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*Emotional capital: the set
of emotional competencies
as professional and vocational skills
in emotional works and jobs*

*Capital emocional: el conjunto de competencias
emocionales como habilidades profesionales
y vocacionales en obras emocionales y trabajos*

Bénédicte Gendron*

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* BÉNÉDICTE GENDRON: Former vice-president of university, is professor at the Department of Education at the university Paul-Valéry Montpellier in France. She is a member of Goleman International Center for Research on Emotional Intelligence in Organization consortium. Her research interests focused on emotional capital, the set of personal and social emotional competencies, vocational skills which are essential in all emotional works and jobs (management, education, health sectors). **Datos de contacto:** University Paul-Valery Montpellier, Department of Education, Route de Mende, 34000, Montpellier, France. E-mail: benedicte.gendron@univ-montp3.fr

Abstract

In the context of changes or decreasing quality of life at school and at work (violence, incivilities, stress, anxiety, depression, burn out, pressure, bullying..), research on Education with its dialectic links between learning and well-being competencies, that is, between educational processes and outcomes on the one hand, and well-being-promotion processes and outcomes on the other, suggests a frame to purpose radical alternatives and reconceptualize educational programmes in itself. Beyond general knowledge (Savoirs) and technical skills (Savoir-Faire), the role of Emotional Capital, referring to the set of emotional competencies (Savoir-Etre), is crucial at sustaining human capital constitution in a broad sense and person development and well-being and performance (Gendron, 2004). This communication will be focus on the experimental research-action part of a global research led at the university of Montpellier 3 called Idefi-UM3D-“Réussir en 3D determination, diversification, différences”. This peticular project called “Idefi-UM3D-emotional capital & well-being & performance”, aims at developing emotional competencies among emotional works and jobs, peticularly future educators and teachers’ students, using tools from the positive psychology, the Mindfulness and the Acceptance and Commitment Training (ACT’) and its return and impact on trainees’ well-being, personal and social emotional competencies and performance. From an interdisciplinary approach combining sciences of education, economic of human resources and positive psychology, it shows that emotional capital, can improve the well-being and performance of trainees, future educators and teachers that contributes to ensure sustainable and benevolence education and balanced person development and professional skills.

Key Words: Emotional Capital; Emotional Competencies; Soft Skills; Acceptance and Commitment Therapy; Mindfulness

Resumen

En el contexto de los cambios o la disminución de la calidad de vida en la escuela y en el trabajo de investigación sobre la educación con sus vínculos dialécticos entre competencias de aprendizaje y bienestar, entre los procesos y resultados educativos, y los procesos de bienestar de promoción y resultados, sugiere alternativas que reconceptualizan programas educacionales. Más allá de los conocimientos generales (Savoirs) ya la técnica (saber hacer, Savoir-Faire), el papel del capital emocional, se hace referencia al conjunto de competencias emocionales (Savoir-Etre), es crucial en el mantenimiento de constitución del capital humano en un sentido amplio y de desarrollo personal y bienestar y el rendimiento. Este artículo será el foco en la parte de investigación-acción experimental de una investigación global llevó a la universidad (Idefi-UM3D-“Réussir en 3D determination, diversification, différences”). Este proyecto peticular “Idefi-UM3D-emotional capital & well-being & performance” tiene como objetivo desarrollar el capital emocional, i.e las competencias emocionales, en los trabajos emocionales, for ejemplo, los futuros educadores y maestros, con el uso de herramientas de la psicología positiva, y de la Meditación mindfulness o conciencia plena y la Terapia de Aceptación y Compromiso (ACT). A partir de un enfoque interdisciplinario que combina las ciencias de la educación, la economía de los recursos humanos y la psicología positive, el desarrollo del capital emocional muestra que puede mejorar el bienestar y el rendimiento de los alumnos, futuros educadores y maestros, y contribuye a garantizar la educación sostenible y la benevolencia y el desarrollo personal equilibrado y habilidades profesionales.

Palabras clave: Capital Emocional; Competencias Emocionales; Terapia de Aceptación y Compromiso; Meditación Mindfulness; Conciencia Plena

1. Introduction

Learning environments are social environments, and learners are highly complex beings whose emotions interact with their learning process in powerful ways. Psychologically-based theories and educational research have provided influential explanations of how emotional experience is produced and how it affects behaviors and can affect learning processes and lives' construction and, also professional skills.

In the context of changes or decreasing quality of life at school and at work (violence, incivilities, stress, anxiety, depression, burn out, pressure, bullying..), research on Education with its dialectic links between learning and well-being competencies, that is, between educational processes and outcomes on the one hand, and well-being-promotion processes and outcomes on the other, suggests a frame to purpose radical alternatives and reconceptualize educational programmes in itself. Beyond general knowledge (Savoirs) and technical skills (Savoir-Faire), the role of Emotional Capital (EK), referring to the set of emotional competencies (Savoir-Etre), is crucial at sustaining human capital constitution in a broad sense and person development and well-being and performance (Gendron, 2004). This experimental research-action financed by the French National Agency of Research, is focus on emotional capital developing emotional competencies among future educators and teachers' students, using tools from the positive psychology, the Mindfulness and the Acceptance and Commitment Training (ACT') and its return and impact on trainees' well-being, personal and social emotional competencies and performance. From an interdisciplinary approach combining sciences of education, economic of human resources and positive psychology, this research, focus of this communication, shows that emotional capital, can improve the well-being and performance of trainees, future educators and teachers which contributes to ensure sustainable and benevolence education and balanced person development and professional skills.

