



## THE CREATIVITY EXPLORATION, THROUGH THE USE OF BRAINSTORMING TECHNIQUE, ADAPTED TO THE PROCESS OF CREATION IN FASHION

KARLA MAZZOTTI<sup>1</sup>, ANA CRISTINA BROEGA<sup>2</sup>, LUIZ VIDAL NEGREIROS GOMES<sup>3</sup>

<sup>1</sup>Universidade do Minho, Mestranda em Comunicação de Moda, karlinha\_mzt@hotmail.com

<sup>2</sup>Universidade do Minho, Professora Doutora, cbroega@det.uminho.pt

<sup>3</sup>Universidade Estadual de Feira de Santana, Professor Doutor, vidalgom@terra.com.br

**Abstract:** *This article describes a practical work experience in a classroom, which deals with aggregating techniques that facilitate the development of creativity, in a process of fashion creation. The method used was adapted to the fashion design, through the use of the concept of "brainstorming" and his approach to generating multiple ideas. The aim of this study is to analyze the creative performance of the students, and the creative possibilities resulting from the use and adaptation of this creative technique.*

**Keywords:** *creativity; creative process; brainstorming; lateral thinking.*

### 1. Introduction

The present study was developed from a work in the curricular unit of Fashion Design Collections in the course of Fashion Design and Marketing, from the University of Minho, in the second semester of 2012. The objectify of the project was to develop a mini-collection of Tops<sup>11</sup>, from the use of brainstorming techniques, such as the influential variable in the creative process. The focus of this work is the exploration of creativity as a factor essential for innovation and idea generation, in both the academic and professional level.

Historically, the creator potential of man began to have importance at the time of the Renaissance, when appear the individualism and, in a sense of value, individuality was seeking of override the social (Ostrower, 2010). Much time has passed since then, and in historical terms, for Lipovetsky and Serroy (2010) we are living in a second individualistic revolution, in which the "Hyper-individualism" is a system of values where the individual is the central value of our culture. Added to this fact, we live in an era where the big changes generated by the power of science, the technology and the globalization require, more than ever, new forms of progress and education, where creativity has become highly valued and required, becoming a reason of praise and even labour promotion (Gardner, 2008).

The fashion, in turns, positioned between the arts and industry, goes yonder than just transform fabrics in clothing, fashion creates objects with meanings. The fashion industry, in the sphere of social life, is characterized not only as an important economic activity, but also as a creative industry, an artistic activity, that not only generates economic profits, but also cultural goods not measurable but of great value to the human development such as innovation and creativity (Godart, 2010).

*" A revolution occurred: while, on the one hand, the art follows now the rules of the market world and newsworthy, on the other hand, the technology of information, the cultural industries, the brands and the capitalism itself build a culture, that is, a system of values, objectives and myths. The cultural diffracts enormously from the material world, dedicating this to create goods with direction, identity, style, fashion and creativity, through the brands, their marketing and communication ... the market increasingly integrates in its offer the creative and aesthetic dimensions "* (Lipovetsky and Serroy 2010, p. 15).

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<sup>1</sup> Tops: top pieces of clothing.

## 2. The creative process

Ostrower (2010, p. 56) states that, "Intuition is the basis of the creation processes". To the author, although the creativity is directly related to the experiences of the individual and is regarded as a rational act, the creative process is essentially intuitive. In a second moment, this process becomes conscious, when it begins to take shape, as it is expressed. What the author focuses on is that the act of creating is an existential process, as it is living, in that sense our ability to discern shapes, symbols and meanings come from our inner world, from our levels of intuition and from our perception, which establish a close connection between the conscious and the unconscious. Later, such a process is then composed of real factors, of work development, that is how arises, the so-called inspiration, the decisive moment of creation, the occurrence of an idea. In this sense, the inspiration never come untied from a work already underway, in preparation, but from a total and constant physical and intellectual commitment.

According to Gomes (2011), for the creative process occur it is necessary that the brain retains an amount and variety of information, so that it can have associations and connections between ideas. Only from this creep of information is that the creative human being are able to come up with new designs, generate new ideas, new projects.

