

CREATIVITY AND HAPPINESS IN UNIVERSITY STUDENTS

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Abstract

Introduction: Creativity, initiative and common sense are personal characteristics which are useful for everyone, both in work and in daily life (Uribe, Valenciano & Bonilla, 2013). Happiness is learned and has positive effects on personal and social development, but also on the student's performance. It broadens the intellectual processes and facilitates creative thinking (Amabile, 1996, 2011; Isen, 2004). Teaching happiness is educate in health and well-being, conditions to overcome some learning difficulties and for was significant. The communication presented is framed within the programs that studied positive emotions and creativity as drivers of human behavior within the educational context, and programs that choose happiness as an element that enhances creativity, educational performance and the personal and social well-being of the people.

Objective: To know the levels of happiness and creativity of university students and how it can be influenced by an educational intervention to work the emotions in the classroom.

Method: A quasi-experimental design was used, with a non-equivalent control group (Cook & Campbell, 1986). The sample consisted of 162 students of different university degrees, aged between 18 and 45 years of age.

Instruments: The subjective happiness scale of Lyubomirsky & Lepper (1999) and the Creative Intelligence test of Corbalán et al. (2003).

Results: The students who worked with positive emotions integrated within the specific contents of the subjects studied and with a methodology that fostered their creativity, showed more level of happiness and creativity than the other who studied within an ordinary methodology.

Discussion: The society demands happy, creative and entrepreneurial professionals that lead educational and social change processes. Creativity and optimism are facilitators of academic performance and incorporation into the working market. It is recommended the design and implementation of emotional, creative and inclusive education programs in the university area that improve the professional skills of our students and contribute to their personal and social development.

Keywords: Happiness, social and emotional learning, creativity method, Higher Education, 21st skills.

1 INTRODUCTION

In the last decades, multiple researches have been developing with the aim of analyzing which variables can favor the creative performance. One of the most attention has received is the affectivity (Ashby, Isen & Turken, 1999). This is because creativity is characterized as a process that involves the cognitive, emotional and motivational aspects of the person (Aranguren 2013).

Aranguren, in his review of the literature on this subject, cites Vosburg (1998) and he says that researchers who works on the relationships between positive affect and creative problem solving they have taken two clearly distinguishable positions: the General Position, argues that positive humor facilitates the creative resolution of problems across a broad spectrum of tasks; and qualified position argues that the effect depends on the type of task and that positive humor can facilitate problem solving but also inhibit it. Our work is stayed in the second position.

In accordance with the works that defend the general position (e.g. Isen, 1987; Isen, Daubman & Nowicki, 1987; Isen, Johnson, Mertz & Robinson, 1985), we try to study the relationship between positive emotion, creativity and the happiness of our students.

One of the central ideas that emerges from this set of studies is that positive affect tends to be associated with a greater number of interconnections in memory (Ashby et al., 1999; Johnson et al.,

2012), it activates multiple ideas simultaneously, and that's why it increases the probability of making innovative and creative associations (Carson, Higgins & Peterson, 2003).

Another position that we have also considered holds that emotion affects the predisposition that people have when they are performing a task. At the same time it influences the processing of information (Martin, Abend, Sedikides & Green, 1997; Newton, 2013). Individuals with a positive mood tend to feel more confident about themselves when facing a task and perceive it as simpler. This attribution promotes a more flexible, exploratory and risky information processing style (Vosburg, 1998), common to creative people (Aranguren, 2013).

According to the person, James, Brodersen & Eisenberg (2004) find a wide variety of characteristics that intervene in the relationship between affection and creativity: degree of self-confidence, self-esteem and willingness to open up to experience and responsibility, as well as ability to clearly perceiving their emotions. In the same line, authors such as Lyubomirsky, King & Diener (2005) y Franco Justo (2009) affirm that positive emotion is related to optimism, self-confidence, self-efficacy, a better functioning of the immune system, prosocial behavior, effective coping, originality and flexibility. Creativity is precisely the skill that allows man to get out of the routine to make way for learning, enabling divergent and flexible minds (De Bono, 2007).

Creativity is a multifaceted phenomenon (Sternberg, 1999) that has to do with the ability to generate ideas and / or genuine products, solving problems and thinking reality in an unconventional way (Runco, 2004). When we talk about creativity we tend to differentiate between the creative person, the creative product and the creative process (Richards, 2007).

Curiosity or what is different and excels in the environment lights the emotion and, with it, the opening to attention, necessary focus for the creation of knowledge (Mora, 2013).

The novelty or the surprise arouse a series of positive emotions that predispose the student towards learning. Repeating and repeating data until memorize them is not the best way to learning. Scientific studies show that emotion, sport, surprise, novelty, creativity and experimentation are some of the necessary ingredients to add knowledge (Sáez, 2014).