But today's trend of the increased emphasis on the accountability of schools and their efficacy leads school leaders and educators to focus solely on improving students test results or academic performance in the core areas of certain domains (such as the 3R, reading, writing, arithmetic...). Under these pressures, for instance, teachers have to focus on teaching or educative content and less on preparing students to learn how to build their sustainable development, to be a good citizen, or to feel happy and peaceful, mindful. All those behavior and social skills called emotional competencies combined with technical and general skills allow a real and complete "Education" with a big caps "E". In this framework, the education of the whole person as the major clue is urgently required today.

Previous researches predicted the necessary competences in order to maintain resilience, health, development, in other words to achieve an optimum development. It's about the emotional competences that constitute the emotional capital (Gendron, 2004, 2008) of each person, decisive in personal, professional and institutional development. Beyond general knowledge (fr. savoir) and technical skills (fr. savoir-Faire), the role of Emotional Capital (EK), referring to the set of emotional competencies (fr. savoir-être), is crucial in sustaining human capital constitution and person development and well-being and emotional work performance (Gendron, 2004). Embedded in an interdisciplinary framework (as neuroscience, sociology, psychology, education and economics of HR), EK is a multi-level concept and approach (macro, meso, micro) which we will define and develop further.

The aim of this communication is to present the outcome of an experimental program addressed to future teachers and educators, trained at the university of Montpellier 3 (sciences of education freshmen students), in order to develop their emotional capital, via an active, positive and interactive workshops focused on personal health issues and well-being. Proficiency in emotional capital includes skilled management of emotions, external situations and relationships, and promotes performance and a better mental health for students, especially a higher resilience to stress. In particular, developing emotional capital can be helpful to students and future teachers working in emotional contexts and works ; that's the case for freshmen students of sciences of education expose to a new life or care helpers facing stressful work events. The development of emotional capital was realized via two approaches: project managements (PIA2) - and ACT - Acceptance Commitment Training (ACT[®]). This proceeding is interesting and innovative because it allows the development of all emotional skills and gives students the possibility to act in a structured frame facilitating work group, self and others knowledge, etc. This experimental research on Emotional capital aims at preparing and facilitating the integration of future teachers and educators at participating to their academic and professional success and performance through ad-hoc development of relevant Savoir-être, their Emotional Capital, human capital and skills which we will discuss in the next section.

2. Theory and methods : Emotional capital and educational performance

The notion of capital is derived from economic discourse and refers to a stock of capital identified by its sources and its returns or effects' returns on performance and socio-economic situations (Gendron, 2004). Traditional economic theory, generally viewed capital as physical items that are used and useful in the production process. But the notion of capital has been expanded as a general way of thinking and taken on a broader meaning especially, when some aspects of its definition provide a useful way of thinking in another domain.

2.1. Theory : from Economics of education, human capital theory, to Emotional capital inclusion

The concept of human capital has a long history (Smith, 1776); the term itself was first coined by economists T.W. Schultz and G.S. Becker less than 40 years ago. In his 1964 book, Human Capital, G.S. Becker viewed education, on-the-job training and health as components of human capital with consequences for earnings and economic productivity. The key aspects of human capital have to do with the knowledge and skills embodies in people. It can be distinguished between the following three components of human capital:

- General skills linked to basic language and quantitative literacy and, more broadly, to the ability to process information and use it in problem-solving and in learning.
- Specific skills are those related to the operation of particular technologies of production processes.
- Technical and scientific knowledge, finally, refers to the mastery of specific bodies of organized knowledge and analytical techniques that may be of relevance in production or in the advance of technology.

If human, social and cultural capitals can be considered as a public good, it is also partly a private good. Gendron (2004) appreciates that, in previous definition of human capital, it's missing the individual part of it, which are social individual skills that enable an individual to reap market and nonmarket returns from interaction with others but not only. Those socio-emotional and individual skills which participate to social cohesion are crucial to behave and grasp the opportunities to grow up in the society. We will argue this position in the following section.

2.2. From Emotional Intelligence and Emotional Competencies concepts to the Emotional Capital approach

Emotions have to be taken into account in economic theory as they can have major impact and economical returns, if well managed and utilized. As cognitive rationality has to be considered in the individual decision-making process in economic models (Gendron, 2004), there is also an emotional capital basis which has to be highly considered in education and in work place. First, we will define emotional intelligence and competencies and what do we mean by emotional capital (Gendron, 2004); then, we will see why the set of emotional competencies have to be considered as a crucial capital, through its major role in allowing and boosting the formation and use of the other capitals (social, cultural and the Becker' human capital).

The term emotional intelligence was introduced in psychology in a series of papers by Mayer and Salovey (1993), though it was Goleman who brought wide popular recognition to the concept of emotional intelligence in his 1995 book *Emotional Intelligence*. In their work, Mayer and Salovey (1993) confirm that being able to direct one's emotions, as well as being able to understand and influence other people's emotional responses, went a long way towards effective adaptation to an environment. They defined emotional intelligence as: "Ability to monitor one's own and other's feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (1990); "the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth" (1997).

