentration (34 ; 1.88) Reflection (30 ; 1.73) Work (29 ; 2.10) Method (17 ; 1.58) Out of the box (15 ; 2.06) Invention (13 ; 1.61) Liberty (13 ; 2.00) Possible (11 ; 2.00) Tenacity (11 ; 2.09) Process (10 ; 1.50) Spontaneity(10 ; 1.50) Diversity (10 ; 2.10) Habit (9 ; 2.11) Universal (8 ; 2.12) Chance (6 ; 2.00)		Novelty (18 ; 2.1) Im'possible (16 ; 2.43) Rupture (15 ; 2.40) Serendipity (15 ; 2.40) Audacity (9 ; 2.33) Dream (8 ; 2.62) Future (6 ; 2.33) Facilitator(6 ; 2.5)
Average Frequency			
Mean 5,53	Game (5 ; 2.00) Team (5 ; 2.20) Organisation (4 ; 2.00)		Accessible (5 ; 2.40) Creation (5 ; 2.40) Color (4 ; 2.25) Open-mindedness (4 ; 2.25) Group (4 ; 2.50) Research (4 ; 2.50)
Low Frequency			

Table 2: Identified opportunities for students to be creative, prior to the Creativity ‘Night’ Exercise

Opportunities identified for creativity	Nb of associations
Fine Arts (drawing, sculpture, painting...)	34
Music (playing, composing...)	33
Societies (projects, events ... organized within school societies)	22
Communication (developing posters, oral presentations...)	17
Dance (choreography...)	12
Writing	8
Theatre	7
Couture	7
Photography and/or Video/Film	7
Group work	7
Leading groups of children	7
Business	6
Others*: cooking, decoration, jewel design, web design, sport, marketing...	37
TOTAL number of opportunities cited **	204

\* all cited 4 times and less \*\* 155 students who could cite several opportunities each

Table 3: Comparison of Likert scales results prior to and after Creativity ‘Night’ Exercise

Statement	Prior to Exercise		After Exercise		Paired-samples t-test Significance Level
	Mean Likert Score	Standard Deviation	Mean Likert Score	Standard Deviation	
Everyone is creative	2.18	1.078	3.43	1.167	0.000*
I am creative in my work	3.14	0.800	3.42	0.882	0.000*
I am creative in my personal life	3.62	0.927	3.65	0.854	0.675
Business world needs creative people	4.53	0.802	4.57	0.666	0.552
Being creative will be important in my future life	3.96	1.009	4.28	0.793	0.000*

Sample size: 245. \* Change in Likert scores is significant at 0.1% level

Table 4: Adjectives that spontaneously came to students' mind to describe the Creativity 'Night' Exercise (cited 5 times or more)

Positive associations		Negative associations	
Fun	65	Long	63
Original	59	Tiring	18
Interesting	56	Late	17
Surprising	34	Disappointing	5
Enriching	33		
Interactive/team work	30		
Stimulating	29		
Instructive	24		
Innovative	21		
Motivating	20		
Creative	20		
Convivial	16		
Well structured	14		
Pleasant	14		
Helpful	9		
Collective	7		
Intense	7		
Outstanding	7		
SUB-TOTAL	465	SUB-TOTAL	103
Others (cited less than 5 times)	133	Others (cited less than 5 times)	34
TOTAL	598	TOTAL	137

## Appendix 1: Phases of the Creativity Night Exercise

### Phase 1: INTRODUCTION TO CREATIVITY NIGHT (10 minutes)

The facilitator welcomes the members of the group and invites them to present themselves briefly

The facilitator invites all participants to turn off their mobiles phones and other Smartphone devices

The facilitator presents his/her double role:

- Y Facilitate the creative reflection of the group
- Y Be the guardian of the rules and the time

The facilitator presents the rules and the timing of the creativity night

S/he reminds participants that their role is to generate the maximum number of ideas, and that this is not a debate but a 'mega-storming' process

#### Rules

1. This is a structured creative process, not an open discussion or debate, nor an exchange of opinions. The aim is to find and develop new and original ideas together.
2. The role of the facilitator is to facilitate the creative process in the group. S/he does not offer any ideas but facilitates!
3. The participants participate actively without questioning the process. What you must challenge is the issue, not the method or how the group is run.
4. Timing is extremely important when 50 groups work in parallel
5. Mobile phones, smartphones and blackberries are switched off during the megastorming
6. All ideas are welcomed and explored. There is no taboo issues or forbidden ideas. This is a creative process where all possibilities are investigated.