The classic model that defines the steps of a creative production, was initially proposed by Graham Wallas, in 1926, and consisted of 4 phases: the preparation (which recognizes the information); the incubation (unconscious action, for the preparation of the project); the illumination (where arises the solution); and the verification (is the final test to draw up solutions). After years of studies, from researchers in the field, it became necessary to greater deployment of these stages of creative production. Gomes (2011, p. 110) suggests then, seven steps:

*"1-identification (definition/delimitation; to write /outline /drawing).*

*2-preparation (direct/indirect; to draw and to write about).*

*3-incubation (voluntary/involuntary; to mark and to outline).*

*4- heating (affective /psychomotor; to outline, drawing).*

*5-illumination (verbal- oral/graphic-verbal; to write, to draw).*

*6-development (graphic/visual, graphic/sinestesia; to draw, to write).*

*7- check (partial /final; to write and to draw)."*

For Dualibi and Simonsen (1990, p. 15), the search for solutions in a creative process, is the proper mix of three elements: the imagination, fantasy and creativity.

*"Creativity, finally, understood in itself, is the ability to mentally form ideas, images and things not present or give life to something new, unique and original, but with a purpose. Therefore the creation itself is different from creativity. This is to say that when someone is purposely creative, the search for solutions is not based on the fragility of fantasy, (that has no restrictions) nor only in facility of imagination (which works reproductively even without purpose). "*

The process of creation in fashion, in its turn, makes use of a methodology for the creation, for the development of collection, which in a way is usual in both academic and professional environment. Godart (2010, p. 95) highlights three phases specifically in the process of fashion creation: "first, the stylistic diagnosis of trends; then the inference, regarding the definition of ideas and themes that correspond to these trends and, finally, the processing, which consists in creating designs that match the trends". In this sense, the intention here is not to modify this creation methodology, but rather to combine practical exercises, which may serve as facilitators, for the generation of ideas, in this creative process.

## 2.1 Brainstorming

Brainstorming is a tool associated with creativity and, generally, used at the planning stage of a project, in the search for solutions for a given problem. The method was created in 1939, by Alex Osborn, which defines the term brainstorm as the act of "using brain to disrupt a problem" (Osborn, 1987, p. 73).

The technique of brainstorming is used in order to generate the largest number of possible ideas about a given topic or issue. The traditional exercise proposes that a group of people, preferably from different areas and competences to come together in order to collaborate for a "storm of ideas", where the differences and experiences of each together and associated with those of the other, forming a long process of suggestions and discussions. No idea is initially dropped or dismissed, all ideas are heard and recorded, so that they can evolve until the arrival of effective solution.

*"Is the ideation<sup>2</sup> – part of the process that requires to imagining all possible ideas, as solutions or directives for other ideas which, in turn, can lead to the solution... The more design ideas conjecturally we design by means of alternate possibilities, most likely is to hit one or more that solves the problem. "* (Osborn, 1987, p. 129)

Through the "wisdom of the abundant ideation", Osborn (1987) states that the quantity in relation to the production of ideas, leads to quality: should explore all possibilities of solving a problem, all chances that may lead to new combinations. The accumulation of alternatives is an efficient technique in the design of new products, as well as the testing of ideas, through the construction of sketches that can generate new designs and prototypes.

The exercise of accumulating hypotheses, however, only has positive results if the period of great conscious effort is followed by a period of unconscious work: the so-called phase of incubation of a project. Regarding the technique of brainstorming, Osborn (1987) suggests that the work should be stopped for a period of one day, at least, for only then return to the issue in demand, with the quiet mind. During this day of relaxation for this purpose, it is imperative that not any effort on the problem is made, it's the only way that the unconscious will perform its work. De Masi (2005, p. 136), in his studies on creativity and the creative groups, also underscores the importance of incubation step, in a process of creation: "... a creative, when looking for a solution to a problem, start exploring everything that exists around him, then leaves the mind to stand until a sudden and unexpected solution."