Later, Cherniss and Goleman (2001) have argued that emotional intelligence itself probably is not a strong predictor of performance. Rather, it provides the bedrock for competencies that are. A certain level of emotional intelligence is necessary to learn the emotional competencies and these competencies can be increased. They tried to represent this idea by making a distinction between emotional intelligence and emotional competencies and divided it in two kinds of emotional competencies: personal and social.

Table 1. *A Framework for Emotional Competencies (Cherniss & Goleman, 2001) (non exhaustive list).*

	Personal Competencies (intrapersonal)	Social Competencies (interpersonal)
Recognition	Self-Awareness <ul style="list-style-type: none"> - Emotional self-awareness - Accurate self-assessment - Self-confidence - Own culture awareness [...] 	Social Awareness <ul style="list-style-type: none"> - Empathy - Service orientation - Organizational awareness - Other culture awareness [...]
Regulation	Self-Management <ul style="list-style-type: none"> - Emotional self-control - Trustworthiness - Conscientiousness - Adaptability [revisit] - Achievement drive - Initiative - Nonjudgmentalness [...] 	Social Skills <ul style="list-style-type: none"> - Developing others - Influence - Communication [revisit] - Conflict management - Visionary leadership - Catalyzing change - Building bonds - Teamwork and collaboration - Respect [...]

In sum, emotional competencies are learned capabilities from the early age until adulthood, in family, peers, communities, societies and school contexts. Consequently, the different emotional competencies developed through those experiences will have a major impact on individual personality and different returns in different spheres. Because of the recognized impact of emotional competencies on performance and on the learning process, those emotional competencies have to be included in the human capital in a broader sense and in its measurement. They refer to the know-how-to-be/behave (fr. savoir-être) to the rules of democratic socialization, to know how to behave in social situation, to know how to communicate, to handle a conflict, to respect other's opinion, etc. Thus, if technical competencies or experiences, referring in the French language to the concept of "Savoir-faire" and in general knowledge to "Savoir", constitute the Becker's human capital (1964), the emotional competencies, which has not been taken into account in Becker's measurement, referee to "Savoir-être".



Figure 1.

Emotional competencies are useful and constitute a crucial capital resource for actors through processes such as using and exploiting plainly their human and social capitals. As emotional competencies are useful to better perform socially, economically and personally, we have to consider them as a capital (Gendron, 2004, 2008) that we will present and develop next.

2.3. Emotional Capital and Educational Challenges

This set of emotional competencies (EC) compounds the emotional capital defined as “the set of resources (emotional competencies) that is inherent to the person, useful for personal, professional and organizational development, and participates in social cohesion and has personal, economic and social returns” (Gendron, 2004). It can be developed as emotional competencies are learnt capabilities. Emotional capital (EK) as a set of emotional competencies is developed and provided since the early age until adulthood in informal manners and contexts, in social environments as family, neighborhood, peers, communities, societies and school contexts. Because social environments include the groups to which people belong, the neighborhoods in which they live, the organization of their workplaces, and the policies created to order their lives, the EK differs from one person to another. The optimum constitution of the human capital might never happen if basic or appropriate emotional capital is not here.

Precisely in education, it's a crucial capital as it impacts people's learning processes and especially for children and young people at risk to enable their balanced human development which participates in social cohesion, smoother human relationships, for their future successful life in the society and already for their school retention and success.

Regarding its effects or returns, neurosciences (see the project on “Learning Sciences and Brain Research” introduced to the OECD's CERI Governing Board on 23 November 1999, and Damasio, 1995), reporting on the brain and learning process, brought the evidence that emotional competencies impact the learning process (Gendron, 2013). According to the capacity of regulation of emotions, referring to emotional competence, an appropriate emotional capital can facilitate the learning process. Considering school performance and failure, students with too high-esteem can be counter-productive in certain situations where modesty should be appropriate to question him-or-herself regarding his-her own failure. At the opposite end, a too low self-esteem or a lack of self-confidence can impede people to progress or lead to self-censure.

Also, emotional capital can be damaged in certain situations. For instance, repeated failure at schools can discourage and develop inappropriate reactions, leading to dropping out or being kicked out. Research on management sciences and on psychology stress the vicious cycle of depression people who have been laid off people can see some part of their personal EK altered or damaged like losing their self-confidence and lowering their self-esteem and isolate themselves (Bennett *et al.*, 1995), and in consequence, may not use optimally their social capital as their social network for finding a job.

A balanced emotional capital can help students to reach their best potential in the classroom and as future workers at the workplace. Emotional capital becomes crucial for the youth's well-being and achievement in life. Balanced emotional capital is the basis for self-improvement, growth, and lifelong learning, as well as being able to successfully and adequately interact with others. It helps at becoming resilient, allowing people to respond to stress and disappointment in appropriate and productive ways.

3. The development of emotional capital using mindfulness education based on ACT' - Acceptance & Commitment Training (derived from ACT Therapy) and project management

Emotional capital has been developed in this experimental research using the project management tools and mindfulness tools. Precisely, two approaches: PIA2 -European management and project management methodology) and ACT' training derived from ACT Therapy (Acceptance and Commitment Therapy). Using these two approaches, the objective is to develop trainees social and personal emotional competences such as a better self esteem, self knowledge and relation with the others as empathy, as conflict management...