The facilitator presents the question that the group will work on

## Phase 2: DIVERGENCE

(45 minutes)

19:50-19:55 The facilitator explains the rules of the initial liberation technique (5 minutes):

For 10 minutes, each participant writes on a post-it (one idea per post-it) all the ideas that come into their mind insilence.

- 1) All ideas are written on post-it notes in capital letters.
- 2) Only one idea per post-it note (keep post-it notes intact!
- 3) Each idea should be detailed: it is the detail that makes sense!

After 10 minutes, each participant reads his/her ideas, as quickly as possible and without commenting on them. The other participants do not comment either. There is no debate or discussion at this stage.

The facilitator sticks the ideas when read they are read out loud onto the flipchart on four columns with 10 post-it notes on each.

19:55-20:15 First part of divergence phase: The liberation of initial ideas (20 minutes)

The facilitator indicates that we are starting the liberation phase, that is to say, seeking individual ideas: For10minutes individual ideaproduction insilence

The facilitator ensures that everyone remains concentrated and silent for exactly 10 minutes.

After 10 minutes, each person read his/her ideas, asquickly aspossible andwithout anycommentary.

The facilitator sticks the ideas on the flipchart.

20:15 -20:35 Second part of divergence phase: find new original ideas with the famous person technique (20 minutes)

The facilitator asks the team to find new ideas 'by asking' approximately 10 famous people how they would answer this question:

1. Lady Gaga
2. Robert Redford
3. Gandhi
4. Barack Obama
5. Yannick Noah
6. Bill Gates
7. Karl Lagerfeld
8. Angelina Jolie
9. Superman
10. Messi

Please make sure that you are creative!

Note bene! It doesn't mean describing Barack Obama, but to find the idea that answers the question asked 'with the help of' the famous person. The famous person plays the role of a virtual consultant.

### 20:35-21:00 Phase 3: CONVERGENCE (25 minutes)

Convergence, which is the evaluation of ideas and the selection of the final idea (i.e. the idea that will be developed and presented to the corporate client).

20:35-20:50 First part: Evaluation of ideas (15 minutes)

The participants evaluate the ideas based on the following categories:

Blue Ideas: simple ideas, which are easy to implement

Red ideas: original and pertinent ideas

Yellow ideas: amazing ideas that are unachievable

How to proceed?

- 1) Distribute the coloured stickers (10 stickers of each colour) to each participant
- 2) Evaluate the ideas individually in silence.
- 3) The facilitator asks the participants to use all their coloured stickers to select the ideas that seem the most interesting
- 4) You can only vote for one single idea
- 5) The participants stick the coloured stickers on the post-it notes

20:50-21:00 Second Part: The selection of the final ideas (10 minutes)

The participants choose one red and one yellow idea with more than five votes.



**21:00-21:40 Phase 4: RECOMMENDATION WRITE-UP**  
(40 minutes)

The group develops the (red or yellow) idea selected by writing up their recommendation.

Transform your idea into a unique, amazing and magical recommendation!

This is the most important moment of the creative process!

1. Complete the one-page recommendation form in detail: the words you use are of utmost importance.  
Please indicate your team name clearly on the form
2. Create an original PowerPoint slide to present your red and yellow idea. Try to illustrate with inspiring images from the Internet  
Please pay attention to the quality of the images used!  
Please indicate your team name clearly on the bottom left of the slide and on the filename
3. Create a poster illustrating your idea as attractively as possible.  
Please use one side only!  
Please indicate your team name clearly on the bottom left of the poster.

**21:40-21:45 PREPARATION OF DOCUMENT**  
(5 minutes)

The facilitator gives the following to the creativity consultant:

- 1) The memory stick with the PowerPoint slide
- 2) The one-page recommendation document
- 3) The poster illustrating the idea

**21:45 CLOSURE OF THE CREATIVITY NIGHT**

- 21:45-22:45 BREAK  
During the break the jury deliberates and selects the 12 best ideas
- 22:45 Facilitators are invited to provide feedback on their facilitation experience  
The best ideas are announced and the 12 laureates are invited on stage  
The facilitators of the ideas selected are called upon to present their idea  
Closing comments