Brown (2010), Executive Director of the American company IDEO Design, one of the most renowned companies at the level of creativity, states that the brainstorming is an important technique and efficient when the goal is to open a wide variety of ideas: "other approaches are important to make choices, but there is nothing better than a good brainstorming session to create them" (Brown 2010, p. 75). As a design company, Brown focuses on the importance of expressing ideas not only through words, but also through drawing: only the drawing, according to him, manages to show both functional characteristics of an idea as its emotional content. The language used to sketch out an idea, especially when dealing with aesthetic issues, is of fundamental importance and the results obtained are different when an idea is expressed through drawing or through words and numbers.

## 2.2 The lateral thinking and the brainstorming

The lateral thinking is an attitude, a method to organize information in a way to generate new ideas and approaches. De Bono (2005) argues that such thinking is bound to change of patterns: a pattern can be a concept, a thought, an image or idea repeated, as well as a way of looking at things, a point of view. The use of lateral thinking does not exclude vertical thinking, on the contrary, both complement each other: while the lateral thinking generates the ideas, the vertical thinking selects them, for example. What matters

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<sup>2</sup> Ideation: formation of the idea; act; conception.

in lateral thinking is the movement, the change, unlike the linearity and the sequence of vertical thinking that commonly we are used to. The destruction of old concepts, the provocation, the exploration of new ways and the look for less obvious situations and approaches, form the basis of lateral thinking. "The most basic principle of lateral thinking is that any particular way to look at a situation is only one of many possible ways" (De Bono, 2005, p. 59).

Among the techniques to the exploration of lateral thinking, De Bono (2005) suggests the brainstorming, as a special framework, which encourages such a flexible thinking and put away from the rigidity of vertical thinking, through their mutual stimulus characteristics and suspension of value judgment. In a brainstorming session, no idea is ridiculed or rejected, the fact that there is no trial by itself already gives participants a greater freedom to present any idea that comes to their heads. Regarding the mutual stimulation, for being an activity performed in a group, the provocation is encouraged by the ideas of participants, i.e., the ideas of one can stimulate the mind of another, and the junction of such ideas, therefore, they can generate something new, original.

De Bono (2005) points out that the assessment of generated ideas, that should be made later by the group or even by another group, is not just a mechanical sorting, unlike, it is fundamentally a creative effort on the part of members in order to extract significant ideas, learn to identify an idea so that it is not discarded when in fact could be developed and transformed into something useful.

### **3. Work's practical development**

The use of methodologies is common sense usual in the field of design: design something without having a method and a survey about design templates already experienced, so there is no waste of time correcting errors that could result if the methods never before were tested. To Munari (1981, p. 21) "Creativity does not mean improvisation without method". You should not feed the illusion that the creative process is completely free and independent. The design method for the designer, serves to aid creativity, and does not block the work of the designer, on the contrary, facilitates their development once it stimulates discover new things and to carry out the project with precision and safety, helps and organization elements that stimulate the act to produce creatively.

Based on the quoted reference, what is proposed here is an adaptation of the existing methodology of collections development, in this case, in addition to a creative methodology, through the use of exercises facilitators of creativity development. The process consists of, initially, to generate the largest number of possible ideas, through a free creation that facilitates fluency of ideas and the association between them, where no suggestion will be dropped, even though it may seem absurd. Later, we passed the lateral thinking to vertical thinking: after collecting all the chances we will make the choice of ideas, then within some limits of collection, pre-set.

#### **3.1 Stages of the creative process**

On the first day of the process was exposed the presentation of the problem, to the students: development of a collection of Tops, from knitted pieces (already used or not), that would be mounted on the mannequin from the technique of *moulage*<sup>3</sup>, with the aid of the brainstorming exercise. The adaptation of this exercise is to produce a large amount of ideas of Tops, at first: the pieces will be assembled directly on the mannequin (with the help of pins), the ideas will not be written on paper or displayed on a table, as it would in a traditional brainstorming session, but rather recorded photographically. In this particular case,

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<sup>3</sup> Moulage: advanced technique of modeling, (also known as draping), created by French fashion designer Madeleine Vionnet. Instead of creating flat made in modeling, the moulage is a three-dimensional shape, which consists in creating molds and parts of garments directly on the human body or sewing dummy.

we opted for the direct creation of parts through the *moulage*, without any previous designs of ideas, this is because the own technique acts as a facilitator in the process of generating multiple ideas, in order to be able to mount and unmount (pin) piece on the mannequin, as many times as necessary, until they reach the expected result. This particularity aims to make the exercise more interesting for students participating in a course of fashion, and whose technique of *moulage* being a specific creation process in this area.