3.1. Theoretical basis, objectives and protocol of the mindfulness approach

To develop personal emotional competencies, it has been used the approach of ACT Acceptance and Commitment Therapy belonging to mindfulness approaches that we declined in a training version Acceptance and Commitment Training-ACT'. The approach ACT' involves a higher level of personal part of emotional competencies. This part of developing emotional capital is based on workshops on acceptance and engagement and practical exercises of mindfulness. Based on psychology and positive education approaches, these workshops envisage the development and the research of a psychological flexibility. They are focused on human language processing; they allow understanding how a behavioral inflexibility/rigidity and a tendency to avoid psychological events can be damaging. The educational approach proposed by ACT' is based on learning have to cope with disagreeable thoughts, emotions and sensations that allows to canceling the barriers in useless or counter-productive behaviors for the learner. So, the objective is to help students to find a psychological flexibility and to stop fighting against their painful thoughts, emotions, memories and perceptions, in order to reset themselves in action for things that really matters. The workshop articulates six central cognitive processes, mentioned before: cognitive diffusion, acceptance, contact with the present moment, observing the self, values, and committed action.

Based on a multidisciplinary approach, the Mindfulness programs (founder Kabat-Zinn in 1982) and others based on Acceptance and Commitment Therapy-ACT (founders Hayes, Strosahl, & Wilson in 1999) derived in educational training participates particularly to the development of emotional competencies. It is an empirically-based psychological intervention that uses acceptance and mindfulness strategies mixed in different ways with commitment and behavior-change strategies, to increase psychological flexibility. ACT differs from traditional cognitive behavioral therapy in that rather than trying to teach people to better control their thoughts, feelings, sensations, memories and other private events, ACT teaches them to just observe, accept, and embrace those private events and emotions, especially previously unwanted ones.

ACT commonly employs six core principles to help individuals develop psychological flexibility (Harris, 2006) : the cognitive diffusion as the learning methods to reduce the tendency to reify thoughts, images, emotions, and memories ; Acceptance allowing thoughts to come and go without struggling with them. Contact with the present moment

which works on the awareness of the here and now, experienced with openness, interest, and receptiveness ; Observing the self by accessing a transcendent sense of self, a continuity of consciousness which is unchanging ; defining values i.e discovering what is most important to one's true self ; Committed action is about setting goals according to values and carrying them out responsibly.

The main objectives of this approach were to develop students' personal emotional competencies, to learn about themselves to be able to learn about others, to be able to regulate their own emotions to be able to help others' emotional regulations.. Combined with a positive education perspective, some exercises work at training future educators and teachers students' mind to assess situations in a positive way : metaphor of "half full/ half empty glass" for a positive outlook/vision (cf. positive psychology), to be aware of difficult psychological situations or events in exercises that include thoughts. ACT aims at training people to (re-)gain flexibility in the presence of some painful events or emotions and to avoid to seek at controlling them. It obliges to think about their own "values", (areas of personal, couple, family, work values, q health, welfare, education life). Such a program participates at preventing stress and psychological and physiological impacts of painful situations.

To do so, the program follows a scientific predefined protocol of interventions based on ACT : at minimum, six workshops of two hours. The experimental research was based on traditional design : two groups – experimental and control with two phases of testing – pre-post-tests and the control group for deontologic motives, received the training (ACT) after the end of the research data collection, after the end of the courses with the experimental group.

3.2. Theoretical basis, objectives and protocol of the management project PIA2 programs

Using the pedagogy of action according to Dewey's work, the main objective of the project management program is, the main objective of the project management program is, by working by groups on a common project, students have to learn about themselves and each other, to evaluate properly and to work together collaboratively. Using a variety of exercises we facilitated students' commitment into their projects. This way, students become actors of their projects where team spirit had an important place. In order to constitute the groups, a short questionnaire allows students to identify their profile choosing from four categories: manager, visionary, analyst, and collaborator. More, in this approach, each member has responsibilities which alternate and specific duties which contribute to the team performance. Each team uses "a board notebook" in order to manage project's progress and, this way, each student learns to control him/herself and to develop his/her deductive, inductive, analytic, synthetic and critical spirit. Using a guidebook, students define and analyze the stakeholders and associated risks. The professor, tutor has an important role as a coach, helping and encouraging students to continue and to persist in order to achieve the team objectives. From the first session until the end of the project, students complete tests and identify, using an evaluation scale, their emotional, social and personal competencies.

3.3. Researchers, stakeholders and Data

The IDEFI - Initiatives of excellence in innovative training team on Emotional capital & Well-being & Performance, the University service of Coaching and the University