Aranguren (2013), synthesizing a large number of bibliographic reviews, correlational and experimental studies that use different methods of induction of affect, as well as different measures of cognitive flexibility, evidence that positive affect promotes the ability of people to generate different perspectives and alternatives in a given situation and promotes creativity (Ashby et al., 1999). These effects have been evidenced in educational labor, organizational contexts, in situations of negotiations, in tasks of clinical diagnoses with samples of doctors, among others.

Our research is reaffirmed in the approach of investigating the creativity of ordinary people (Richards, Kinney, Bennet & Mertzal, 1988; Riple, 1989), and how they can be helped to develop their potential through education (Craft, 2003; Craft, Jeffrey & Leibling, 2001; Starko, 2005).

Emotional education and the promotion of positive emotions in school, improve the recognition and understanding of emotions, the understanding of social problems, the ability to generate alternative solutions to problems, cognitive flexibility and academic performance, among other aspects (Oros, Manucci & Richaud de Minzi, 2011).

Fernández-Berrocal & Ruiz (2008) indicate that emotional development improves performance, interpersonal relationships, and psychological wellbeing. Emotional education is a benefit to the school, the individual and society (Caballero-García, 2004, 2007).

In higher education, happiness, also called subjective well-being, has been positively associated with teachers productivity (Fredman & Doughney, 2012), academic success of students (Heikkila, Lonka, Niemen & Niemivirita, 2012) and retention of students in their early formative years (González, Castro & Martín, 2011; Wintre et al., 2011). This supports the idea that student performance is the result of their knowledge and skills, the beliefs they have about themselves (Muñoz, Zueck, Gastelum & Guedea, 2012; Ramirez & Fuentes, 2013) and subjective happiness.

Taking as precedent a study based in social and emotional learning (Caballero-García, 2010), in we studied happiness of teachers and their impact on the performance of elementary students (Carretero, 2012) we wanted to continue working in this line of positive psychology with students of our education degrees.

The project presented fits into programs that seek emotional development of people in organizations and facilitate their welfare; programs studying emotions as a driver of human behavior within the

educational context, and programs that choose happiness as an enhancer element of the social class climate, creativity, educational performance, as well as personal and social wellbeing of people.

Apart from this, we add a good training of scientific thought, capacity for observation, analysis, reasoning, communication and abstraction will be favored; it will help the development and construction of an autonomous, creative thought, both individual and social and also providing personality. Research in the classroom can be a learning strategy and not only to improve practice (Caballero-García, 2009a, 2009b).

Our aim is to develop an intervention proposal aimed to develop an emotionally intelligent culture in the university classroom, to promote emotional development and happiness of our students, and to study the influence that this intervention may have on creativity, scientific thinking and academic performance of our students, future teachers of kindergarten and primary education.

The child does not go to school just to learn, but to "learn to learn" to develop skills and stimulate their minds, including emotional intelligence (Caballero-García, 2008).

The social and emotional learning and subjective happiness, along with the other mentioned aspects are key skills for teacher training in the 21st (Carretero, Caballero-García, Bueno & Salinero, 2013).

The educational community recognizes, for a long time, the importance of creativity and the requirement to work on the implementation of concrete policies and strategies for its promotion (Klimenco, 2008). Having into account that education in the 21st century seeks innovation in order to adapt to the modern world that is progressing so quick, it is essential to start educating from creativity and optimism, creating awake and happy minds, capable of giving quick solutions to problems, and to create with originality and fluidity, because there are these minds that will make their way into the world of work and, what is greater, those minds that will open us to the future.

2 AIM AND RESEARCH HYPOTHESIS

The goal of this research is to know the levels of happiness and creativity of university students and how it can be influenced by an educational intervention to work the emotions in the classroom.

We start from the hypothesis that the intervention program based on emotions would improve the levels of happiness and creativity of our students.

3 METHODS

We used a quasi-experimental design, with a non-equivalent control group (Cook & Campbell, 1979, 1986).

3.1 Participants

The sample was selected on a non-random and intentional way. The final group was composed of 162 students in total of different university degrees (75.5% women and 24.5% males), aged between 18 and 45 years, with an average of 22.45 years old (sd= 5.77), and that they are in agreement on participating voluntarily in the study. The experimental group was composed by 76 students (46.9%) and the control group by 86 students (53.1%).

3.2 Instruments

The main instruments used throughout this research where: 1) The Subjective Happiness Scale (SHS), developed by Lyubomirsky & Lepper (1999). An instrument that consists of four items on a 7-point Likert scale. These authors found that the four items showed good to excellent internal consistency, revealing comparability across samples of varying ages, occupations, languages, and cultures. The alphas ranged from .79 to .94 (M = 0.86). In this investigation the SHS had a Cronbach's alpha of .81 to get to know student's happiness; 2) CREA, Creative Intelligence. A cognitive measure of creativity (Corbalán, Martínez, Alonso, Donolo, Tejerina & Limiñana, 2003). This test is aimed at recognising creative intelligence by means of a cognitive evaluation of individual creativity according to the indicator for question generation, in the theoretical context of problem searching and solving. It has three strips (two of them for adults) from which the subject has to generate all types of questions as suggested to him/her by the drawings. CREA meets the basic reliability and validity standards that can

be required of a psychological test (the estimated reliability for forms A and B is .87). For this sample two strips have been used: the A, B and C CREA for adults.