In order to start the reflection about the proposed topic and to make participants "examine" the thinking about the problem in question, the exercise was exposed with a day in advance of the beginning of practical activity and it was asked to students to research on what is meant by Tops and customization<sup>4</sup> ideas and how to reuse materials in order that they could choose what materials would be used. These were also given a small explanatory briefing of the activity and a explanation of the traditional brainstorming techniques to a greater knowledge on the subject.

To be part of an Interdisciplinary Project of Development of Collections, each group worked from a thematic panel developed, with the goal of creating harmony between the pieces created by the group. The process took into account the principles of collections creation, in witch the pieces must communicate the intended style elements. It is understood by all style elements the details used repeatedly, with variations from one model to another, in order to create a visual unit within the collection, and refer for the theme of inspiration (examples: colours, fabrics, prints, accessories, monograms, applications).

On the second day, with the materials and the theoretical search done, begins the process of creating step, starting the process of assembling the Tops on the mannequin: important to remember that this is the step of free process in order to generate the largest number of possible ideas. Edward de Bono, quoted by Munari (1981), talks about the importance of looking at things, not only in what they represent in reality, but also what it could be. The purpose is to examine an object or a simple idea, under various aspects: when looking under views less obvious and more comprehensive, can prove to be very interesting and useful conclusions. And it is in this sense, second Ostrower (2010, p. 165), which is encouraged the free production of ideas:

*"...free creation does not mean being able to do anything and at any time, in any circumstances and in any way. We see free creation as a structured and highly selective condition, as a condition always linked to present intentionality, though perhaps unconscious, and values of the individual and social time. "*

In this step, all the pieces generated were pinned on the mannequin, even because it does not required the final version of the goods, but only a photographic record of each piece, being they good or bad, without exclusion, just in order to generate an amount of effects, according to the third rule of the brainstorming, proposal by Osborn (1987): quantity can generate quality, produces enough to then choose which is convenient. Thus, the novelty of such an exercise rests on binomial *moulage*/photography, instead of the use of the traditional writing or drawing as suggested by the brainstorming exercise. Such a process chosen acted as facilitator in the development and generation of a large amount of ideas, by both the variety and rapidity with which the initial ideas could be mounted on the mannequin, as by the aid through the photo registration in the final choice of works.

The students were divided into groups of four elements each, being the goal that each element should be produce a final piece, and each final piece would be selected from a batch of at least three initial ideas [Figure 1- Pieces developed by the group of students: Ana Rita Capão; Isabel Félix; Inna Boyarskaya; Marta Gonçalves; Patrícia Ribeiro e Rita Sousa].

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<sup>4</sup> Customization: Customize suggests reform or modify pieces of clothing or accessories, in order to obtain personalized and exclusive pieces. Clothing with changeable or convertible, based on the principles and functional clothing utilities.



**Figure 1:** creation of initial parts, which will give rise to a final piece. [Student: Ana Rita Capão; Isabel Félix; Inna Boyarskaya; Marta Gonçalves; Patrícia Ribeiro e Rita Sousa]

After this step, it comes the period of incubation of ideas (two days apart), with the goal of resting the mind, in order to leave the unconscious work by itself. According to Dualibi and Simonsen (1990), the incubation is the idea that after spending a much time around the information collected in order to solve a problem, it is necessary to stop and rest, i.e. leave the idea "incubate" in the unconscious level, let the mind work virtually alone. For Gomes (2011, p. 153): "the work-rest-routine work even though, in a first moment, nothing can create, discover or invent, seems to facilitate the creative process, thanks to the disruption to the quiet. This break restores the strength and vigour of the creative mind. "