Service of Preventive Medicine and Health Promotion were involved in this research experimentation. The participants for this research consisted in a group of 132 future educators or teachers of the first academic year of Sciences of Education (valid data: 97 students compounded of 11 males and 88 women students. All the participants were splitted into in 8 groups (19 students maximum per groups.) and 4 groups as experimental groups (XP GP) and the 4 others as control groups (Ctrl GP). To measure their EK progress, we used several scale of measurements and tests based on the instruments and tools used. First, the Trait Emotional Intelligence Questionnaire (TEIQue) is a scientific measurement instrument based exclusively on trait EI theory. Developed by Petrides in 2009, it consists of 153 items responded to on a 7-point scale (from “strongly agree” to “strongly disagree”). It provides scores for 15 subscales and four factors (wellbeing, self-control, emotionality, and sociability) and global trait EI. The Emotion Regulation Profile-Revised (ERP-R) developed by Nelis, Quoidbach, Hansenne, & Mikolajczak in 2008, is a vignette-based measure. It comprises 15 scenarii describing different types of emotion-eliciting situations. Each scenario features a specific emotion (e.g., anger, sadness, fear, jealousy, shame, guilt, joy, contentment, awe, gratitude, pride) and is followed by eight possible reactions: four considered as adaptive and four viewed as maladaptive. Respondents are required to select, for each scenario, the strategy(ies) that best describe their most likely reactions in the situation. We used also the ACT measurements, the Mindful Attention Awareness Scale (MAAS) developed by Brown and Ryan in 2003. It is a 15-item scale designed to assess a core characteristic of dispositional mindfulness, namely, open or receptive awareness of and attention to what is taking place in the present. Co-relational, quasi-experimental, and laboratory studies have shown that the MAAS taps a unique quality of consciousness that is related to, and predictive of, a variety of self-regulation and well-being constructs. The Acceptance and Action Questionnaire 2 (AAQ 2) developed by Bond *et al.* in 2011, assesses a person’s experiential avoidance and immobility and acceptance and action. The 10 items are rated on a 7 point Likert-type scale from 1 (never true) to 7 (always true). High scores on the AAQ-2 are reflective of greater experiential avoidance and immobility, while low scores reflect greater acceptance and action.

Beyond those tests, we used also the Depression, Anxiety, Stress Scale (DASS) developed by Lovibond and Lovibond in 1993, which consists of 42 negative emotional symptoms. The scale rates the extent to which individuals have experienced each symptom over the past week, on a 4-point severity/frequency scale. Scores for the Depression, Anxiety and Stress scales are determined by summing the scores for the relevant 14 items. The Academic Motivation Scale – AMS (fr. Echelle de Motivation en Education) developed by Vallerand *et al.* in 1989, is based on self-determination theory and is composed of 28 items subdivided into seven subscales. This scale is assessing, on a 7-point-Likert-type-scale, three types of intrinsic motivation (intrinsic motivation to know, to accomplish things, and to experience stimulation), three types of extrinsic motivation (external, introjected, and identified regulation), and amotivation. And the Generalized Self-efficacy Scale (fr. Echelle d’auto-efficacité généralisée) developed by Schwarzer and Jerusalem in 1992, is a 10 items scale who was created to assess a general sense of perceived self-efficacy with the aim to predict coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events.

4. Outcomes and Analysis

4.1. Experimental Group (XP GP) and Control Group (Ctrl GP): main inter-group differences

Regarding intrinsic motivation, the first inter-group analysis (T1) indicated significant differences between XP GP and Ctrl GP using Academic Motivation Scale. Using a 7 point scale, each student indicated to what extent each of the items corresponds to one of the reasons why they go to university. Statistical data shows that the Ctrl GP obtained higher scores than XP GR (see Figure 2) for two subscales of intrinsic motivation (IM).

This subscale, IM – to know, (score $m=5,42$ Vs $4,99$; $U=745,5$; $p=0,024$), is related to several constructs such as exploration, curiosity, learning goals, intrinsic intellectuality, and finally the intrinsic motivation to learn (e.g. “Because I experience pleasure and satisfaction while learning new things”, “For the pleasure that I experience in broadening my knowledge about subjects which appeal to me. The scale IM-to know can be defined as the fact of performing an activity for the pleasure and the satisfaction that one experiences while learning, exploring, or trying to understand something new (Vallerand *et al.*, 1992).

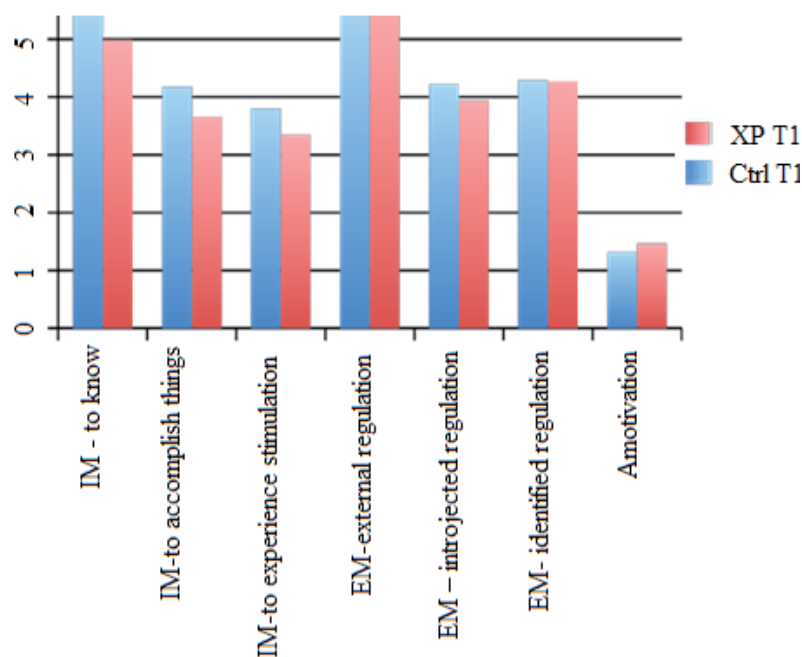


Figure 2. Mean scores of XP T1 and Ctrl T1 (AMS).