3.3 Data collection procedures

In the first session, students were informed of the purpose of the research and they were invited to participate in the study. When they agreed to voluntarily participate in the experiment, they performed happiness and creativity tests (pre-test). Data collection is carried out in two sessions of 0.5 hour of duration approximately. After that, the experimental group developed their classes with a methodology based on emotional development while the control group worked their subjects with a traditional methodology. At the end of the semester, we once again evaluate your happiness and creativity (post-test). Once all this information had been collected, the different tests were corrected and it was possible to start with the statistical data analysis.

3.4 Data analysis

For the data analysis we used the statistical program SPSS 24, with a 95% confidence interval and a margin of error of 5%. We carried out a descriptive analysis (frequencies, percentages, averages and standard deviations) in order to determine happiness and creativity in university students. To analyse differences in these variables, we used the T Student tests and U de Mann-Whitney, depending on the normal distribution of sample or not, respectively, and the independence of the samples; Wilcoxon test, in case of depend samples, and hypothesis test in case of significant differences.

4 RESULTS

The average creativity of our students was 44.32 points (average, according to scale 26-74) and the average happiness, evaluated with the test of Lyubomirsky & Lepper (1999), was 4.99 points (medium-high, according to a scale of 1-7).

When we analyzed the existence of variations in these variables (happiness and creativity) before and after the intervention program with emotions in the classroom, the Wilcoxon test for related samples showed, at a level of confidence of 95%, the existence of significant differences in creativity, between the pre-test and the post-test ($Z = -3.120$, $p = .002$). Our students showed greater creativity after the experiment, compared to the score they obtained in the pretest. As for Happiness, the Wilcoxon test for related samples also showed significant differences between the pre-test and the post-test ($Z = -1.991$, $p = .046$). After the emotional intervention program in the classroom (post-test), our students obtained higher average happiness scores, than those that showed previous moments (pre-test) to their teachers working with this didactic methodology in their classroom.

By group, at a confidence level of 95%, the U de Mann-Whitney for independent samples show that there are significant differences in creativity in the pre-test ($U = 2051$, $p = .021$), but not in the post-test ($U = 1518$, $p = .618$). The control group showed higher average scores in this variable, compared to the experimental group. Regarding happiness, we did not find significant differences in the groups, neither in the pre-test ($U = 2296$, $p = .200$) nor in the post-test ($T = 1.142$, $p = .256$).

By sex, at a confidence level of 95%, the U de Mann-Whitney for independent samples show that there are significant differences in creativity in the pre-test ($U = 1347.5$, $p = .003$), but not in the post-test ($T = .874$, $p = .384$). Women showed higher mean scores compared to men. Regarding happiness, we did not find a significant gender differences neither in the pre-test ($U = 1876$, $p = .579$) nor in the post-test ($T = .071$, $p = .944$).

5 CONCLUSIONS AND IMPLICATIONS

This study confirmed that the students who worked with positive emotions integrated within the specific contents of the subjects studied and with a methodology that fostered their creativity, showed more level of happiness and creativity than the other who studied within an ordinary methodology.

Happy people have many benefits. They not only feel good, but they have productive and creative capacity, enhanced by greater flexibility, more satisfying relationships, superior physical health and even to longer life. This happiness passes on contagious the context and happy context creates a culture of happiness and empowering the individual and societies. For these reasons it seems important that teachers are able to create a positive environment in their classrooms to promote

development and learning, students' wellbeing. The child does not go to school just to learn, but to "learn to learn" to develop skills and stimulate their minds, including emotional intelligence (Caballero-García, 2008).

The society demands happy, creative and entrepreneurial professionals that lead educational and social change processes. Creativity and optimism are facilitators of academic performance and incorporation into the working market. Society also demands social and educational changes and the University needs to train entrepreneurs teachers, adaptable to these changes, with skills and differentiating qualities that ensure efficiency and effectiveness of their interventions in training students who will be the future citizens.

We recommended the design and implementation of emotional, creative and inclusive education programs in the university area that improve the professional skills of our students and contribute to their personal and social development.

From a practical perspective, the results represent a major challenge for higher education institutions aimed at promoting emotional intelligence and happiness in university classrooms, and also creativity as essential skills that will help professional success, improved interpersonal relationships and greater personal and social welfare (Caballero-García & Carretero, 2014; Caballero-García, Carretero & Fernández, 2015).

Because of that, we consider essential that education in creativity and positive emotion to be part of the curriculum of the university educational environment.

Like Klimenco, we consider indisputable that attention to creativity must cross all levels of education, from children to the university, being all the evolutionary stages equally important.

Likewise we leave the line opened to other research that want to investigate the differences by gender, and other variables that can model the relationship between emotions and creativity, and can help to better understand when they favor or harm, not only the creative process but also the creative and happy person.

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