Passed this stage, in the third and last day of the activity, it is time to move on to the thought vertical and make the choice of parts. Through the photographic record, students chose at least one piece each, which judged to be the most suitable for this collection, i.e. in this step the choice was adapted based on the theme of each group. From the piece chosen, each participant had to "reassemble" his piece on the mannequin, in order to complete it or modify it if need be. This step might arise new ideas and useful if they are should not be discarded, but rather adapted, in order to contribute to an improvement or evolution of the initial idea. (Figure 2)



**Figure 2:** final piece ready, adapted from one of the early pieces. [Student Ana Rita Capão; Isabel Félix; Inna Boyarskaya; Marta Gonçalves; Patrícia Ribeiro e Rita Sousa]

De Masi (2005) states that in the creativity group developed, for being an activity that belongs to many, not just the qualities of the individual members that reflect in the creative process: the higher the interaction among the participants of the group, consequently the better is the cross-cultural personnel between them, there relationship and income with the outside world. In this sense, the interaction of a good group, contributes to the production of good ideas, while the opposite is also true: a bad group can block the creativity of which it is part.

The question, however, is how to encourage the creativity in groups, through proper organization, where none of the members feel less important or with their creative capacity dwarfed by other participants. In this process of creation, each student, despite having raised the pieces individually, worked within their group respecting proposed thematic and the principles of creation of pre-established collection. Thus, the choice of the final pieces was made with the participation of the entire group in order to establish interaction and harmony both within the team and the final result of the project: the creation of a mini collection of Tops. (Figure 3)



**Figure 3:** Mini collection of Tops, design by Ana Rita Capão; Isabel Félix; Inna Boyarskaya; Marta Gonçalves; Patrícia Ribeiro e Rita Sousa.

It is interesting to note that, after examining the report done by the groups about exercise applied, absolutely all final pieces chosen suffered changes during the last "reassembly" in the dummy. Some students claim that the photographic record helped to add details from a piece to another, thus creating a third and new Top, which sometimes was chosen as the final piece. In this sense, the technique of *moulage*, coupled with "divergent thinking", fulfilled their original purpose: to generate a wide ranges of initial ideas that serve as the basis for later converge to a final proposal. The groups also said that, in the final choice of pieces, it gave priority to those who maintained a connection with the concept and initial theme, in order to be able to establish a collection drive between all the parts generated.

#### 4. Final Considerations

The application of the brainstorming technique, and encouraging the lateral thinking, constitute attempts to creative evolution, adapted the traditional methodology of collection development in fashion, which can be used both at academic and professional environment. To analyse the results obtained, one can see clearly the difference between a end pieces generated from the development of a few alternatives, and on the contrary, that had as its starting point the generation of multiple alternatives. The adaptation possibilities about association of ideas, and composition of the end pieces are infinitely greater when there is much information and especially when this information is organized properly. In this case, the information organization followed the De Bono's model (2005), through the lateral thinking initially, start

by putting the ideas in motion, without any evaluation in order to escape from the natural line of reasoning, creatively. The ideas resulting from the first step, in turn, were then selected, through vertical thinking, excluding the remaining paths, in order to reach a final direction.

The practice of classroom exercise has been the evolution of mini-collections of students through the use of the *moulage* technics, as already stated earlier, by the consequent generation of multiple ideas as the basis of the process. Group work, assembly and re-assembly of parts, added harmony and balance to the whole collection at the same time it became possible to explore creativity and both collective and individual skills. The method created is an adaptation of existing techniques that are used in the practice of design, to the universe of fashion, in an attempt to reconcile specific methods of this area, and which can at the same time be facilitators and serve as a stimulus for the fashion designer.

Obviously, there is no fixed formula for the production of ideas. Ideation processes vary according to the problems to be solved and the type of business involved, and even so, there is not a recipe that will last years, the procedure will change often. However, a problem of any kind requires concentration and continuous dedication, both rational and emotional and physical and mental. "The steps are not scientific or formulas. We present them simply as a means for understanding the various phases of the solution of the problem creator" (Osborn, 1987, p. 105).

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