The second subscale, IM – to experience stimulation ($m=3,80$ Vs $3,35$, $U=819,5$; $p=0,04$), is operative when someone engages in an activity in order to experience stimulating sensations derived from one’s engagement in the activity (e.g. “For the pleasure that I experience when I read interesting authors”, “For the “high” feeling that I experience while reading about various interesting subjects”). Students who go to class in order to experience the excitement of a stimulating class discussion, or who read a book for the intense feelings of cognitive pleasure derived from passionate and exciting passages represent examples of individuals who are intrinsically motivated to experience stimulation in education (Vallerand *et al.*, 1992).

Regarding the self-control competencies, another relevant inter-group characteristic, identified in the moment T1, was released using the Trait Emotional Intelligence Questionnaire – TEIQue. This instrument allowed us to evaluate the factors and scales of emotional intelligence and the total EI score of the subjects. Statistical data analyze underlined that the mean scores of the subjects from the Ctrl GP are higher than the mean scores of the subjects from XP GP (see Figure 3) on self control factor ($m=4,1987$ compared to $m=3,9051$; $U=648,000$; $p=0,044$). Individuals with high scorers have a healthy degree of control over their urges and desires. In addition to fending off impulses, they are good at regulating external pressures and stress. They are neither repressed nor overly expressive. In contrast, low scorers are prone to impulsive behaviour and seem to be incapable of managing stress. Low self-control is associated with inflexibility (Petrides, 2001).

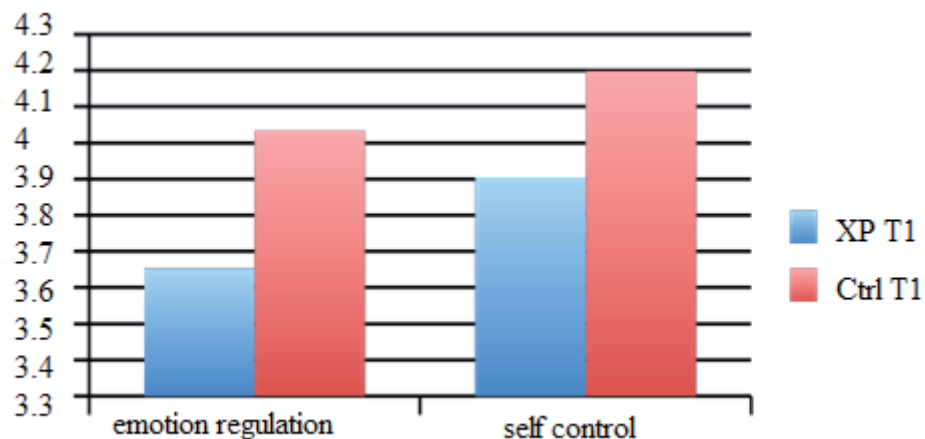


Figure 3. Mean scores of XP GP and Ctrl GP in T1 (TEIQue)

TEIQue allowed us to identify also a significant inter-group difference for the emotion regulation scale of the same factor ($m=4,0338$ compared to $m=3,652$; $U=774,500$; $p=0,030$). A characteristic item for this subscale is “When I get upset, I can calm myself down quickly”. This scale measures short-, medium-, and long-term control of one’s own feelings and emotional states. Individuals with high scorers have control over their emotions and can change unpleasant moods or prolong pleasant moods through personal insight and effort. They are psychologically stable and they know how to pick themselves up after emotional setbacks. Low scorers are subject to emotional seizures and periods of prolonged anxiety or even depression. They find it difficult to deal with their feelings and are often moody and irritable (Petrides, 2001).

The scores obtained regarding flexibility, via the Acceptance and Action Questionnaire (AAQ2), indicate the same rapport as the previous analyses. The mean scores of the XP GP are lower in the domain of flexibility than the mean scores of the Ctrl GP ($m=4,76$ compared to $m=4,44$; $U=816$; $p=0,05$). Higher scores obtained by the Ctrl GP indicate greater psychological flexibility or acceptance and committed action towards valued goals. This variable was evaluated through items like: „My painful experiences and memories make it difficult for me to live a life that I would value”, „It seems like most people are handling their lives better than I am”, „Worries get in the way of my success” etc.

Psychological flexibility is even more important as a broad number of studies indicate that lower psychological flexibility, have been found to predict: higher anxiety, more depression, more overall pathology, poorer work performance, inability to learn, substance abuse, lower quality of life, depression, alexithymia, anxiety sensitivity, etc. (Kashdan & Rottenberg, 2010).

4.2 Experimental Group (XP GP) and Control Group (Ctrl GP) : main intra-group differences

Regarding emotional regulation, at the end of the program (period named T2), the purpose of ERP-R was to evaluate the emotion regulation of our subjects and to determine how they usually react in different emotional situations. ERP-R evaluated two forms of regulation. Nine scenarii evaluate the down-regulation of negative emotions and six measure the up-regulation of positive emotions. For each scenario, eight reactions are proposed: four adaptive and four maladaptive. The two most common circumstances in which people regulate their emotions are first, when their emotions impede goal achievement and then when their emotions do not match with the group’s emotional display rules. Emotional regulation (ER) refers to the processes through which individuals influence which emotions they have, when they have them, and how they experience or express these emotions (Gross, 1998). Namely, the ERP-R not only provides information about how a person regulates his/her emotions, but it also highlights the regulation strategies used. Statistical analyze identified, after the intervention program (period T2), that subjects from XP GP have better abilities than subjects from Ctrl GP on up-regulating positive emotions ($Z=2,284$, $p=0,022$) and on concentrating in the positive side of the situation even if there are some obstacles ($Z=2.851$, $p=0,004$).

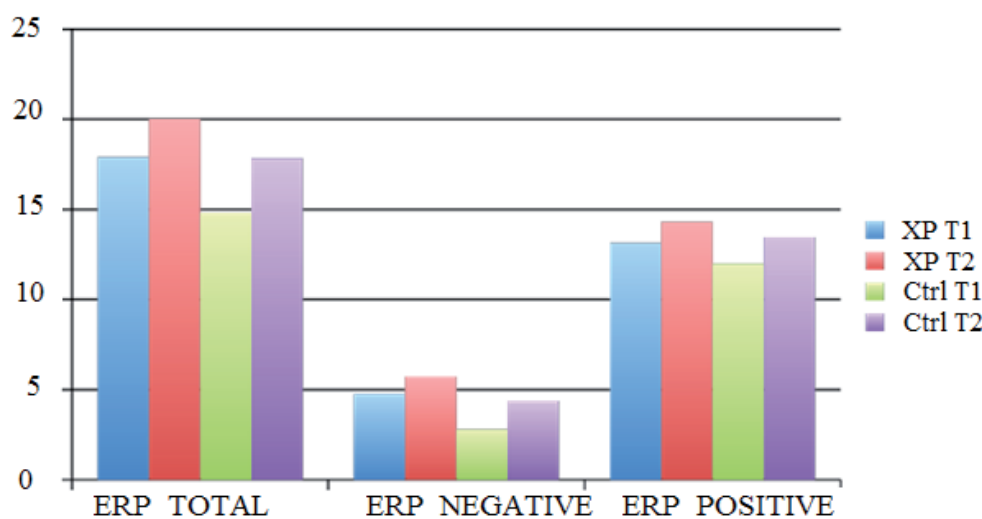


Figure 4. Mean scores of XP GP and Ctrl GP in T1 and T2 (ERP-R)

For the positive emotion component, participants were presented with vignettes concerning positive events (winning the lottery, going on a romantic break, enjoying a scenic walk with friends or being invited on a free holiday). Participants were allowed to choose as many options as they wanted from eight options to indicate how they would typically respond in these situations.

Four of these options are designed as savoring strategies:

- behavioral display – expressing positive emotions with non-verbal behaviours such as smiling;
- being present – deliberately directing attention to the present pleasant experience;
- capitalizing - communicating and celebrating the event with others;
- positive mental time travel - remembering or anticipating positive mental events.

Four of the options were designated as dampening strategies:

- suppression - repressing or hiding positive emotions;
- distraction – engaging in activities and thoughts –often worries- unrelated to the current positive event;
- fault finding – paying attention to negative elements of otherwise positive situations;
- negative mental time travel – negative reminiscence on the causes of a positive event with an emphasis on external attribution.

Depending on which strategies were checked, participants obtain a total score on eight strategies. Total dampening and savoring scores were calculated by adding the total scores for the four savoring strategies and the four dampening strategies. For the same group (XP GP), we also identified a positive correlation between up-regulating positive emotions ability and the subscale optimism of TEIQue ($r= 0,306$; $p= 0,018$).

This correlation is almost expected, because as Carver and Scheier (2002) underline: optimists are people who expect good things to happen to them and the difference between optimists and pessimist is the way they approach and cope with adversity. Optimism, defined as the persistence in pursuing goals despite obstacles and setback, is not only a state, but can be learned and developed.

In TEIQue, optimism is linked to well-being, albeit in a forward-looking way. High scorers look on the bright side and expect positive things to happen in their life. Low scorers are pessimistic and view things from a negative perspective. They are less likely to be able to identify and pursue new opportunities and tend to be risk-averse. Along with happiness and self-esteem, this scale reflects your general psychological state at this point in time (Petrides, 2001).

Regarding empathy, after the training intervention, statistical analyze identified that subjects from XP GP raised their level of empathy ($m= 4,94$ compared to $4,74$; $Z= 2,347$; $p= 0,019$). Empathy measures the perspective-taking aspect of empathy: seeing the world from someone else's point of view. In other words, it has to do with whether one can understand other people's needs and desires.

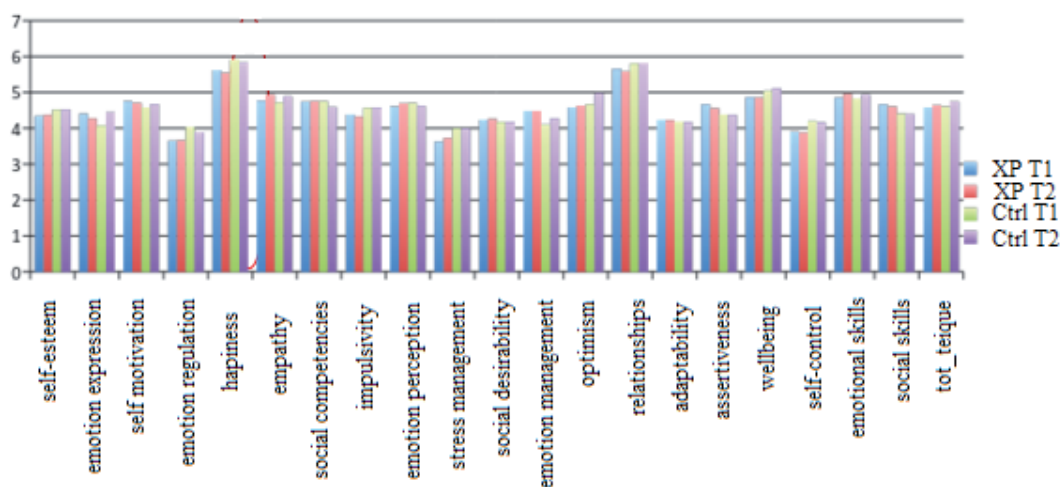


Figure 5. Mean scores of XP GP and Ctrl GP in T1 (TEIQue)

People with high scores on this scale tend to be skillful in conversations and negotiations because they take into account the viewpoints of those they are dealing with. They can put themselves “in somebody else’s shoes” and appreciate how things seem to them (Petrides, 2001).

Empathy is one basis for moral action, as a motivator of helping and altruism, it’s part of the emotional connection between people culture and society, but also for developmental psychologist, the growth of empathy reveals an individual capacity to respond to another’s emotional experience, which is a foundation for social and emotional understanding. And this emotional competence, to take only this one as an example, is crucial and essential in social situation as the class situation (Gendron, 2004).

Regarding subjective stress and anxiety, the Depression, Anxiety, Stress Scale (DASS) revealed a paradoxical outcome in appearance (Figure 6). Statistical data illustrated that, after the training (period T2), subjects from XP GP feel more stressed and anxious than before (period T1) ($m=7,81$ compared to $m=6,04$; $Z=2,702$; $p=0,007$, $m=5,28$ compared $m=6,42$; $Z=2,194$; $p=0,028$). One explanation for this result is that the training may have allowed to students to better know themselves and to better evaluate their resources and not to be afraid to look the reality.

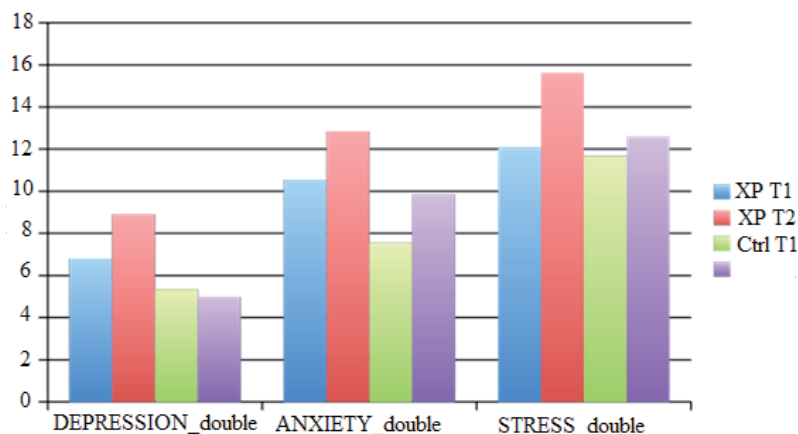


Figure 6. Mean scores of XP GP and Ctrl GP in T1 and T2 (DASS).

5. Conclusions, limitations and suggestions for further research

The purpose of this study was to develop emotional capital among future educators and teachers using a learning by action methodology, as some projects management and trained self awareness and self regulation via Mindfulness and the Acceptance and Commitment Training (ACT') derived from Acceptance and Commitment Therapy (ACT). A limit of this research is that it was not possible a random selection regarding groups' schedule enrollment. Further studies will consider: a random selection of participants, the selection of tests towards a more reduced battery of test, promising results to be confirmed with next promotions of students follow-up and coaching in 2nd and 3rd year of university (for the sustainability and the maintenance of the emotional capital...).

Nevertheless, statistical data underline positive changes in future educators and teachers regarding their emotions self-regulation, empathy, but also regarding their level of anxiety and stress as this training helped them to know better themselves and to be able to copy with their level of stress and to manage it. This participate to a better quality of life and well-being, both in private and social sphere. Also, social and personal emotional competencies as self-adaptation are crucial to cope with changes in society and the work world. Developing emotional capital represents a personal, professional and organizational asset that helps people to act on themselves, their environment and organization. Acceptance and Commitment Training participates on this development. Engaged in action based on core values and overcoming psychological barriers of changes, the person discovers flexibility necessary to live better.

To end, emotional capital, which belongs to the human capital in a broad sense, is a singular capital in which people, institutions (such as educational institutions) and society should invest in it, because of the economic, social and personal' returns. It enables at a micro level, sustainable person development in the lifelong learning perspective, as it can lead to less individualism and favour an humanistic and civic engagement, respect of education and work values in the economic and social life (at schools, at work) ; and at a macro-level, it participates in social cohesion and citizenship responsibility (Gendron, 2015) ; which in it all, makes Emotional Capital a real and effective Personal, Professional, Social and Organisational Asset.

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